

# **Socialisation Eco-systems of Child Technology Adoption: Digital Exclusion and Digital Elites**

Sophie Reeves-Morris

**November | 2024**

A thesis submitted in partial fulfilment of the  
requirements of Liverpool John Moores  
University for the degree of PhD

## AUTHOR DECLARATION

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning. I can confirm that all the work is my own; where the works of others have been included, it has been cited.

A handwritten signature in black ink, appearing to read 'Sophie Reeves-Morris', with a small dot above the 'i'.

Sophie Reeves-Morris

## ABSTRACT

The COVID-19 pandemic powerfully impacted consumers overall reliance on various communication technologies (Cruz-Cárdenas, et al., 2021). Various technologies emerged during that period as crucial educational tools (i.e., during school closures); to enable remote working; to access health services and care; to order food and other essential supplies, and as the main communication tool for families and other important groups during lockdown periods (Sheth, 2020; Ofcom, 2020). This unique cultural epoch highlighted the severity of digital disparities, and this was particularly intensified for young children who were denied face to face school and peer group socialisation; instead becoming reliant on their parents and teachers to help build a very necessary digital citizenship (Mossberger, et al., 2008). In general, the way that children are socialised into digital citizenship is of key interest to policymakers (Online Safety Bill, UK Parliament, 2022); Education Technology policies (DfE, 2019b); and academics regarding for example, the exploration of relationships consumers form to devices (Melumad & Pham, 2020) and the implication of digital disparities for child consumers in the digital age (Ólafsson & Mascheroni, 2015). This general set of concerns, has however, become an intensified set of concerns due to the impact of the COVID-19 pandemic (Bozkurt, et al., 2020).

This study draws on data collected both prior to and during the COVID-19 lockdown to explore the impact of the pandemic on child technology socialisation. Prior to the pandemic, data collection consisted of explorative multi-method research for two key socialisation agents of the child consumer: teachers (Shin & Lwin, 2016), using focus groups and parents/guardians (Cotte & Wood, 2004) through surveys as well as interactive focus groups with young children. During the pandemic, alternative methods of data collection were employed using online forums for surveys and online interviews for the teachers and parents/guardians.

Child socialisation, defined as ‘processes by which young people acquire skills, knowledge and attitudes relevant to their functioning as consumers in the marketplace’ (Ward, 1974, p. 2). Although accepted as a process involving family, peers, mass media, teachers and the wider community (Lawlor & Prothero, 2011); socialisation has tended to be conceptualized in the consumer research literature as predominantly parental, and peer (John, 1999; Hunter-Jones, 2014). Although some research has examined peer and sibling effects (Kerrane et al., 2015). This thesis extends the extant literature to develop a more holistic model of this process, encompassing policymakers, schools and parents/families, by exploring the complexity of interactions between these environments. It concludes that the manner in which children are socialised toward digital citizenship is highly complex and the development of the child technology socialisation ecosystem helps to better understand this complexity. The findings explore the role of the family, school and policy with peer to peer socialisation changing in importance and kind due to the pandemic. In the school environment, the impact that differential familial socialisation had on educational outcomes was an important theme, in addition to this, the school culture toward the use of enabling technology (ET), the teacher’s personal consumption of technology, their views and experience of child ET use and their perceived role, emerges as a further influential layer of the child consumers ET socialisation eco-system. Recommendations include the need to consider further interventions to lessen digital inequality for the child consumer.

### Supervisors:

Professor David Bryde – Professor Shona Bettany – Dr Angela Daly – Dr Tashkin Vasfi

# PUBLICATIONS AND PRESENTATIONS

## Publications

- Research in Consumer Culture Theory, Vol. 2 · Figuring the Child as Digital Native: Digital Class in the Net Generation · Proceedings of the Consumer Culture Theory conference, Montréal · 2019 ·
- Advances in Consumer Research, Vol. 49 · Sharing is Not Always Caring: Enforced Familial Sharing During The COVID-19 Lockdown · Proceedings of the Association of Consumer Research conference, Seattle · 2021 ·

## Presentations

- Sharing is Not Always Caring: Enforced Familial Sharing During The COVID-19 Lockdown · The Association of Consumer Research conference · Seattle, U.S · 2021 ·
- Don't Kids say the Darndest of Things: Figuring the Child as Digital Native to Innovate Mindful Social Media use · British Academy of Management · Conference in the Cloud · 2020 ·
- Figuring the Child as Digital Native: Digital Class in the Net Generation · Liverpool John Moores University Research Café · Liverpool, UK · 2020 ·

## Poster Presentations

- Do as I say, not as I do: Figuring the child as Digital Native Through Technology Ideology and Caregiver Consumption · The Association of Consumer Research conference · Paris, France · 2020 ·
- Don't Kids say the Darndest of Things: Figuring the Child as Digital Native to Innovate Mindful Social Media use · British Academy of Management · Conference in the Cloud · Doctoral Symposium · 2020 ·
- Figuring the Child as Digital Native: Digital Class in the Net Generation · Consumer Culture Theory conference · Concordia University · Montréal, Canada · 2019 ·
- Figuring the Child as Digital Native: Digital Class in the Net Generation · Research and Innovation Day · Liverpool John Moores University · Liverpool, UK · 2019 ·
- Figuring the Child as Digital Native: Digital Class in the Net Generation · Doctoral Research Academy Conference · Liverpool John Moores University · Liverpool, UK · 2019 ·



## ACKNOWLEDGEMENTS

This research project would not have been possible without the support given to me from colleagues, friends, family and the research participants themselves.

Firstly, my director of studies: Professor Shona Bettany, not only have you acted as a role model to me throughout this process, but you have also been a huge encouragement and support to me, from the start where I felt completely out of my depth, when I felt overwhelmed during lockdown, and when I just needed time to crack on and get it written! Your sense of humor, advice and generosity with your time and guidance made this whole research project possible. It's been an absolute pleasure to work closely with you. Thank you. Professor David Bryde who stepped in part way through the project as my DOS (thank you), but whose continued help, advice and guidance has been instrumental, thank you again for being so generous with your time and providing me with some much-needed structure throughout the completion of the project. Dr Angela Daly, discussions with you were always refreshing and enjoyable, you were always so generous with your time and advice, thank you. Finally, to Dr Tashkin Vasfi, if it were not for your kind encouragement, I would have never applied for a scholarship to complete my PhD. I really do appreciate the role you have all played in supervising this project; I will always be so grateful to you all.

To my friends and colleagues at LJMU and MMU, particularly Andrew, Jane and Dr Scott Foster, you brought light and laughter on even the most challenging of days. To my friends and family, you've listened to me laugh, cry and moan about this project since it began. Jen, Chelsea, Lauren I genuinely don't think I'd have finished without your help with my motivation, I am so lucky to have such amazing women to look up to and have the pleasure to call my friends. To my husband, who probably feels like he has worked harder than me on this PhD... from pulling all nighters to go over presentations, putting up with my anxiety, stress and sacrificing your time so I could complete this project, thank you. My dad, for taking on the unsolicited role of project manager; you not just listened but you knew when it was the right time to tell me to stop letting my brain get in the way and just get on with it. My mum, for always being so empathetic and a never-ending or wavering source of support. I don't know how you have/had the patience. To my brothers and sisters; Josh, Tiggi, Jake, Cole, Rachel, Poppy and Laura, and my mother in law, Marilyn, you've all put up with this PhD being a constant in our conversation, thank you all for the support, encouragement and all the times you've regretted asking me how my PhD is going. Finally, to my daughter; Darcey, who I'd hoped to have met after this project was over, but ironically, it seems having you was what pushed it over the line. Since meeting you, I achieved more in a few months than I had over 3 years, I give all credit to your need for naps and the joy that you bring. Thank you for being you. Lastly, but not least; to those of you who gave your time to participate in this research, if it were not for the generosity you showed with your time during the pandemic, this project would not have been possible.

**If I could award you all with an honorary PhD, I would. You certainly deserve one.**

# CONTENTS

<b>1. INTRODUCTION</b> .....	<b>21-33</b>
1.1 Introduction .....	21-22
1.2 The study scope .....	22-23
1.3 An overview of the thesis chapters.....	23-24
1.4 Researcher background .....	24-25
1.4.1 Professional.....	24
1.4.2 Organisational policy.....	24
1.4.3 Policy.....	24
1.4.4 National .....	25
1.4.5 Theoretical.....	25
1.4.6 Motivation for study .....	25
1.5 The study background .....	25-27
1.5.1 The COVID-19 pandemic .....	25
1.5.2 Digital divides among child consumers.....	25
1.5.3 The role of socialisation agents during the COVID-19 pandemic .....	26
1.6 Justification for the study and its significance.....	27-30
1.6.1 The impact of digital inequality .....	27
1.6.2 An interdisciplinary lens.....	27
1.6.3 COVID-19: A unique crisis environment?.....	29
1.7 The study significance .....	30
1.8 The study aims and objectives.....	31-32
1.8.1 Research aims .....	31
1.8.2 Research objectives.....	31
1.9 Contribution to knowledge .....	32
1.10 The thesis structure.....	32-33
1.10.1 Project flow.....	33
1.11 Chapter summary .....	33
<b>2. ENABLING THEORY</b> .....	<b>34-38</b>
2.1 Introduction .....	34
2.2 Theoretical scopes of the child consumers digital socialisation process.....	34-38
2.2.1 The socialisation process .....	34
2.2.2 Digital inequality.....	36

2.2.3 Attitudes toward digital technology.....	38
2.2.4 The ecological approach to socialisation .....	38
2.2.5 The COVID-19 pandemic .....	38
<b>2.3 Chapter summary .....</b>	<b>38</b>
<b>3. <u>LITERATURE REVIEW</u> .....</b>	<b>39-78</b>
<b>3.1 Introduction .....</b>	<b>39-40</b>
<b>3.2 Digital divides: Why should we mind the gap? .....</b>	<b>40-49</b>
3.2.1 Digital divides: An overview .....	40
3.2.2 Digital divides: The first level.....	42
3.2.3 Digital divides: The second level .....	44
3.2.4 Digital divides: The third level .....	47
3.2.5 Digital divides: Summary .....	49
<b>3.3 The role of the familial environment.....</b>	<b>49-55</b>
3.3.1 Digital inclusion.....	49
3.3.2 Digital exclusion .....	52
3.3.2 The role of the familial environment: Summary.....	55
<b>3.4 The role of the political and education environment.....</b>	<b>55-65</b>
3.4.1 The role of education policy .....	55
3.4.2 The role of education in practice .....	62
3.4.2 The role of the political and education environment: Summary.....	65
<b>3.5 Child socialisation.....</b>	<b>65-76</b>
3.5.1 Parents/Guardians as digital socialisation agents.....	65
3.5.2 Educators as digital socialisation agents .....	68
3.5.3 Policymakers as digital socialisation agents.....	70
3.5.4 Child socialisation summary.....	76
<b>3.6 Chapter summary .....</b>	<b>76-78</b>
<b>4. <u>METHOD &amp; METHODOLOGY</u> .....</b>	<b>79-112</b>
<b>4.1 Introduction .....</b>	<b>79-83</b>
4.1.1 Overview of research aim .....	80
4.1.2 Overview of research objectives .....	81
4.1.3 Research questions .....	81
4.1.4 The impact of COVID-19 .....	81
<b>4.2 Research philosophy .....</b>	<b>84-85</b>
4.2.1 Justification for the ontological position chosen.....	84
4.2.2 Justification for the epistemological position chosen .....	85
4.2.3 Justification for the axiological position chosen .....	85
<b>4.3 Approach to theory development.....</b>	<b>85-86</b>
4.3.1 Justification for the inductive approach to theory development.....	85
<b>4.4 Research design .....</b>	<b>86</b>
4.4.1 Justification for the explorative research design chosen .....	86

- 4.5 Methodological approach.....86-89
- 4.6 Research choices..... 89
  - 4.6.1 Justification toward the qualitative methodological choice ..... 89
- 4.7 Research strategy ..... 90
  - 4.7.1 Justification toward the grounded theory research strategy..... 90
- 4.8 Time horizon..... 90
  - 4.8.1 Justification of a cross sectional design..... 90
- 4.9 Data collection .....90-96
  - 4.9.1 Participant sample..... 90
  - 4.9.2 Location ..... 91
  - 4.9.3 Sampling method..... 91
  - 4.9.4 Sample size ..... 91
  - 4.9.5 Data collection methods..... 92
  - 4.9.6 The impact of COVID-19 on the data collection methods ..... 94
- 4.10 Research credibility .....96-98
  - 4.10.1 Generalizability ..... 96
  - 4.10.2 Objectivity..... 96
  - 4.10.3 Replicability..... 97
  - 4.10.4 Reliability..... 97
  - 4.10.5 Validity ..... 97
  - 4.10.6 Rigor ..... 97
- 4.11 Data analysis ..... 98
  - 4.11.1 Justification of thematic approach to analysis ..... 98
- 4.12 Ethical considerations.....98-101
  - 4.12.1 Original ethical considerations ..... 98
  - 4.12.2 The impact of COVID-19 on the ethical considerations ..... 99
- 4.13 Design of data collection instruments ..... 101-113
  - 4.13.1 Focus groups: Teachers ..... 101
  - 4.13.2 Survey: Teachers ..... 104
  - 4.13.3 Online interviews: Teachers..... 107
  - 4.13.4 Survey: Parents/guardian’s ..... 108
  - 4.13.5 Online interviews: Parents/guardian’s..... 111
- 4.14 Chapter summary ..... 112
- 5. PHASE ONE RESEARCH FINDINGS ..... 113-148**
- 5.1 Introduction ..... 113-115
- 5.2 Data analysis..... 115-122
  - 5.2.1 Secondary analysis ..... 115
  - 5.2.2 Focus group: Teachers..... 120
- 5.3 Findings ..... 122-148
  - 5.3.1 Secondary analysis ..... 122

5.3.2 Focus group: Teachers.....	127
5.4 Chapter summary .....	148
<b>6. <u>PHASE TWO RESEARCH FINDINGS</u></b> .....	<b>149-192</b>
6.1 Introduction .....	149-151
6.2 Data analysis .....	151-155
6.2.1 Teacher survey.....	151
6.2.2 Teacher interviews .....	154
6.3 Findings .....	155-190
6.3.1 Teacher survey.....	155
6.3.2 Teacher interviews .....	176
6.4 Chapter summary .....	190-192
<b>7. <u>PHASE THREE RESEARCH FINDINGS</u></b> .....	<b>193-232</b>
7.1 Introduction .....	193-195
7.2 Data analysis .....	195-200
7.2.1 Parent/guardian survey.....	195
7.2.2 Parent/guardian interviews .....	198
7.3 Findings .....	200-231
7.3.1 Parent/guardian survey.....	200
7.3.2 Parent/guardian interviews .....	218
7.4 Chapter summary .....	231-235
<b>8. <u>DISCUSSION</u></b> .....	<b>233-275</b>
8.1 Introduction .....	233-235
8.2 How the COVID-19 pandemic impacted upon the digital divide for young children..	235-247
8.2.1 The child consumers digital socialisation ecosystem: A framework.....	236
8.3 Objective one .....	247-251
8.3.1 The significance of digital inequality within the child consumption of ET .....	247
8.3.2 The significance of the familial context within the child consumption of ET.....	249
8.3.3 The significance of the education context within the child consumption of ET .....	249
8.3.4 The significance of the covid-19 context within the child consumption of ET .....	250
8.4 Objective two.....	251-254
8.5 Objective three.....	254-259
8.5.1 How parents/guardians embraced ET during the COVID-19 pandemic .....	255
8.5.2 How teachers embraced ET during the COVID-19 pandemic.....	256
8.6 Objective four .....	259-264
8.6.1 The impact of parent/guardian ET use on the child consumer.....	259
8.6.2 The impact of teacher ET use on the child consumer .....	262
8.7 Objective five.....	264-268
8.7.1 The teacher perspective on ET use in schools .....	265
8.7.2 What influences the teacher perspective on ET use in schools.....	266
8.8 Objective six .....	264-274
8.8.1 The child consumers socialisation ecosystem during the COVID-19 pandemic .....	268

8.9 Chapter summary .....	274-275
<b>9. <u>CONCLUSION</u></b> .....	<b>276-284</b>
9.1 Introduction .....	276-278
9.2 Validation of the findings .....	278-279
9.3 Implications.....	279-282
9.3.1 Contribution to knowledge.....	279
9.3.2 Contribution to theory .....	280
9.3.3 Contribution to policy .....	280
9.3.4 Contribution to practice .....	282
9.4 Limitations.....	283-284
9.4.1 Timing .....	283
9.4.2 Participant sample .....	283
9.4.3 Data collection methods .....	283
9.4.4 The restrictions of the COVID-19 pandemic .....	283
9.5 Recommendations .....	284
9.6 Chapter summary .....	284
<b>10. <u>REFERENCES</u></b> .....	<b>285-315</b>
<b>11. <u>APPENDICES</u></b> .....	<b>316-355</b>

## LIST OF FIGURES

Figure 1. Introduction chapter outline

Figure 1.1 The thesis structure

Figure 1.3 Project Flow

Figure 2. Enabling theory chapter outline

Figure 2.1 Model of relative influence

Figure 2.2 Kozinets (2008) technology ideology categories

Figure 3. Literature review chapter outline

Figure 3.1 Parents' agreement that the benefits outweigh the risks of child use of ET

Figure 3.2 Framework for change

Figure 3.4 Conceptual framework: The child consumer's digital environment

Figure 4. Method and methodology chapter outline

Figure 4.1 Original project flow

Figure 4.2 Updated project flow 2020

Figure 4.3 Original research onion

Figure 4.4 Updated research onion

Figure 4.5 Research philosophy and methodological approach

Figure 4.6 Etic and emic data collection methods

Figure 4.7 Original research ethics process

Figure 4.8 Amended research ethics process 2020

Figure 4.9 Amended research ethics process 2021

Figure 4.10 Outcome of pilot study for teacher focus group

Figure 4.11 The teacher focus group process

Figure 4.12 Outcome of pilot study for teacher survey

Figure 4.13 Outcome of the pilot survey for teachers

Figure 4.14 The teacher online interview process

Figure 4.15 Outcome of the pilot survey for parents/guardians

Figure 4.16 The parents/guardian online interview process

Figure 4.17 Outline of phases one-three of the research project

Figure 5. Phase one findings chapter outline

Figure 5.1 Age composition of non-internet users, UK, 2011-2018

Figure 5.2 The nine qualification levels across England, Wales and Northern Ireland

Figure 5.3 The analysis process: Teacher focus group

Figure 5.4 Analysis overview: Teacher focus group

Figure 5.5 Themes overview: Teacher focus group

Figure 5.6 A detailed summary of theme one from the teacher focus group: Teacher's personal consumption

Figure 5.7 A summary of theme one from the teacher focus group: Teacher's personal consumption

Figure 5.8 A detailed summary of theme two from the teacher focus group: Teacher's views surrounding technology use

Figure 5.9 A summary of theme two from the teacher focus group: Teacher's views surrounding technology use

Figure 5.10 A detailed summary of theme three from the teacher focus group: Management of devices within school

Figure 5.11 A summary of theme three from the teacher focus group: Management of devices within school

Figure 5.12 A detailed summary of theme four from the teacher focus group: Digital inequality among children



Figure 5.13 A summary of theme four from the teacher focus group: Digital inequality among children

Figure 6. Phase two findings chapter outline

Figure 6.1 The analysis process: Teacher survey

Figure 6.2 Analysis overview: Teacher survey

Figure 6.3 Demographic overview: Teacher survey

Figure 6.4 Themes overview: Teacher survey

Figure 6.5 The analysis process: Teacher interviews

Figure 6.6 Analysis overview: Teacher interviews

Figure 6.7 Demographic overview: Teacher interviewee's

Figure 6.8 Themes overview: Teacher interview

Figure 6.9 A detailed summary of theme one from the teacher survey: Teacher's personal consumption

Figure 6.10 A summary of theme one from the teacher survey: Teacher's personal consumption

Figure 6.11 A detailed summary of theme two from the teacher survey: Teacher's views surrounding child technology use

Figure 6.12 A summary of theme two from the teacher survey: Teacher's views surrounding child technology use

Figure 6.13 A detailed summary of theme three from the teacher survey: The impact of device usage within the education environment

Figure 6.14 A summary of theme three from the teacher survey: The impact of device usage within the education environment

Figure 6.15 A detailed summary of theme four from the teacher survey: Management of devices within school

Figure 6.16 A summary of theme three from the teacher survey: Management of devices within school

Figure 6.17 A detailed summary of theme five from the teacher survey: Digital inequality

Figure 6.18 A summary of theme five from the teacher survey: Digital inequality

Figure 6.19 A detailed summary of theme one from the teacher interview: Prior to pandemic

Figure 6.20 A summary of theme one from the teacher interview: Prior to pandemic

Figure 6.21 A detailed summary of theme two from the teacher interview: Changes as a result of the COVID-19 pandemic

Figure 6.22 A summary of theme two from the teacher interview: Changes as a result of the COVID-19 pandemic

Figure 6.23 A detailed summary of theme three from the teacher interview: Changes carried forward

Figure 6.24 A summary of theme three from the teacher interview: Changes carried forward

Figure 6.25 A detailed summary of theme four from the teacher interview: Changes not suitable to be carried forward

Figure 6.26 A summary of theme four from the teacher interview: Changes not suitable to be carried forward

Figure 6.27 A summary of the progression of data from the teacher data collection methods

Figure 7. Phase three findings chapter outline

Figure 7.1 The analysis process: Parent/guardian survey

Figure 7.2 Analysis overview: Parent/guardian survey

Figure 7.3 Demographic overview: Parent/guardian survey

Figure 7.4 Themes overview: Parent/guardian survey

Figure 7.5 The analysis process: Parent/guardian interviews

Figure 7.6 Analysis overview: Parent/guardian interviews

Figure 7.7 Demographic overview: Parent/guardian interviews

Figure 7.8 Themes overview: Parent/guardian interviews

Figure 7.9 A detailed summary of theme one from the parent/guardian survey: Perceived outcomes of use

Figure 7.10 A summary of theme one from the parent/guardian survey: Perceived outcomes of use

Figure 7.11 A detailed summary of theme two from the parent/guardian survey: Technology ideology

Figure 7.12 A summary of theme two from the parent/guardian survey: Technology ideology

Figure 7.13 A detailed summary of theme three from the parent/guardian survey: Management of devices

Figure 7.14 A summary of theme three from the parent/guardian survey: Management of devices

Figure 7.15 A detailed summary of theme four from the parent/guardian survey: Outcomes of child access

Figure 7.16 A summary of theme four from the parent/guardian survey: Outcomes of child access

Figure 7.17 A detailed summary of theme one from the parent/guardian interviews: Changes as a result of the pandemic

Figure 7.18 A summary of theme one from the parent/guardian interviews: Changes as a result of the pandemic

Figure 7.19 A detailed summary of theme two from the parent/guardian interviews: Changes from the pandemic that will be carried forward

Figure 7.20 A summary of theme two from the parent/guardian interviews: Changes from the pandemic that will be carried forward

Figure 7.21 A detailed summary of theme three from the parent/guardian interviews: Changes from the pandemic that will not be carried forward

Figure 7.22 A summary of theme three from the parent/guardian interviews: Changes from the pandemic that will not be carried forward

Figure 7.23 A summary of the progression of data from the parent/guardian data collection methods

Figure 8. Discussion chapter outline

Figure 8.1 The discussion of the conceptual framework: The child consumer's digital environment

Figure 8.2 The discussion of the elements within political influence

Figure 8.3 The discussion of the elements within school influence

Figure 8.4 The discussion of the elements within family influence

Figure 9. Conclusion chapter outline

## LIST OF TABLES

Table 1. The aims of EdTech

Table 2 Consumer socialisation stages

Table 3. The three levels of digital divides

Table 3.1 Activity types

Table 3.2 Motivational items for activity engagement

Table 3.3 Type of usage

Table 3.4 Summary of key commitments

Table 3.5 Researcher summary of EdTech (2019a) policy document

Table 3.7 The digital skills framework

Table 4. The differences between deductive and inductive approaches to research

Table 4.1 Common uses of focus groups

Table 4.2 The justification the teacher focus group and survey questions

Table 4.3 The justification of the teacher online interview questions

Table 4.4 The justification of the parent/guardian questionnaire questions

Table 4.5 The justification of the parent/guardian interview questions

Table 5. Justification of socio-demographic factors considered

Table 5.1 Secondary analysis findings: Location

Table 5.2 Justification of institutional factors considered

Table 5.3 Secondary analysis findings: Schools

Table 8. The significance of demographic and motivational factors found within the parent/guardian data collected

Table 8.1 The significance of school factors found within the teacher data collected

Table 8.2 The significance of socio-economic factors on the relative influence of socialisation agents in the familial context during the COVID-19 pandemic

Table 8.3 The significance of socio-economic factors on the relative influence of socialisation agents in the education context during the COVID-19 pandemic

Table 8.4: The impact of digital inequality on the child's socialisation within the education environment

## LIST OF APPENDICES

Appendix 1- Research ethics training

Appendix 2- DBS certificate

Appendix 3- Certificate of first aid

Appendix 4- Information sheets: Schools, parents, teachers and children

Appendix 5- Consent forms: Gatekeeper (school), teachers and parents/guardians and children

Appendix 6- Ethics approval 19/LBS/022

Appendix 7- Updated ethics approval 19/LBS/022

Appendix 8- Child focus group template

Appendix 9- Teacher focus group template

Appendix 10- Teacher interview template

Appendix 11- Parent/guardian interview template

## LIST OF ABBREVIATIONS

ET- Enabling Technology

COVID-19- Coronavirus Disease 2019

EdTech- Educational Technology Policy

DfE- Department for Education

PSHE- Personal, Social, Health and Economic education

ONS- Office of National Statistics

IMD- Index of Multiple Deprivation

IDACI- Income Deprivation Affecting Children Index



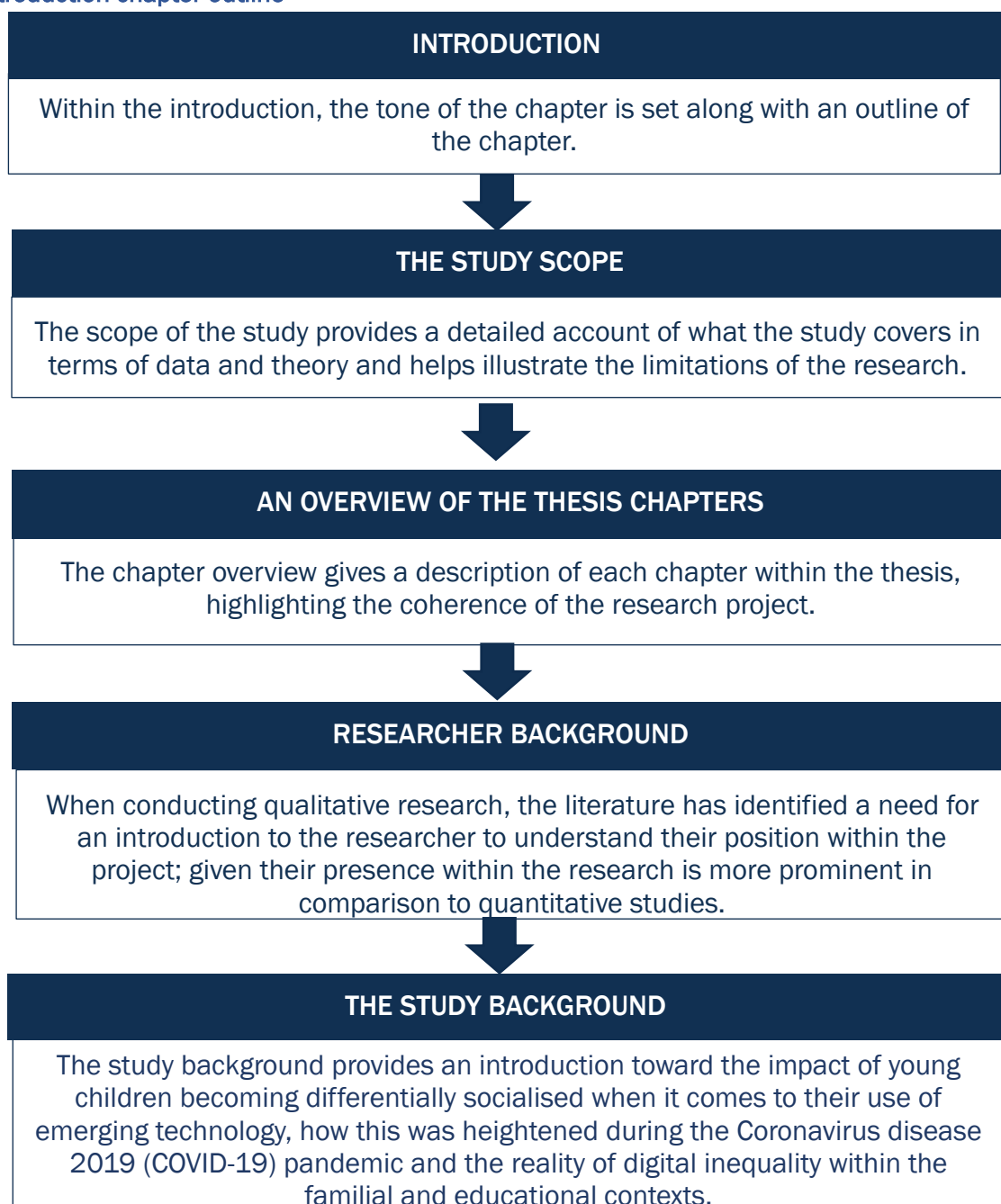
# CHAPTER ONE

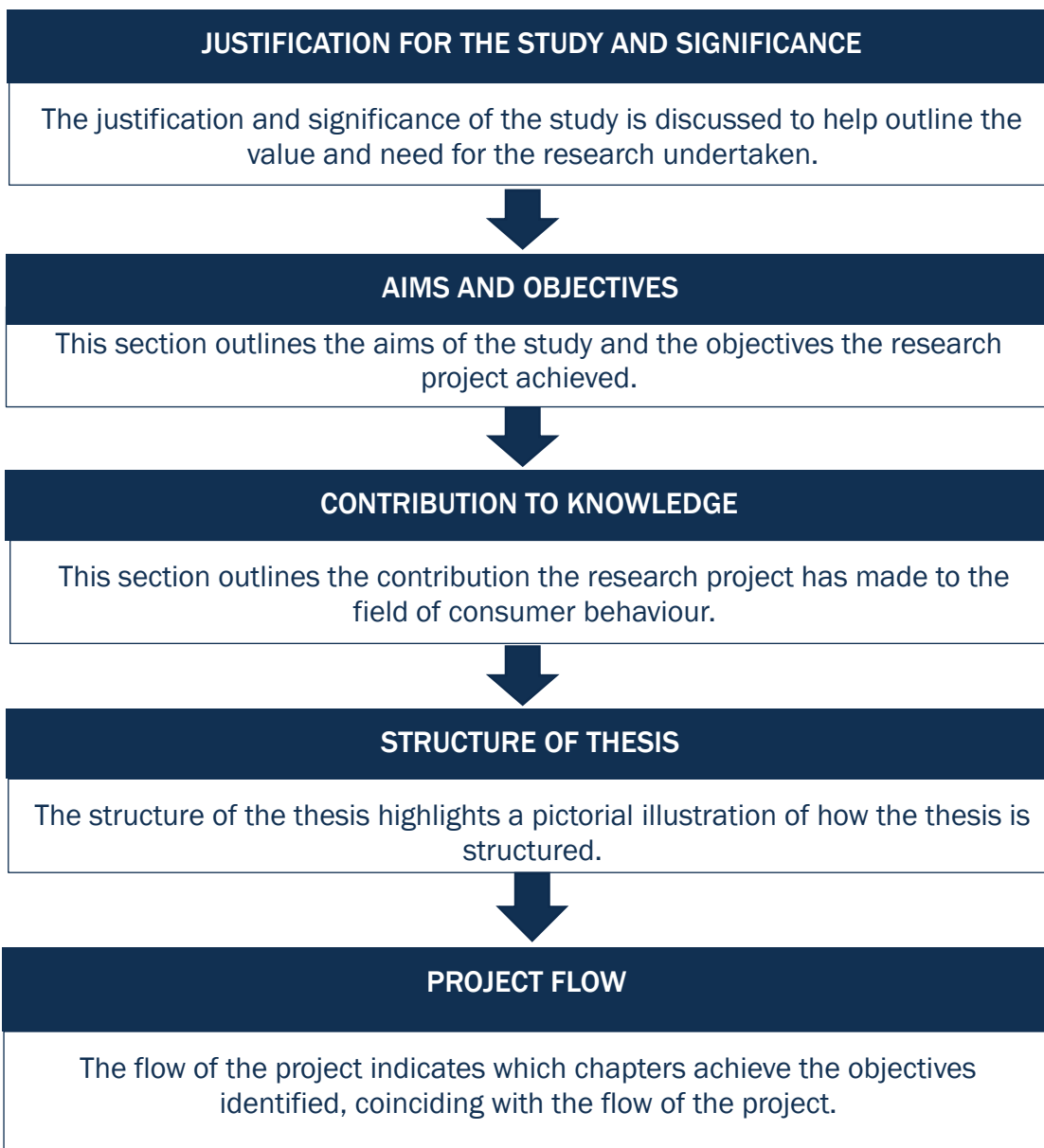
## · INTRODUCTION ·

### 1.1 INTRODUCTION

The introductory chapter contextualizes the research undertaken by discussing the scope, background, justification, significance and contributions of the study. An overview of the chapters is also provided with the overall structure and flow of the project outlined.

Figure 1: Introduction chapter outline





## 1.2 THE STUDY SCOPE

The COVID-19 pandemic increased digital inequalities, making those on the wrong side of the digital divide increasingly vulnerable (Beaunoyer, et al., 2020). This research project surrounds the highly emotive topic of the child consumer’s rights approach to digital experiences (Livingstone, et al., 2023). The recent ban of smartphones within schools exemplifies that although access was accelerated during lockdown (Cruz-Cárdenas, et al., 2021); we still do not fully understand this. The policy prohibiting the use of mobile phones seeks to ban the use of smartphones in schools (Department for Education, 2024), whereas teachers and parents disagree about the effectiveness of this (Asbali, 2024; Milmo, 2024). The findings show the complexities of ET use among young children is not going away and answers the research question: “How has the COVID-19 pandemic impacted upon the digital divide for children?” with the aim of exploring how ET was embraced within the familial and education environment’s during the COVID-19 lockdown context. This topic divides opinion on how best to guide children to become digital citizens, interrelating the contributions of the research: Understanding how the COVID-19 pandemic impacted upon the digital divide for young children, adding the concept of child socialisation ecosystems within digital socialisation research, introducing teachers as important socialisation actors within the child socialisation ecosystem and to help policymakers and educators understand the status quo of the digital divide in the post-COVID era.

The scope of the project surrounds data collected in the days leading up to the COVID-19 lockdown environment (focus group of the teachers), during lockdown (teacher and parent surveys) and post-lockdown (teacher and parent interviews). It covers the experience of these participants during this

time, with consideration toward how they used ET, what changed about this in comparison to pre and post pandemic life, as well as their views on the experience of the child consumer. Although the child consumer is the focus of this project, it was not possible to speak to young children directly due to the pandemic. This study accesses the perspective of teachers and parents on the child as consumers of ET. The research was limited toward the digital aspects of the lockdown environment that impacted the socialisation of the child consumer which is where the addition of knowledge stems from; avenues of exploration outside of this scope were not investigated further.

This study considers the account of lockdown experiences of parents who had children aged 8-11, although some parents also had other children of different age groups, parents were only asked to complete the survey if they had children within this age group. Teachers were asked to complete the survey if they taught children from the ages of 8-11 which included both primary and secondary school teachers. The geographic location was initially Merseyside, however due to lockdown and the nature of the online data collection methods, it was difficult to only target one area, thus the data is representative of parents and teachers who reside in the UK. The sample size was less of a concern whereby data saturation was reached throughout all methods of research.

Constraints of the project lie within the time period within which it took place as face-to-face research was not possible, and online methods had to be utilised. Although this was not in the control of the researcher, every effort was made to limit any possible issues of this and the context of the COVID-19 environment is completely transparent throughout the project.

## 1.3 AN OVERVIEW OF THE THESIS CHAPTERS

### Chapter one: introduction

Within chapter one an introduction to the project is given. This adds value to the thesis by outlining the relevance of the research undertaken, introducing the reader to the research question, aims and objectives as well as providing information surrounding the researcher, the study background and rationale. An overview of the chapters is given to conceptualise the structure of the thesis.

### Chapter two: enabling theory

Chapter two offers a snapshot of the different theoretical perspectives toward the topic under investigation, it adds value to the thesis by highlighting how interrelating these perspectives enable the topic to be fully explored. This allows the reader to consider these theories as a frame of reference when reading the chapters through the viewpoint of the researcher.

### Chapter three: literature review

The literature review achieves objective one by tying together existing knowledge through a multi-disciplinary lens between consumer behaviour pertaining to ET use within the familial, educational, political and COVID-19 context with a focus on digital inequality. Value is added through this chapter by understanding current research in the area of the child consumers digital socialisation.

### Chapter four: method and methodology

Within this chapter the research philosophy, approach, design, methodology, strategy, data collection methods, analysis techniques and ethical considerations are detailed. This adds value to the thesis by outlining the researchers considerations and justifications toward the approaches taken, as well as highlighting the impact the COVID-19 context had on the data collection and sampling techniques. In doing so, transparency is given toward how the data was collected and the findings analysed.

### Chapter five: phase one

Chapter five illustrates the findings from the first stage of the research which was achieved leading up to the COVID-19 lockdown. This phase includes the focus group for teachers which aided the development of the teacher survey.

### Chapter six: phase two

Chapter six follows the same structure as chapter five by outlining the findings from the surveys and interviews conducted for the teacher participants. This research took place both during and after the COVID-19 lockdown context.

### Chapter seven: phase three

Phase three within chapter seven outlines the findings of the data collected from the surveys and interviews conducted for the parent/guardian participants. This research also illustrates data collected both during and after the COVID-19 lockdown context.

### Chapter eight: discussion

Within the discussion chapter the findings from each phase of the project are holistically considered. In doing so, the research question: how did the COVID-19 pandemic influence the digital divide for the child consumer? Is answered and a conceptual framework for understanding the child consumer's digital socialisation during the COVID-19 pandemic is shown. This adds value to the thesis by showing in what ways the findings interrelate current literature, and how the findings extend on pre-existing knowledge.

### Chapter nine: conclusion

Chapter nine concludes the research project with consideration toward practical, theoretical and political contributions the study makes. This chapter is valuable to the overall thesis by stating the implications and recommendations resulting from the research findings as well as considering avenues for future research.

## 1.4 RESEARCHER BACKGROUND

Given (2008) highlights the importance of transparency within qualitative research, the background of the research and researcher has been included for research credibility. Plowright's (2011) framework has been utilised by highlighting the five contexts within which research questions are formulated.

### 1.4.1 PROFESSIONAL

During my MSc Digital Marketing dissertation at LJMU, I investigated through focus groups the social media activities of young children. This highlighted disparities in their experiences, making me concerned not just for their safety, but for those excluded. It was evident some children were missing out on key elements of consumer culture.

### 1.4.2 ORGANISATIONAL POLICY

Primary and Secondary school's within the UK form the organisational context for the study. Reference is made to the UK educational policy throughout this thesis.

### 1.4.3 POLICY

The MSc dissertation focussed on the Online Harms White Paper (2019), referred to as the Online Safety Bill (UK Parliament, 2022 b.), which seeks to put in place further restrictions regarding child internet use. The pandemic highlighted further prominence of this topic within education which

interrelates policy pertaining specifically to the digitisation of education, referred to as EdTech (2019a).

It is important to note changes within laws toward consumers daily lives during the COVID-19 pandemic; people were restricted to their homes whereby home schooling and work was facilitated virtually. Only key workers remained in the face-to-face work environment, with children of these workers permitted to remain in school (Public Health England, 2020). Leaving the home was only permitted if deemed essential for the care of others, to get food or medical supplies and for one hour of outdoor exercise (Cabinet Office, 2020).

#### 1.4.4 NATIONAL

This research takes place within the United Kingdom.

#### 1.4.5 THEORETICAL

The theoretical scope emphasises multiple levels of socialisation; the macro-level as political, the meso-level to be institutional and the micro level to be agents within everyday environments such as the family (Richardson, et al., 2005).

#### 1.4.6 MOTIVATION FOR STUDY

My family background influenced me as a researcher and my interest in the topic because I have seen first-hand that not all siblings in the same household have equal digital socialisation experiences. The detriment of digital inequality within the workplace is something I have also observed throughout many professional roles. This motivated me to research how embedded differential access and opportunities are within the layers of the child consumers socialisation ecosystem.

### 1.5 THE STUDY BACKGROUND

#### 1.5.1 THE COVID-19 PANDEMIC

The COVID-19 pandemic required consumers to be more reliant on technology than ever before, where it was expected to be used as an educational tool during school closures, for remote working, a way to access health services and care, as well as being the main communication tool for consumers during lockdown periods (Sheth, 2020; Ofcom, 2020). This unique cultural shift in terms of a consumers' reliance on technology highlighted the severity of digital disparities; intensified for young children whereby they are reliant on their parents and teachers when building their digital citizenship (Mossberger, et al., 2008). For some, their independent digital knowledge and skills were relied upon in their household during the pandemic, either to stay engaged with their own educational activities, at times assisting caregivers as well as taking on 'sibship' responsibilities; acting as key socialisation agents to their siblings (Kerrane, et al., 2015). The increased reliance on technology within the home and school environment meant inequalities in consumers skill and engagement when using devices were more intensely realised, with all members of the household feeling the effects of the frustrations that would have come from an absence or shortage of skill and aptitude in this area.

#### 1.5.2 DIGITAL DIVIDES AMONG CHILD CONSUMERS

Research interrelating digital disparities within young consumers has previously been focused on digital literacy due to public concern surrounding young children with internet access (Livingstone, et al., 2018), with research centring on child protection. Ownership of ET "technology that enables the user to perform a task or to improve his or her overall performance: e.g. the internet" (Collins, 2024); is becoming increasingly ambiguous among young children with some parents seeing it as a 'rite of passage' around age 11/12 (Haddon & Vincent, 2015; Bettany & Kerrane, 2016), access however is starting much earlier (Ofcom, 2019). With regard to the use of ET within schools, policies are not unified, thus within the UK, access is unequal and the responsibility of the family. During

the COVID-19 pandemic lockdown context, access was deemed essential as a source of education, entertainment and social support, thus the effect of differential ownership and access among child consumers was problematic during this time. The differential consumer experiences surrounding ET leads to implications for equality of educational opportunity, sociality, support and friendship. Earlier studies including the pan-EU Net Children Go Mobile survey (3500 respondents/9–16 years) (Ólafsson & Mascheroni, 2015) suggest emergent digital inequalities among children with and without access to the internet intersect with social inequalities, and can result in disparities in online activities, with children who benefit from a greater autonomy of use and a longer online experience, having enhanced socio-economic opportunities. The pandemic saw this suggestion turn to a world-wide reality. Issues relating to digital exclusion/inequality are therefore becoming more central, as the pandemic has accelerated the ubiquity of reliance on ET, making this line of research increasingly more important.

### 1.5.3 THE ROLE OF SOCIALISATION AGENTS DURING THE COVID-19 PANDEMIC

The three contexts within which child socialisation took place during the pandemic included the familial (micro-environment), educational (meso-environment), and political (macro-environment). Barnes (2022) highlights how parents and carers are integral policy actors given their advocacy is central to campaign success, reinforcing the findings from Löblich & Wendelin (2012), that policy decisions form part of a mass process. The familial environment is particularly prominent given children model their parents (Bandura, 1977). Carers who do not use the internet, are less likely to introduce their children to ET, it is therefore the goal of policy to ensure every child has access and certain skills, this goal is then carried out by teachers meaning the first level divide (access) is lessened by policy makers, teachers work toward equality of opportunity within the second level divides (skills) and parents play a vital role within the third level (outcomes) (Keen & France, 2022).

Policy makers are an indirect but authoritative agent when it comes to the digital socialisation of young children; with aims to deliver economic and social growth through the development of digital skills (Davies & Eynon, 2018). The proposal of Educational Technology policy (EdTech) was piloted in April 2019 (DfE, 2019b) and seeks to standardize the digital skill development of young children within schools.

Teachers are a direct reflection of policy influence, given the department of education will direct and set policies that teachers work toward (such as the teaching of digital skills) and teach the use ICT technology (Schriever, 2020), which was heightened when education was virtually facilitated during the pandemic. However, teacher attitude impacts how technology is used in the classroom and therefore the socialisation experience for young children (Schriever, 2020). Kemp, et al. (2018) suggests as computing studies is no longer mandatory within Progress 8 (DfE, 2016; DfE, 2017; DfE, 2019a; DfE, 2020) school leaders may be less encouraging toward spend in this area however. This indicates that although the macro (political) context aims to standardise the development of digital skills within the meso (education) context, this is not the case within individual schools and classrooms.

Research has well documented the importance of caregivers within a child's digital culture, whether they are directly or indirectly mediating their child's use of ET (Kordrostami, et al., 2018). When in the role of caregiver, Liu, Dallas & Fitzsimons (2019) highlight consumers strive to balance the carers preferences and child's preferences, whilst making choices appropriate for the child's long-term wellbeing. Mascheroni, et al. (2016) highlights understanding parental use of ET is pivotal in understanding children's, thus many studies have considered the digital media socialisation process from the parental perspective. Socialisation differs within every household however.

This project progresses understanding toward how these three important contexts within the child consumers digital socialisation eco-system embraced ET during the pandemic, and the impact on



the child consumer. Therefore delving further into Sheth's (2020) initial discussion on the immediate impact of COVID-19 on consumer behaviour.

## 1.6 JUSTIFICATION FOR THE STUDY AND ITS SIGNIFICANCE

The justification of this study stems from considerations of inequality within the consumption of ET. The significance comes from exploration of this within a unique crisis environment: The COVID-19 pandemic. Focusing on the context of the familial, educational and political environment during this time, extends knowledge of consumer behaviour theories surrounding a consumers' individual agency toward the use of ET and how this is influenced by differing layers within the digital socialisation process, with emphasis toward the impact of this on young children.

### 1.6.1 THE IMPACT OF DIGITAL INEQUALITY

The opportunities available to consumers utilizing the beneficial outcomes of technology use bleeds into social, cultural and economic outcomes (Helsper & Reisdorf, 2017). With 86% of the UK adult population deemed internet users (Ofcom, 2020), research has moved beyond broad considerations between the have and have nots when it comes to digital inclusion, but the quality of that inclusion. Lines are becoming less clear-cut between online and offline inequality, with Helsper & Reisdorf (2017) finding them to be intrinsically linked. This means those who suffer from offline social exclusion, might find this reality lessened through digital inclusion and vice versa. Thus, the richness in the outcomes of consumer inclusion (both social and digital) is determined through the interdependent relationship between their offline social and digital behaviours. As indicated within the background of this study, social inclusion was sustained and contingent on a consumer's digital inclusion during the COVID-19 pandemic context. Consumers face pertinent levels of inequality without equal opportunities when it comes to our socialisation and education surrounding ET.

### 1.6.2 AN INTERDISCIPLINARY LENS

#### The familial context

Socio-demographic factors largely effect the outcomes of digital technology use, however exclusion is increasingly becoming a personal consumer choice (Helsper & Reisdorf, 2017). Complex familial negotiations take place with regard to child internet access, whereby parents are the purchasers, but children are the consumers (Kerrane , et al., 2012; Kerrane & Hogg, 2013). Personal choice within the home environment are rightly with parents/guardian's, however total exclusion can lead to detriments later in life where Weil et al (1990) found technophobia could present itself as an anxiety about present or future interaction, negative global attitudes about technological operations and their societal impact, or self-critical internal dialogues during present or future interactions. In this study, the media was also found to have influenced the participants' attitude toward technology depending on their predisposition, which largely stemmed from their experience of use. Within a society such as the UK where rapid technological innovation is prominent, this hinders the availability of socio-economic opportunities for consumers who have been completely excluded from access to ET. Consumers whose socialisation agents were uncomfortable when introducing technology are far more likely to experience technophobic tendencies, than those whose socialisation agents were comfortable and confident when introducing technology. In Weil & Rosen (1995), this work was extended in a cross-country study, finding technophobia in countries where technology is common and innovative (much like the UK) may express phobias through their fear of the unknown, but also by being overwhelmed with the volume of gadgets available.

Helsper & Reisdorf (2017) considered the emergence of a digital underclass throughout a longitudinal cross country-study finding in Sweden and Britain where internet use was high, motivation was the main focus of technological inclusion. Motivations toward access are not balanced however, Kalmus, et al. (2011) developed a quantitative study, with personality traits as

the basis for identifying inclusion/exclusion choices. Here it was found consumers were motivated to use the internet primarily for social media and entertainment or work and information, finding the younger generations were more likely to access the internet for social media and entertainment purposes. The findings with regard to these choices, motivations, value and desire to use technology can be conceptualised throughout Kozinets (2008) work on technology ideologies. The narratives here were conceptualised as techspressive: “technology consumption as pleasure”, work machine “technology consumption as economic engine”, Techtopian “technology consumption as social progress” or Green Luddite “technology consumption as destruction of the natural”. Within this study, it was found consumers who used technology at work did not want to use it at home. Conversely, within the context of the caregiver, Mascheroni, et al. (2016) found parents ICT use at work positively impacted the active mediation of child’s media (regardless of their socio-economic background). This pilots the need for minimal exposure of balanced technology use and the importance of interludes of this access. The necessity of balance and use of technology was heightened within the family home during the COVID-19 pandemic, making the context of this study illustrious for exploration of this nature.

## The educational context

van Deursen & van Dijk (2019) highlight that despite common access to the internet (ONS, 2020), affordability is still a consistent issue. Not in terms of basic access, but the expenses associated with maintenance, software, subscriptions and other device related opportunities; relating to second and third level divides. Pearce & Rice (2013) suggest users of ET did not engage in as many beneficial activities in comparison to devices that are more costly to maintain (laptops and computers), despite being the most common forms of internet access for those on ‘the wrong side of the digital divide’. With this study being centered around young children, it invites an interdisciplinary perspective between the familial and educational contexts. Reasons for this are that educational institutions are by definition, responsible for ensuring equality of access to materials, insights and experiences that lead to advanced socio-economic opportunities in the future: “We work to provide children’s services, education and skills training that ensures opportunity is equal for all, no matter background, family circumstances, or need. At our heart, we are the department for realising potential. We enable children and learners to thrive, by protecting the vulnerable and ensuring the delivery of excellent standards of education, training and care. This helps realise everyone’s potential – and that powers our economy, strengthens society, and increases fairness” (DfE ‘about us’, 2021).

In ensuring potential to empower the economy, computer technology previously implicated education policy as the commodity was seen to increase human capital, making workforces better educated, more productive and competitive (Mossberger, et al., 2003, p. 5); whereas ET has not (or at least not equally) been introduced across schools in the UK. Since the introduction of computing technology in schools in the 1990’s (Tatnall & Davey, 2014), ET such as tablets and smartphones have come a long way. They can no longer be considered a ‘shiny new toy’ when free exploration of the internet is pertinent to build digital literacy and resilience (Hollis, et al., 2020). The LR discusses in detail how the quality of digital outcomes are dependent on the device on which the internet is accessed, however beneficial outcomes are available to those with access to the internet from a wide range of devices. The likelihood of beneficial outcomes however, is currently dependent on the way in which use is encouraged within households. Consideration toward inequality in this regard is already prevalent, not only within research confirming relationships between socio-demographic variables and quality digital usage, but also within initiatives from the UK Government encouraging parents from lower income household’s to use educational apps on ET such as smartphones and tablets (DfE, 2019c).

Consumer behaviour is the lead discipline within this research because it moves beyond considering educational institutions and educators in the same regard. Teachers within this study are considered as consumers of technology in the first light, the dynamism of their consumption of technology and how this is reflected in their teaching practice is then considered. This is considered



through the teacher’s individual relationship with technology, what an institution ‘should’ or ‘should not’ be doing is considered the responsibility of educational policy.

### 1.6.3 COVID-19: A UNIQUE CRISIS ENVIRONMENT?

Although there is a unique nature of the COVID-19 context, exploration during this time allows insight toward a post-pandemic environment. The exploration of technology use during the pandemic is of pivotal interest given the unique crisis is arguably representative of a snapshot of future consumer behaviour, whereby technological reliance increases. Theoretically this is pertinent to this context alone, and the main contribution this study seeks to make.

The COVID-19 pandemic saw the issue of digital inequality move from a ‘join the que’ attitude with regard to the involvement of technology within education, to a non-optional necessity. EdTech was planned to be integrated within schools from April 2019 with the aim to develop and embed technology in a bid to diminish current barriers hindering the support and utilisation of good technology use. These aims take the form of cutting teacher workloads, increasing efficiencies, inclusion and to improve educational outcomes (DfE, 2019b). Policymakers acknowledged delaying or rather, not prioritising this was an oversight during the Westminster Education Forum policy conference, (2021). Nevertheless, educators worked tirelessly to ensure these plans were accelerated in facilitating virtual learning during the national lockdown. Looking to the future, [table 1](#) outlines the aims of EdTech.

**Table 1: The aims of EdTech**

AIM	ACTION
<b>Support learning throughout life</b>	<ul style="list-style-type: none"> <li>• Helping those not in formal education to gain new skills</li> <li>• Proving use of home early learning apps can be beneficial for both parents and children</li> <li>• Improving delivery and accessibility of online basic skills training for adults</li> <li>• Incorporating artificial intelligence (AI) to support the delivery of online learning and training for adults</li> </ul>
<b>Teaching practice</b>	<ul style="list-style-type: none"> <li>• Identify the best technology proven to help level the playing field for learners</li> <li>• Encourage and demonstrate teachers to diagnose and support their development needs through the use of technology</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Include the use of technology to help reduce teacher workload relating to assessment preparation and marking</li> <li>• Incorporate anti-cheating software</li> </ul>
<b>Administration</b>	<ul style="list-style-type: none"> <li>• Improve parental engagement and communication that is mediated through technology use with the aim of reducing teacher workload</li> <li>• Use technology to facilitate part-time and flexible working patterns</li> </ul>

A survey conducted from November 2020-January 2021 aimed to capture the experiences of schools during lockdown, and embedded responses from 1,012 schools, 1,001 Headteachers, 943 teachers and 975 staff members who had knowledge of EdTech capacity within the school (DfE, 2021). When asked about issues for child consumers during this time, 61% of teachers noted the availability of technology in pupils homes as a ‘big barrier’, a further 33% said this was a ‘small barrier’ with only 4% suggesting this was not an issue. Internet connectivity was similarly regarded with only 5% stating this was not an issue. With regard to digital skills however, 31% observed this as a big issue, 50% as a small issue and only 18% of teachers did not see this as a barrier. From an institutional perspective, wireless connectivity in school was not seen as a barrier by 32% of Headteachers and 37% of teachers. 40% of Headteachers and 42% of teachers did not experience issues with the broadband connectivity in the school. Staff barriers in terms of current skills/confidence was not seen as an issue for 12% of Headteachers and 42% of teachers. This is

concerning considering an overwhelming number of teachers and Headteachers saw both institutional, and personal capability as an issue. Willingness to use technology however was not seen as an issue by 37% of Headteachers and 67% of teachers, which is a positive sign. The initial descriptions of these barriers signify the importance of foresight toward what this will mean for the continuous interrelation of EdTech in the future. Exploration in the context of the COVID-19 pandemic is a significant contribution of this research.

## 1.7 THE STUDY SIGNIFICANCE

Research surrounding technology adoption theories is largely focused on factors or criteria that result in inclusion or exclusion (Straub, 2009). Differential outcomes of technology inclusion are recognised (Livingstone, et al., 2019) and looks at the consumers outcomes of technology use with consideration toward socio-demographic variables. A consumers' individual agency within environments that are significant to the child consumer, such as the family and schools during the COVID-19 pandemic are under explored. The significance of inequality within a child's experiences surrounding technology use tends to be overlooked given priority has (rightly so) been toward safety and potential harms (HM Government, 2017). The prioritization of focus toward child safety and harms is thoroughly justified, however the role of digital inequality within a child's consumer's socialisation is an area that can be explored further; the enforced reliance on technology during the COVID-19 pandemic heightened awareness toward this.

### Political significance

The permanence of the increased reliance on technology resulting from the pandemic has been infused within work and educational environments especially. This indicates that whilst the COVID-19 context is considered a unique crisis environment, technological capabilities, and our reliance on devices is only moving forward. The pandemic environment is considered a snapshot of what the future will hold (Sheth, 2020). Understanding the dynamism of a consumers digital socialisation is of key interest to policymakers in ensuring consumers are not left disadvantaged in an increasingly digital world (DfE, 2019b). Not only in ensuring that the UK's workforce is globally valuable and well equipped for this future, but that consumers understand the different outcomes available to them and in an equal stead, the importance of balance and the significance of harms when using devices. The significant policies in this area include the Online Safety Bill (UK Parliament, 2022 b.) and digital education, EdTech (2019a). The findings of the study provide significant implications toward EdTech policy (2019a), finding policymakers need to take a more active role to achieve the policy aims.

### Theoretical significance

The theoretical significance of this study comes from the enforced nature of technology adoption as a result of the constraints from the COVID-19 pandemic. Technology adoption was necessitated during this time which in turn led to technology diffusion in a different sense than previously considered, stemming from crisis as opposed to personal choice. The theoretical focus explores the child's digital socialisation environment within an ecological approach toward the different socialisation contexts that were significant during the COVID-19 pandemic. By extending knowledge toward the dynamism of ET use within this eco-system, the study heightens awareness toward the implications of a lack of unified policy when it comes to the child consumers socialisation within the macro, meso and micro contexts.

### Practical significance

The practical significance of this study surrounds the three environments that were of focus: The political, educational and familial which resulted from the achievement of objective six. The findings show each environment are working toward a shared goal; the digital education and protection of the child consumer. The implications of this study highlight understanding toward the process of digital competence needs to be reconsidered whereby ideals currently surround children being digitally literate without exposure to risk.

## 1.8 THE STUDY AIMS AND OBJECTIVES

### 1.8.1 RESEARCH AIMS

The review of current literature identified a need to expand knowledge surrounding the child consumer's digital socialisation environment during the COVID-19 pandemic; whereby consumers of all ages, backgrounds and industries were more reliant on technology than ever before, heightening the awareness and impact of digital inequality. The project aimed to explore how ET was embraced by consumers within the familial and education environment's during the COVID-19 context with focus on how this impacted the child consumer.

### 1.8.2 RESEARCH OBJECTIVES

**Objective one:** To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic.

This objective is important to the whole research process from recognizing what is already known to the field of consumer behaviour and digital divides with concentration on the familial and education contexts during the COVID-19 pandemic. Considering different theoretical and methodological approaches used throughout the literature aided the design of the research questions and was useful when interpreting the findings.

**Objective two:** To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected.

This objective was important to ensure the data analysis was rigorous in its exploration toward the embrace of ET for parents and teachers during the COVID-19 pandemic. With consideration toward what this meant for the child consumer, it facilitated deeper understanding toward the outputs of the research.

**Objective three:** To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic.

Digital inequality within the consumption of ET is increasingly becoming a choice in cultures like the UK. It was important to gain understanding toward how socio-economic factors impacted the embrace of ET during the COVID-19 lockdown context as well as how parent and teacher consumers embraced ET during lockdown.

**Objective four:** To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer.

Although young children are the consumers, parents are the purchasers and schools have autonomy when it comes to the introduction of ET. Both socialisation agents heavily influence a child's digital socialisation which was heightened due to the reliance on ET during this time and the significance of these contexts. This was achieved through focus groups, online questionnaires, and interviews.

**Objective five:** To investigate and evaluate an educators perspective on the use of ET within schools.

This objective was important to gain understanding toward how ET is utilised within schools in understanding the implications of the individual autonomy schools have with regard to ET use. This was more significant during the during the COVID-19 lockdown whereby virtual learning was facilitated. This was investigated through focus groups, questionnaires and interviews.

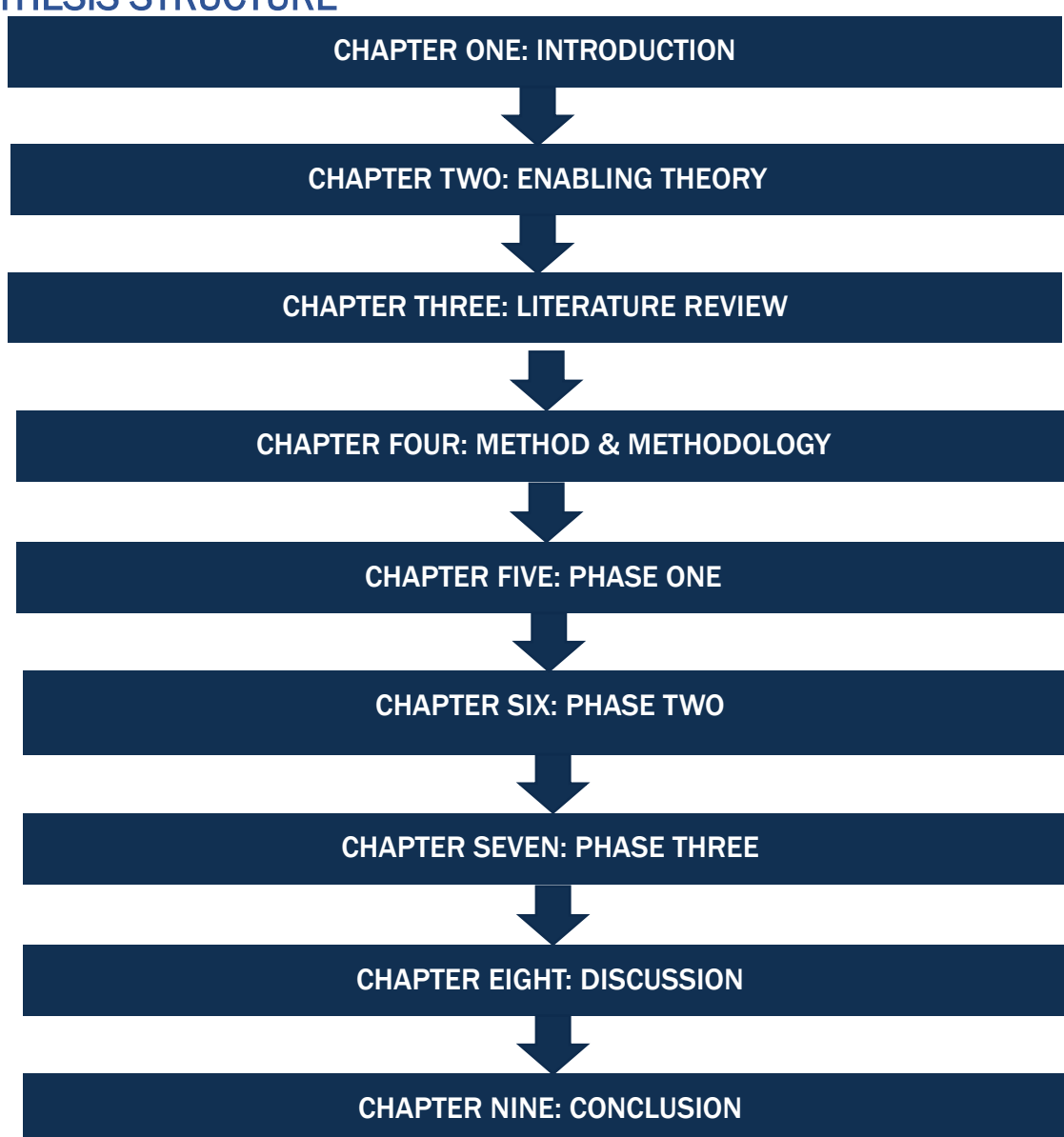
**Objective six:** To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future.

The final objective relates to the outputs of the research project in terms of the contribution it seeks to make.

## 1.9 CONTRIBUTION TO KNOWLEDGE

This thesis presents three interlinked contributions. The first relates to the empirical evidence presented in the findings, addressing the research question of “how has the COVID-19 pandemic impacted upon the digital divide for children?” The second contribution augments child socialisation theory by adding the concept of child socialisation ecosystems, this introduces important socialisation actors (like teachers) into consumer research which has hitherto largely ignored these aspects of child socialisation. The third contribution is to policy makers and educators to help them understand the status quo of the digital divide as we go into the post-covid era.

## 1.10 THE THESIS STRUCTURE



### 1.10.1 PROJECT FLOW

Objective one was achieved through the literature review (chapter two), the key findings of the literature review are illustrated through **figure 3.3** to show how the research questions for the project were developed, which is explained within chapter three: the method and methodology. Objective two, identifying the demographic and motivational factors through a secondary analysis, can be seen within **table 4** throughout the first phase of the project (chapter four). The data collection stages achieve objectives three-five which are demonstrated through phases one-three of the research project and chapters four-six. The final objective is achieved throughout chapter eight.

Figure 1.3: The project flow

PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator's perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator's perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

### 1.11 CHAPTER SUMMARY

The introduction chapter has outlined the justification for the research taking place, the aims and objectives as well as the scope and significance of the research undertaken. It has also outlined how the thesis will be structured in achieving the aims and objectives of the project.

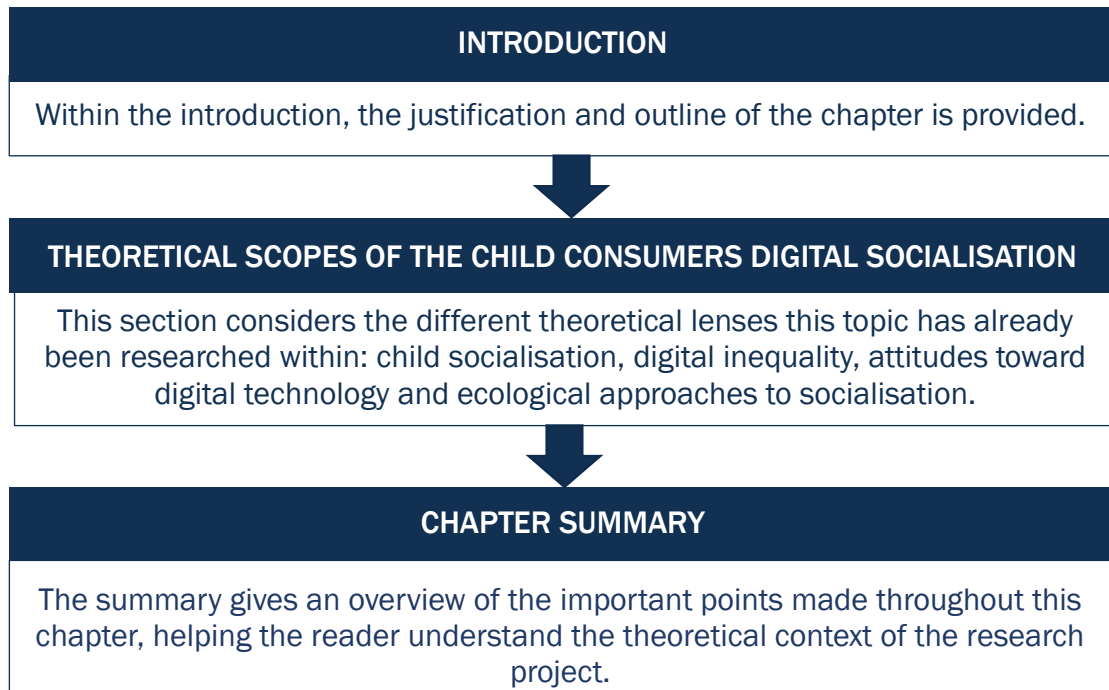
# CHAPTER TWO

· ENABLING THEORY ·

## 2.1 INTRODUCTION

Within this chapter the different theoretical approaches to understanding key topics within this research project are outlined by highlighting how these theoretical lenses can be interrelated in understanding the topic under investigation. By including an enabling theory chapter, it allows deeper understanding toward the shape and perspective of the research project (Dolbec, et al., 2021).

Figure 2: Enabling theory chapter outline



## 2.2 THEORETICAL SCOPES OF THE CHILD CONSUMERS DIGITAL SOCIALISATION

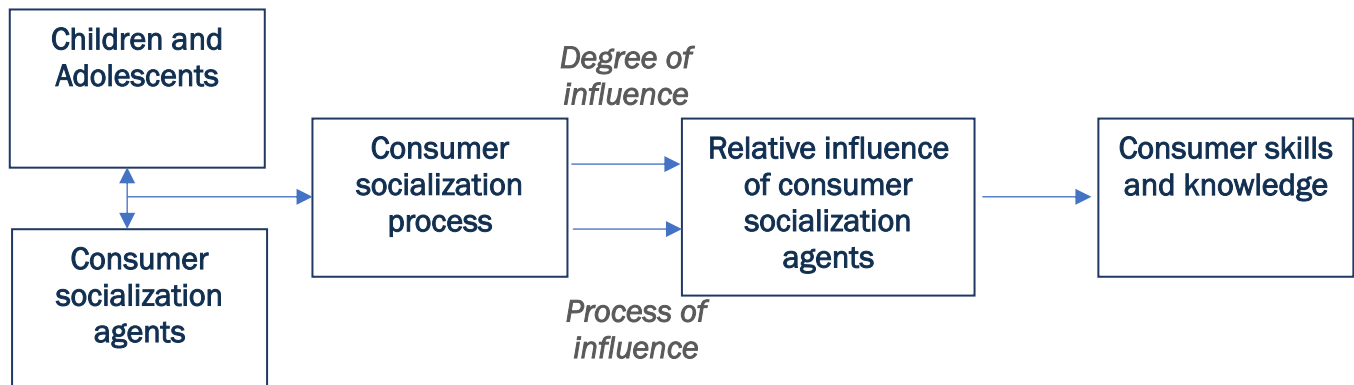
### 2.2.1 THE SOCIALISATION PROCESS

Consumer socialisation “is the widely held belief in behavioural science that childhood experiences are of paramount importance in shaping patterns of cognition and behaviour in later life, and this belief is supported by much research in clinical psychiatry, child development, criminology and political socialization” (Ward, 1974). The socialisation of young children enables the prediction of some adult behaviours; this understanding holds importance to educators and public policy, by preparing child consumers with the skills, knowledge and attitudes allowing them to evaluate and process marketing information (Ward, 1974). This same process is applicable to a child’s



formulation of knowledge, skills and attitudes toward ET. Digital media socialisation can be bi-directional between parents/guardians and children. Parents are the most influential, although children reported higher levels of internet self-efficacy, over time, this bi-directional influence decreases as children become more private about their ET use (Nelissen, et al., 2019). Socialisation within the household also occurs between siblings (Kerrane, et al., 2015), however microenvironments are apparent in the household, meaning children receive different socialisation experiences from siblings and parents (Kerrane & Hogg, 2013). Socialisation also takes place within educational and political environments, the formation of equality of opportunity is the broad focus (DfE, 2021). The child consumer is reliant on access and influence of socialisation agents, Hota & McGuiggan (2005) outline a model of relative influence:

Figure 2.1: Model of relative influence



(Hota & McGuiggan, 2005)

The model outlines that socialisation agents interact with children through the form of the socialisation process, however the degree and process of influence varies. John (1999) argues that the socialisation of young children is not so simplistic however, outlining the significance of child age and development stages:

Table 2: Consumer socialisation stages

CHARACTERISTICS	PERCEPTUAL STAGE 3-7 YEARS	ANALYTICAL STAGE 7-11 YEARS	REFLECTIVE STAGE 11-16 YEARS
<b>Knowledge structures</b>			
<b>Orientation</b>	Concrete	Abstract	Abstract
<b>Focus</b>	Perceptual features	Functional/underlining features	Functional/underlining features
<b>Complexity</b>	Unidimensional Simple	Two or more dimensions Contingent (if-then)	Multidimensional Contingent (if-then)
<b>Perspective</b>	Egocentric (own perspective)	Dual perspective (own and others)	Dual perspectives in social context
<b>Decision-making and influence strategies</b>			
<b>Orientation</b>	Expedient	Thoughtful	Strategic
<b>Focus</b>	Perceptual features Salient features	Functional/underlining features Relevant features	Functional/underlining features Relevant features
<b>Complexity</b>	Single attributes Limited repertoire of strategies	Two or more attributes Expanded repertoire of strategies	Multiple attributes Complete repertoire of strategies
<b>Adaptivity</b>	Emerging	Moderate	Fully developed
<b>Perspective</b>	Egocentric	Dual perspectives	Dual perspectives in social context

Ward & Wackman (1974) also confirm a child's consumer socialisation process of acquiring skills, knowledge and attitudes is not only influenced by direct and indirect forms of guidance, but also their stage in cognitive development, which can effect both short and long term behavioural and cognitive patterns toward ET use. The age group this research project is focussed on are those aged up to 11 years, within the perceptual and analytical stages of development. The degree of influence of various socialisation agents are those that are more prominent up to ages 11; Shin & Lwin (2016) confirms parents and teachers have a higher degree of influence up to this age and agents are less likely to be socially considered (peers, media). It is not until children reach their teenage years that parent and teacher influence diminishes and peer influence escalates.

## 2.2.2 DIGITAL INEQUALITY

A child's digital socialisation is dependent on their socialisation agent's digital status which is outlined by three levels: first level (access), second level (skills), third level (outcomes) (Hargittai, 2002; van Duerson and Helsper, 2013; van Deursen & van Dijk, 2019). These factors account for the degree and process of socialisation that takes place. Outcomes of this process of socialisation either result in digital opportunities or inequality. The British Academy commissioned six projects looking at digital inequality within the UK, the end result found the need for the following considerations to address digital inequality:

1. Addressing digital poverty involves more than improving access- interventions must empower people and places to benefit from digital access.
2. Local resources and intermediaries can be valuable assets in tackling place-based digital poverty, and the public sector has a crucial role to play in enabling them.
3. Strategies to tackle digital poverty are important components of broader policies tackling inequality.
4. Policies should consider how and why intersecting inequalities are likely to exacerbate digital poverty and design interventions that can benefit those most at risk of digital poverty.
5. People can move in and out of digital poverty over time.
6. Consider policy interventions that can adapt to demographic and economic changes through consistent and long-term investment.

(The British Academy, 2022)

The findings here intertwine theoretical considerations that digital inequality is not just an outcome of socio-economic factors, and especially in the UK where access to ET is more affordable, it is a personal choice (Helsper & Reisdorf, 2017).

## 2.2.3 ATTITUDES TOWARD DIGITAL TECHNOLOGY

Technology diffusion theory plays a role in predicting planned behaviour (Acikgoz, et al., 2023); this type of behaviour can surround the type of technology use consumers choose to engage in (Kozinets, 2008), thus, their differential experiences (Hoffman & Novak, 2018). As digital divide research suggests, this type of planned behaviour is increasingly an adult consumer choice. The technology acceptance model (TAM) is a well explored approach with regard to digital inclusion, with concentration on the most influential factors of acceptance: perceived ease of use and perceived usefulness (Davis, 1989) found in (Charness & Boot, 2016). The model has been extended within various contexts (Farzin & Fattahi, 2023); however, when applied to the child consumer, these approaches do not as well encapsulate the experience of those without the means or autonomy to make purchase decisions for themselves. The child consumer is reliant on access and influence of socialisation agents, and do not have the same level of autonomy as the consumers in the aforementioned theoretical scopes. Further to this, a child's perceived ease of use and perceived usefulness of ET, is firstly influenced by early socialisation agents.



The parents/guardians' technology ideology (Kozinets, 2008) plays an important role in how children are socialised to use ET. When interrelating the framework for understanding consumer choices for others by Liu, Dallas & Fitzsimons (2019); complex motives drive the caregiving context. This is shown through balancing the carers preferences and child's preferences, whilst making choices appropriate for their long-term wellbeing. This indicates conflict between the parents' own internal contradictions concerning the dynamism of their technology ideology and their role as caregiver in terms of their child's access to ET.

**Figure 2.2: Kozinets (2008) technology ideology categories**

IDEOLOGICAL FIELD	DESCRIPTION
<b>GREEN LUDDITE</b>	Technology consumption as destruction of the natural. Compliments the emotion of techspressive ideology. Contrasts in morality of Techtopian position. Contradictions of individualism with the work machine ideology.
<b>TECHTOPIAN</b>	Technology consumption as social progress. Complimentary of reason for work machine ideology. Contrasts in morality of the green luddite ideology. Contradicts the standards of techspressive.
<b>TECHSPRESSIVE</b>	Technology consumption as pleasure. Compliments the emotion of green luddite. Contradiction of standards with Techtopian ideologies. Contrariety of indulgence with the work machine ideology.
<b>WORKMACHINE</b>	Technology consumption as economic engine. Compliments the reason of Techtopian. Contradictions of individualism with green luddite ideology. Contrariety of indulgence of techspressive ideology.

(Kozinets, 2008)

When relating both theories to a child's consumer socialisation process of acquiring skills, knowledge and attitudes toward technology, they are not only influenced by direct and indirect forms of guidance, but also their stage in cognitive development. This can effect both short and long term behavioural and cognitive patterns toward technology consumption (Ward & Wackman, 1974). The direct and indirect socialisation experiences will be dependent on the parents/guardians' technology ideological position and their views toward the child's wellbeing; perhaps more complex or dynamic given their differing motivations as a caregiver rather than an independent consumer. For example, a parent/guardian may hold dominant ideologies of a Green Luddite, nevertheless aware of how using technology can realise certain societal benefits (Techtopian), is used for personal economic gain (Work Machine) and can be used to fulfil pleasure (Techspressive). As such they may be conflicted by their desire to purchase, give, or allow their child access to use ET. Another example as noted within Kozinets (2008) is that consumers using technology within a Work Machine capacity may not be motivated to use devices at home. Perhaps making some caregivers less motivated to socialise children to use technology (Becker, et al., 2019). In terms of a parent/guardians' Techspressive use, this can be turbulent based upon whether this is viewed positively for adults (Melumad & Pham, 2020), or as a problematic 'addiction'. When interrelating the concept of Digital 'immigrants', 'Natives' (Prensky, 2001) and 'the Net Generation' (Tapscott, 1998) this is complicated further (Turkle, 1995, 2011), where parents may not have the desired skills and/or knowledge to introduce ET in the most optimal way.

## 2.2.4 THE ECOLOGICAL APPROACH TO SOCIALISATION

Within Richardson, et al. (2005) the theoretical scope emphasises multiple levels of socialisation, finding the macro-level as political ('socio-cultural systems of logic'), the meso-level to be institutional and the micro level to be agents within everyday environments such as the family.

Katz & Gonzalez (2016) apply this ecological approach toward macro and meso level influences toward Latino families' perception of technology, finding schools (meso level factors) influenced the child's microenvironment (the family). Within Sergis, et al. (2018), an ecological system approach was followed within the education context, finding the macro layer comprised of the school leader's self-reported attitude toward ICT, the availability of ICT equipment, school culture (staff/parent views) and teacher CPD. ICT pedagogy (the infusion of IT throughout the curriculum), teacher self-reported attitude and digital skills, and the teachers level of ICT use within the classroom, accounted for the meso layer and the students' digital skills were the micro layer of school conditions that impacted digital skill development in young children.

The agents within the environments discussed within the LR (the family, teachers and policymakers) can be conceptualised into micro influencers (the family), meso influencers (teachers) and macro influencers (policymakers). Hadlington, et al., (2019) also looks at different environments with interrelation of Bronfenbrenner's (1994) ecological systems theory; the theoretical perspective here considers child development within microsystem levels, much like the three eco-systems of a child's digital socialisation within this study. The appropriateness of this microsystem or ecological approach is specifically appropriate to the child consumer whereby each microenvironment considers the specific activities they engage in. Johnson and Puplampu (2008) found in Hadlington, et al., (2019) applies this to the child consumers use of digital technology, concluding that within the home children are more likely to choose their own activities whereas in schools the activities are restricted. Similar research includes Brown & Donnelly (2022) looking at emotional wellbeing, finding what is valued within the home environment, is then valued differently within the school and political context. This can be applied to the context of this study whereby some families may view certain types of access, skill and ET outcomes in one way (positively/negatively), but these are not valued in the same way within the educational or political contexts.

### 2.2.5 THE COVID-19 PANDEMIC

During the COVID-19 pandemic these contexts (familial, educational, political) were starting to gain further attention (Hammer, et al., 2021), the familial and education contexts working together was of particular importance (Gewirtz, 2001; Lu, et al., 2016) whereby there can be inequality in both contexts (Harrison, et al., 2014). The contextual significance of this approach within the research project, centres around the COVID-19 pandemic, an environment which left more than three billion people in isolation, reliant upon digital technology to access information, services, economic, educational, social and leisure activities. Digital inequalities existed previously to the lockdown environment, but as highlighted by Beaunoyer, et al. (2020), lockdown dramatically magnified the impact of this inequality. It is therefore important to explore the significance of these contexts on the child consumer's digital socialisation, with exploration into how COVID-19 impacted them.

## 2.3 CHAPTER SUMMARY

The enabling theory chapter has highlighted the theoretical scopes that this research project interrelates in order to explore and understand the context being investigated by taking an ecological approach toward exploring child digital socialisation during the COVID-19 lockdown environment.

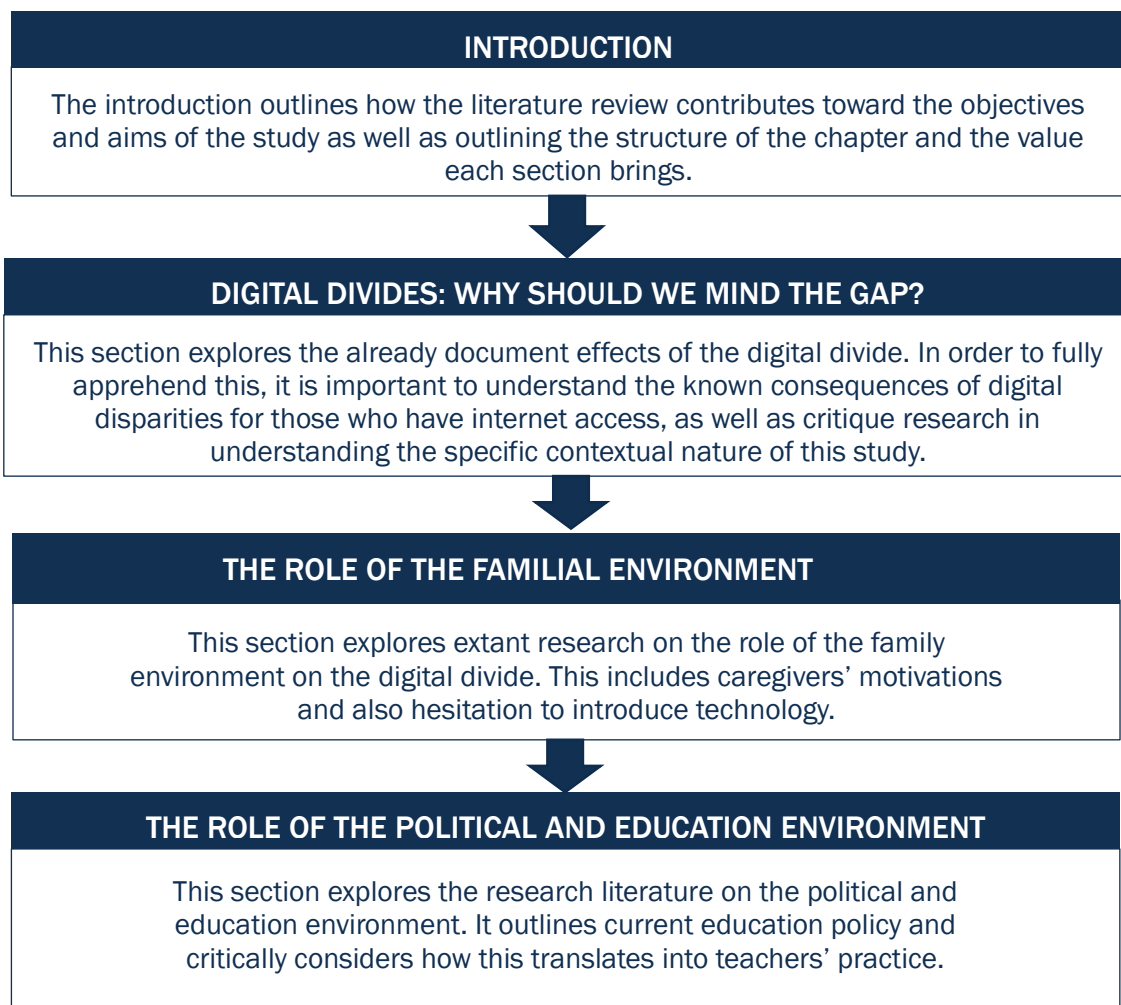
# CHAPTER THREE

## · LITERATURE REVIEW ·

### 3.1 INTRODUCTION

The review of the literature fulfils the first objective of the project; acting as a source of search (identifying relevant information), survey (an investigation into the past and present), vehicle (increasing the knowledge of the researcher), facilitator (shaping the course of the research) contributing toward the written discussion of the literature (Bryman, 2012, pp. 99-101). The chapter aims to develop a story using synthesized coherence: to discuss and analyse existing knowledge surrounding digital divides and the role of the familial and school environment within the child consumers adoption of ET; aiming to consider what may have previously been unconnected or viewed differently. This problematizes the situation by identifying where there are gaps in knowledge and where existing literature has overlooked the phenomenon by offering alternative views that can aid understanding toward the challenges parents/guardians and teachers faced during the COVID-19 pandemic, and how this has impacted the child consumer.

Figure 3: Literature review chapter outline



## CHILD SOCIALISATION

Within this section the interdisciplinary literature on child socialisation is examined, providing an underpinning of understanding upon which to develop the conceptual framework.



## CHAPTER SUMMARY

In summarizing what is already known toward the topic and identifying where this research contributes to existing literature, a framework is conceptualized to illustrate this.

### 3.2 DIGITAL DIVIDES: WHY SHOULD WE MIND THE GAP?

By exploring the consequences and impact of digital divides for consumers in the digital age, this section adds to the argument of the thesis by outlining what is already known and why digital inequality is an important area to address. This section contextualises the important time within which the research took place: The COVID-19 pandemic. This environment magnified the importance and detriments that can stem from inequality of the consumption of technology (Beaunoyer, et al., 2020).

#### 3.2.1 DIGITAL DIVIDES: AN OVERVIEW

Digital divide research originally focused one-dimensionally on digital exclusion (consumers without access to the tools and services required for internet and technology access). Referred to as the first level digital divide (van Deursen & van Dijk, 2019). Consumers within this first-level divide, encompass those who do not have any access. Attention was paid toward causations stemming from socio-demographic factors, with income and education considered prevalent influences (van Dijk, 2005). Hargittai (2002) conceptualised the second-level digital divide, requiring a shifted focus toward disparities between consumers with internet access and the skills they possess. This was addressed by van Dijk (2006), finding the gap between those who did not have access was lessening but the gap concerning digital skills and outcomes was widening. Subsequently, the resources required for consumers to learn and develop these skills became of prominent interest. In 2013, Van Duerson and Helsper introduced the concept of the third level digital divide (the possible outcomes of digital inclusion). These outcomes are equally available, but not equally achievable. Asmar, et al. (2022) developed eight dimensions of inclusion and exclusion types, extending the three levels of divides. Ranging from deep inclusion to deep exclusion with consideration to five social indicators (income, education, social participation, agency, well-being) and eight digital indicators (access, attitudes, digital skills, soft skills, media richness of the environment, autonomy of use, user practices and social support). This conceptual framework reduces the exploration of digital divides to these particular influences, which can be more varied, and extends digital divides to eight levels which can be broadly contemplated within the three levels.

**Table 3** conceptualises this:

**Table 3: The three levels of digital divides**

<b>THE FIRST LEVEL</b>	Access to devices and the internet
<b>THE SECOND LEVEL</b>	The skills to use devices and the internet
<b>THE THIRD LEVEL</b>	The outcomes reached based on use of devices and the internet

## Digital expertise: Accepted definitions

Digital literacy: A consumers basic knowledge of computers and the internet, encompassing the skills needed to use the internet within the capacity of learning, production, communication and recreation (Liang, et al., 2021) . However, it is argued that digital competence underpins digital literacy (Spante, et al., 2018). The European Digital Competence Framework defines competence as the “confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society”. Defined as a combination of knowledge, skills and attitudes, intertwining problem solving, information and data literacy, communication, collaboration, digital content creation and safety as key competence areas (European Commission, 2023). The UK government refer to this as the Essential Digital Skills framework (DfE, 2019); skills are underpinned by a consumer’s ability to access and use basic elements of devices for communicating, handling information and context, transacting, problem solving and being safe and legal online. Further terms include digital capital: a consumers’ digital competencies that surround information, communication, safety, content- creation and digital technology (Ragnedda , 2018); the accumulation of which, mirrors the concept of social capital. Digital captial surrounds resources (both actual and potential) that can be utilised through relationships within soceity (institutionalised or not), which enable the consumer to function effectively within society today (Edgerton & Roberts, 2014;Gómez, 2020).

## The relationship between digital and socio-economic inequality

Second-level divides acted as a catalyst to interlinking digital and social inequality, whereby digital divides were referred to as a new form of social inequality (Hagattai 2009). Solidified within Pearce & Rice’s (2013) consideration between the affordances of different devices, and how these translated to differing levels of quality internet usage and activities. Whilst capital enhancing activities were influenced by device type, socio-demographic factors were found more influential in the liklihood of quality internet usage and activities. Thus, the higher a consumers socio-economic status, the higher they are on the digital ladder. The interconnected nature of digital and social exclusion/inclusion, was theorised within Helsper (2012), finding one does not cause the other within a static relationship type, social and digital exclusion are intrinsically linked with an element of back and forth. Helsper (2012) categorised the outcomes of digital and social inclusion/exclusion into four corresponding fields: economic, cultural, social and personal; theorising the translationof offline inequality and online inequality in these area’s was facilitated by access, skill and attitude/motivation. Online ability that effected offline equality was mediated by the relvance, quality, ownership and sustainability of online engagement. Consumers utilising one of the outcomes of these fields were not necessarily engaged in other fields; for example online/offline social inclusion did not translate to economic offline/online inclusion. Ragnedda et al, (2024) found that economic and social components have the strongest impact on digital capital. This opens the door toward the complexities of the second-level divide, just as the nature of access mediates skill, skill mediates outcomes of digital inclusion, and skill in one area, does not correspond or necessarily translate to skills in another. Skill is not a blanket term as some skills may be socially, personally, economically and/or culturally beneficial, therefore not all available outcomes are achieved. The final level of digital divides relates to these outcomes that stem from a consumers individual agency/skill toward what their digital inclusion realises.

## Outcomes of digital inequality

Unequal access leads to unequal skill and unequal skills leads to inequality of outcomes realised. The outcomes of digital inclusion were condenced into economic, cultural, social and personal by Helsper (2012), however the UK Government’s digital inclusion strategy is less about inclusional benefits and more about reducing exclusion through the development of digital skills, connectivity and accessibility (Gov.uk, 2014). Although it is recognised that social and economic benefits are the key driver to this strategy. Equally, the NHS are focussed on inclusion as opposed to outcomes; digital inclusion is defined as those with the skill to use devices and access the internet, with focus on accessibility (the ability to use digital services with consideration to assistive technology needs) (NHS digital health services, 2023). Further underlining the importance and complexity of equal digital access and skill, where beneficial outcomes are able to be realised, those on the wrong side of the divide are at a socio-economic disadvantage in the digital and offline aspects of life in the digital age. The following section seeks to delve deeper into the levels of digital divides in discussing the impact of inequality stemming from our differing consumer experiences when using devices.



### 3.2.2 DIGITAL DIVIDES: THE FIRST LEVEL

The first level divide encompasses those without access to technology and means to access the internet. Fortunately, within the UK at least, most consumers had this access during lockdown, although the quality of that access was impacted by the surge of demand from internet providers (The Guardian, 2020b).

#### Appropriate Access

Napoli & Obar (2014) convey that mobile internet access (through the form of smartphones and tablets), offer lower availability of content, and by comparison, lower level's of functionality than computers and laptops. Although internet access was available to most during lockdown, the appropriateness of that access is problematic. 61% of consumers aged 3-17 accessed the internet from mobile ET, and 2% through non-smartphones; finding some content difficult to view on smaller screens and some tasks not suited to be completed via a mobile (OfCom, 2022a). Lutz (2019) also identifies this as problematic, however Lutz (2019) suggests these difficulties stem from websites not having mobile friendly versions, particularly focussed on the difficulties the self-employed have with making mobile friendly versions of their websites. Employees are the most likely to be internet users (ONS, 2019), indicating it is the skill set of the self-employed to make their websites mobile friendly that is the issue. As 88% of the UK population are mobile internet users, if a website can be made mobile friendly, it should (Ofcom, 2022b). Napoli & Obar (2014) highlight the problematic nature of mobile use stems from memory, storage, capacity and speed (mobiles have less capacity to store and process as much data), content availability (not a skill issue for those making the website mobile friendly, but there is a limit to how much information can be displayed on smaller devices), and the network/platform architecture (internet access or use of apps through a mobile is less open).

van Deursen & van Dijk (2019) extended the concept of basic access to the internet, toward device-related opportunities. This does not fall under the second-level divide (consumer skill) but the opportunities relating to devices and peripherals which enhance device-related opportunities. Unequal opportunities such as these, lead to inequality of skill, uses and outcomes; underpinned by the quality of access available. Examples of this include not only devices that are able to be used to connect to the internet, such as PC's, laptops, game consoles, smart TV's and smartphones, but also peripheral equipment available; printers, scanners, additional screens, software, subscriptions and maintenance hardware, which shape the quality of access and therefore the skills that are able to be developed. Income plays a major role here but does not overlook the role of social resources. Having a network of people able to help and support with a consumers access and maintenance of technology, is seen to indicate the level of social capital. Consumers need to not only have the economic means to afford this equipment, but the social support to manage it (if they do not have the knowledge themselves, or are able to pay a professional to help). Age also has an effect here. With younger consumers more likely to experiment with ET and supporting devices than older age groups. Although those employed may have more experience of supporting devices, it does not translate to having the means to purchase them. This type of material access is problematic within the realm of digital divides, moving on from having basic access, to the type of access available, causing differences in skills (second level divides) and outcomes (third-level divides).

Opinion toward devices were also present factors within van Deursen & van Dijk's (2019) research, this was in part related to age whereby younger consumers were more likely to access the internet from smartphones and game consoles, and older consumers more likely to use laptops and PC's. The study does not pilot which device is the most beneficial, but that the best availability of opportunities comes from having access to varied devices which realises different opportunities to develop digital skills. Humphreys et al. (2013) in Napoli & Obar (2014), found causation between the differences between PC and mobile technological quality internet access, surrounded consumers using mobile devices for purposive activities in comparison to a PC or laptop which were immersive. This supports Hargittai & Kim (2010), finding that use of a variety of devices supplements the quality of basic access. For the child consumer, accessing the internet through any device overcomes the first level digital divide, but there are inequalities within this level, with those who have access to the internet through a variety of devices, having a better quality

experiences. During the pandemic, it was reported that 63% of child consumers did not have access to a laptop or desktop, with 36% of parents of primary aged children felt their child did not always have access to appropriate technology for their needs (OfCom, 2022a). The majority of internet users during lockdown had access to mobile only, although better than none, the next section moves on to consider the appropriateness of the environment within which children accessed the internet during this time.

### **Quality of Access by environment**

When applying the concept of 'access' to young children, Hasebrink, et al. (2011) highlights situational differences in variances between the ubiquity, quality and privacy of a child's internet access. Within the lockdown context, privacy was a concern for all family members, with some children's rooms being turned into office spaces (Million, 2021). Within Livingstone & Helsper (2007) boys were more likely to have access to the internet in more places and within private spaces such as their bedroom in comparison to girls, leaving girls less opportunity and freedom to gain the same quality internet access. Children within households with higher levels of socio-economic status were able to access the internet outside and inside the household. Socio-economic status did not influence access within the home, however, the higher likelihood of having access outside the household for those with higher socioeconomic status means there is an increased quality of access.

The significance of the environment within the first-level divide surrounds the ability of parents/guardian's to monitor access, although access may still be constrained in private settings. Quality access correlates with the opportunity to go online from various places, experiencing public, private (but restricted), unrestricted and longer experiences with the internet, as they perform more activities online. In turn, this also exposes children to the likelihood of online risks. If excluded from the internet however, children are not exposed to these online risks; the next section explores why some children are excluded from accessing the internet.

### **Reasons for Exclusion**

Young children are vulnerable to frequent marketing messages and content, often inappropriately targeted toward them when accessing platforms that restrict their age group. Dahl, et al. (2009) considers this with regard to advergames on child targeted sites, finding even companies within the legal obligation of the Children's Online Privacy Protection Act (COPPA) within the USA (Federal Trade Commission, 2018), enforced through GDPR in the UK (European Commission, 2018), children are still inappropriately targeted. The resilience to which can be built through exposure, but does not sit well with guardian's or policy makers.

Eynon & Helsper (2010) introduce the concept of disengagement (those who used to use the internet/have access). Disengagement can stem from a lack of interest or access. Within the study, those with children reported it was not access but interest which led to their choice of exclusion, although the expense was a prevalent factor. Those identified as always being excluded, largely attributed this to skill, however consumers with lower education levels were less likely to consider this a skill issue, and those who were younger, less likely to consider this as a lack of interest. Higher education levels, higher levels of internet self-efficacy and children aged 10 or older were more likely to use the internet for formal learning, those with a more positive attitude toward technology (as well as the aforementioned factors) were more likely to use the internet for informal learning. When it came to fact checking however, it was found to be more likely for those with higher levels of self-efficacy, positive attitudes, higher levels of education and were also younger in age. This infers that consumers within the lockdown environment may have chosen to exclude themselves not only because of access, but out of choice.

Helsper & Reisdorf (2017) found motivation to be the most important factor to consider when consumers chose to exclude themselves, although lack of access and skill did remain important. When applying these factors to young children, Livingstone & Helsper (2007) identified 3% of children did not have access to the internet, in comparison to 22% of their parents, concluding that the divide between users and non-users within the adult population does not necessarily apply to child consumers. Within this study, it was found reasons for inequality of access within young

children stemmed from age, gender and socio-economic status. For older age groups (18-19 year old's), exclusion from the internet is more likely to be a choice, whereas for the younger age groups, exclusion was a result of making little use of the internet as opposed to voluntarily excluding themselves due to a lack of interest.

### 3.2.3 DIGITAL DIVIDES: THE SECOND LEVEL

The second level divide describes those with internet access, but with differing skills when it comes to utilising technology (Hargittai, 2002). As previously discussed, digital skills are not just an outcome for those with access, it is the quality of that access that dictates the development of skills.

#### Developing Digital Skills

One of the reasons parents/guardians choose to exclude children from accessing the internet, is because time spent accessing the internet is positively correlated with exposure to risks or harm (Hasebrink, et al., 2011). This was problematic for households within lockdown as the necessity of spending time online, meant time online and harmful opportunities increased (Zhao & Healy, 2022). Livingstone & Helsper (2010) however, suggests skills of resilience to online harms are not able to be developed without this exposure, and time online also correlates with the development of digital skill. Although skills can be developed through monitored access or joint consumption, greater opportunities are present if freedom to explore is granted.

DiMaggio et al (2004); Hargittai & Hinnant (2008); Kim & Kim (2001); Mossberger et al (2003); van Dijk (2005); Wasserman & Richmond-Abbot (2005); Zillien & Hargittai (2009) found in van Deursen & van Dijk (2014), disagree with the above premise, that time spent online equates to a higher degree of both risk and skill; concentrating more on how users interact with ET. This interaction can result in the development of different digital skills through utilising different activities, some of which are more beneficial or advantageous than others. Van Deursen & van Dijk (2014) found lower educated people may spend more time online, but do not engage in as many informational or self-development activities as those with medium-high education levels; in comparison, lower educated individuals will be more likely to use the internet for gaming or social activities. Students, however, are more likely to utilise a wider variety of usage such as gaming, viewing, socialising, leisure, information search and personal development activities. Hargittai (2010) solidifies how these findings impact young children, as higher levels of parental education positively impacted the extent young people engage in diverse activities when using the internet, which contributes to skill development. The findings here move beyond assumptions that time spent online automatically correlates with skills, reinforcing van Dijk (2006), that skill divides are more prevalent than access divides. The next section considers how these skill divides are formed.

#### Skill divides

Park (2015) investigated the role of socio-demographic variables to predict the development of digital skills and the consequences of any differences. Gender and age had the biggest impact, differences existed when it came to instrumental, expressive and social-entertainment based skills, but not content-creation skills. Parental status had little impact here, coinciding with Hargittai (2010). Radesky, et al. (2015) suggested time is the amalgamating factor. Increased time spent online, enhances familial opportunities for 'teachable moments' and using ET together is likely to increase educational skill development and reflection. Parental attitude can have an impact, whereby viewing the use of ET as a supportive device for parent-child interaction, rather than displacing this opportunity altogether, in turn helps to establish healthy relationships with ET, which is not always an outcome of ET use for young children (Chou, et al., 2005). The study also found that skills could be developed to help children when stressed or bored, however many do not view this as a skill for young children, and that using ET in these circumstances leads to addiction and prohibits the development of healthy relationships.

Cotten & Jelenewicz (2006) considered how permanent digital divides are when consumers eventually have equal access to the internet (at university). The multifaceted nature of digital divides means even within an equal environment, time does not reduce all aspects of skill divides. This pilots the need for structured environments, like educational institutions to provide this equal



playing field at earlier ages than those in this study (ages 18+). This finding supports Hargittai (2010) in recognizing that just because children in the digital age will have grown up with technology, it does not mean they are universally skilled in the same way. Conversely to Radesky, et al. (2015), higher levels of parental education meant there was a higher likelihood of valuable digital skills being formed, finding socio-economic status predicted whether or not consumers were using ET to engage in more informed ways, often stemming from skills in a variety of areas. van Deursen & van Dijk (2014) add to this by recognizing those with lower-educational status, may spend more time online, but this does not equate to skill. The reasoning here is that some activities are more beneficial than others in increasing digital skill, thus realising the beneficial outcomes.

## Activities

Activities can be differentiated between those that offer opportunities to progress within careers, work, educational and societal positions and those which are mainly for entertainment purposes (DiMaggio et al, 2004; Hargittai & Hinnant, 2008; Kim & Kim, 2001; Mossberger et al, 2003; van Dijk, 2005; Wasserman & Richmond-Abbot, 2005; Zillien & Hargittai, 2009) found in (van Deursen & van Dijk, 2014). However, opportunities are only available to those with the skill to engage in these activities, **table 3.1** demonstrates activity types:

**Table 3.1: Activity types**

<b>Personal development</b>	Finding online courses and training Following online courses Finding vacancies/applying for jobs Independent learning
<b>Leisure</b>	Downloading music/video Hobbies Free surfing
<b>Commercial transaction</b>	Using sites such as eBay Acquiring product information Shopping or ordering products
<b>Social interaction</b>	Using social network sites Chatting Sharing photos/videos
<b>Information</b>	Using search systems Searching for information
<b>News</b>	News services Newspapers and online magazines
<b>Gaming</b>	Playing online games

Table adapted from: van Deursen & van Dijk (2014).

**Table 3.2: Motivational items for activity engagement**

<b>Information</b>	To find information To discover things To investigate things
<b>Career</b>	To make a career for myself To improve my chances in the work field To get a promotion at work
<b>Personal development</b>	To stimulate my creativity To learn new things Develop myself
<b>Shopping</b>	To order something quickly To buy a product I heard of To purchase something

<b>Entertainment</b>	To entertain myself To have fun To find information for amusement
<b>Relaxation</b>	To feel less hurried To release stress To come at ease
<b>Relationship maintenance</b>	To maintain contact with friends To have contact with my friends To send people I know messages
<b>Social interaction</b>	To participate in chat sessions To make new contacts To connect with a group

Table adapted from: van Deursen & van Dijk (2014).

Although motivated, not all consumers have the same skill set when it comes to finding information, to participate in social connection, or to order something quickly. This is solidified within Hargittai & Hinnant's (2008) findings, those with higher educational levels and more 'resource rich' ET usage, were only able to realise these beneficial outcomes, if they had the skills to do so.

Blank & Groselj (2014) found the dimensions of internet use that led to the development of skills, surrounded the amount, variety and also the type of use. Examples of the type of uses and factors that had an impact are highlighted below:

Table 3.3: Type of usage

<b>USAGE</b>	<b>FACTORS IMPACTING THIS USE</b>
<b>Entertainment</b> <i>Watching films, television, listening to music, streaming or downloading video's</i>	Life stage had no impact, but single people were more likely to use the internet for this purpose.
<b>Commerce</b> <i>Buying, selling, comparing prices, making travel reservations, ordering groceries online, paying bills</i>	Minority groups were less likely to engage in this activity and single people were less likely than those who are married.
<b>Information seeking</b> <i>Looking up facts, definitions, pursuing topics of interest</i>	Students were found to be the most likely to utilise this activity, education status also had an impact.
<b>Socialising</b> <i>Instant messaging, chatting, posting photos and maintaining a social media profile</i>	The employed and unemployed were more likely to use the internet for socialising than students.
<b>Email</b> <i>The use of attachments and distribution lists</i>	Age had no impact here, but education level did.
<b>Blogging</b> <i>Reading and writing blogs, maintaining a personal website, making internet calls</i>	Minority groups were more likely to blog and the employed and retired more likely than students.
<b>Production</b> <i>Uploading videos, files, posting or writing anything creative</i>	Higher education is a significant predictor of this activity.
<b>Classic mass media</b> <i>News, sports and events</i>	This activity had the strongest gender effect with students more likely to engage in this activity than others.
<b>School and work</b> <i>School and work-related use</i>	Understandably, students were the most likely to utilize this activity.
<b>Vice</b> <i>Gambling and visiting adult sex-related sites</i>	Education had no impact here, however, married people were more likely to use the internet for these means than singles.

Overall, age and education had the biggest impact. The young male demographic are more likely to utilise a wider variety of activities and for longer in comparison to older, less educated or female groups. The overall contributions of this study highlight that when discussing digital inequalities that pertain to skill gaps, the amount, variety and types of usage are important to distinguish between, as those without the skill to utilise a wider variety of affordances, are not as able to achieve beneficial outcomes. Livingstone & Bober (2016) also found that opportunities are not equally accessed by children. The outcomes here relate to third level digital divides, however the ability to achieve them is hindered by skill gaps within the second level. Some children experience rich, diverse, engaging and stimulating internet use, whereas others without the skill, experience narrow and unengaging ET use with less frequent activities that are considered useful.

Kozinets, et al. (2008) consolidates online consumer groups into Crowds, Hives, Mobs and Swarms. Each allows the opportunity to create bonds and social ties; creating valuable social opportunities. Conversely, Ball et al (2017) found those without the skill to effectively manage online relationships can be vulnerable to physical divides in the real world as consumers can feel physically divided when in the company of those who are glued to their devices, leaving less room for social interaction; managing the time spent engaging within these activities online (so as not to impact offline social relationships) is therefore a skill in itself.

### **Management as a skill**

Melumad & Tuan Pham (2020) found ET can be beneficial in reducing stress and bringing psychological comfort, however Hartanto & Yang (2016) and Gui & Argentin (2011) explore this negatively. Hartanto & Yang (2016), found the comfort ET can bring can lead consumers to be anxious without it. Gui & Argentin (2011), found this separation anxiety meant a consumers' cognitive functioning was impaired, in the same way anxiety can impact this function. When applying this to other objects, this attachment is viewed positively (Wallendorf & Arnould, 1988), for the child consumer, a comfort such as a cuddly toy, blanket or pacifier is encouraged and affectionately valued within the household. Nie, et al. (2020) demonstrates although these objects of comfort can be valuable, it is still a skill set to manage the relationship or attachment consumers have with the device, so they are not cognitively impaired if separated from this. Device affordances are vast, the separation from them can leave consumers feeling vulnerable due to an inability to perform certain tasks. This was evidenced throughout Nie, et al. (2020), as it was the activity type being interrupted that mediated the extent to which consumers experienced separation anxiety.

### **3.2.4 DIGITAL DIVIDES: THE THIRD LEVEL**

Differential access and skills within ET use equates to differential outcomes. This inequality extends Bourdieu's (1985) forms of offline capital, prevalent for economic, cultural and social forms of capital (Gomez, 2020). This area of the LR, seeks to outline some of the known outcomes of ET use within the literature, problematizing the impact of digital inequality heightened during the lockdown context (Campbell, et al., 2020).

### **Economic outcomes**

Zillien & Hargittai (2009) found the outcomes of ET use reinforces socio-economic status, as those with higher status are more likely to engage in capital enhancing activities; utilising the increased financial, social, cultural and technical resources available to them. Those with lower socio-economic status are more likely to engage in ET use that is not significant to increasing socio-economic status; due to them having less resources. The economic outcomes of technology use see's socio-economic gaps being widened, not lessened as a result of inequality. Pearce & Rice (2013) found it is not just socio-economic status that plays a role in beneficial economic outcomes being achieved, it is the device from which they are accessed, concluding more capital enhancing outcomes were achieved by using a laptop. Lutz (2019) highlights that computer technology, supporting technology, space, and software to keep this type of device running efficiently is more expensive than that of mobile devices, so although device type may play a role in the outcomes of technology use, it is still embedded within socio-economic inequality. There are exceptions to the rule (Ofcom, 2022b), affordances of access, skill and outcomes of ET use, do give consumers the chance to climb the social ladder (even if less likely for those with lower socio-economic status),

beneficial outcomes such as these are a possibility. These findings solidify the detriment for those without the access and skill to realise economic outcomes, in comparison to those who do.

## Social outcomes

Przybylski, et al., (2013) found some users of ET were vulnerable to experiencing a Fear of Missing Out (FoMO), a feeling they are missing out on rewarding experiences, despite more options being presented on platforms than can be pursued. The study suggested links between FoMO and low psychological wellbeing, showing a correlation of low general mood and overall life satisfaction. Later, Elhai, et al., (2016) found that anxiety, depression, need for touch and experiences of FoMO were related to problematic smartphone use. Outcomes such as these reinforce Helsper (2012), offline and online social experiences influence each other, as opposed to a cause-and-effect phenomenon. With regard to digital skills translating to such outcomes, it indicates socio-economic status can influence the skills consumers desire and do exercise, in turn influencing outcomes. In this example however, the wish to better social outcomes, comes with a risk of upward comparisons that reinforce their psychological state, if more skilled however, consumers are able to climb the ladder of opportunistic outcomes rather than reinforce them. Social outcomes can therefore lead to anxiety, exclusion, and obligation, but can also help young people feel intimacy, proximity and security (Mascheroni & Vincent, 2016).

## Personal outcomes

Personal outcomes are evidenced through van Duersen & van Dijk (2014) and Blank & Groselj (2014) (tables 2.1, 2.2 and 2.3), as consumers are able to engage with their hobbies and interests through the use of ET. Husemann & Eckhardt (2019) outline the decelerated experiences consumers seek in order to escape from their fast-paced lifestyles, with technology enabling this outcome. Conderman, et al. (2021) found skilled use of wearable technologies can help support anxiety related issues by helping children monitor what situations may be contributing to their stress, signifying the need to proactively utilise interventions. Personal outcomes are therefore individualized depending on the consumers' desires, wants and needs. Although beneficial, not equally manageable, where some consumers found this can also lead to addiction (Chou et al, 2005). The detrimental side of ET use can be managed however, if consumers are afforded the time to upskill and manage their relationship with ET in a healthy way; achieving healthier outcomes.

## Cultural outcomes

Interrelating motivational (Dijk, 2006), cultural and social reasons to use technology (Helsper, 2012); Belk, (2014) suggests that skill to use technology can result in outcomes that afford consumers the opportunity to express their identity and connect without physical barriers. This has become an important outcome of ET use within modern consumer culture (Arnould & Thompson, 2005). Castells (2007) highlights the prominence of ET within the political sphere, finding involvement with both political and social movements are afforded through the ability to use online communication spaces. Examples of this during the lockdown environment include black lives matter, influencing politics through social movements afforded through social media platform Instagram (The Guardian, 2020a). Again, outcomes such as these are dependent on the consumers' skill to use ET, skills of which are not equally developed or accessible.

## Outcomes for young children

Vincent (2015) contextualises outcomes of digital inclusion for young children as educational, resilience building, positive content seeking, creating and exploring their identity, social, being mobile, and developing online skills, which can lead to children taking more responsibility for their safety online. The more outcomes realized, the more skilled, confident and experienced children become, this in turn leads to young children sharing their experiences. The more outcomes they realise, the higher up the ladder of opportunities they climb. Although the majority of children within this study said they do not experience distress when faced with online risks, there are those that do, indicating for vulnerable groups, more support needs to be in place to solidify the achievement of beneficial outcomes. It seems over time, children are less likely to inappropriately disclose private information, but this outcome is achieved with experience of use. As it stands, the first experiences of use are gained from the familial environment (Vincent, 2015); with Livingstone & Bober (2016) solidifying the beneficial outcomes to young children, it warrants exploration within

this environment, toward how children gain access to ET, in order to upskill, thus achieve these beneficial outcomes.

### **3.2.5 DIGITAL DIVIDES: SUMMARY**

In summarising this section, it is important to solidify understanding toward the impact of digital exclusion but also the complexity of digital inequality. This area of the literature review highlights that digital inclusion is not a blanket term when we consider the different levels of divides. For those with less digital and social capital, the socio-economic implications can be profound. Heightened significantly within the lockdown environment. It is clear, particularly in Western cultures (with technology becoming more affordable), it is a consumers' personal choice, beliefs and attitudes toward technology that have an overarching role in a consumers' digital inclusion. This personal choice was inhibited throughout the COVID-19 lockdown environment however (Million, 2021), magnifying the impact of digital inequality in an increasingly digital world. For young children, this personal choice is not their own. Although they are the consumers, parents are the purchasers, thus in the context of young children, the familial home requires to be explored in understanding the antecedents of digital inequality for the child consumer.

## **3.3 THE ROLE OF THE FAMILIAL ENVIRONMENT**

The familial environment is pertinent to explore as members of this environment make the choice for children to access ET, this is most likely to be parents/guardians (Wartella & Jennings, 2001). Lee & Beatty (2002) explore the influence of gender, finding mothers who contribute toward household provisions exert more influence within the family decision making process. Inclusion may be granted because children have influenced this purchase; signifying their power and influence when using sophisticated, co-constructed and networked approaches (Kerrane, et al., 2012). This choice could also have been made for an older sibling, and/or it is a sibling that introduces the child consumer to ET (Kerrane & Hogg, 2013). Within this section of the LR, the role of the familial environment is discussed with regard to digital divides as van Dijk (2005) found people were more likely to learn digital skills in informal environments such as the familial context in comparison to formal education settings. The section does not explore how children are educated to use ET or the forms this takes within the familial environment, this is discussed within the LR later. This section adds to the argument of the thesis by contextualising the exploration of digital divides to the child consumer in considering parental/guardian motivations for inclusion or exclusion. Although noted older siblings can play a vital role here (Kerrane, et al., 2015), this section does not look at the role of siblings in depth as this is not the core focus of the thesis.

### **3.3.1 THE ROLE OF THE FAMILIAL ENVIRONMENT: DIGITAL INCLUSION**

Liu, et al. (2019) explores consumer choices for others, finding the context of these choices are either for gift giving, joint consumption, everyday favours or caregiving. Within the context of inclusion of ET within the familial environment, the consumer choice for others is either for gift giving, joint consumption or caregiving. Although simplified into context here, complex familial negotiations take place during both purchase and consumption phases (Kerrane, et al., 2012). Liu, et al. (2019) argue their research extends the Lackman & Lanasa (1993) family decision making model by adding contextual significance. Although family members can be decision makers and/or buyers, Liu et al (2019) suggests pure buyers only exist within professional capacities, highlighting the social focus and context of this consumer choice for another member of the household. The social focus considers when the chooser is focused on their relationship with the recipient and strongly considers the relational message their choice sends, as well as a recipient focus; the chooser will primarily consider the recipient when making their choice, showing less concern for their self-preference or the relationship. Belk (2014) considers the context of joint consumption and gift giving within the sharing economy; in Belk (2010) forms of sharing within the family are differentiated in terms of mothering (the physical act of sharing her body with the foetus and mothering in terms of the love and care shared), as well as the allocation of household resources. With males unable to share in terms of the physical sharing of their body, Bettany, et al. (2014) highlight the role of caring technologies. The findings here suggest ET can act as 'virtual umbilical cords' for males in the transition to new fatherhood. These type of caring technologies or mothering in terms the physical sharing of their body, do not form part of a child's digital inclusion however.



The contextual and social focus of familial motivations to include their child within ET takes the form of joint consumption, gift giving and allocating resources.

### Joint consumption

Within this context, guardians have a relationship and recipient focus, although they will aim to balance the recipients preferences with their own. This balance is not necessarily equal, but some form of consideration is shown, the more consideration shown toward the recipient, the stronger the relational focus (Lui et al., 2019). Examples of this form of consumption are paired reading activities: using ET whereby the caregivers preference (educational reading) and interests of the child (using a device) are considered (Krcmar & Cingel, 2014;Flewitt, et al., 2015). Shapiro (2018) suggests joint consumption of ET is central to parenting in the digital age; balance is heavily weighted toward a relationship focus, with parents who may not enjoy game playing on their own, should do so in order to bond with their child. This ethos is supported by Wang, et al. (2018) finding the more families played together, the better family satisfaction and closeness. This was observed to benefit those with poor family communication over those who were already effective communicators however. Although joint consumption relieves concerns toward the first-level divide, issues can emerge as a result of joint consumption with parents that can be detrimental. Inequalities between households surrounding the quality of access comes into play, as caregivers may not have the skill or confidence to use ET. Krcmar & Cingel (2014) found children comprehended less when paired reading took place using a device to paired reading offline, as the guardians 'distraction talk' was higher. This distraction talk is categorised as comments surrounding the digital environment/format which were not apparent within the offline activity.

van Deursen, et al. (2011) noted children have a better aptitude toward technology when navigating the internet and devices, but parents are better skilled at evaluating the information; joint consumption within the household can therefore benefit both the caregiver and child. Livingstone & Helsper (2008) highlight the importance of freedom when using ET and the internet. Although joint consumption ensures safe internet use, freedom helps children build their digital skills (Hargittai & Hinnant, 2008) and resilience to content online (Livingstone & O'Neill, 2014). To mitigate some of the harmful aspects of ET use for the child consumer in the long-term, allowing opportunities to explore a number of features and have access to a multitude of online touchpoints using different devices is key (Hargittai & Kim , 2010). Having said this, Wang & Xing (2018) suggest parents who were more involved with their child's ET use have higher reported levels of digital etiquette and safety, highlighting that balance is essential.

It has to be noted that joint consumption within the household does not just take the form of parent and child but also between siblings. This type of sib-ship within consumer behaviour is common (Kerrane, et al., 2015), with older siblings having an impact on digital inclusion for young children (Livingstone, et al., 2015). This section is focused on the parental/guardian motivation for inclusion however. Liu, et al. (2019) suggests compromise will take place based on the strength of the relational focus within joint consumption (between siblings or parent-child). The stronger the relationship focus, the more the consumer will be happy to prioritise the recipients needs. When we consider parents who do not have the skills to use ET with their children (even if motivated), this is not a choice. Thus, the child is either excluded altogether, the parents are open to learning this new skill, the parents' digital literacy is misguided and this is passed down to the child, or unsupervised access takes place.

Although it is important that parents are striving to balance their own and their child's preferences, this does not mean they are skilled or confident enough to do so, which can be related to a fear of the unknown (Carleton, 2016). Weil et al (1990) considers this fear as technophobia, presenting itself as an anxiety about present or future interaction, negative global attitudes about technological operations and their societal impact, or self-critical internal dialogues during present or future interactions with ET. In this study, the media was found to have influenced the participants' attitude toward technology (depending on consumer predisposition) largely stemming from their experience of use. Children whose parents are uncomfortable when introducing ET, are far more likely to experience technophobic tendencies. Dijk (2006) defines technophobia as a fear of technology in general, stemming from skepticism about the benefits of use. Weil & Rosen (1995),

found technophobia in countries where technology is common and innovative may leave consumers overwhelmed with the volume of gadgets available.

Parents with anxious attachment styles may be more likely to go with their child's preference when using ET jointly, whereas parents with avoidant attachment styles prioritise their own preferences (Liu, et al., 2019). Parental style also has an impact (Baumrind, 1991), when reflected within internet use (Valcke, et al., 2010); authoritative parents (more responsive and demanding than average) may be more responsive to their child's preferences toward technology use, but will have firm boundaries surrounding rules in comparison to permissive parents (warm and supporting but non-demanding) having less rules/boundaries, with authoritarian's (high control and low warmth) less likely to yield to consumption requests or joint consumption requests if it is not of interest to them and laissez-faire (uninvolved parenting, low in demand and responsiveness) may be passive about whether or not their child has access and also toward how ET is used (Livingstone, et al. 2015; Bettany & Kerrane, 2016). This leads to consideration of joint consumption in the household whereby devices are shared, but access is unsupervised.

### **Unsupervised access**

Ofcom (2022) found 99% of children aged 3-17 had access to the internet in 2021. Turkle (2011) discusses the use of ET as a typically isolated activity, dictating unsupervised, isolated access is present within the familial environment. Passive and unsupervised access is of interest to policy makers and researchers given the harms children are exposed to and the importance of freedom of use for a child's digital education (Livingstone & O'Neill, 2014). Cho & Lee (2017) found many parents use ET as 'babysitters' whether they are in a public place or the familial environment. Liu, et al. (2019)'s research does not consider consumer choices that take the form of borrowing or lending whereby the children may not own the device, but it is lent to them to use independently. Belk (2010) considers borrowing or lending as a form of commodity exchange whereby reciprocity can be present in an immediate sense, potentially including the use of contracts. Verbal contracts or promises are often used by children in the family as a tactic to influence their parents to yield to their purchase requests (Kerrane, et al., 2012), however commodity exchange dictates there is a transfer of ownership. Belk's (2014) definition of collaborative consumption encompasses bartering, trading and swapping whereby 'collaborative consumption is people coordinating the acquisition and distribution of a resource for a fee or other compensation'. By this definition, members of the household engage in the collaborative consumption if persuasive techniques that involved compensation were incorporated. Bartering techniques used without the transfer of ownership, takes the form of borrowing and lending within the sharing economy. Although forms of compensation may not be overtly expressed by caregivers, motivations for granting a child access to ET in exchange for them being pre-occupied can be a catalyst to this type of unsupervised access (Cho & Lee, 2017).

### **Gift Giving**

Another context of digital inclusion within the household includes gift giving. Belk (2010) distinguishes between gift giving and sharing through expectations of reciprocity, however this is less prevalent within the familial environment, with parents who will give their children gifts based on a recipient focus as opposed to expectations of reciprocity (Joy, 2001). Within Lui et al. (2019) gift giving is seen to hold stronger regard toward the wants and needs of the recipient because gift giving is a way for a chooser to express the strength and bond of a social relationship (Schwartz, 1967; Belk, 1979; Sherry, 1983; Camerer, 1988; Otnes, et al., 1993; Belk, 1996; Ruth et al., 1999; Lowrey, et al., 2004) found in Lui et al (2019). This type of gift for young children is usually given at ages 11-12 (OfCom, 2022a) and is considered a 'rite of passage' (Haddon & Vincent, 2015; Bettany & Kerrane, 2016). Waiting until children start secondary school shows higher concern for their long-term wellbeing (both through not granting access earlier due to safety concerns, and granting access at this time, out of safety concerns) (Lui et al., 2019). The child's long term wellbeing is a stronger indication of parental chooser preferences than the relationship focus within the gift-giving context. This motive is not unified however, with the parents within Haddon and Vincent (2015) viewing the device as a safety tool whereas in Bettany & Kerrane (2016) parents suggested children would be unequipped for the real world if child GPS trackers were used by parents; describing themes of infantilised young adults who lack resilience, resistance, and problem solving skills. Social inclusion is seen as another motivator to gift children ET, indicating

both a relational (thinking of child wants and needs) and a recipient focus toward their social wellbeing (Clark, 2009). Gifting children ET devices can also stem from educational and entertainment benefits (Ba, et al., 2002). With consumers forming high attachments to ET (Melumad & Tuan Pham, 2020), during the lockdown environment sharing devices was a great sacrifice, embedding the first element of 'the perfect gift' (Belk, 1996). The outcome that stems from motivations of gifting ET results in ownership of devices; leaving room for autonomy with regard to private/unsupervised use.

## Caregiving

There are differential contexts and motives for carer's granting ET access to children, these choices all encompass the caregiving context. Liu, et al. (2019) suggests within this context, the choices are focussed on how they affect the recipient, not necessarily their preferences. Whilst it was noted within the joint consumption context that consumers with a higher relationship focus will lean toward the recipient's preference, and those with a weaker relational focus will show more consideration to their own preferences; within the context of caregiver, it would be pro-typical that a caregiver will put their child's long-term interests before their relationship. The focus is still recipient orientated but this is based on what the caregiver believes the recipient ought to consume rather than their actual preference. Therefore it is the parental belief toward how the consumption of ET will impact the child consumer in the long-term, is prioritised over concerns for their relationship; this is considered as having a strong responsibility focus. These beliefs are the most influential toward a child's digital inclusion or exclusion, whether this be through joint consumption, gift giving or the allocation of household resources.

Kozinets (2008) identifies consumer beliefs toward ET can be conceptualised within four ideological fields: 1. Techtopian "technology consumption as social progress", 2. Green Luddite "technology consumption as destruction of the natural", 3. Work Machine "technology consumption as economic engine" and 4. Techspressive "technology consumption as pleasure". However, consumers are dynamic in that they rarely fit into one field entirely when it comes to their technology ideology. Kalmus, et al. (2011) developed a quantitative study, with personality traits as the basis for identifying inclusion/exclusion choices. It was found consumers were motivated to use the internet primarily for social media and entertainment or work and information, finding the younger generations were more likely to access the internet for social media and entertainment purposes. Unlike Kalmus et al (2011), Kozinets (2008) finds one field may be more dominant, but ideologies are turbulent and can have different impacts on behaviour. Theoretically you may have adult caregivers who fit into the Green Luddite category; but experience conflict in that they are aware of how important digital skills are and are progressively becoming, as highlighted during the lockdown environment (Sciacca, et al., 2022). Therefore wanting to introduce ET to their children (or at the very least, temporarily allocate ET as a resource for education and entertainment during this time).

One of the ways a child's consumption of ET can contribute to their long-term well-being is by building their resilience. For example, developing strategies to manage situations where they may see inappropriate social media content, without intervention from their parents (Olesen, 2000), found in (Nelissen, et al., 2019). Issues arise with children not being mature enough to handle this exposure, but as Livingstone & Helsper (2010) pilots, there is a degree of risk we expose children to in the offline world in order to build their resilience, this is a necessary part of their development and this is the same with the online environment. For some caregivers however, the benefits do not outweigh the risk and exclusion takes place.

### 3.3.2 THE ROLE OF THE FAMILIAL ENVIRONMENT: DIGITAL EXCLUSION

For parents that view ET use as detrimental, they can favour toward excluding children. Exclusion may occur because the caregiver believes it is within the long-term interests of their child, socio-economic factors, the carer's personal consumption and planning also plays a role within the decision to exclude children from ET use.



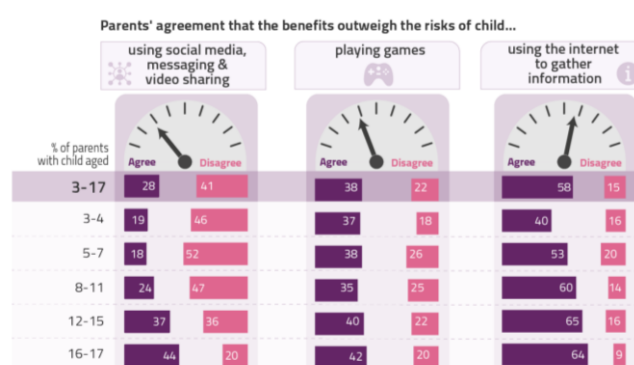
## Caregivers' personal choice

Digital exclusion has previously been considered an affordability issue (Hargittai, 2002), however, Helsper & Reisdorf (2017) found income is not the most common factor within the first level divide (access). This is due to the affordability of mobile internet access, meaning access is less of a concern for the child consumer, but the outcomes of this access (second and third level digital divides) are. It's therefore more likely to be the parent's beliefs toward technology use being threatening (or not) that can lead to the choice of exclusion for the child consumer (Kozinets, 2008; Bettany & Kerrane, 2016).

Parents may not consider ET harmful, Kozinets (2008) found consumers emulating the Work Machine ideology, are less motivated to use technology at home. When applying this to the caregiving context, Liu, et al. (2019) suggests there is an added complexity whereby caregivers will balance both their own and their child's preferences. Therefore, if they feel ET use is valuable to the child's long-term wellbeing, they may still introduce their child to ET, despite being fed up it for work. On the other side of this, caregiver's may fit into the Work Machine ideology, but believe ET is detrimental to long-term well-being. As famously documented among Steve Jobs, Jonathon Ive and Bill Gates having screen-time limits for their own children; some news outlets have interpreted this as hypocritical whereas others have underlined the importance of balance be taken seriously given their knowledge in this area (Fleming, 2015). Conversely, Hammer, et al. (2021) found that parents who valued ET for its intrinsic, utility and attainment values (Techtopian's and Work Machine's), were more likely to have children with higher digital self-efficacy; suggesting digital education took place within the familial environment. Parent's who valued ET for 'being fun, useful and important' (Techspressive's and Techtopian's) were more likely to purchase devices for children at a younger age and model this behaviour, but this did not translate to a child's digital self-efficacy.

Hammer et al (2021) highlights the importance of not just parental beliefs, but their skill here also. The findings show further insight is needed to interpret the reciprocal link between parental beliefs and the child's digital self-efficacy; socialisation research tells us there is a link here, the descriptive nature of the data could not-give that insight. Parental beliefs are not black and white, parents may exclude their children from ET until the age caregivers believe inclusion should take place. Inclusion is therefore on the horizon, but only at a time that parent's believe is best. The conversation is increasingly less about exclusion versus inclusion, but when inclusion starts within the familial environment. The below diagram from OfCom (2022) sheds further light on this, illustrating that parents are more likely to view ET activities less favorably for younger children in comparison to older children, which in turn correlates with the age children have ownership and access to ET:

Figure 3.1: Parents' agreement that the benefits outweigh the risks of child use of ET



(OfCom, 2022a)

## Socio-economic factors

Although income may not be as influential, it impacts on the type of device the child accesses the internet from. Lutz (2019) found internet access from handheld devices is less beneficial than computers and laptops. Expenses take the form of software to protect these devices from virus' or

hackers, as well as having WiFi with parental controls. Socio-economic factors influence parental mediation style; Livingstone, et al. (2015) found restrictive mediators (those with strict rules or bans) were most likely to have primary education or less, making them the least educated of all the mediator styles. Chang, et al. (2018) however argues this is not down to education level, but risk perception, parents with higher awareness of the risks of technology use, are more likely to mediate this risk in comparison to others. This perception of risk partly stems from research focusing on children with access as opposed to those excluded (Livingstone, et al., 2018). Some studies reflect hysteria, whereby moderate significance between ET use and the impact on youth functioning such as cognitive control, academic performance and socio-emotional functioning is heavily cited by the media (van der Schuur, et al., 2015). Examples include: “Is your smartphone ruining your memory? A special report on the rise of ‘digital amnesia’” (Seal, 2022), “Smartphone is now ‘the place where we live’, anthropologists say” (Hern, 2021), “Constant craving: how digital media turned us all into dopamine addicts” (Waters, 2021), “The smartphone is our era's cigarette – and just as hard to quit” (Barkan, 2019), “Smartphone ‘addiction’: Young people ‘panicky’ when denied mobiles” (Coughlan, 2019), “Our minds can be hijacked’: the tech insiders who fear a smartphone dystopia” (Lewis, 2017), “Is our smartphone addiction damaging our children?” (Davies, 2017).

This does not mean there are not harmful effects of internet access for young children, but there are households that have less strict mediation styles, who are more educated and leave room for children to benefit socially and educationally from ET use (Ólafsson & Mascheroni, 2015). Online opportunities and risks are positively correlated (Livingstone & Helsper, 2010; Livingstone, et al., 2012), however, not all risks result in harm, regular use can help children cope with the problems they encounter when using the internet.

Further influences of socio-economic factors include findings from Kozinets, et al. (2017) that technology can be a desire amplifier. With children having access to social media, it can intensify their demands within the household which can understandably be problematic, and conflicts can occur (Kerrane, et al., 2012; Kerrane & Hogg, 2013).

### **Caregivers’ personal consumption**

Reasons for digital exclusion can stem from parents’ personal relationship with ET. Matthes, et al., (2021) found parents who do not have a positive relationship with their smartphone, were more likely to experience a lack of control over their children's use, increasing conflict within the household. Matthes et al. (2021) found it was the parents’ excessive use and lack of control over their own usage that led to this increased likelihood of conflict. With many parents struggling with their own relationship with ET, it is logical they would exclude their children. Cho & Lee (2017) argues the biggest indicators of child ET use is parental use of the internet and ET. Kushlev & Dunn (2019) tasked parent’s with using their smartphone during a family outing, as a result of being distracted by the device, they felt isolated from their children. Although purposely tasked with the activities here, parents struggling to manage their own relationship with technology project this onto their children. With ET such as handheld devices being so integrated within our lifestyles, teenagers especially, can view their devices as a companion (Xiao, 2020). This ultimately impacts the familial environment whereby parents find themselves feeling guilty for their ET use distracting them from feelings of connection, the fear is that their children will do the same and conflict occurs when cultivating familial relationships.

Other risks pertaining to the caregivers consumption includes social media, with many adults concerned over this negative impact, in turn are concerned that children (not being as mature as them) will be struggling with this also, and perhaps to a greater extent. This is supported by Clark (2009) exploring the influence of parental involvement with ET access, finding that although there are gains to ET use (such as social benefits and the building of tech skills), online risks make parents concerned for child safety. These concerns for safety are of course legitimate (Weinstein, 2018), and awareness of them is a key skill that can aid the development of a child’s digital literacy, however, these fears can often lead to exclusion altogether.

Concerns for a child’s long-term wellbeing as a result of ET use are multifaceted. Some relate to physical health: eye health, child obesity, hindering fine motor skills; mental health: depression,

anxiety, bullying; educational attainment and/or distraction from this; social: hindering social skills, lacking empathy, conversation skills; online safety: exposure to inappropriate content, predators etc. Some parents do not feel they have the skills to protect children from these harms and so exclusion becomes the better option with Mascheroni, et al. (2016) finding parents who feel less familiar with ET often feel outsmarted by their children.

## Planning

Haddon & Vincent (2015) and OfCom (2022) suggest most caregivers plan to introduce ET around ages 11-12. Parental planning surrounding the introduction of healthy ET use is key but does not necessarily take place if access was not planned. Reasons for unplanned access interrelates Mick & Fournier, (1998) considering ET as an embedded force of paradoxical innovation, unavoidable in everyday life, with paradoxes existing between feelings of control/chaos, freedom/enslavement, new/obsolete and competence/incompetence. These conflicts may lead some parents to grant access earlier than they planned, however Thomas and Epp (2019), explored why new parents often fail when it comes to habituating practices they are motivated to introduce; finding it is the planning that dictates how these practices unfold. For those with a darker view of technology, this paradoxical relationship may lead to selective exclusion. Digital exclusion for the child consumer can therefore stem from the guardian's decision to exclude themselves and their children or potentially mean delaying this access. However, some parents find themselves purchasing technology because of the influence of older children in the household (Sharma, et al., 2016); this results in younger siblings gaining access earlier than older siblings and earlier than parents intended. This can lead to problematic ET use being far more common and negatively influencing parents from introducing their children to technology.

### 3.3.2 THE ROLE OF THE FAMILIAL ENVIRONMENT: A SUMMARY

This section has underlined the importance of the familial environment for digital inclusion/exclusion, however the consensus of the literature further supports Hutchinson et al (2020) "some of the barriers to engaging parents in digital learning environments, when this requires learning new skills or relies on sets of digital capital that are not equally accessible to parents, teachers and children." Thus, the impact of relying solely on the familial environment for a child's digital education realises inequality and reinforces the impact of the digital divide for young children. To help tackle this, the UK government introduced EdTech policy to ensure the school environment takes an active role in the child's digital education, the next section focusses on this environment.

## 3.4 THE ROLE OF THE POLITICAL AND EDUCATION ENVIRONMENT

Information Communication Technology (ICT/IT) is a mandatory subject within schools (making schools as institutions and educators an important agent when discussing digital divides for the child consumer). Within this section of the LR, the role of education is critically discussed surrounding the use and introduction of ET, as well as the unification of policy in this area. The section does not consider how children are educated to use ET, instead focusing on opportunities and barriers that exist to digital inclusion within the education environment. This adds to the discussion of the thesis by highlighting digital divides in the context of the education environment. This is a result of making considerations between the theoretical role of schools (policy) and how this translates to practice (the school environment). The section also discusses loopholes that exist within ICT/IT education. This section does not explore learning theory within the education context in depth, the focus is on the role of the education environment within the context of digital divides.

### 3.4.1 THE ROLE OF EDUCATION POLICY

The context of this study is the UK education system, below is a definition of the role of schools:

*"We work to provide children's services, education and skills training that ensures opportunity is equal for all, no matter background, family circumstances, or need. At our heart, we are the department for realising potential. We enable children and learners to thrive, by protecting the vulnerable and ensuring the delivery of excellent standards of education, training and care. This helps realise everyone's potential – and that powers our economy, strengthens society, and increases fairness"*

At the heart of this definition lies the premise of potential and equal opportunities, hence compulsory education within the UK; for young people up to the age of sixteen, and from ages sixteen-eighteen, young people must engage in education or professional training (UK Legislation, 2008). This section highlights that there are issues impacting this ethos, with the most pertinent being pupil absenteeism, considered an outcome of familial factors and/or a schools inability to meet pupils' needs (Zhang, 2003). The Government have introduced "The Schools Bill" (UK Parliament, 2022a.), in a bid to combat this. Further issues are evidenced by the call for the DfE to recognise additional educational requirements (Westminster eForum policy conference, 2019). Many academics are passionate about the importance of their discipline for child welfare, however, the Westminster eForum conference (2019) highlighted there is a 'join the que' attitude here whereby prioritization understandably takes place. This supports Cukurova, et al. (2018), recognizing delicate gaps between industry, research and education in practice. The child context surrounding concerns of digital divides is a current priority however, evidenced through the Online Harms White paper (2019) and EdTech policy (2019a). The DfE's self-defined role within a child's digital education is highlighted within EdTech policy; subsequent discussions surround what DfE do take responsibility for within this context.

EdTech (2019a) refers to the integration of technology throughout the UK education system with aims of reducing teacher workload, saving money and improving student outcomes, especially those with special education needs. Pertinent elements of the EdTech (2019a) policy within the context of this project, include those relating to the improvement of student outcomes. In achieving these outcomes EdTech proposes the following:

**Table 3.4: Summary of key commitments**

COMMITMENT NUMBER	COMMITMENT
1.	Work with industry to accelerate the rollout of full-fibre internet connectivity to schools most in need.
2.	Continue to support Jisc to provide full-fibre connections through their Janet network to colleges and universities.
3.	Encourage and support schools, colleges and other providers to consider moving to a cloud-based approach for their IT systems and storage.
4.	Continue to review and improve our guidance documents that help steer schools, colleges and other providers through the key questions and issues to consider when implementing their technology infrastructure.
5.	Work with the Chartered College of Teaching to launch online courses for teachers and headteachers so that they can learn how to make their uses of technology more effective
6.	Launch a network of 'demonstrator schools and colleges' that will leverage the existing expertise in the sector and help to provide peer-to-peer support and training.
7.	Work with the British Educational Suppliers Association (BESA) to support the LearnEd programme, bringing together teachers, education leaders and industry to showcase best practice and products through events across the country.
8.	Continue to improve our support for schools to access and use our prenegotiated and recommended buying deals for schools, helping to secure cheaper products.
9.	Continue to work with BESA to support a trial of the LendEd service, an online lending library for education technology software, so educators can try before they buy to help identify the 'right' products for them.
10.	Explore how to build on existing practice and facilitate a better online marketplace where schools, colleges and other providers can buy with confidence and sellers have an efficient and effective route to market.
11.	Trial an offer of independent Buying Hubs in the South West and North West regions, including testing a service to directly manage procurement for schools (before national roll-out).

12.	Engage with local School Business Manager networks to increase awareness of the support available to improve procurement practice.
13.	Set up a new EdTech Leadership Group made up of representatives across the education sector (including academia) and industry to continue to drive this agenda forward, find new ways to collaborate and to agree a plan on how to support the aims of this strategy by the end of the year.
14.	Help galvanise activity across the wider technology sector to support the aims of this strategy.
15.	Work with industry, research and education groups to establish small ‘testbeds’ of schools and colleges to support the development, piloting and evaluation of technology.
16.	Work with EdTech investors to ensure they are aware of and able to access government facilities including through the British Business Bank’s (BBB) angel, venture and patient capital programmes.
17.	Work with the EdTech Leadership Group and key partners to engage incubators and accelerators and ensure EdTech businesses are aware of the opportunities they offer.
18.	Launch a series of ‘EdTech Challenges’ to stimulate a step-change of activity in key areas where we believe education technology can make a significant impact. We will support these challenges by launching a series of innovation competitions to promote product development where needed and through the aforementioned ‘testbed’ and ‘demonstrator’ schools and colleges.
19.	Create a step change in the digital services available to parents, students, teachers and education leaders. We will pilot ways of engaging with these groups that brings together relevant information, so that the education sector and the public get the services they need.

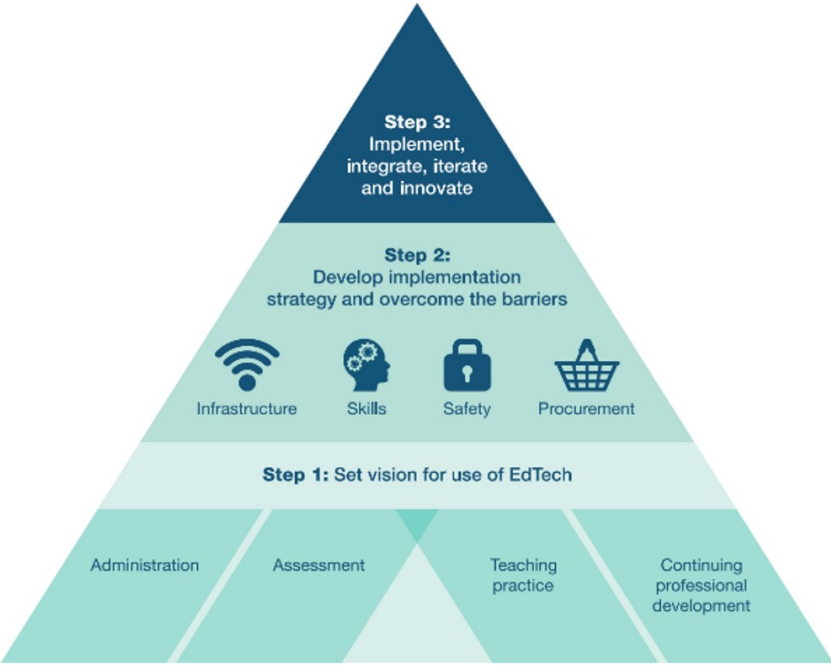
(DfE, 2019a)

This summary speaks to the press release surrounding EdTech (2019b), although prominence is put on student outcomes within this release, this is less clear cut within the policy document. The aims within the full report largely speak to efficiencies surrounding the integration of EdTech which in turn supports better outcomes for the child consumer, as opposed to direct benefits to their digital education. Please see the table below for the researcher’s synopsis of this, this compromises the researchers interpretation of the policy document:

**Table 3.5: Researcher Summary of EdTech (2019a) Policy Document**

SECTION SUMMARISED	RESEARCHER’S NOTES (FOCUSSED ON CHILD CONSUMER OUTCOMES)
<p><b>Section 1: Setting our vision for education technology</b></p>	<p>Summarised within the figure below, the vision for EdTech surrounds the DfE’s aim to support and enable the education sector. Plans to do so rely on reducing workloads by reducing the burden of administrative tasks, increasing efficiencies with prominence on assessment processes, breaking down barriers to education by supporting access and inclusion for improved education with prominence on continued professional development (CPD) opportunities for teachers, supporting the EdTech business sector with a view to improve ‘learning throughout life’, helping those not just in formal education.</p> <p><b>Figure 3.2: Framework for change</b></p>



	 <p style="text-align: right;">(DfE, 2019a)</p> <p>Recognised as an essential to this delivery, is a partnership between educators, leaders and experts within the EdTech sector.</p>
<p><b>Section 2: Securing the digital infrastructure</b></p>	<p>Recognition toward schools without the infrastructure to support the aforementioned strategies. Data here is based on a 2018 report, the latest update from OfCom suggests 40% of UK homes are able to access broadband capable of Gigabit speeds, 24% of homes with access to full-fibre, 62% of homes have access to ultrafast broadband (download speeds of a minimum of 300Mbit/s), with just over 2% of homes unable to access ‘decent broadband’ (10Mbit/s for download speed and 1 Mbit/s upload speed) (OfCom, 2021). Plans are in place to have all schools across the UK with top internet speeds by 2025 (DfE, 2022).</p>
<p><b>Section 3: Developing digital capability and skills</b></p>	<p>Have acknowledged confidence and willingness to learn as the main barriers with regard to the consumption and role of ET education by teachers, and plan to make training available online as well as 8 accredited CPD events, prominence is put on the demonstrator schools to share their experiences and insight.</p>
<p><b>Section 4: Supporting effective procurement</b></p>	<p>Vulnerabilities toward the integration of ET within practice is noted to stem from lack of knowledge surrounding the best tools and equipment that are fit for purpose, making schools and parents exposed to issues of buying expensive technology that is not best suited to their needs. In light of this, the government have pre-negotiated contracts for schools, available through the digital marketplace platform, cloud-based technology is available through this platform but not through traditional catalogues. Other initiatives include online procurement guidance and a lend service; educators can try equipment before committing to purchase. Independent and tailored buying advice to directly manage procurement for schools has been piloted within the South-West. A ‘directory’ of contacts has been created to develop a network for advice between educators surrounding this, although no responsibility to monitor or guarantee the quality of this advice is given, it is stated that the information here ‘does not constitute a recommendation’ by the DfE.</p>

<p><b>Section 5: Promoting digital safety</b></p>	<p>Highlights the implications of not having this knowledge through examples of the cyber-attack impacting the National Health Service in 2017 (Smart, 2018). The responsibility for digital security and data protection lies with the individual institutions. A tool kit is provided for guidance as well as an annual review/checklist for education providers to complete in line with the data protection act (2018). The tool kit details data protection activities, policies and processes for data management and guidance on how to respond to data breaches, should they occur. They have also outlined initiatives from external providers such as the National Cyber Security Centre (NCSC), Jisc and where to report instances of personal data breaches.</p> <p>With regard to the child consumer, they highlight schools should do what they can to limit children’s exposure to content through the use of filters and monitoring systems. Referral is made to the Keeping Children Safe In Education (KCSIE) statutory guidance, this guidance is there to signpost schools to the Safer Internet Centre’s guidance, where they will explain what filtering and monitoring best practice looks like. They advise children are taught online safety throughout the curriculum and staff training should be inclusive of policy guidance. Interrelating industry, it is expected they adhere to ‘cyber essentials’ minimum standards developed by the NCSC and adhere to the Code of Practice for Consumer IoT Security throughout the design process. Hints toward the Online Harms policy are made where policy makers will work with the DfE to ensure the safety of young children.</p>
<p><b>Section 6: Developing a dynamic EdTech business sector</b></p>	<p>The aim here is for industry to work with schools to develop practical, school-led solutions and teacher-tech training in peer-peer groups to help raise the confidence and competence of staff. Noted is the importance of the EdTech business sector in driving this change as being innovative and evidence based.</p> <p>Suggestion of an EdTech launchpad scheme to identify and support Further education (FE) and Higher Education (HE) startups is made, aiding product development, and making it easier to work with these startups. A ‘Rocket fund’ is in place to boost support and engagement with local communities to help UK schools procure and embed technology.</p> <p>Issues for EdTech businesses include struggling to access education institutions to test, pilot and prototype their products. Empathy is given for teachers and school leaders prioritizing their day to day duties, but outlines this in turn hinders the quality of the products that are offered. The aim is then to work with industry, research and education groups to establish small ‘testbeds’ to facilitate product development.</p>
<p><b>Section 7: Supporting innovation through EdTech challenges</b></p>	<p>Five opportunities were outlined when describing how EdTech can specifically support schools. Again, prominence is on collaboration between industry, research and practice:</p> <ul style="list-style-type: none"> <li>• “Administration processes: reducing the burden of ‘non-teaching’ tasks.</li> <li>• Assessment processes: making assessment more effective and efficient.</li> <li>• Teaching practices: supporting access, inclusion, and improved educational outcomes for all.</li> <li>• Continuing professional development: supporting teachers, lecturers and education leaders so they can develop more flexibly.</li> </ul>

	<ul style="list-style-type: none"> <li>• Learning throughout life: supporting decisions about work or further study and helping those who are not in the formal education system gain the skills they need now and in the future.”</li> </ul> <p style="text-align: right;">(DfE, 2019a)</p> <p>With regard to the learning throughout life initiative, the aim is to prove that early learning apps can help improve literacy and communication skills for disadvantaged children. The benefits here are also sought for adults to “widen accessibility and improve delivery of online basic skills training”. With artificial intelligence being used to support this delivery and training.</p> <p>These aims are dressed as challenges, posed to industry and research bodies to undertake this research and evaluation. With schools being encouraged to widely share any good practice.</p> <p>The DfE have outlined their role as supportive:  “To support the type of coordinated sector leadership that is a feature of other more established business sectors, the DfE and the Department for Business, Energy &amp; the Industrial Strategy (BEIS) will establish an EdTech Leadership Group, that will ensure that both the business sector and the education sector are able to drive the delivery of this strategy across England. We will work with the Group to agree a plan by the end of the year, including on how industry and the English education sector will support the aims set out in this strategy, and will work with this group to utilize their networks and communication channels to discuss this with the broader sectors” (DfE, 2019a)</p> <p>Both the business sector and education sector are therefore expected to stay tuned with regard to their role and responsibility in this, and that outline is within the premise of the DfE’s supportive role. In order to promote the product development for industry, innovation competitions will take place, giving businesses the opportunity to bid for funds to develop, test and refine EdTech products and services. The education sector will then be expected to work with the winning bidders to build on this. Following this, the research group is responsible for demonstrator schools and colleges; disseminating this good practice.</p>
<p><b>Section 8: Improving the Department for Education’s digital services</b></p>	<p>In order to improve the DfE’s digital services, the below is outlined:</p> <ul style="list-style-type: none"> <li>• “Support for people who want to become new teachers by making it easy to find a postgraduate training course and apply for teacher vacancies</li> <li>• Help for teachers and school leaders to buy products and services</li> <li>• Systems for schools and colleges to more efficiently send data securely to the DfE</li> <li>• Help for parents to find and pay for childcare, including access to 30 hours free childcare</li> <li>• Support to help young people to find an apprenticeship</li> <li>• An online tool to help students to apply for a student loan to support further study.”</li> </ul> <p style="text-align: right;">(DfE, 2019a)</p> <p>Also mentioned as in development, is a national retraining scheme.</p> <p>It is suggested that a minimum standard must be set with regard to digital standards; schools are given autonomy to define what success looks like with the requirement of publishing performance data.</p>



<p><b>Section 9: Conclusion – Implementing, integrating and innovating</b></p>	<p>This section acknowledges technology can ‘polarize’ opinion but recognition of it’s potential to positively impact the sector is made with a view to move EdTech on from ‘just one more thing to do’, with focus on how it can improve efficiencies, leaving educators more time to focus on student outcomes. The strategy is viewed as a revolution with regard to the sectors approach to technology, underpinned by government support and partnership with education and industry. Noted as a journey that is beginning.</p>
--	--

(DfE, 2019a)

The DfE’s recognised barriers to these commitments and strategies are:

- Infrastructure: (slow connection, outdated networks and devices)
- Greater digital capability and skills: (skills and confidence to use the technology, responsibility for school leaders to empower teaching staff to use the technology, awareness of the tools available and expertise to identify those best suited)
- Procurement: (the ability and expertise to make sound purchase decisions)
- Privacy, safety and digital security: (concerns toward protection for both education providers and students)

(DfE, 2019a)

### Infrastructure

Schools having the infrastructure in place to effectively use the internet (as demonstrated by the demonstrator schools) is key. Since the original policy, there have been monumental increases in internet availability, as part of the governments 5G Supply Chain Diversification Strategy (DfDCMS, 2020). However, within the COVID-19 lockdown environment, infrastructure within the home environment was a greater concern with a ‘small but significant’ number of homes without decent broadband service by December 2020 (119,000 in England, 34,000 in Scotland, 19,000 in Northern Ireland and 18,000 in Wales (Ofcom, 2020).

### Procurement

The commitment to support greater digital capability and skills is discussed within the next section (the role of the education environment: in practice). With regard to procurement barriers, this surrounds concerns toward the ability and expertise to make sound purchase decisions. The availability of such information is (for cloud technology) restricted to the online digital market place, as opposed to traditional catalogues; meaning schools must first have the infrastructure to upskill digitally, before having that in-depth information available to them. The exclusive availability of this information online, hinders service standard three: to provide a joined-up experience across all channels “Users should not be excluded or have an inferior experience because they lack access to technology or the skills to use it.” (Gov.uk, 2022). The trial of buying hubs was announced within EdTech policy (2019a), which included testing a service to directly manage procurement of schools; at the time of updating this section (April 2022), this has been trialed within the South-West only, but this could be a beneficial initiative to help school’s individual procurement needs. In turn, this trial synthesizes with the governments procurement commitment by making this information available in both online and offline settings. Within the (2020) Westminster Education Forum policy conference, it was acknowledged that EdTech policy had not been prioritised prior to the pandemic; forcing schools to accelerate these procurement plans in a short time period, the standard of which was rightly praised, despite the outlined trial’s not having been implemented.

### Practical barriers

The commitment from the DfE to tackle barriers include reaching a ‘good minimum standard of digital maturity, an essential pre-cursor to the effective use of technology’ (DfE, 2019a). This benchmark encompasses the schools’ individual responsibility to follow the framework for change (figure 3.2) above. The autonomy given to schools is beneficial to school leaders and teachers

understanding better than policy makers the requirements of their individual school and pupils, however there is ambiguity surrounding the outcomes to children within the document. These benefits appear to be an indirect outcome of the efficiencies of the integration of technology rather than being specified. Responsibility is on demonstrator schools to disseminate this beneficial information, which adds to their workload. It is clear workloads are acknowledged by the DfE, however the insensitivity toward this is pertinent, putting responsibility on ‘testbed’ schools to work with industry and demonstrator schools to disseminate best practice. In the first light, sharing knowledge and best practice is the burden of demonstrator schools; the expectation of this knowledge sharing is also questionable. As acknowledged by the DfE, digital capability and skills are a barrier to the implementation of this policy, does knowledge sharing solve this barrier? Teachers and leaders within schools where this knowledge would be beneficial does not translate to them having the infrastructure or skills to implement these examples. Peer-peer learning is an optimal way to disseminate information, but is grounded in impracticality. This strategy embeds inequality whereby schools without the infrastructure, or those whose leaders and teachers do not have the capability and skills to implement these examples given, are excluded. The complex and embedded nature of digital disparities are overlooked here. Practically, what is the expectation of the demonstrator school? The lack of intervention from the DfE will leave some staff and schools even further behind, meaning inequality within the child consumers familial environment is only one side of the coin, as there are inequalities within the educational environment also.

### **Fair compensation**

Adding to the concerns surrounding the ‘supportive’ role of the DfE, are ethical considerations surrounding the need for schools to work with industry in reaching these better outcomes. How are school leaders and teachers being compensated for taking time out of their working day to work with industry? Luckin & Cukurova (2019) highlight the importance of this collaboration, but these companies stand to win funding from the government and profit from this partnership. Whilst Luckin & Cukurova (2019) consider that collaboration gives developers better understanding on the educator’s perspective and the process of teaching and learning, in exchange educators upskill and improve their understanding about ET; in turn improving their practice and student outcomes. What does this mean for schools whose teachers are not motivated to engage in this undertaking? Those who already go above their contracted capacity to increase student outcomes? Or those who are already overwhelmed with unmanageable workloads? Do teachers who do not see this as fair compensation, or those who do not have the capacity to take on more, get discriminated against? And how sustainable is it to expect teachers to do this? Even if this engagement is fairly substituted within their workload, is this fair compensation? With regard to solutions here, the DfE need to take an active supporting role in the form of enriching their understanding of best practice, disseminating this information themselves and actively supporting school leaders and teachers who are motivated, but need further help in tailoring these examples to their contexts. Although training opportunities are available to upskill teachers (making knowledge-sharing more effective); 44% of teachers suggest they will resign in the next 2-5 years (The Guardian, 2022), unmanageable workloads appear to be the catalyst for this. For the majority of teachers then, the efficiencies suggested through the introduction of EdTech indicates workloads will be brought to manageable levels *when* they upskill. Thus, these efficiencies do not necessarily achieve the overall aims of the policy with regard to improving student outcomes. In light of comments surrounding the DfE ‘failing to get a grip on the issues facing teachers’ (The Guardian, 2022), it highlights part of the issue with the promulgation of EdTech within practice is that evidence-based research is generalizable, but not practical (Bennett, 2013) found in (Cukurova, et al., 2018). The next section moves on from discussing the theoretical role of the education environment toward considering the reality of this environment in practice.

### **3.4.2 THE ROLE OF THE EDUCATION IN PRACTICE**

Within the EdTech policy conference: The future for Edtech in England - standards, quality and accessibility, the experience of lockdown, and next steps for the Edtech Strategy (2021), the researcher asked about the practical implications of how policy would be implemented. It was stated schools would have autonomy, as they know their pupils and needs better than policy makers. This autonomy however, includes responsibility, whereby the DfE’s role is strictly supportive. When asked about this, it was stated “only 18% of schools rely on the DfE prior to making procurement choices” (Westminster Education Forum policy conference, 2021),

highlighting the role of DfE for procurement purposes was not imperative. This section discusses the infeasibility of the DfE's top-down approach to the integration of ET in schools, unveiling how currently, the DfE are ungrounded regarding the antecedents of ET use that impacts a teacher's willingness and ability to integrate ET within the classroom. This may therefore be the reason that only 18% of schools rely on this advice, as opposed to a statistic used to shed the weight of this responsibility.

## **Mindset**

The EdTech policy rejects or is unsympathetic to the idea educators can have a fixed mindset: where intelligence is viewed as unchangeable (Dweck, 2000). Their faith toward a teachers' belief they can upskill indicates presumptions of a growth mindset with regard to their efficacy of technology use. Within a growth mindset, failure is viewed as a normative essential to growth, effort is central, skills are changeable and able to be developed (Dweck, 2006). Hase (2014) suggests a growth mindset is synonymous to leaders in education, desirable given the influence a teachers' mindset can have on a students' achievement (Hattie, 2012). Schriever (2021) found this is not always the case when it comes to ET however; making the assumptions surrounding the fixed mindset approach within the EdTech policy problematic.

Schriever (2021) conceptualised a framework outlining the complexities of a teachers' individual agency regarding the management of ET within the classroom. It showed the consumption and integration of ET within schools is multi-dimensional between a teachers' personal and professional consumer behaviour. An educators mindset toward their ability to upskill and integrate ET within the classroom is reflected through the autonomy teachers have regarding the use of ET within their classroom. The importance of autonomy here strengthens the political approach the DfE take (a supportive role). However, what about those who see this autonomy as a loophole? Fraser (2018) highlights classroom culture as significant in the practical implementation of new practices, although difficult to change (Van Dam, et al., 2008). Naturally, educators with a growth mindset toward themselves, explore opportunities to learn and grow, whereas those with a fixed mindset look to validate their competence (either seeking situations where this competence can be displayed and/or avoiding situations where they may feel incompetent) (Solberg, et al., 2020). The difference in the individual mindset of educators will therefore lead some to be more opportunistic and enthusiastic about embedding ET within their teaching (with the autonomous element of the policy being beneficial), whereas others may struggle to do so (making the autonomous element problematic). Some may look at this training as an opportunity and some as a hinderance, in either scenario this attitude will equate to diverse motivation to partake in such training. Practically, this may be a hinderance to all educators given their workload, but some will be more motivated than others. In addressing this barrier to make the EdTech policy more practical, training should aid the identification of schools and educators who require knowledge surrounding the benefits of digital education to ensure student outcomes. Earlier studies have shown one-off training of this nature is unlikely to see permanent effects after a 3-month period (Donohoe, et al., 2012), whereas multiple training sessions saw longer lasting results (Seaton, 2018).

## **Approaches to pedagogy**

To encourage deeper thinking when introducing ET, Blau & Peled (2012) suggest it requires to be embedded within a constructivist pedagogical perspective, requiring teachers to give their students room to explore and construct their knowledge in comparison to teachers who believe learners simply absorb information (Bruner, 1999). Cukurova, et al., (2019) also advocates this approach. Kolb & Kolb (2017) pilot the importance of experiential learning within pedagogy, focusing on how this approach gives students the ability to experience the topics first-hand. When this approach is enabled through technology use, this allows a more meaningful understanding of topics. Activities can include role play, field trips and applied projects. Whilst pedagogy surrounds the teaching of children and andragogy the facilitation of learning for adults, the EdTech policy surrounds self-directed adult learners, thus andragogy. However, Blaschke (2021), recognises the role of educators is to prepare students for lifelong learning given there is a rising demand for these skills within the digital age; promoting the emerging approach of heutagogy within their teaching. This coincides with EdTech (2019a): section 7: Learning throughout life. However, the supportive role embeds the dissemination of good practice by 'test bed schools', which is not suitable when training teachers to apply this knowledge in a constructivist approach in order to embed critical

thinking and realise the beneficial outcomes. Hutchinson, et al. (2020) considers the pressures both parents and teachers feel about this burden; finding ultimately, successful pedagogies were only developed when continuous opportunities for collaboration were available. This approach ensured constructive and creative ways to embed ET were incorporated into practice whereas the limited and infrequent opportunities suggested by the EdTech policy through sharing best practice, will not be effective for everyone.

## **Outcomes to pupils**

Literature surrounding beneficial outcomes of ET use within the classroom is vast; ranging from outcomes for students that stimulate motivation and concentration, with particular benefits to those with special educational needs (Flewitt, et al., 2015), improved learning for students (although not automatic) (Neal, 2007), engaging students in more complex projects, increasing their commitment to their academic work (Kalman & Guerrero, 2013), added value to educational activities both inside and outside the school environment (Shamir-Inbal & Blau, 2016), the fun and engaging aspects of incorporating digital games, ultimately leading to educational benefits (Beavis, et al., 2014) and ultimately, improved student learning (Cloonan, et al., 2014). These beneficial outcomes, along with those that benefit teachers, are clearly recognised by the DfE which has ignited the introduction of EdTech policy within the UK. Selwyn (2012) however, concluded many teachers are not able to sufficiently adapt to the challenges technology can bring, and this is highlighted within some of the challenges the aforementioned studies found within their research. This can stem from fears of potential harms (Flewitt, et al., 2015), some fearing their skillset as teachers becoming redundant (Neal, 2007), difficulties stemming from teacher skill (Kalman & Guerrero, 2013), limitations of the technology within the classroom (Shamir-Inbal & Blau, 2016), confidence and willingness (Schreiber, 2021), teacher's losing control within the learning environment (Beavis, et al., 2014) and despite preparation, technological difficulties and issues with protocol (such as students' forgetting passwords) (Cloonan, et al., 2014). The commonality between the successful integration of ET within classrooms, thus overcoming these challenges to realise beneficial outcomes, were grounded within the participation of viable transitional practices (Kalman & Guerrero, 2013). This included a teacher's willingness and motivation to view the integration of ET as a complex process of re-interpreting the curriculum, expanding beyond the use of academic texts, by taking risks and constructing new approaches to work and interaction.

The process of embedding EdTech to realise beneficial outcomes for both teachers, schools and children is achievable but clearly complex, with Livingstone & Third (2017) highlighting the need for children to be educated about both protection and maximizing the benefits of ET use. There is therefore a heavy demand on teachers, not only to outline the harmful connotations of ET use, but to embed ET to realise beneficial outcomes. Active participatory studies such as Parnell & Bartlett (2012) and Cloonan, et al. (2014) are integral to understanding how (if educators are willing and do upskill), these outcomes can be achieved; highlighting benefits for teachers, children and parents. The reality is, not all teachers have the same level of skill, confidence and/or motivation to do the same as the researchers in these studies. This view is supported by Beavis, et al., (2014) whereby the researchers highlighted the teachers' attitude toward ET within their sampling method, as it was acknowledged the findings were illustrative of teachers with a higher motivation to learn these new skills and pilot this within the classroom. Having said this, Kalman & Guerrero's (2013) research is incredibly meaningful to the literature, showing how a teacher with 38 years of experience and little knowledge of digital technology, can realise these outcomes if they are willing to take part in these transitional practices. Solberg, et al. (2020) emphasizes the need to understand why consumers within organisations engage or avoid these practices.

## **Current policy and loopholes**

The UK introduced EdTech in 2019, however this was put on 'the backburner' (Westminster Education Forum policy conference, 2021). It wasn't until the COVID-19 pandemic that this became the focus of the DfE again, however no changes have been made responding to the practical issues highlighted within this section of the literature review. In a bid to proactively share responsibility of children's digital education between the education and familial environment, the government introduced free early learning apps to families eligible for free school meals. Meyer et al (2021) found free early-learning apps were less effective than paid apps however. On top of implications for those with lower-income, the study found parents would benefit from understanding how to



evaluate the quality of free or paid apps before downloading them (Meyer, et al., 2021). This interrelates Hutchinson, et al. (2020), finding parents/guardians do not have the skill or capacity to introduce ET effectively to young children, at least not to the same degree as the education context; underlying the need for the school environment to make these recommendations, although not a remit within the EdTech policy. In keeping with this holistic approach to the child consumers digital education, the introduction of Relationships, Sex and Health Education (RSE) in England's primary and secondary schools is in place to support students with their personal use of the internet. It is within this subject that relationships on online platforms are discussed, what is considered kind, appropriate, private and what kind of data is responsible to share; with the aim of increasing digital literacy (DfE, 2021). To support teachers with this, guidance is available such as frameworks to help equip children and young people for digital life (UK Council for Internet Safety, 2020); topics here include self-image and identity, online relationships, online reputation, online bullying, managing online information, health, wellbeing and lifestyle, privacy and security as well as copyright and ownership. There is also the UK Council for Child Internet Safety (UKCCIS), there to help provide guidance for parents, carer's and educators (UKCCIS, 2020). However, in a recent survey (n1,014 school children aged 7-16), it appeared children have been taught nothing, or at least very little when it comes to their data rights (Livingstone & Pothong, 2022). Given the heavy workload of educators however, it is plausible to consider that subjects like RSE (not an area where a schools' performance is measured) (DfE, 2022), will not take priority over those that are. On that same token, computing studies has not been mandatory within progress 8 for quite some time either (DfE, 2016; DfE, 2017; DfE, 2019a; DfE, 2020; DfE, 2022).

### **3.4.2 THE ROLE OF THE POLITICAL AND EDUCATION ENVIRONMENT: SUMMARY**

This section has discussed a lot of what stands in the way for teachers and their ability to up-skill if necessary. The pandemic has shown all teachers are able to do this, but a pandemic lifestyle and workload is not sustainable. This section has highlighted the problematic nature of the EdTech policy aiming to increase teacher and student outcomes within the education environment. In order to contextualise the critical discussions so far, the next section takes a theoretical approach toward digital divides within the familial and school environment during the COVID-19 pandemic lockdown period.

## **3.5 CHILD SOCIALISATION**

Technologies today are as significant as the tools human beings have been evolving with for the past 2.6 million years; it solidifies our technological tools today are significant within every aspect of our lives by "reflecting us, connecting us, shaped like us, shaping us, replacing us, controlling us", to be a new and embedded force within our lives (Kozinets, 2019). The significance of ET today and the impact of digital inequality highlighted within the LR so far, draws consideration toward how consumers are socialised to use such tools. So far, the LR has revolved around the topic of digital divides, and the role that the familial and education contexts play toward the child consumers' position on the digital ladder. This section adds value to the thesis as socialisation theories conceptualise the discussion so far; moving away from the role of the aforementioned environments with regard to a child's digital inequality, toward considering how the child consumer is socialised to use ET within these contexts. Adoption and diffusion theories are mentioned, however, these approaches do not form the theoretical grounding of the thesis. By interrelating the topics discussed so far within one theoretical lens, a holistic view of digital divides for young children is enabled. This section does not encompass socialisation agents outside of parents/guardian's, educators and policy makers, given it is not within the scope or focus of the study.

### **3.5.1 PARENTS/GUARDIAN'S AS DIGITAL SOCIALISATION AGENTS**

Cotte & Wood (2004) suggest parental influence is stronger than the influence of siblings, with parental style being a dominant factor. Moreno-Ruiz, et al. (2019) discuss how parental style can impact cyber aggression and victimization; protective, warm, affectionate and supervisory characteristics found within authoritative and indulgent parental styles, reduce the likelihood of cyberbullying and aggression. Authoritarian styles that have elements of control/supervision but little warmth, are more likely to result in children becoming a risk factor for cyberbullying. Conversely, Thomas, et al. (2022) argues family satisfaction and parent/child attachment plays a

major role in influencing the monitoring of online activities; it impacts problematic internet use (PIU) as child aggression and parental monitoring of online activity positively correlate, and family satisfaction, attachment and low parental work-family conflict, negatively relate to PIU. Ventouris, et al. (2021) found a better educated father and high family income meant PIU was less likely. On the other hand, Leijse, et al. (2023) outlines parent factors do not equate to risky internet use on social media, however these kind of factors can equate to low self-esteem, which in turn leads to risky and therefore PIU. Self-esteem being the prominent factor interrelates with Matthes, et al. (2021), finding children who had self-regulation promoted within childhood were more likely to have control and be able to regulate their own internet use, without this experience of self-regulation in earlier years, it caused issues later. Parental style however, can influence a child's self-esteem, the likelihood that self-regulation is promoted, as well as direct influences on a child's mediation of ET. Sciacca, et al. (2022) found within the more active and restrictive mediation styles, more skills were developed. Helsper, et al. (2013) found restrictive mediators to be more of a hinderance to the development of digital skills than active mediators, but both had a higher degree of influence than parents who were passive about their child's internet use, this style was more commonly used by parents with male children. Matthes, et al. (2021) concludes mediation does not change with technology type.

Sciacca, et al. (2022) contextualises this to the lockdown environment; finding active mediation was most likely if parents were worried about online risks. Restrictive mediation was caused by the amount of time children spent online during lockdown, worries about online risks, the carers' digital skills and their negative attitude toward digital technology. Child digital skills were developed when high levels of both active and restrictive mediation were present during lockdown. Skill development was hindered if parents had a dominant restrictive style however, given children spent less time online, thus active mediation/influence was less prominent within their socialisation style in comparison. Whilst passive mediation would mean increased time spent online, a child's opportunity to digitally upskill increased as they are more likely to encounter opportunities and risks which builds their resilience (Livingstone & Helsper, 2010). When extending on this research, Livingstone, et al. (2012) clarified not all risks result in harm, but regular use can help children cope with problems they encounter, although the outcome is increased digital efficacy, the degree of influence was lessened as parents did not have a huge role in the process.

## Family structure

The family structure and environment are influential within the degree of socialisation. Sela, et al. (2020) finds a negative family environment is more likely to lead to depression and FOMO. Buelga, et al. (2017) agrees, discussing cyber bullying is more likely in lower family climates and communication environments. On the other hand, Carvalho, et al. (2015) found technology use impacts the family, not the other way around. One form of this is through technoference (using technology in front of each other), as this can impact the parental relationship (McDaniel, et al., 2018). Parents tasked with using their smartphone during a family outing reported they felt isolated from their children as a result. Although the parents were purposely tasked with this activity, parents who are less conscious of the impact of technoference, may feel the same (Kushlev & Dunn, 2019). Within the lockdown context, Hong, et al. (2022) found family closeness made game playing more valuable during lockdown, with Wang, et al. (2018) finding the more a family plays games together, the closer they are. This interrelates Xiao (2020) where teenagers without this family closeness viewed their phone as a companion; this can stem from low family climates, but can also be a result of seeing their parents excessively using ET. These norms and behaviours can form part of the family identity; co-constructed qualities and attributes that are particular to that family and differentiate them from others (for example, using/not using ET at the dinner table) (Epp & Price, 2008).

The families interpersonal communication can directly and indirectly impact consumer socialisation, whether this takes place through concept or socio orientated communication; it is the frequency that children discuss ET use with their parents that increases the degree of socialisation that takes place. Information can of course come from sources outside of the family, but it is found that if this information prompts family discussion, the sources influence is weakened, thus the family structure has a huge bearing on child socialisation. In instances where carers have more restrictive/protective styles of communication (protecting the child from controversy), the

influence of these agents is likely to be higher, concluding that communication type is just as important as the frequency of the communication (Moschis, 1985). Goodrich & Mangleburg (2010) however, suggest child consumers who are high socio-orientated are more likely to be influenced by their peers, and those who are high concept-orientated are more likely to be influenced by their family. Earlier studies by John (1999) highlight this depends on age, this is more likely the case for teenagers than child consumers. Other attributes of the process of socialisation can take the form of frequency of contact, primacy, and ability to reward and punish behaviours. Within this scope, Moschis & Moore (1979) suggests socialisation takes three forms: Modelling (imitating behaviour), reinforcement (reward-positive reinforcement or punishment- negative reinforcement), or social interaction (the degree of influence will vary based on factors such as socio-economic status, sex, birth order, age, or life cycle position as it negates the learners' recognised social environment and where this learning takes place). Whilst socialisation can take place within the familial or school environments, it does not diminish the influence of familial habitus. This interlinks Bourdieu's concept of habitus, conveyed within digital capital (Fletcher & Blair, 2016). Families who use ET for either capital enhancing or non-capital enhancing activities, are likely to pass this on to their children. There are however instances whereby socialisation is child-led, rather than a parent-child process.

### **Child led socialisation**

Foxman, et al. (1989) suggest the extent of child influence within the family depends on the communication environment, the child's personal resources, perceived product knowledge and importance. Flurry (2007) notes child-led socialisation is also dependent on family structure. Flurry (2007) also found if a child contributes financially to a product, is the first born or part of a smaller household, they will have more sway toward the products that get purchased. In instances where parents are separated, children are seen to have a connected presence with their parents through ET, however this can be contested by the child whereby they are in a position that makes them responsible for mediating communication between the separated parents (Sjöblom, et al., 2018); in this instance, the child experience dictates whether communication of this nature is a right or responsibility within this family structure.

Children are more influential when it comes to the digital environment with a female parent, those who are 35 years old+ and have lower socio-economic status (Correa, et al., 2015). Although children are responsible for parental socialisation, this does not equate to their internet efficacy; reinforcing findings from van Deursen, et al. (2011), children may have better aptitude in the haptic attributes of device usage, but parents have a better ability to evaluate information they find. Bao, et al. (2007) found if a child views parental power to be high, their influence strategy is more likely to be bilateral, but with little concern toward the parent-child relationship. The more influence the child has, the more satisfied they are, reasons for this relate to the findings of Singh, et al. (2020); child knowledge is less influential within the child-parent socialisation as is child concern toward the object. Wang, et al. (2018) found when participatory learning is present, whereby neither party is dominant, parents and children learn from each other. As children age, they interact less with their parents when it comes to ET use (Nelissen, et al., 2019). A degree of influence continues to take place however which follows the imitating mode of socialisation.

### **Impact of parent personal smartphone use**

As previously discussed, technoference impacts on familial relationships and this behaviour can be learned (McDaniel, et al., 2018). In terms of impact, Kildare & Middlemiss (2017) finds this can lead children to engage in naughty behaviour in a bid to gain their parents' attention. Although parental views on the capability or hinderance of ET toward child development is important in their motivation to expose children and encourage use (Jeffery, 2021), Matthes, et al. (2021) finds parental views are less influential than their own usage. Shin (2015) however, finds one dictates the other. Carers with good mediation strategies foster more positive views on internet use, thus not only do they set a good example, but they also have a more positive and therefore encouraging view on child ET use. This is prevalent within Wald, et al. (2023), whereby joint use of virtual assistants with young children is motivated by hedonic experiences. The formation of these views may stem from parental knowledge of risky behaviours, with Geržičáková, et al. (2023) finding parents were well informed about risky behaviours but underestimated their child's experience of this. Some parental styles such as supportive and active mediators had a higher knowledge of this

behaviour, whereas restrictive styles and monitoring lead to less knowledge, giving them a false sense of security. In this case, the degree of socialisation may be stronger, but the process makes this less successful. Kucirkova & Flewitt (2022) found it is not just viewpoints that dictate the degree to which ET use is encouraged, finding conflicting themes such as trust/mistrust, agency/dependency and nostalgia/realism had an impact here within the context of digital book reading.

### **3.5.2 EDUCATORS AS DIGITAL SOCIALISATION AGENTS**

Silber-Varod, et al. (2019) explores teacher skills that contribute toward their digital literacy: collaboration, communication, creativity, critical thinking, information literacy, problem-solving and socio-emotional skills. Kajamaa, et al. (2019) found teachers need to promote relative expertise in the learning environment to be influential within the socialisation process, and students need to take responsibility for their learning to a degree. The more empowered teachers are in believing they are able to influence a child's digital skills, the more they are likely to do so (Runge, et al., 2023). Teacher education level can influence these beliefs, higher educated teachers have more self-belief toward their digital expertise (Wang, et al., 2022). Miranda & Russell (2011) suggest a teachers' influence is predicted based on teacher experience, belief that ET is beneficial and perceived importance. In order to gain this experience and belief however, teachers need to use ET to see how it would work. Stošić & Stošić (2015) suggests an increase in technology availability within schools will help increase the interest of teachers which in turn will motivate them to implement innovative use of ET within the classroom. This suggests the grounding of embedding successful use of ET within the learning environment depends on the equipment available. However, Xianhan, et al. (2022) suggest equipment is only one side of the coin, finding the key to this is reflection; reflection of ET use could come in the form of colleague interaction, but this interaction was only helpful if perceived to be useful.

There is a debated spiral toward what can shape the learning environment and when considered collectively, the school culture. Kadrijević & Haapasalo (2008) acknowledges that to achieve a good learning environment and successfully embed ET, a teacher's attitude can be improved by means of experience. This experience can be improved by using apps for content learning over informational and learning skills (Domingo & Garganté, 2016). Hermans, et al. (2008) however, suggest constructivist beliefs are more important than experience, as it is this belief that will help teachers realise the benefit of the experience. Debeer, et al. (2021) observes an adaptive learning environment is better suited to the use of ET for young children, which reinforces the findings of Hobbs & Tuzel (2015). Hobbs & Tuzel (2015) found another key to success is teachers having a complex set of attitudes behind their motivations to introduce ET. If their attitudes were complex, thus deeply embedded, it meant they were able to think more critically about its use. Whilst motivated to use ET, this made them more effective within the socialisation process (Butler & Leahy, 2021). Mertala (2019a) found effective activities for digital education was using ET for non-tech activities. This interrelates Borgonovi, et al. (2023), using ET for leaning was associated with lower boredom, but when used for leisure, higher boredom in comparison.

It is the quality of the ET available within the learning environment acts as a catalyst to teacher experience, attitudes and beliefs, and the better quality the learning environment, the more engaged students will be (Wang, et al., 2022). If digital tools are used effectively within the environment, it can foster feedback, social, agentive and game based learning that can increase the quality of the digital skills learned (McNaughton, et al., 2018). Equality between schools is a consistent concern however, as not all schools will have the same culture and quality learning environment needed.

#### **Role of the teacher**

Whilst the learning environment acts as a foundation toward the role of the teacher in the child's digital socialisation process, their role is prominent with Gil-Flores, et al. (2017) finding teacher characteristics and demographics are predictors of ICT use in the classroom. On the other hand, Turvey (2006) highlights the role of the learner is just as important to this process, however teachers are able to empower them. Aldunate & Nussbaum (2013) found teachers who are early adopters of ET commit a significant portion of their time to integrating educational technology



whereas those who are not early adopters, spend far less time on this, are less likely to adopt new technology and if they do, they are prone to abandoning the adoption at different points. Sailer, et al. (2021) extends on these characteristics by finding it is not just early adoption but the frequency of which teachers use ET to be influential. Although practical experience is important, Sailer, et al. (2021) suggests it is not just early adoption and/or frequency of use, but psychological characteristics can be used in predicting a teachers level of digital citizenship. Lai (2015) considers these characteristics toward how they influence children, for example, if teachers are encouraging toward their use of ET and not just proficient at using it themselves, they are likely to have more impact in the socialisation of children; those who were the most encouraging had the highest levels of perceived usefulness. Fütterer, et al. (2023) found utility value such as this was more important than teacher knowledge of ET. Runge, et al. (2023) found it is integral to understand the structure of the teachers' competence related beliefs about learner empowerment, which helps to address diverse learning needs and promote active and creative engagement. When looking at gender differences, Fütterer, et al. (2023) suggests although teacher utility value was more important than knowledge, this was not the case for women who needed to feel they had more ET related knowledge. Baydas & Goktas (2016) however found no gender differences here, but this is not supported by Hao & Lee (2016) in that self-efficacy and non-ET teacher knowledge were associated with most stages of concern, and that females had more awareness and management concerns. When it came to predicting stress levels with regard to ET use, gender had no effect, however, age, level of school support and Technological Pedagogical Content Knowledge (TPACK) (Guggemos & Seufert, 2021), were predicting factors (Özgür, 2020). Teacher characteristics such as gender and ethnicity can impact the level of influence they hold within the socialisation process, not because these factors are predictors of digital skill but because students are more likely to do well if they feel they have accurate role models. Since 1997, steps have been taken to introduce more male and ethnic minority entrants to the teaching profession (Carrington & Skelton, 2003).

Ultimately, there is diversity within the attitude of teachers toward technology. Although schools as institutions are there to level out the playing field, there is not equality in this. This diversity bleeds into their expectation of performance expectancy and facilitating conditions which further influence how or if ET is used in the classroom (Ilfenthaler & Schweinbenz, 2013). There are also variances in a teacher's focus within the classroom; some will ensure students focus on checking relevance and credibility of sources, some on exploring different sources, their evaluation ability and self-efficacy for instructional purposes. What is more highly valued, depends on the individual teacher (Hatlevik & Hatlevik, 2018). When determining the values teachers uphold, Mertala (2019a) suggests this consists of educational expectations (what is important), the care they give to students and the influence they have regarding child socialisation. It is noted that these values are shaped, not just by micro factors (teachers personal experiences) but also macro factors in the form of national educational policies. The role of policy makers has to be considered within the socialisation of children, but as a macro influencer within this process. The technology acceptance model considers a teacher's intention to use technology by considering the perceived level of usefulness. However, Antonietti, et al. (2022) also theorises that as well as perceived usefulness, their beliefs surrounding digital competence is important as this in turn influences their beliefs about ET. All are connected here whereby perceived usefulness mediates their intent to use ET, thus their digital competence, and this influences their intention to use ET in class. Rubach & Lazarides (2021) argues competence is the catalyst for usefulness rather than usefulness being the catalyst for competence.

## Teacher training

Although barriers to the use of ET would be the cost of the equipment and software, the most costly is not training teachers to use the technology, this can make the learning process less effective and render the expense of ET wasted. ET can be seen as either a threat or a benefit to learning, but that depends on how teachers' are trained to use them (Thompson, 1991). This is congruent to De Smet, et al. (2010), the quality of teacher training determines the adoption of tutoring activities, thus how beneficial the activities are to young children and their socialisation. Developing competencies such as these is an integral to foster a teachers positive attitude toward technology (Tondeur, et al., 2021). Scherer, et al. (2023) however, found a teacher's confidence level would initially increase and would decrease, even with continued experience, therefore training should be continuous and aid the development of teacher confidence within their role of child socialisation.

Sprenger & Schwaninger (2023) suggest key elements of training should include highlighting the usefulness of ET use in the classroom, with Teo (2011) extending this toward highlighting the usefulness, ease of use, facilitating conditions and appropriateness of the use toward the subject. Overall, a key aspect is the improvement of teacher attitude to engage teacher practice (Prestridge, 2012), and knowledge itself is only one side of the coin. Teachers may be proficient users of ET, but do not think it is helpful for their particular subject or age group. Ruthven, et al. (2005) found the following strategies are used to introduce ET: “Organising lessons around teacher-supported pupil activity; Enhancing lesson resources through use of Internet material; Structuring and supporting pupil access to Internet resources; Instrumenting use of ICT tools to support subject learning; Building and capitalising on pupils’ sense of capability and agency; Supporting and shaping pupil activity through informal teaching; Managing lesson relocation, room configuration and technical malfunction.” However, some teachers view school policies and parents’ opinions as constraints to this (Chien, et al., 2014).

### **The familial influence on socialisation within the education context**

Corkin, et al. (2022) acknowledges home use plays an important role toward the degree of socialisation that takes place within the school as there is only so much that is in control of the school and teachers to ensure an equal playing field. It is recommended there is coordination between activities at home and those at school in order to build the pupil’s digital capability. This can be done by relating the digital curriculum to how ET is used at home (Hayes, 2005). Mumtaz (2001) found children made more use of ET at home than they did at school, if schools looked into this further they could learn about what works at home and try to enable this at school. Piloting the need for more collaboration between the two socialisation environments. Meelissen & Drent (2008) explores how influential school and non-school factors are on a students’ attitude toward ET, for the most part, non-school related factors are the most influential (the home environment), for young girls, a teacher centered pedagogical approach and experience with ET were very influential (although not more so than the familial environment).

Ventouris, et al. (2021) highlights the importance of balance with the digital and non-digital. Teachers can help empower learners to control their emotions and strike this balance, which can also be done through working closely with parents. This solidifies findings of Hao & Lee (2015) in that school teachers’ concern about the use of ET is less about how it is used for learning and more so for informational, personal and management strategies (or lack of). This is suggested to be due to teachers considering part of their role to be to care for students’ social, emotional and physical needs, ergo they have caring and socialisation tasks to help children become functional members of society. The students’ personal use of ET can cloud teacher perception on how ET is used for the education task because that is only part of their role for the children they teach (Mertala, 2019b). Shin & Lwin (2016) concludes that discussions between children and teachers within school can reduce their exposure to online risks, although peer discussions are likely to increase this risk.

DeCuir-Gunby & Bindra (2022) argue the most prominent role in the degree of influence within the socialisation process at school are teachers, as it is their explicit beliefs that influence students’ learning and behaviour. Although Nunes, et al. (2023) found it depends on the subject; math achievements for example is influenced by the students’ perception of ET involvement and not by parent’s or teacher’s expectations. Banihashem, et al. (2023) find both teacher and student beliefs and attitudes influence the success of ET blended education, this depended on how satisfied they felt with the use of blended education.

### **3.5.3 POLICY-MAKERS AS DIGITAL SOCIALISATION AGENTS**

#### **Policy: The agenda**

When looking at the degree of influence policymakers have on a child’s digital socialisation, it starts with their definition of digital inequality, what they address as a problem, what responsibility they put on schools (i.e., what is within their remit and what isn’t) and what they deem appropriate for a skilled workforce. Policymakers are detached from the child but are the catalyst for the agenda surrounding their digital education. The Department for Education has set forth a digital skills framework which compromises national standards of essential digital skills (**table 3.7**). These include:

**Table 3.7: The digital skills framework  
Using devices and handling information**

	<b>Entry level</b>	<b>Level one (GCSE)</b>
<b>Using devices</b>	Know what is meant by hardware, software, operating systems and applications; locate and install an application; apply system settings, including those for accessibility.	Keep operating system and applications up to date.
<b>Finding and evaluating information</b>	Navigate online content using hyperlinks, menus and other navigation elements to locate required information; carry out searches to find information and content.	Use appropriate techniques to carry out and refine searches, taking into account currency, relevance, and reliability, and be aware that results are ranked by search engines.
<b>Managing and storing information</b>	Open, read and save information from/to a file using appropriate naming conventions; work with files and folders to store, organise and retrieve information using local and remote storage.	Organise and store information using files, folders, hierarchy and tagging to enable efficient information retrieval on a device and across devices.
<b>Identifying and solving technical problems</b>	Recognise when a technical problem has been encountered, solve simple technical problems, and seek assistance when unable to solve a technical problem.	Identify and apply solutions to common technical problems, using online tutorials, FAQs and help facilities.
<b>Developing digital skills</b>		Identify and use appropriate online learning resources to maintain and improve digital skills.

### Creating and editing

	<b>Entry level</b>	<b>Level one (GCSE)</b>
<b>Creating and editing documents</b>	Use a suitable application to enter, edit and format information (including text, numbers and graphics).	Use applications to enter, edit, format, layout information (including text, tables, graphics, charts) for a

		range of purposes and audiences.
<b>Creating and editing digital media</b>	Capture and save images, sound and video.	Edit and enhance an image.
<b>Processing numerical data</b>		Enter, edit, sort, process, format, and chart numeric data.

## Communication

	<b>Entry level</b>	<b>Level one (GCSE)</b>
<b>Communicating and sharing</b>	Create, edit and use contacts when sending and receiving online communications comprising text and other digital content to individual and multiple recipients; initiate and participate in a video call.	Identify and use appropriate modes of online communication for a range of contexts and audiences.
<b>Managing traceable online activities</b>	Identify the types of digital activities that leave a 'digital footprint' and understand the implications.	Take steps to manage online identity.

## Transacting

	<b>Entry level</b>	<b>Level one (GCSE)</b>
<b>Using online services</b>	Complete and submit a form as part of an online transaction, complying with verification checks.	Interact with online transactional services and manage account settings.
<b>Buying securely online</b>	Buy an item/service online using a chosen method of online payment.	Compare online buying options for an item/service and identify best option.

## Being safe and responsible online

	<b>Entry level</b>	<b>Level one (GCSE)</b>
<b>Protecting privacy</b>	Identify situations where personal information may be stored by devices and online activity; identify and use simple methods to protect personal information and privacy.	Protect personal information and privacy, understanding personal rights and options for controlling the use of personal data.

<b>Protecting data</b>	Be aware of online risks and threats; identify and use simple methods to protect a device and data from online risks and threats; be aware of the security risks of using public Wi-Fi.  Configure and use secure ways to access devices and online services.	Protect devices and data from online risks and threats.  Configure and use multifactor authentication to access and use online services.  Backup data locally and using a cloud provider.
<b>Being responsible online</b>	Know how to report concerns with online content	Use appropriate language and behaviour online.
<b>Digital wellbeing</b>	Recognise and minimise the effects of physical stresses of being online.	Apply simple methods to avoid physical and psychological health risks while using devices.

(Department for Education, 2019)

There is a detailed and well-rounded list of skills encompassed here that make a high quality national standard of essential digital skills. This policy however, then has to be interpreted and carried out by schools; Duarte, (2021) studied the subjectivity of the relationship between teachers carrying out the education aspect, and school leaders upholding the policy; it was found policies are contextually and individually dependent, thus, inequality exists within the education environment, despite this influence of standardisation. Haydn & Barton (2008) suggests this is also down to teachers not having enough time or sufficient training to integrate ICT, reporting on a funded project that paid for supply teachers to cover teaching while teachers used the time to integrate ET and had room to discuss and share good practice. This was reported to be highly successful, but again, this is not something that every school has the funding or interest in doing. Inequality within schools is therefore apparent, suggesting that the degree and process of influence that policymakers have over the child consumers digital skills, is lacking, or at the very least, is top down and does not hold weight over individual schools to successfully ensure equality.

Policy reflects socio-economic priorities, 'digital skills' is a broad term, there are specific aspects such as privacy that reflects social concerns of digital safety. Concerns such as these help inform policy (Phillips, 2004), if concerns are not reflected or agreeable, protests are likely (Löblich & Wendelin, 2012). Although safety is seen to be a social concern, within the EU, economic outcomes are prioritised when it comes to forging policy, which is found to be similar to the US (Goodwin & Spittle, 2002). Not unlike the EU and US, the UK also prioritise economic outcomes, with digital skills showing promise toward delivering economic growth to the country and social mobility to young people; regarded as 'a pipeline to prosperity' (Davies & Eynon, 2018). However, when you look at the education context, it seems there is a social injustice that takes place; teachers are not fully supported in upholding these outcomes, thus, the policy and practical emphasis are at odds. At current it seems the outcome serves the economic interest of the country, but more can be done when it comes to the process of socialising young children to learn such skills (Gale & Molla, 2015).

Player-Koro, et al. (2018) gives an example of good practice of how policy is successfully integrated in Scandinavia: education trade shows. These trade shows act as 'sites of policy interpretation', offering the chance to share, but more so 'sell' policy ideas to local schools and teachers. In doing so, the trade shows allow equal access to all schools and create a two-way relationship between



the policy and education contexts; with consideration to education interests, differentiating teacher subjective views, knowledge and experiences, and encouraging entrepreneurship among teachers. Criticism includes the restriction of teacher agency, however in the UK context, help such as this would equal the playing field and give teachers the backing to integrate ET so that the decision is not so subjective. Practices such as these are increasing within worldwide policy objectives; standardising digital skills, however consistent issues remain: policy is standardised, education is not. This grounds digital policy as an important aspect of socialisation for young children, but one with a degree of influence that only carries so far at the moment.

### **Policy agenda: Potential issues**

Technology is a tool for the UK government in a similar way to Sweden, however Olsson (2006) criticized the Swedish government for looking at households in too uniform a manner. This finding adds insight as UK policymakers have distinct considerations surrounding digital inequality, but are uniform in how they expect schools to influence a child's education. Asmar, et al. (2022) outlines 8 profiles of inclusion or exclusion, whereas the government has a basic framework (Gov.uk, 2014), suggesting more can be done to understand the individual needs of children when it comes to their digital skills. Eynon & Helsper (2010) support findings that different socio-economic groups use ET for different learning opportunities and have differing reasons for their digital choices and decision to exclude themselves. This reinforces that policymakers need to consider those who do not use ET because of demographic factors and those who exclude themselves out of choice. When encouraging uptake, individuals need to be better understood so the approach can be tailored, with Eynon & Helsper (2010) finding this can be achieved through informal learning methods. Even in countries like the UK where ET use is integral within children's lives, more needs to be done to prevent offline discrimination translating to digital inequality. Outcomes of this can present themselves as problematic for drawing the balance between protecting children's online safety and their agency (Bulger, et al., 2017).

'Balance', is subjective to the individual, however Nguyen, et al. (2022) found key themes within their research: appropriate amounts of use, purposeful use, social connection, non-addiction and time for real life. The Department for digital, culture, media & sport (2020) considers this within policy, by requiring organisations to inform the online harms regulator of designed addiction and extended engagement measures to ensure the regulator has considered the impact of this on users, with higher protection applied to children. Although protecting children from harms like these should be high on policy agenda, Livingstone & Third (2017) advise policy initiatives should advocate for children's rights and balance this with their need for protection in order to maximise the opportunities and benefits of connectivity. Controversially, socialisation is said to be more effective if children are exposed to online risks as it helps build their resilience to this. Information skills specifically help minimize the negative outcomes of exposure, whereas technical skills were linked with mixed and negative outcomes (they were technically competent to expose themselves to risks, but not informationally competent to reduce the harm of this) (Livingstone, et al., 2023). Exposure or 'practice' then is beneficial within the school setting to aid this resilience. Issues with this include a child's right to protection online, although not a bad thing by any means, Bulger, et al. (2017) finds young people's online behaviour challenges conceptions about what is normal, what protects 'childhood innocence' and what restricts their agency, advocating the government work with child welfare specialists to draw this balance, and not assume what is risky and what is not.

This section has so far highlighted the role policymakers take with regard to a child's digital socialisation and the issues they face in effectively influencing this. It can be concluded they are distanced from children, but this does not mean they are redundant or are viewed that way by any means. Livingstone, et al. (2023) highlights tangible outcomes of digital skills, showing a positive association between skill, opportunity, information and orientation to technology; all of which are in the remit of the digital skills framework. Selwyn, (2004) however suggests more clarity is needed by what is meant by ICT, access, use and knowledge of harms of use of ET, within the UK, this is clarified within the framework but further clarification or help could take place on how teachers can integrate these skills throughout their specific subject area's. This emphasises the findings of Livingstone, et al. (2018); the focus should be shifted from how children engage with ET and the internet, toward how they engage with the world mediated by the internet and ET. Lee, et al. (2022)

advocates for 'new media literacy' to be included within educational aims, protecting consumers from the vulnerability of fake news, this however is within the scope of Personal, Social and Health Economic (PSHE) education, but does pilot the need to respond to the increasing changes and differing threats that can manifest as our digital society evolves.

To successfully influence young children within their digital media socialisation, the government have adopted a top-down approach as it is necessary to give autonomy to schools (Tang & Ang, 2002). This autonomy however should not translate to lack of support; issues within the top-down approach mean there is little room for two-way communication between policy makers and schools, but this is important if policy is to be successful. As it stands, the lack of collaboration hinders this success, highlighting a policy-practice divide rendering inequality within socialisation experiences (Margetts, et al., 2023). The government view the media as problematic when it comes to this policy practice divide, themes of issues from the policymaker's perspective include the media simplifying, assigning blame and being too focused on the short term when it comes to communicating (Levin, 2004). More needs to be done to build trust with school leaders and teachers to encourage integration of the digital skills framework and successfully upholding the policies made.

### **The role of parents and educators**

Wright (2012) highlights government policy is designed in such a way that responsibility to integrate policy is at too individualistic a level. Political discourse advocates independence and distance from local authority agenda's, it separates the interests of parents and teachers with local authorities representing the schools and dehumanizing local authorities as faceless; all of which is problematic for the influence power of policymakers (Exley, 2016). Ranson (1987) echoes concerns that the government's top-down approach is not effective, finding more localised approaches with educators would make for better learning environments; whereby citizen engagement is possible.

Levin (2010) suggests wrong policies are often adopted because effective implementation of education policy is lacking, government face issues based on their policies being made by belief rather than evidence, which is a worldwide issue. Ozga (2009) details attempts to address this issue by utilising self-regulation through self-evaluation; drawbacks include the appearance of deregulation but local government have a role of managing and evaluating data. Arguably the evaluation of data does not translate to effective integration of the national digital skills framework. Perryman, et al. (2017) suggests it's down to the interest and curiosity of the individual teacher to self-improve, giving them responsibility for their own performance. Their role encompasses more than just teaching however, leaving them with tensions between the performance of students, the school, themselves, caring duties, and their own practice (Perryman, et al., 2017). Policy only makes a difference if teachers practice change, this is not the same as achieving outcomes of that change (Lynch, et al., 2023). "Education policy research draws attention to teachers' work to enact, translate, and elaborate policy" (Braun, et al., 2010). The practice of this standardises their approach, however education is highly personalised and dependent on the students' personal attitude, experiences, and socialisation from home (Hardy, 2018). It is therefore integral to look at the role of parents in enacting policy as well as teachers.

Examples of this include a carer's right to choose the school their child attends, engage with school management practices as well as have the right to performance data (Munn, 1998). The ways in which these rights are exercised are through parents becoming members of school boards or governing bodies, or less formally through their choice of school. The idea is that parents would opt for schools where their policies on teaching, learning and discipline would allow their children to flourish, schools who were not doing well in these area's would not get chosen and would consequently close, making parents part of the driving standard of education quality. Criticisms of this are underlined within a Marxist theoretical framework: this would benefit the capitalist class and disadvantage children from low socio-economic families (Munn, 1998). One key theme from Munn (1998) includes marketing: schools want parents to be involved in order to understand and effectively 'sell' their school, governing bodies influence the curriculum and assessment, however in terms of actual power, the funding of local education authorities means this is very limited. Despite this limited influence, Ragnedda, et al. (2024) concludes digital capital is related positively to offline backgrounds, including those who engage and/or act politically within schools.

### 3.5.5 CHILD SOCIALISATION SUMMARY

It can be concluded that different socialisation agents focus on different aspects of a child's socialisation. There are different theoretical views on how consumers are socialised, however, these usually take the form of a deep dive on an individual consumer level (not suited to the child as parents are the purchasers); are focussed on certain agents (peers, family, or the media); and those who focus on multiple agents, however these have to be broad in their approach as the degree of the agents' influence is contextually significant. The context of this thesis is the digital socialisation of the child consumer, the LR thus far has identified that the family, schools and policy makers all have an important role in this process. Both siblings and peers have roles here also, however for the age group this research focusses on; peers are less influential in comparison to older age groups, and the role of siblings is dependent on the type of family unit.

We can see overlap within the political sphere such as teachers as actors and integrators of policy and parents who influence the school policy. With the teachers' focus on how ET can buffer the teaching of existing subjects and focus on child safety/wellbeing. Parents and carers include/exclude children and offer a high degree of influence within the socialisation process; all of which play an important role.

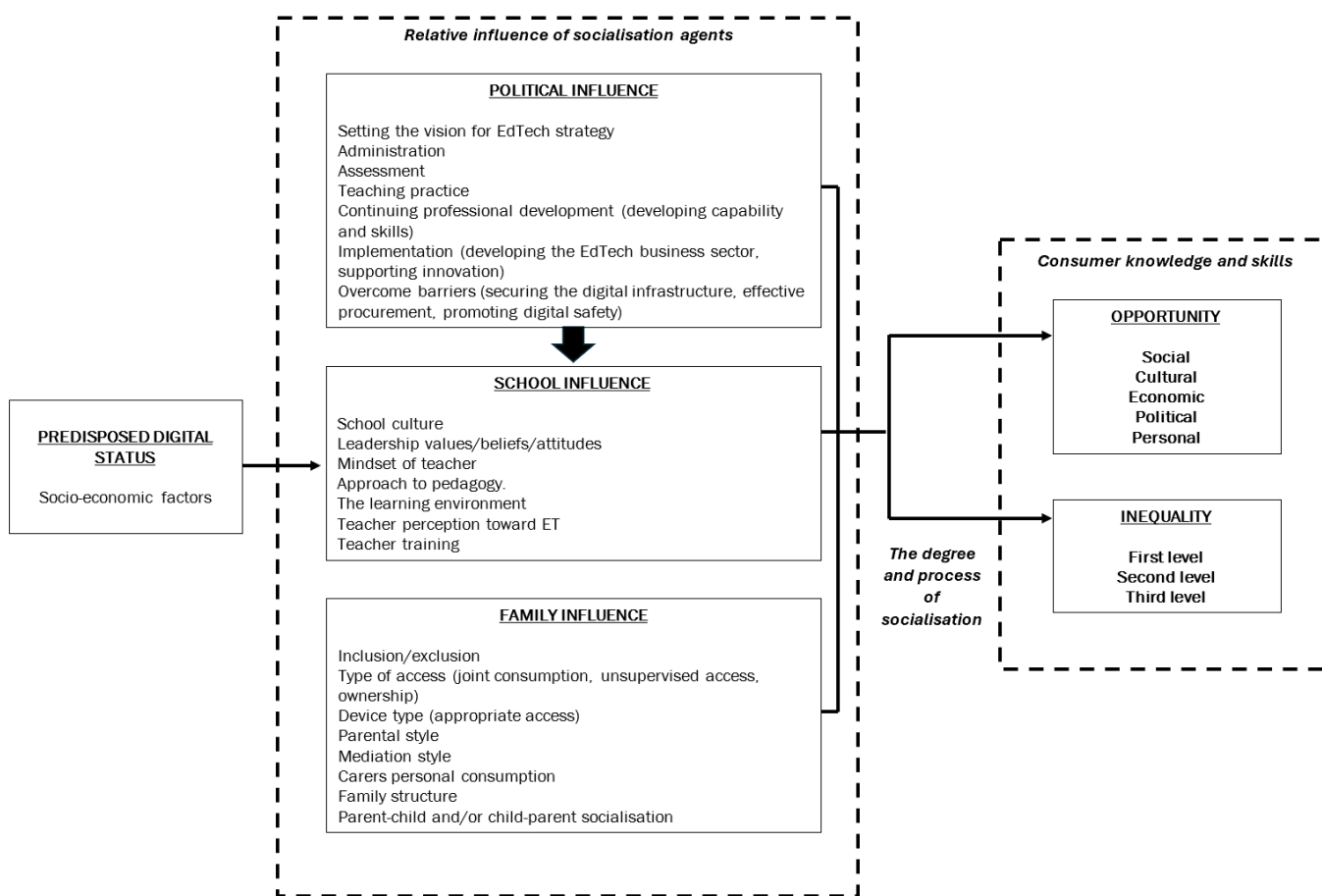
### 3.6 CHAPTER SUMMARY

The conceptual framework helps encapsulate what is already known surrounding the topic of digital divides for young children (**figure 3.4**). The conceptual framework was developed by considering how to conceptualise each element of the LR: Digital divides, the family, the education environment and child digital socialisation. Once a sketch had been drawn that encapsulated the sections separately, the researcher reflected on this by considering how everything could be put together into one conceptual framework. At this stage in the process, the consumer socialisation model by Hota & McGuiggan (2005) (table 2: consumer socialisation stages), was used as the central framework, and the other sections were interweaved throughout the socialisation stages. In doing so, digital divides were conceptualised as both a causation and outcome of the child's digital socialisation. The socialisation environments: the family, education and political were then considered as an ecosystem as they all have relative influence within the child's digital socialisation process, although varying degree's of influence, each environment contributes toward the child consumer's digital knowledge and skills. This informed the role and importance of each environment within the pandemic and which elements to investigate.

Predetermined socio-economic factors contribute toward consumer status on the digital ladder, although a consumer's personal choice surrounding which digital activities they engage in (if any) also plays a role. The same can't be said for the child consumer, although socio-economic factors play their part, it is their carers decision to include/exclude them. The child's familial environment is the earliest setting they experience ET use which intersects inequalities given the socio-economic diversity within the UK. Policymakers instruct the introduction of ET within the education environment, not just to lessen inequality but to maximise potential opportunities that are not equally accessible within each family home. Socialisation theories holistically tie these environments together, providing insight into the child's eco-system of digital socialisation. The degree and process of influence is higher within the familial environment than the education environment, policymakers are influential but to a lesser degree than agents within the education and home. A consumer's engagement with digital technology can lead to opportunities or inequalities; of which are interlinked with online and offline opportunities/inequalities.



Figure 3.4: Conceptual framework: The child consumer's digital environment



Digital divides is a well explored area, less is known about inequalities for the child consumer given researchers have tended to focus on child safety when it comes to their internet use (Livingstone, et al., 2014). Research in this area focusses heavily on the role of socio-economic factors; although consumer choices are considered, little is known about these choices for young children. Although digital education is high on the political agenda, research surrounding the education environment suggests this is another context where inequality can be further intersected within the child consumer's digital socialisation. With regard to socialisation research, the focus tends to be on the role of the family and peers, with the education context less explored.

Liu, et al. (2019) explored consumer choices for others, within the LR this was applied within the familial context to understand carers motivations for engaging with the digital socialisation process. By applying the paper within the context of this research, it outlined why some carers would choose to exclude or include their children within this process. Livingstone, et al. (2014) conducted research surrounding child access to ET which includes both the familial and school environments. This research looks at access, activities, skills and risks for the child when using ET, however the focus was on child safety rather than digital divides. Mascheroni & Ólafsson (2016) have considered digital engagement as an opportunity within the context of divides for young children, as well as how different usage is likely to attribute to different outcomes. This research is similar to those outlined here by considering why/how children are socialised to use digital technology within key contexts: the family and school, as well as what this means in terms of equal access to the opportunities available through increased digital citizenship.

This research relates to the aforementioned studies surrounding digital divides for the child consumer, however it does so within the context of the COVID-19 pandemic whereby consumers were increasingly reliant on ET. It is within this context that digital disparities were highlighted, and the influence of the school and familial environments within the child consumer's socialisation

process was intensified due to the lockdown over this time period. Thus, the set of concerns surrounding the consequences of digital divides highlighted within the LR so far, were escalated for policymakers and academics. This research is of value because it takes place during this unique cultural shift, adding insight into the degree and process of socialisation that the child consumer experienced during the COVID-19 pandemic. Implications surround understanding of child socialisation as well as political interests toward digital divides for the child consumer within an increasingly digital world.

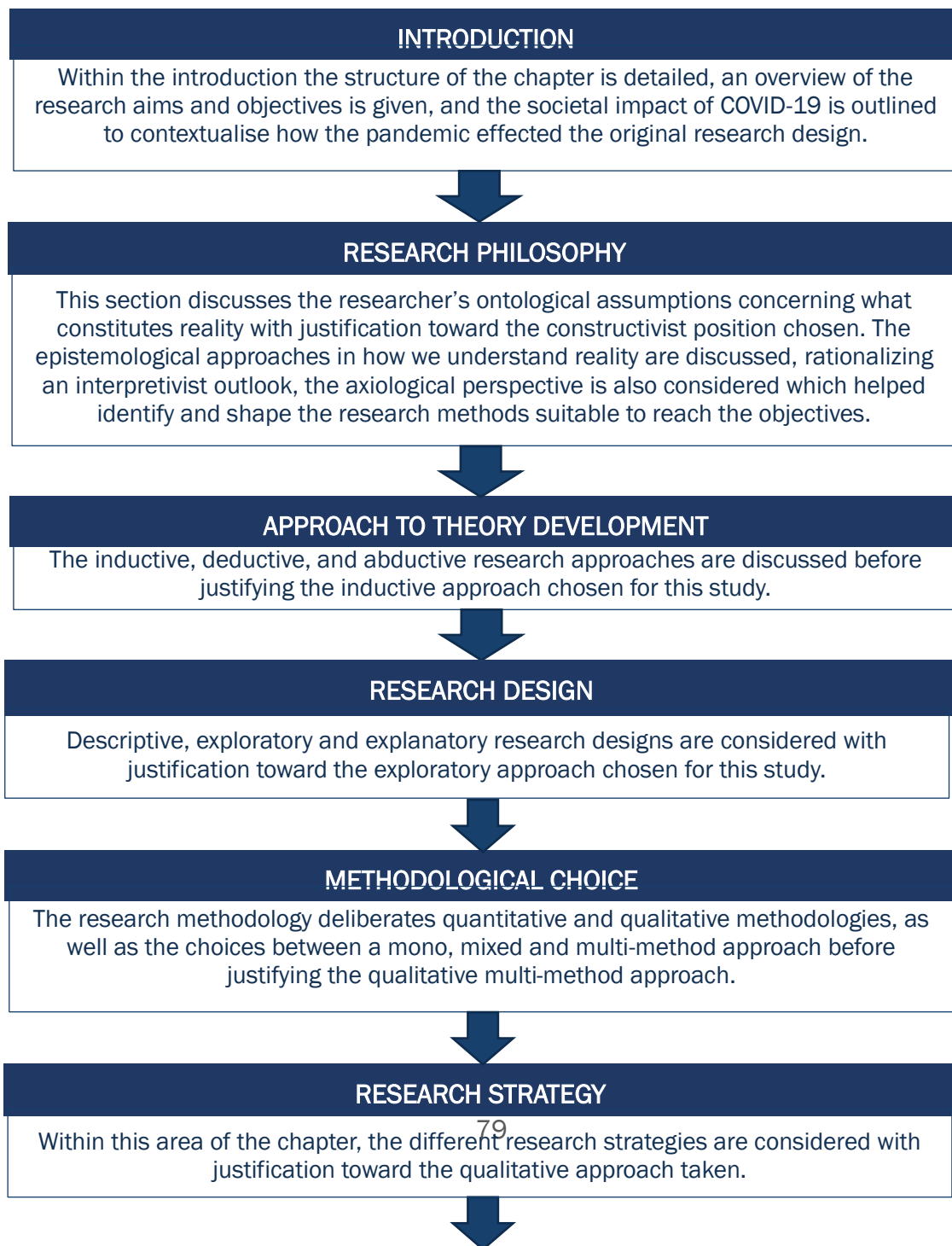
# CHAPTER FOUR

## · RESEARCH METHOD AND METHODOLOGY ·

### 4.1 INTRODUCTION

This chapter encompasses the contemplation and validation of the chosen data collection methods and methodology that enabled the research questions to be answered. The original research design had to be reviewed to accommodate the ever-changing circumstances surrounding COVID-19.

Figure 4: Method and methodology chapter outline





#### 4.1.1 OVERVIEW OF RESEARCH AIM

2020-2021 is reflective of a time where the integration of ET in daily life was no longer an optional commodity (Cruz-Cárdenas, et al., 2021). For young consumers, digital disparities were more prominent than ever, thus the aim of the project is to explore how ET was embraced by consumers within the familial and education environment's during the COVID-19 context, with focus on the child consumer.

#### 4.1.2 OVERVIEW OF RESEARCH OBJECTIVES

- **Objective one:** To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic
- **Objective two:** To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected
- **Objective three:** To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic
- **Objective four:** To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic on the child consumer
- **Objective five:** To investigate and evaluate an educator's perspective on the use of ET within schools
- **Objective six:** To develop a conceptual framework encompassing how the parental and teacher consumers' embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future

#### 4.1.3 RESEARCH QUESTIONS

The literature review helped inform and develop the key question this research seeks to answer: How has the COVID-19 pandemic impacted upon the digital divide for children?

#### 4.1.4 THE IMPACT OF COVID-19

##### Severe acute respiratory syndrome (SARS) and Corona virus (CoV)

On the 18<sup>th</sup> of March 2020 the announcement of school closures was made in the UK with Friday 20<sup>th</sup> of March being the closure date (Department for Education, 2020). In the days that followed, further restrictions were put in place advising everyone should work from home if possible, and that only key workers would remain in physical employment (Public Health England, 2020). Travel was only permitted if deemed essential (for the care of others, to get food or medical supplies). Daily activity was restricted to one outing a day and a limit of one hour for exercise, with people to remain in the house for the rest of the time (Cabinet Office, 2020). This meant re-considering the research methods to accommodate data collection during this time.

##### Impact on original research design

The below figures demonstrate how the pandemic revised the project flow:

##### Figure 4.1: Original project flow

PROJECT FLOW	OBJECTIVE
LITERATURE REVIEW ↓	To examine, critically discuss and articulate a literature review interconnecting the child media socialisation process and the influence of emerging technologies (specifically ETs) within peer groups, family, and education
METHOD & METHODOLOGY ↓	
<b>PHASE ONE: SECONDARY ANALYSIS, SURVEY &amp; FOCUS GROUPS</b> ↓	To identify and categorise demographic factors that influence digital inclusion/exclusion through a secondary analysis to ensure demographic representativeness throughout the purposive sample
PHASE TWO: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	To investigate and evaluate the differing parental/guardian opinions toward young children using ETs and how the COVID-19 pandemic may have impacted this
PHASE THREE: SURVEY & INTERVIEW (TEACHERS) ↓	To investigate and evaluate an educator's perspective on the impact of ET adoption for young children and how the COVID-19 pandemic may have impacted this
PHASE FOUR: INTERVIEWS (CHILDREN) ↓	To identify and analyse the antecedents and outcomes of ET adoption for young children aged 8-13
THEORETICAL FRAMEWORK AND PRACTICAL IMPLICATIONS	To develop a holistic view of ET adoption to validate theoretical and practical suggestions surrounding the impact of ET inclusion/exclusion for young children, the impact the pandemic may have had on this and to suggest potential future research directions

Figure 4.2: Updated project flow 2020:

PROJECT FLOW	OBJECTIVE
LITERATURE REVIEW ↓	To examine, critically discuss and articulate a literature review interconnecting the child media socialisation process and the influence of emerging technologies within peer groups, family, and education
METHOD & METHODOLOGY ↓	
SECONDARY ANALYSIS ↓	To identify and categorise demographic factors that influence digital inclusion/exclusion through a secondary analysis to ensure understanding of the demographic representativeness throughout the purposive sample
<b>SURVEY (PARENTS/GUARDIANS)</b> ↓	To investigate and evaluate the differing parental/guardian opinions toward young children using ETs
<b>FOCUS GROUPS (TEACHERS)</b> ←	To investigate and evaluate an educator's perspective on the impact of ET adoption for young children
<b>FOCUS GROUPS (CHILDREN)</b> →	To identify and analyse the antecedents and outcomes of ET adoption for young children aged 8-13
↓ THEORETICAL FRAMEWORK AND PRACTICAL IMPLICATIONS	To develop a holistic view of ET adoption to validate theoretical and practical suggestions surrounding the impact of ET inclusion/exclusion for young children, the impact the pandemic may have had on this and to suggest potential future research directions

Figure 1.3: The project flow

PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator's perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator's perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

The first outlined change in 2020 was the sequence of the data collection and analysis stages. Given the uncertainty surrounding school closures it was decided to systematically focus on the data collection and analysis of the adult participants which can be seen within phases two and three. This was going to be followed by the data collection and analysis of the child participants (phase four). Following further lockdowns, phase four was excluded. Saunders, et al., (2015) research onion illustrates the impact on the original research design:



Figure 4.3: Original research onion

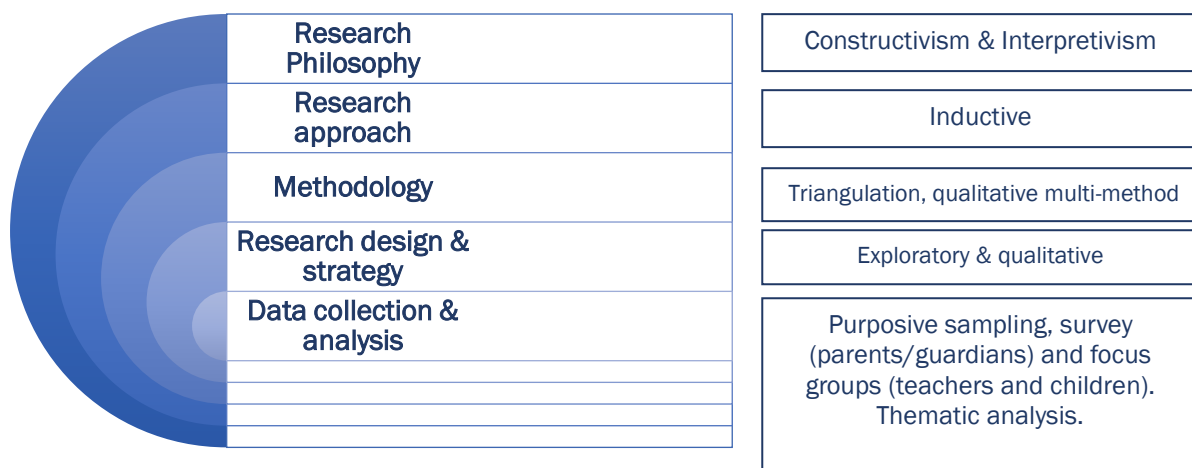
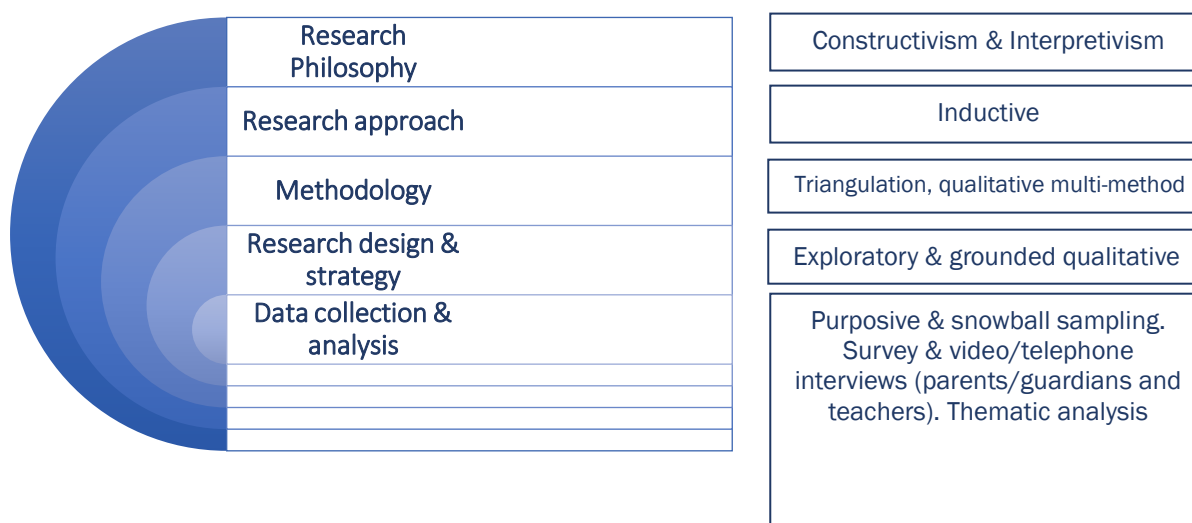


Figure 3.4: Updated research onion



## 4.2 RESEARCH PHILOSOPHY

### 4.2.1 JUSTIFICATION FOR THE ONTOLOGICAL POSITION CHOSEN

Ontologies consider the nature of reality, whether it should be considered objective (external to social actors) or built from the actions and perceptions of social actors (Bryman, 2016, p. 28). Post-positivism, critical realism, pragmatism, interpretivism and constructivism share a commonality in that social actors are (to different extents) are responsible for the constitution of reality. Social ontological positions ask how reality comes to be constituted as it appears, respecting that unlike the objects of natural science, social reality is the result of complex forms of human action and interaction, making social reality dynamic in a way that natural reality is not (Given, 2008, p. 579). The perspective of post-positivists, critical realists, pragmatists, and interpretivists share a core need to understand social reality through the meaning of subjects and consider social order through social structures and independent forces. A constructionist or constructivist approach considers how reality is emergent from collective or individual constructions of concepts, values, beliefs, ethics and norms; social order is derived from the customary thoughts, habits and shared meanings of social actors (Given, 2008, p. 662).

The ontological position for this study lies within the premise that social actors are responsible for the constitution of reality (Saunders et al, 2023). Interpretivism and constructivism have very close similarities, where human actors negotiate interpretivist meaning, constructivism emphasizes that knowledge is constructed through an individual’s interaction with the environment. Constructivism advocates the individualistic perspective/experience more so than interpretivism and

constructionism which is the key difference that makes constructivism the most suitable for this study. Whilst each participant group (parents, teachers and children) may share a collective understanding, this research seeks to explore the differential, thus individual views of these participants. To exemplify this further, family members from the same household may have differential experiences or constitutions of reality when it comes to their engagement with ET, the same can be said with teachers from the same school.

#### 4.2.2 JUSTIFICATION FOR THE EPISTEMOLOGICAL POSITION CHOSEN

When justifying the ontological position for this study it has made clear that the objective approaches toward what is considered as acceptable knowledge (positivism, post-positivism and realism) are not best suited to the social nature of the research. This is demonstrated within Tahir & Arif (2015) whereby parental attitude was measured toward children’s technology use, however they were given limited options, and were not able to select more than one. Parental mediation of a child’s technology is complex and at times conflicting, room to express and understand this is important. The interpretivist approach advocates researchers are empathetic to all participants in developing acceptable knowledge, whereas pragmatism is open to observational and subjective meanings as acceptable data (Kushlev & Dunn, 2019).

#### 4.2.3 JUSTIFICATION FOR THE AXIOLOGICAL POSITION CHOSEN

The human nature of the social sciences infers that people give different meanings or value to their social, cultural and material environments (Given, 2008, p. 53). Although positivist approaches to axiology are seemingly ‘value free’, Given (2008) highlights contradictions whereby both intrinsic and instrumental values are clarified through the justification of the research questions and design. In doing so, validating the decisions made are deemed valuable to the field of inquiry. The objectives of this research are to understand the differing perspectives of the participant groups (parents/guardians and teachers) as they have both been integral socialisation agents during the COVID-19 pandemic. Unlike pragmatism where value combines or utilises both ends of the spectrum (objectivity and subjectivity), this study considers the data to be value laden. Thus, following a subjective axiology which identifies the need for in-depth exploration as opposed to pre-defining and quantifying value into generalisations.

### 4.3 APPROACH TO THEORY DEVELOPMENT

#### 4.3.1 JUSTIFICATION FOR THE INDUCTIVE APPROACH TO THEORY DEVELOPMENT

This project is multi-disciplinary in nature, lying within digital divide research which has been of key interest to policy makers. It is understood that basic digital exclusion can be a causation of economic, educational, political, health, and geographic inequalities contributing toward social exclusion (Damodaran & Olphert, 2006, p. 34). The causation of basic level digital exclusion has therefore been deducted or reduced to simple form through the relational observations with socio-demographic factors.

**Table 4: The differences between deductive and inductive approaches to research**

DEDUCTION EMPHASISES	INDUCTION EMPHASISES
Scientific principles	Gaining an understanding of the meanings humans attach to events
Moving from theory to data	A close understanding of the research context
The need to explain casual relationships between variables	The collection of qualitative data
The collection of quantitative data	A more flexible structure to permit changes of research emphasis as the research progresses
The application of controls to ensure validity of data	A realization that the research is part of the research process

The operationalization of concepts to ensure clarity of definition	Less concern with the need to generalise
A highly structured approach	
Researcher interdependence of what is being researched	
The necessity to select samples of sufficient size in order to generalise conclusions	

(Saunders, et al., 2009, p. 127)

Digital divide research has been successful in validating the socio-demographic variables, which act as a baseline to qualitative studies of this nature (Xiao, 2020). This project enhanced understanding of digital divides within the context of the COVID-19 pandemic, extending knowledge that has been ‘reduced’ by working from the ‘bottom up’ in identifying participant views into broader themes and generating a theory which interconnects these themes (Plano, Clark & Creswell, 2007, p. 23). Given any conclusions that emerge will result from the research process (Thornhill, et al., 2009, p. 490), and a deduction of causation for digital divides exists in different contexts, this justifies the inductive approach as opposed to abductivism.

## 4.4 RESEARCH DESIGN

### 4.4.1 JUSTIFICATION FOR THE EXPLORATIVE RESEARCH DESIGN CHOSEN

The research design for this project is exploratory in nature. The justification stems from the notion that whilst exploratory researchers think deductively at times, it is in keeping with an emerging theoretical framework as opposed to a priori predictions (Given, 2008). The aims and objectives of this research do not entail describing nor explaining reasons for digital divides stemming from a priori hypotheses; but to explore digital divides within the context of the COVID-19 pandemic, to induce a theoretical framework from this exploration. Where descriptive and explanatory logic relating to digital divides is prominent, this study seeks to uncover observations relating this to a different context.

## 4.5 METHODOLOGICAL APPROACH

The philosophical position and approaches to research can favour certain methodological approaches over others. [Figure 4.5](#) has been adapted from the work of (Given) 2008, (Howell) 2013 and Saunders, et al (2015) to depict this:

Figure 4.5: Research philosophy and methodological approach

	POSITIVISM	REALISM	POST-POSITIVISM	CRITICAL THEORY	INTERPRETIVISM	PRAGMATISM	CONSTRUCTIVIST
ONTOLOGY	Reality can be totally understood, it exists and can be discovered (Howell, 2013, p. 30)	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence. (Saunders, et al., 2015, p. 119)	Reality may only be understood imperfectly and probabilistically. Reality exists but humanity is unable to totally understand it. (Howell, 2013, p. 30)	Reality shaped by history. Formed by values that are crystallized over time (Howell, 2013, p. 30)	Socially constructed, subjective, may change, multiple (Saunders, et al., 2015, p. 119)	External, multiple, view chosen to best enable answering of research question (Saunders, et al., 2015, p. 119)	Reality is locally constructed. Based on experience, although shared by many. Dependent on person/group changeable (Howell, 2013, p. 30)
EPISTEMOLOGY	The investigator and the investigation are totally separate. Values are overcome through scientific procedure. Truth is a possibility. (Saunders, et al., 2015, p. 119)	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations. Focus on explaining within a context or contexts (Saunders, et al., 2015, p. 119)	Abandonment of total separations of investigator and investigation. Objectivity still pursued (Howell, 2013, p. 30).	The investigator and the investigation is linked. Accepted that historical values influence the inquiry. Results subjective (Howell, 2013, p. 30).	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings, motivating actions (Saunders, et al., 2015, p. 119)	Either or both observable phenomena and subjective meanings can provide acceptable knowledge, dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data (Saunders, et al., 2015, p. 119)	As critical theory, however, the findings are created as the investigation proceeds (Howell, 2013, p. 30)
AXIOLOGY	Research is undertaken in a value free way, the research is independent of the data and maintains an objective stances (Saunders, et al., 2015, p. 119)	Research is value laden, the research is biased by world views, cultural experiences and upbringing, these will impact on the research (Saunders, et al., 2015, p. 119)	Research is value free (Given, 2008, p. 673)	Research is value laden (Given, 2008, p. 53)	Research is value bound, the research is part of what is being researched, cannot be separated and so will be subjective (Saunders, et al., 2015, p. 119)	Values play a huge role in interpreting results, the researcher adopting both objective and subjective points of view (Saunders, et al., 2015, p. 119)	Research is value laden (Given, 2008, p. 673)
DATA COLLECTION TECHNIQUES	Scientific experiments based on hypothesis, these	Methods chosen must fit the subject matter, quantitative	Multiple modified scientific experiment. Pursues	Needs dialogue between investigator and		Mixed or multiple method designs, quantitative and	Create a consensus through individual constructions,

<p>MOST OFTEN USED</p>	<p>are usually quantitative. Conditions that are confound are manipulated (Saunders, et al., 2015, p. 119)</p>	<p>or qualitative (Saunders, et al., 2015, p. 119).</p>	<p>falsification of hypotheses, may include qualitative methods (Howell, 2013, p. 30)</p>	<p>the subject of investigation. Structures may be changeable. Actions effect change (Howell, 2013, p. 30).</p>		<p>qualitative (Saunders, et al., 2015, p. 119).</p>	<p>including the construction of the investigator (Howell, 2013, p. 30)</p>
------------------------	--	---	---	---	--	--	---

This research is following the below:

- A constructivist ontology
- Interpretivist epistemology
- A subjective axiological position
- An inductive approach to theory
- An exploratory design

Although [figure 4.5](#) outlines what may be considered the most suitable methodological approach, this will be explored further with consideration toward mono, mixed and multi-method studies.

## 4.6 RESEARCH CHOICES

### 4.6.1 JUSTIFICATION TOWARD THE QUALITATIVE METHODOLOGICAL CHOICE

The justification between a descriptive, explanatory and exploratory research design influences the suitability of qualitative research methods. The exploration of the human elements of this study toward an individualistic interpretation of participant thoughts, feelings, views and experiences of the phenomena justify the qualitative approach (Given, 2008). As such, this is the methodological position chosen for this study.

A con-current design was originally considered given the school was going to be contacted as a gatekeeper when recruiting the child and adult participants. In order to ensure the feasibility of the schools' participation it meant being considerate toward their timescales, as such collecting data from each participant group at the same time. The uncertainty surrounding COVID-19 during national lockdown measures instigated a sequential design to data collection. This facilitated the completion of data collection for the adult participants at a time when it was impossible to go into the schools. It was later decided due to further lockdowns to exclude the child participants.

Multiple participant groups (children, parents and teachers) heightens consideration toward a multi-method approach where the research groups are of different age groups, different techniques will be best suited to each. Triangulation within multi-method studies involves combining different data collection and analysis techniques to understand the phenomena under investigation. There are practical considerations to make when using triangulation techniques, with the biggest concern being the ability to test the validity of research findings (Given, 2008, p. 892). This 'impractical' approach is beneficial to this research project whereby the nature of technology adoption for young children is complex, thus a more 'complex' approach to data collection and analysis is required through qualitative triangulation. Given (2008) identifies that a multi-method approach is a way of strengthening the credibility of research through the identification, exploration and understanding toward the different dimensions of a phenomena. For the young children this is needed whereby their technology use is mediated by their parents/guardians and teachers during the lockdown environment. Similarly to mixed method models there are concerns over multi-method designs interrelating different ontological and epistemological paradigms. With these concerns however, come the beneficial aspect of enriching understanding toward a phenomenon through developing a fuller picture and in doing so, validating and verifying the consistency and integrity of the findings (Given, 2008, p. 894). For this project, the ontological and epistemological positions remain consistent throughout the different qualitative data collection instruments used.



## 4.7 RESEARCH STRATEGY

### 4.7.1 JUSTIFICATION TOWARD THE GROUNDED THEORY RESEARCH STRATEGY

This research aims to explore how ET was embraced by consumers within the familial and educational environments during the COVID-19 context to understand how this impacted the child consumer. The approach to data collection was guided by existing theory, outlined within the enabling theory chapter. It was as a result of the literature review that the environments explored, the age group of the children and specific aspects of ET use (pertaining to socialisation) were investigated which interrelates grounded theory; using the literature review for orientation (Urquhart, 2019).

The initial focus groups with teachers and parent surveys prior to the lockdown environment were coded before the online research methods took place; allowing back and forth between empirical and interpretive efforts to conceptualise theory, making it a sophisticated and robust method of interpretive theoretical generation (Clarke, 2019, p.6). Theory development within this project is grounded within the data, allowing explanation of the specific context explored. This process mitigated concerns of grounded approaches such as restricting data to strict theoretical avenues whereby the theory is forced on the data as opposed to theory being generated from the data (Urquhart, 2019).

Given (2008, p. 374) identifies that approaches toward grounded theory stress the historical and social conditions that constrain social actions. This is reflected within this research project by understanding the views of socialisation agents on children's technology engagement within their respective social groups/role as carer and teacher, rather than focussing on the individual's lived or personal experiences only. Within the approach for this study, participant samples were actively sought that inform the theoretical categories identified (Given, 2008, p. 375). This meant saturation was achieved when theoretical saturation was reached (Bryant et al, 2007).

## 4.8 TIME HORIZON

### 4.8.1 JUSTIFICATION OF A CROSS SECTIONAL DESIGN

Whilst the current time period is of prominent interest (during a global pandemic), it also has to be noted that the objectives of this study is not to consider a parent/guardian's or teachers use of ET over time. As such, a cross sectional design is justified for this research project with aims of exploring the varied lockdown experiences within families and schools.

## 4.9 DATA COLLECTION

### 4.9.1 PARTICIPANT SAMPLE

Identifying the participant sample is imperative, not only in ensuring they are suitable in extending the researchers knowledge on a particular topic, but as Perrault (2018, p. 1448) highlights, to determine the measures that may need to be considered when obtaining approval from an ethics review board. This ensures the correct safeguarding processes and resources are in place so that participants are treated and communicated to ethically, and their data is also managed as such. Defining the population or sample includes carefully defining the individuals, social roles, positions, relationships or social groups, and identifying their key characteristics, as well as who or what should be included or excluded in ensuring the desired characteristics will be represented (Chadwick, 2018, pp. 1,283-4).

#### Parent's/guardians (full or part time) with children aged 8-11 years old

A child's inclusion, exclusion and differential experiences of ET is first mediated by their parents/guardians. As such, the differential socialisation experiences at this age is largely enforced within the familial context. To ensure understanding toward this, parents/guardians of children are

needed to understand the differential socialisation experiences children encounter within the familial context.

### Teachers within an education setting of children aged 8-11

Schools as an institution are an influential area within the child socialisation process whereby teachers and peers are key socialisation agents within this process. The pandemic highlighted how different schools managed during the lockdown period, with some excelling given the circumstances, and others facing huge difficulties with regard to their resources and skills to enable distanced learning. As such, teachers are an important participant group within this project, understanding the different practices and policies within individual schools and their opinions toward the children's access to ET.

The focus on children aged 8-11 stemmed from the literature identifying ET use is underexplored for those under the legal age limit of social media platforms (13+), despite access being prevalent for this age group. Socialisation research also suggests that this age group being in the perceptual and analytical stages of development are more likely to be influenced by parents and teachers than peers and the media.

### 4.9.2 LOCATION

The secondary analysis was initially used as an unobtrusive method for generating a purposive sample (Bryman, 2012, p. 325) and to enhance the analysis stage and study impact (Gibbs, et al., 2007).

### Impact of COVID-19

The data collection instruments were updated to include questions surrounding the socio-demographic factors of the participants as the recruitment method moved online.

### 4.9.3 SAMPLING METHOD

The sampling method for this research project was generic/fixed whereby the population is not going to change throughout the research process.

### Impact of COVID-19

A purposive and snowball sampling method was used for the adult participants. Reasons for this were that the social media channels used were purposively chosen to reach the desired population (parents/guardian's and teachers). Snowball sampling was also useful when generating more participants by asking those that completed the survey to pass this on to their colleagues or friends who they knew fit the criteria.

### 4.9.4 SAMPLE SIZE

Data collection will stop when the results or themes analysed become predictable. This indicates the collection of further data is not adding value in terms of the richness of the data but is causing the researcher to 'drown' in more data than possible to analyse (Morgan, 2008). The sample size for the primary data collection methods is outlined below:

Figure 5.4: Analysis overview: Teacher focus group

FOCUS GROUP	PARTICIPANTS	DURATION	WORD COUNT	TOTAL SUB THEMES	TOTAL THEMES
	8				

1	Female: 7 Male: 1	41.31	7,445	10	4
---	----------------------	-------	-------	----	---

Figure 6.2: Analysis overview: Teacher survey

SURVEYS COMPLETED	TOTAL PARENT CODES	TOTAL THEMES
68	21	5

Figure 6.6: Analysis overview: Teacher interviews

INTERVIEWS COMPLETED	TOTAL RECORDING TIME	WORDS TRANSCRIBED	TOTAL PARENT CODES	TOTAL THEMES
3	64.35 minutes	10,653	12	4

Figure 7.2: Analysis overview: Parent/guardian survey

SURVEYS COMPLETED	TOTAL PARENT CODES	TOTAL THEMES
62	15	4

Figure 7.6: Analysis overview: Parent/guardian interviews

INTERVIEWS COMPLETED	TOTAL RECORDING TIME	WORDS TRANSCRIBED	TOTAL PARENT CODES	TOTAL THEMES
10	167 minutes	23, 141	9	3

#### 4.9.5 DATA COLLECTION METHODS

##### Phase one: original data collection instruments

##### Secondary analysis: Policy documents

A qualitative secondary analysis was conducted in order to fully understand the policy most pertinent to the research study: The Educational Technology policy (EdTech) (2019a). Secondary analyses of policy documents are used to re-evaluate documents in detail to be used as evidence in a different argument (Dale et al. 1998) found in (Payne & Payne, 2004). This analysis took place within the literature review ([table 3.5: Researcher summary of EdTech \(2019a\) policy document](#)). The secondary analysis of policy documents was needed in order to successfully reach the aims and objectives of the study. Firstly, objective one: to critically discuss and articulate a LR interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic, as well as objective five: to investigate and evaluate an educators perspective on the use of ET within schools, and objective six: to develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer. As teachers are responsible for reflecting policy within their practice (Schriever, 2020), the education environment could not be fully explored without this analysis.

## Secondary analysis: Demographic factors

A quantitative secondary analysis of consensus data was used as the original sampling method with the aim of conducting the research within an area of rich demographic diversity; representative of socio-demographic factors that are pertinent within digital divide research. Consensus data was used as it allowed the analysis of population data, which can be used for a variety of disciplines (Ernest, Salkind and Rasmussen, 2011). A secondary analysis is an efficient way to represent the information gained from digital divide literature. **Table 5: Justification of socio-demographic factors considered** details the justification of the socio-demographic factors considered within this analysis. **Table 5.1: Secondary analysis findings: Location**, outlines the findings of this analysis. **Table 5.2: Justification of institutional factors considered** details the justification of the school factors considered when selecting schools to take part. **Table 5.3: Secondary analysis findings: Schools** illustrates the findings of this. The consensus data was collected and organised by wards/towns within each county in Merseyside, which was the original location of the study based on the rich socio-demographic diversity available. Once the data was collected, the researcher analysed which ward represented the most, medium and least of each socio-demographic factor considered. From the wards identified, an analysis took place of institutional factors that are pertinent to digital divides. Further secondary data was collected for each school within these areas, with the aim of conducting research with a sample of schools that were representative of the institutional factors identified. Lockdown impacted this sampling method however, as the location of the data collection moved online. The research surrounding the impact of demographic factors on digital divides was not used for the sampling method, but to enhance the researchers understanding of the data collected.

## Focus group: Children and teachers

For the teachers and child participants, focus groups were chosen as the research method given they facilitate a better focus on a certain theme when looking at this in a lot more depth (Bryman, 2012, pp. 501-503). The interactive focus groups within this project aimed to be as unstructured as possible, allowing multiple perspectives to be shared in order to identify how the group culture interacted and engaged with the topic under discussion (Given, 2008, p. 443). This was important for the young children and teachers at the school as both peer and school cultures sought to be understood. Interviewing the participants within a group setting highlighted the similarities and differences within each group, as well as identifying the language that was used when talking about this topic (Given, 2008, p. 589). Focus groups are also useful when engaging with participants with lower levels of literacy, like young children (Mascheroni & Vincent, 2016). Within a focus group setting it is possible to understand the dimensions that are important to a particular phenomenon in exploring the range of ideas presented which is why they are often used early in research projects (Given, 2008, p. 589). This data collection method allows the research objectives to be reached as the research team can hear how an opinion is reached (or differs) within a group instead of just the individual when producing a rich body of data. Examples of this include the participants in a focus group interacting by probing and prompting each other to reach the group consensus or view on a particular phenomenon. The researcher will observe how the collective group understanding toward topics around ET use emerge. In an interview setting this is lost where the individual will give an answer to a question, but it is difficult to ask challenging or probing questions, thus interviews are better at covering a wide range of topics, but not to study group interactions of one topic in as much depth.

**Table 4.1: Common uses of focus groups**

NUMBER	USE
1.	Obtaining general background information about a topic of interest
2.	Generating research hypotheses that can be submitted to further research and testing using quantitative approaches

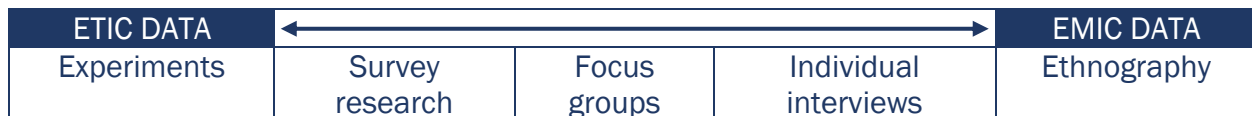
3.	Identifying similarities and differences among respondents with respect to specific behaviors, experiences, interests, perceptions, opinions, attitudes or other characteristics
4.	Stimulating new idea and creative concepts
5.	Diagnosing the potential for problems with a new program, service or product
6.	Generating impressions of products, programs, services, institutions, or other research tools that might be employed in more quantitative research
7.	Interpreting previously obtained quantitative results

(Given, 2008, pp. 590-591)

### Survey: Parents/guardians

Surveys have been chosen as the data collection tool for the parents/guardians as Given (2008, pp. 591-592) outlines within etic data collection methods, where the researcher is not present, their views are not an imposed view of the situation.

**Figure 4.6: Etic and emic data collection methods**



Given (2008, p.592)

The presence of the researcher is important when engaging in data collection for the child and teacher participants in that the ability to prompt, probe and guide discussion within the focus groups is advantageous. For the adult parent/guardian's however the ability to prompt and probe may lead to misleading an answer in some cases (Bryman, 2012, pp. 234-235). The decision to conduct an open-ended survey comes from reflection of the casual conversations the researcher had with parents/guardians about the research project. The topic of ET use is a sensitive subject for parents wanting to protect their children online and allow them access to a device that is prominent within their consumer culture (Haddon & Vincent 2015). With a lack of guidelines in this area, parents/guardians may be motivated to give what they believe to be a socially desirable answer within an interview or focus group setting, as such it is thought emic methods would not produce the most reliable results (Bryman, 2012, p. 233). Further to this, questionnaires are a cost effective, convenient, and reasonably quick method of data collection without interviewer variability.

Qualitative surveys are often referred to as interviews or email interviews as they produce text that will be analysed qualitatively (Given, 2008, p. 846). Some closed questions have been included to ensure the question is framed or on topic but are followed by open ended questions in allowing the parents/guardians freedom to express their reasons for selecting the particular response. This added richness by providing details of deeply held beliefs, personal experiences, opinions and perceptions that would not otherwise be captured.

### 4.9.6 THE IMPACT OF COVID-19 ON DATA COLLECTION METHODS

A sequential design was utilized to enable the collection of empirical data during the months of lockdown. The project was divided into different phases to make this clearer. The research methods, data collection and analysis that took place prior to the pandemic has been identified as phase one. Phases two and three (collection of data from adult participants) comprises of a qualitative survey and online interviews. To accommodate the social distancing measures in place, the focus groups for

the young children were changed to interviews using the schools as gatekeepers, this was later excluded completely.

## Phase two: data collection method for teachers

### Location

For the teachers, Facebook was utilised given it was possible to directly target this participant group through the platform (Greenhow, et al., 2021). Location was slightly more problematic than that of the parents, however. Whilst parenting groups on the platform were segregated by area/specific locations, teacher groups on Facebook were less likely to be for specific area's given there are a limited number of schools in an area, and it was less confidential to identify the location of the teachers in this manner. Location for this participant group comprised of teachers throughout different area's of the UK. This was achieved by contacting Facebook groups that were UK specific, aimed toward teachers, and had a good diversity of subjects, levels and ages. The demographic factors identified throughout the secondary analysis were considered in both the teacher and parental survey by asking demographic questions.

### Sampling method

The sampling method was purposive and the participants were asked to forward the survey on to others that reached the criteria, encapsulating a snowball sampling method also.

### Survey

After transcribing and analysing the teacher focus group, it allowed understanding toward the language used and different dimensions of the phenomena that was considered by this participant group. This was beneficial when generating survey questions. Although an alternative method to focus groups, the qualitative survey meant data could be collected during school closures. Further to this, the transcription of the focus group showed there were dominant contributors, although conversations and discussions could be heard it was clear that the teachers tended to agree or contemplate and agree with each other when it came to some topics. Although the focus groups allowed understanding toward the individual and collective group thoughts toward topics, a questionnaire allowed further variance and deeper understanding toward the individual perspectives. The similarities and differences were easily recognisable during the focus groups, this is not lost when using a survey but was more time consuming to interpret.

### Online interview

The focus groups enabled a deeper awareness of the topic, making the researcher aware of the different experiences that are likely to be discussed. This aided the survey design, which further aided the ability to prompt and talk in-depth about the topic during the interviews (Given, 2008, p. 423). The interviews were semi-structured giving control over the topics to be discussed, with the participants still free to elaborate and provide in-depth information (Given, 2008, p. 470).

## Phase three: data collection method for parents/guardians

### Location

As previously identified, the schools are no longer being used as gatekeepers, as such the location of the research was adapted. Social media was used as an online recruitment tool, focusing specifically on the social media platform: Facebook. Reasons for this are due to the platforms affordance of creating, and becoming a member of certain groups. This allowed a greater level of control over who the survey was being advertised to, by posting and getting in contact with groups and pages of specific interest to this participant group. To ensure greater levels of diversity, groups were approached such



as parenting groups, buy and sell groups, activity ideas for parents/children as well as community pages whereby goods for babies and young children were offered for free to help those in need.

### Sampling method

A purposive sampling method was still utilised, however at the end of the survey it was asked that the participant forwarded the URL link on to anyone they knew who fit the criteria. Snowball sampling became an added component to this method.

### Survey

Surveys were previously being used as the data collection instrument for the parents/guardians, however these were offered as a URL link and hard copy for those without digital access. Online surveys are popular in this respect as they are not bound by geographical barriers, are convenient, and during the pandemic, a practical solution.

### Online Interview

Virtual interviews took place, allowing greater insight to areas that required deeper understanding from the surveys. In this respect, the survey helped in generating understanding toward areas that needed deeper qualitative investigation in identifying potential interview questions and participants (Given, 2008, p. 846). Virtual interviews afford the opportunity of one-way dialogue as non-verbal cues can still be taken into account (Given, 2008, p. 471). Online interviews are often used as an alternative if for logistical, geographical or financial reasons, a face-to-face focus group or interview cannot take place. Stewart & Williams (2005) considered the temporal divides of online interviews or focus groups in that they can be asynchronous (not in real time for example through email where participants can take time to consider their response) and synchronous (the most similar to face to face methods where the interview or focus group takes place in real time through a video conference for example). For this research project synchronous interviews took place.

Deakin & Wakefield (2014) found the option of an online interview allowed a greater level of participation. Concerns surrounding the use of online interviews include the ability to build a rapport, however it was noted that although the experiences were different, the opportunity was not hindered and did not impact the quality of the data gathered. Lo Iacono, et al. (2016) experienced difficulties in picking up non-verbal facial cues during their research but still concluded skype could be used as a viable alternative or supplement to traditional face to face research.

## 4.10 RESEARCH CREDIBILITY

### 4.10.1 GENERALIZABILITY

The data collected for this study is developed from collective in-depth insight (focus groups/surveys) to more detailed insights within the interviews (Weinstein, 2018). Bryman (2016, p. 399) refers to Williams (2000) who terms this as 'moderatum'; the findings may be limited to tentative rather than statistical generalisations which represents a modicum of generalisation.

### 4.10.2 OBJECTIVITY

To ensure objectivity within qualitative studies researchers are required to be honest and transparent when contextualizing the research process by providing a credible and trustworthy depiction of the participants identity, beliefs, ideas, passions and actions within the investigation (Given, 2008, p. 573). In ensuring objectivity is attained, a qualitative researcher may be more descriptive about the research process and introduce themselves so that readers are aware of their background, indicating

why for example they may be passionate about a particular subject. This was introduced within the introductory chapter of the thesis, ensuring transparency toward the researcher's background.

#### 4.10.3 REPLICABILITY

The in-depth nature of this study infers that the location, people, and unique time of the research will make it difficult to completely replicate. Instead, demographic variables have been identified that have shown to be influential within the research area of digital divides. As the research is context specific, external validity or replicability may be weak, however as some findings are comparable to findings within studies with similar participants, it strengthens the external validity. This may not be as sophisticated as generalizability within quantitative studies (Given, 2008, p. 756), but can be viewed as a 'volume button' whereby the question is not whether external validity exists within the study, but how much is present.

#### 4.10.4 RELIABILITY

In ensuring reliability within qualitative research, the credibility, dependability, confirmability and consistency indicators are methodological coherence (appropriate and thorough data collection, interpretation and analysis), responsiveness of the researcher (verification of findings and analyses) as well as audit trails (transparent descriptions of all procedures and issues) (Given, 2008, p. 754). In achieving this, the methodological approaches have been critically considered throughout this chapter ensuring the data collection instruments and analysis technique is substantiated. The interpretation of the data was verified by conducting interpretive checks with my supervisory team and considering comparisons to studies similar in nature. Audit trails have been accounted throughout the introductory chapter (researcher background), the method and methodology chapter, within each phase of the research project (pilot studies, design of data collection instruments), within the analysis stages; and finally, when identifying the limitations of this study and potential future research directions without compromising the methodological meanings that underpin this research.

#### 4.10.5 VALIDITY

Validity refers to the extent to which a research project truly studies what it intends to investigate, understand, or measure in that the 'truth' is accurately defined (Given, 2008, p.909). For qualitative researchers the resonance of findings within the context of their investigation pertains to validity. As well as the aspects mentioned within the discussion of reliability, validity can be inferred through verification of the findings, self-reflection, negative case analysis, sampling sufficiency, theoretical thinking and audit trails (Given, 2008, p.909). This process of verifying the findings leads to trustworthiness, examples of where data would be untrustworthy includes deliberate distortion of the data, changes in how data is collected (and this not being detailed), and when the data collection method are not able to accurately add insight within the topic of interest (Saunders et al., 2023). By verifying the findings within the aforementioned ways, this allows transparency to the data collection and analysis process which increases the level of trust within the data.

#### 4.10.6 RIGOR

Rigor denotes the quality of the research, within qualitative studies this applies to the transparency, maximal validity of credibility, maximal reliability or dependability, comparativeness and reflexivity in negating the findings are trustworthy (Given, 2008, p. 796). Transparency was achieved through clarification of the research process by describing the steps taken in conducting the research. In doing so, an audit trail has been included throughout each phase of the project whereby thorough descriptions of the steps taken have been included. This ensured the study can be replicated, although results may be similar despite contextual differences. Representing the findings of the data accurately by also outlining negative cases, demonstrated the data was not dismissed if it did not support the

theory and that rigor has been achieved through considering these. Furthermore, the dependability of the findings has been cultivated by ensuring interpretative checks were made throughout the data analysis stages with the research team, this meant the findings were also in line with others and not just the researcher. Throughout the discussion, the comparability of the findings was demonstrated whereby elements of the data could be associated with research in a broader context. Reflexivity is another key element whereby the researcher must acknowledge the influence their presence had on the research process (Given, 2008, p. 796). This was clearly demonstrated during the consideration of data collection methods as it was chosen to firstly conduct a survey for the parents/guardian's given the presence of the researcher had (even in a qualitative context), an undesirable effect on the initial research process. Further to this, areas within the face-to-face elements of the research that may have been effected by the researchers presence has been acknowledged.

## 4.11 DATA ANALYSIS

### 4.11.1 JUSTIFICATION FOR THEMATIC APPROACH TO ANALYSIS

The flexibility offered through thematic analysis makes it the best option for this research, as the analysis method needed to be flexible to provide understanding within each context, gaining a holistic understanding toward the phenomena. The considerations made during the analysis stage were the explanation of why themes were significant, providing an audit trail of how they were identified, how they interlinked with the other themes as well as the literature, which substantiated why they were significant (Bryman, 2016, p. 587). Knapp, & Daly (2002, p. 113) point out a detailed qualitative analysis may lead researchers to invent patterns in the data, to start with a logical sequence will be followed during the analysis stages:

1. Use the focus group and questionnaire's semi structured rubric to begin the data analysis
2. Apply the data to NVivo software to enhance the quality of the analysis
3. Generate codes, sub-codes and themes using a close reading of the data
4. Conduct interpretive checks with my supervisory team to discuss any missed or ambiguous interpretations for the data
5. Repeat steps 1-4 for the interview data analysis

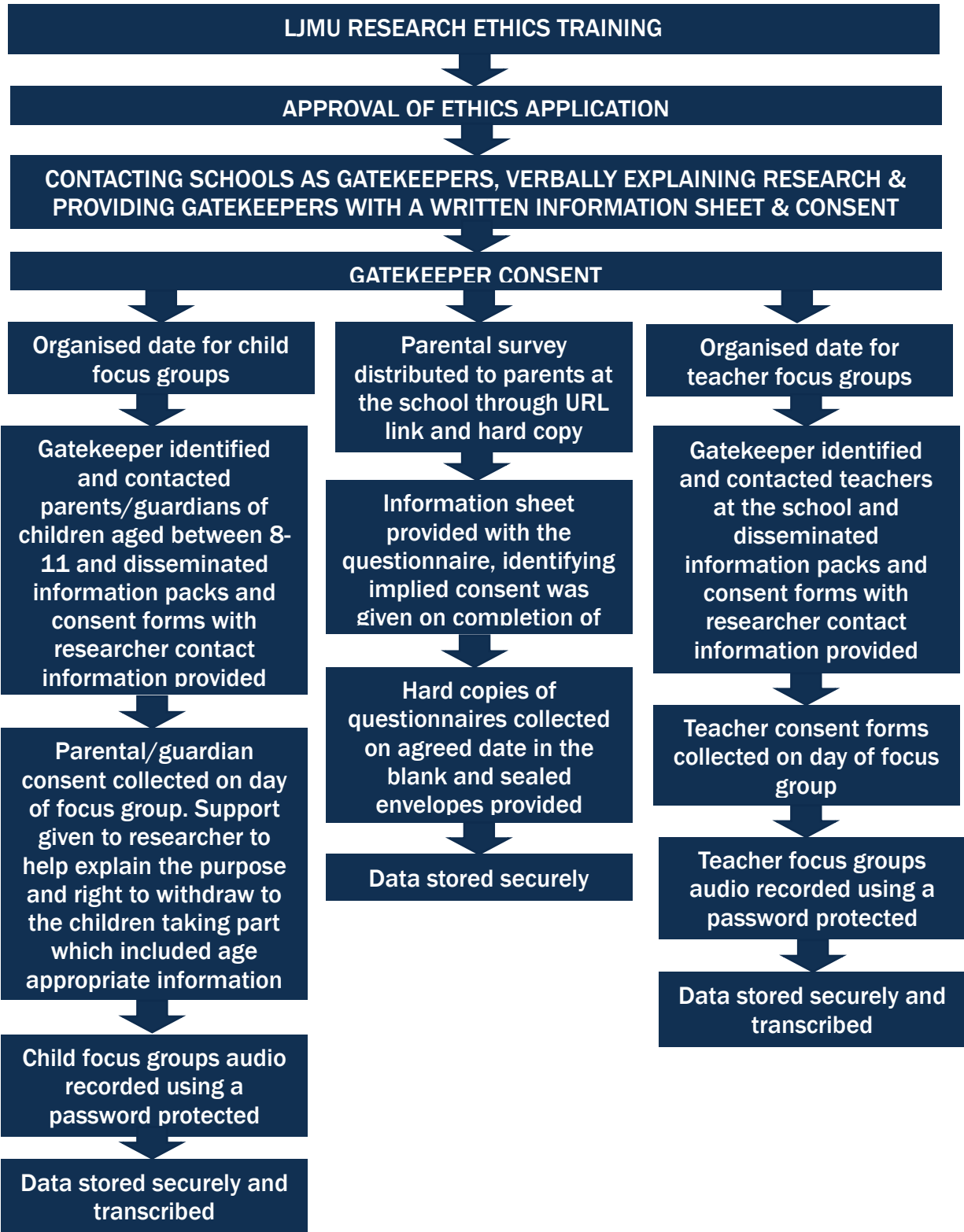
Memo's were also created which outlined the conditions under which the codes arose, and allowed comparison of other codes, adding rigor to the analysis of the data collected (Given, 2008, p. 376).

## 4.12 ETHICAL CONSIDERATIONS

### 4.12.1 ORIGINAL ETHICAL CONSIDERATIONS

The LJMU research ethics training was completed ([appendix 1](#)), I obtained a DBS certificate for working with young children ([appendix 2](#)), as well as a certificate within first aid ([appendix 3](#)). The ethics training ensured the researcher was able to consider the different angles of ethical considerations from scientifically justifying the research, considering the participant sample requirements, as well as inclusion and exclusion criteria, the design of data collection instruments, procedures and protocol, the time it would take to complete, where the research would take place, how data was to be collected (face to face, online or retrieving hard-copies of completed questionnaires), creating the information and consent forms, instructions (including the right to withdraw) [appendix 4 and 5](#), the method for recruiting participants, the potential risks, any rewards for taking part, limits to confidentiality, signposting, and finally managing and storing the data. These considerations were well considered which led to the approval for the study under reference number 19/LBS/022 ([appendix 6](#)). The process followed for the ethical collection of data can be seen below:

Figure 4.7: Original research ethics process

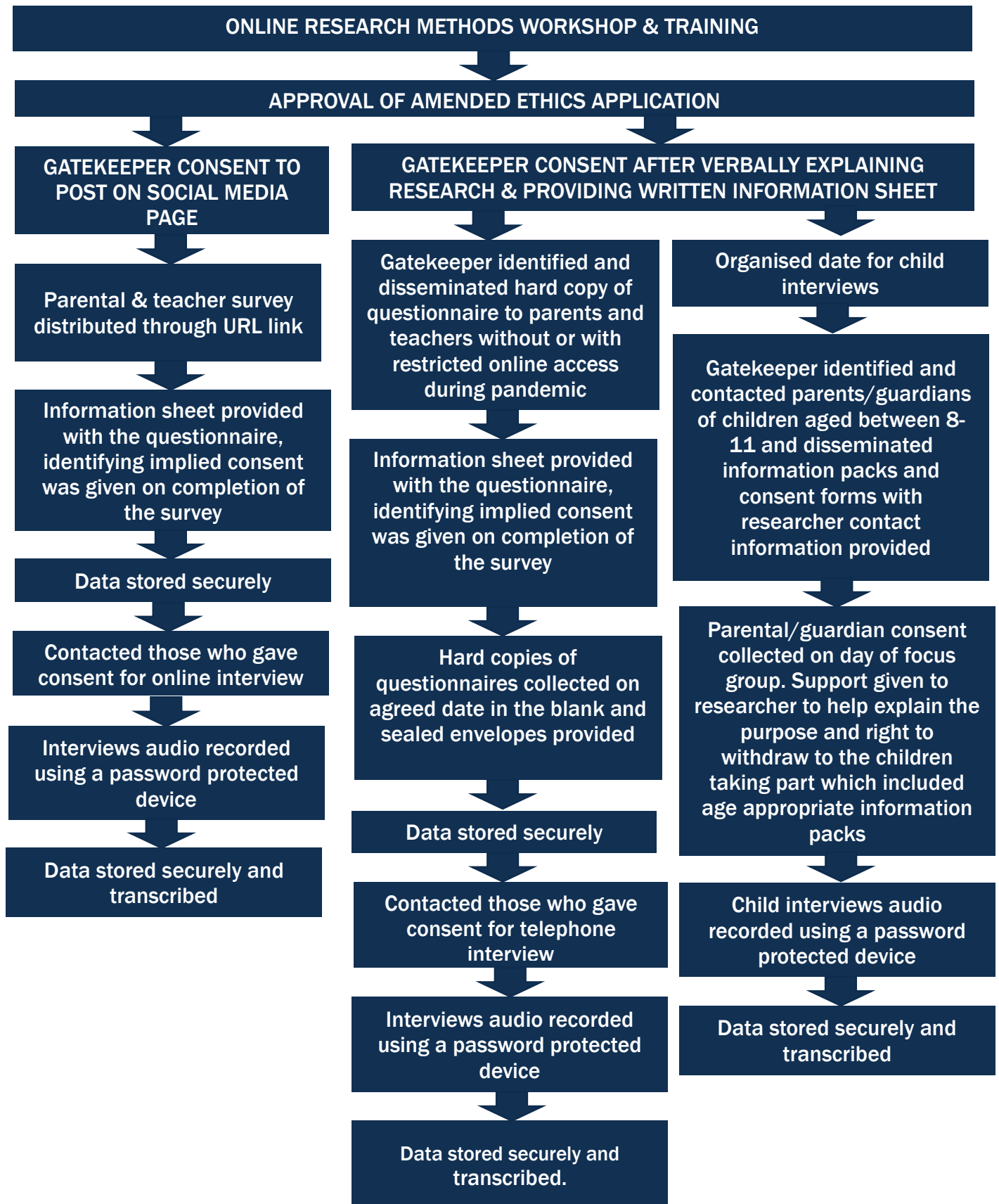


#### 4.12.2 THE IMPACT OF COVID-19 ON THE ETHICAL CONSIDERATIONS

The COVID-19 pandemic presented the need to revise the data collection methods which required submitting an amendment to the ethics application which was approved under reference number 19/LBS/022 (appendix 7). During this time, permission to conduct face to face research was prohibited. To overcome these restrictions the main changes included changing the teacher focus groups to an online survey and the child focus groups changed to interviews to adhere to social

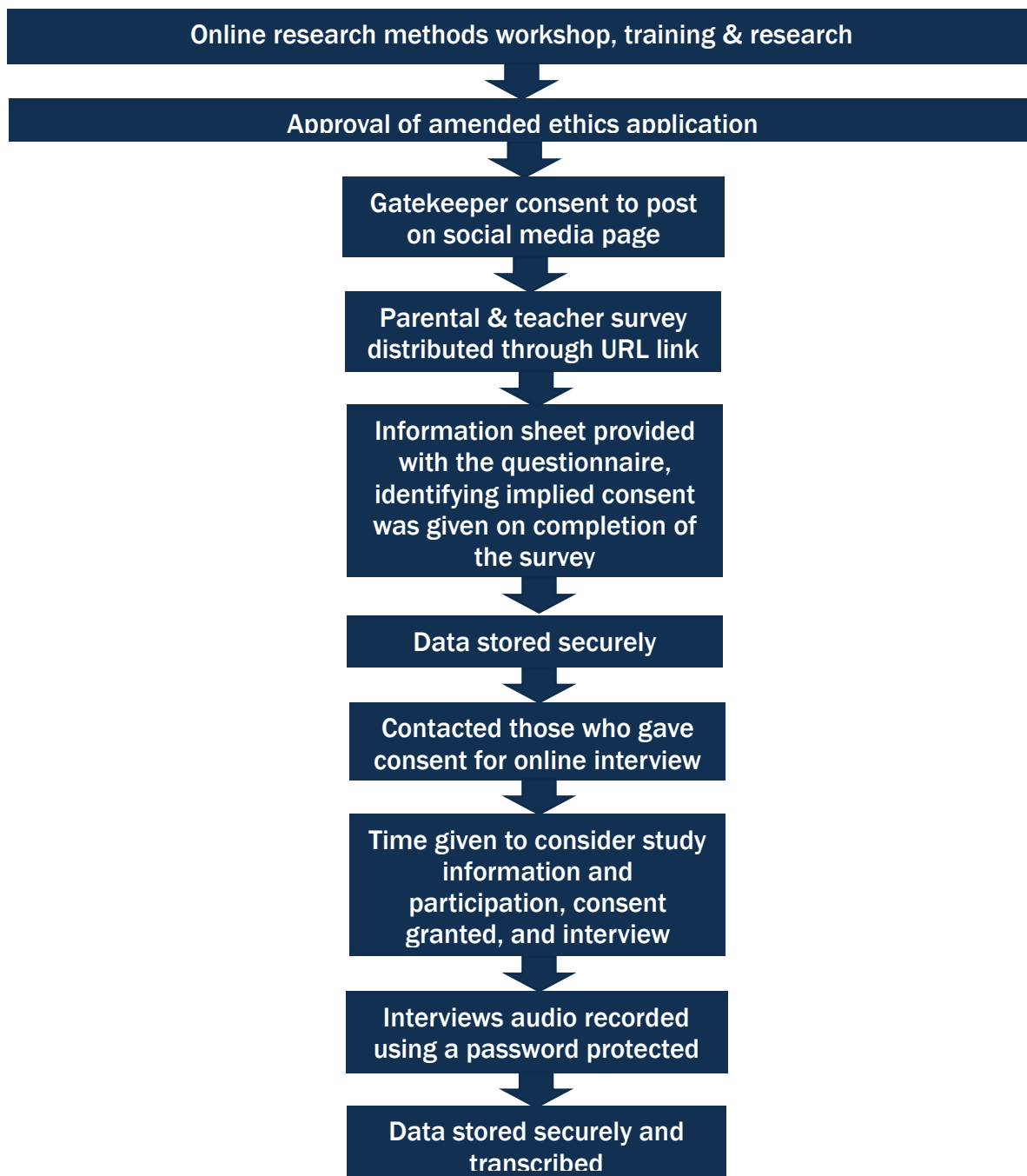
distancing measures when the schools re-opened. **Figure 4.8** below outlines the amendments to the ethics process in 2020:

**Figure 4.8: Amended research ethics process 2020**



As England went into a second lockdown toward the end of 2020, the ethical considerations for the project changed given children were no longer part of the study. [Figure 3.9](#) below depicts this:

Figure 4.9: Amended research ethics process 2021



## 4.13 DESIGN OF DATA COLLECTION INSTRUMENTS

### 4.13.1 FOCUS GROUPS: TEACHERS

The main reasoning for utilising the focus group method when collecting data from the teachers was to observe the discussion between the teachers surrounding the topics that had been introduced by the researcher. Given (2008) highlights one of the first steps in facilitating conversation between the

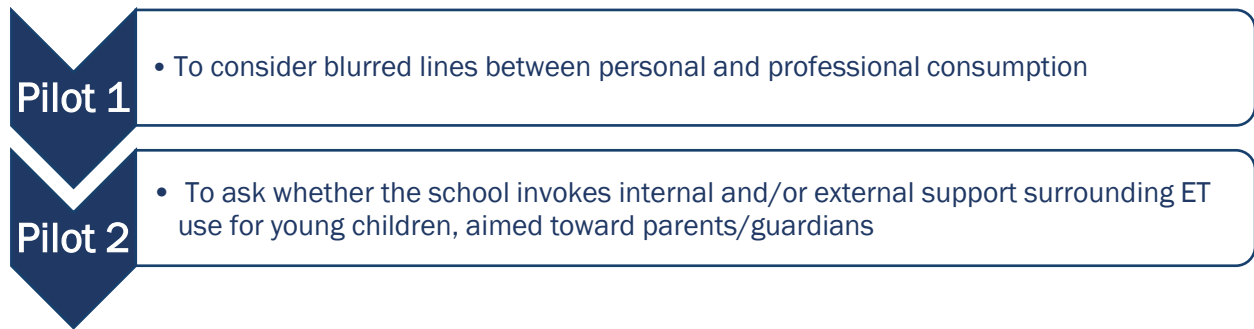


participants about a topic is to ensure they are comfortable talking to each other about it and to a degree, share similar experiences to generate active exchanges. Although the researcher was not able to pre-empt any personal reservations, professionally the participants were familiar with each other (as colleagues). Although differing views were anticipated, commonalities were found within the official processes at the school, such as a shared experience of the institutional ethos toward technology use and school policy that they had to uphold. With these commonalities it was easier to establish a consensus as well as areas that the participants had differences of opinions.

### Key outcomes from pilot study

Two teachers, one from a primary and a secondary setting took part in the pilot studies, Figure 3.10 highlights the key learning points from each pilot:

Figure 4.10: Outcome of pilot study for teacher focus group



### Changes made as result of the pilot study

Although it was known that ET can be used both personally and professionally; the first pilot identified it was important to make clear distinctions between a teachers' personal agency toward the use of ET for professional means, professional use of ET that is standardised by the school and the teachers' personal consumption of ET outside of professional use. This heightened the researchers' awareness toward probing (if necessary) to ensure there were no misinterpretations surrounding the teachers' personal consumption and the aforementioned differences were overtly distinguished if the researcher thought this was needed.

The second pilot identified that this particular school was very proactive about internet safety whereby external (often non-for-profit) organisations were invited to come into the school and speak to the children and parents about internet safety. This highlighted prominence toward differentiating what internet safety topics were mandatory and which were a result of the institutions individual agency, views and ethos toward this type of education. At the time of the phase one data collection, PSHE had not yet been made compulsory.

### Justification of questions

Table 4.2: The justification of the teacher focus group and survey questions

THE TEACHER'S PERSONAL CONSUMPTION
Questions were asked surrounding the teachers personal consumption of ET as the literature showed teacher experience and frequency of use of ET can impact their confidence to use it within the classroom. This may indicate whether teachers are skilled/not skilled enough to use ET within the classroom or whether its their attitude toward how it can be used.
TEACHER OPINION ON CHILD CONSUMPTION OF ET

The literature showed that teacher attitude toward how ET can be used within classrooms, and by young children, will influence whether or not they integrate ET into the classroom. Understanding their opinion on this identified whether the decision to introduce ET was lead by the school or individual teacher.

#### TEACHER OPINION ON FAMILIAL CONSUMPTION OF ET

As the parents/guardian's were also taking part in the study, it was of interest to consider their account of how ET is used in the home and the teacher's view on this.

#### TEACHER OPINION ON HOW ET HAS HAD AN IMPACT ON SOCIETY

The literature showed teacher attitude can have a bearing on whether or not they use ET in the classroom, questions surrounding their general view on the topic was desired to see whether teachers had the same general view of ET, as they did toward the children they teach

#### HOW ET IS USED IN THE EDUCATIONAL SETTING

The aim was to highlight how ET is currently used in the educational setting and to see whether this stemmed from an individual teachers personal passion toward this, or policy and school leaders.

The topics and questions were pre-determined, and an interview guide used (Given, 2008), however the guide was not followed to the letter. The topics were discussed in reaction to the flow of the conversation that took place between the participants which meant the researcher took notes to ensure all topics desired were covered.

## Process

Figure 4.11: The teacher focus group process

#### SETTING THE SCENE & GROUND RULES

Before getting started, the researcher ensured the setting for the focus group was comfortable, it took place within one of the school classrooms, tables and chairs were arranged so that everyone could sit around the tables and had view of each other (a circle shape was utilised here). The participants were provided with a full information sheet and consent form prior to the date of the focus group which meant only those who had shown an interest in taking part arrived to take part. Upon arrival, the researcher introduced themselves and the teachers were asked to give the researcher a copy of their signed consent form, or to sign one and were also given the option of taking a hard-copy of the information sheet (as well as the electronic copy previously provided). Before starting with the introductions, the researcher highlighted some of the 'ground rules', these included what the participants could expect throughout the duration of the focus group, they were introduced to the recording device and reminded of their right to withdraw at anytime as well as the appreciation of responses being kept anonymous outside of our discussion. Time for questions were made before moving on to the introductions.

#### INTRODUCTIONS

Once the ground rules were laid out, less formal introductions took place which meant providing an overview/reminder of the research topic, why I was speaking to them as teachers and the value this focus group had for the project.

#### OPENING TOPIC

Careful consideration went into the design and flow of the topics to be discussed (Macnaghten & Myers, 2004) ensuring the opening topic for the focus group was light-hearted, asking the teachers about their personal consumption. This allowed a rapport to be built with the researcher and the participants where the topic was a nice warm up that elicited humorous reflections, encouraged group interaction and set the tone for an open discussion with the questions that followed.

#### DISCUSSION

Within the main discussion, topics were covered such as the teachers' views on child consumption of ET, their views toward ET use in the home environment, the school policy toward ET as well as considering their opinions on this policy and ET use in schools. The researcher ensured that all participants views were acknowledged throughout the discussion, notes were taken throughout and if at times the researcher felt it was important to check their understanding, this was done. This took the form of 'playing dumb' which prompted the participants to explain things further if necessary as well as summarising the researcher's interpretation of a discussion, giving the participants the opportunity to confirm or offer further explanation, potentially to reflect further and add to what had been summarised.

#### ENDING DISCUSSION

When ending the focus group, the teachers were asked to consider and reflect on the discussion by the researcher asking whether (with all things considered) they felt inequality was apparent for children excluded from ET use. After this, the participants were asked if they had anything else they wished to add or they felt was important to say. Finally, they were thanked for taking part and reminded that the researcher contact details were available on the participant information sheet.

(Finch & Lewis, 2003)

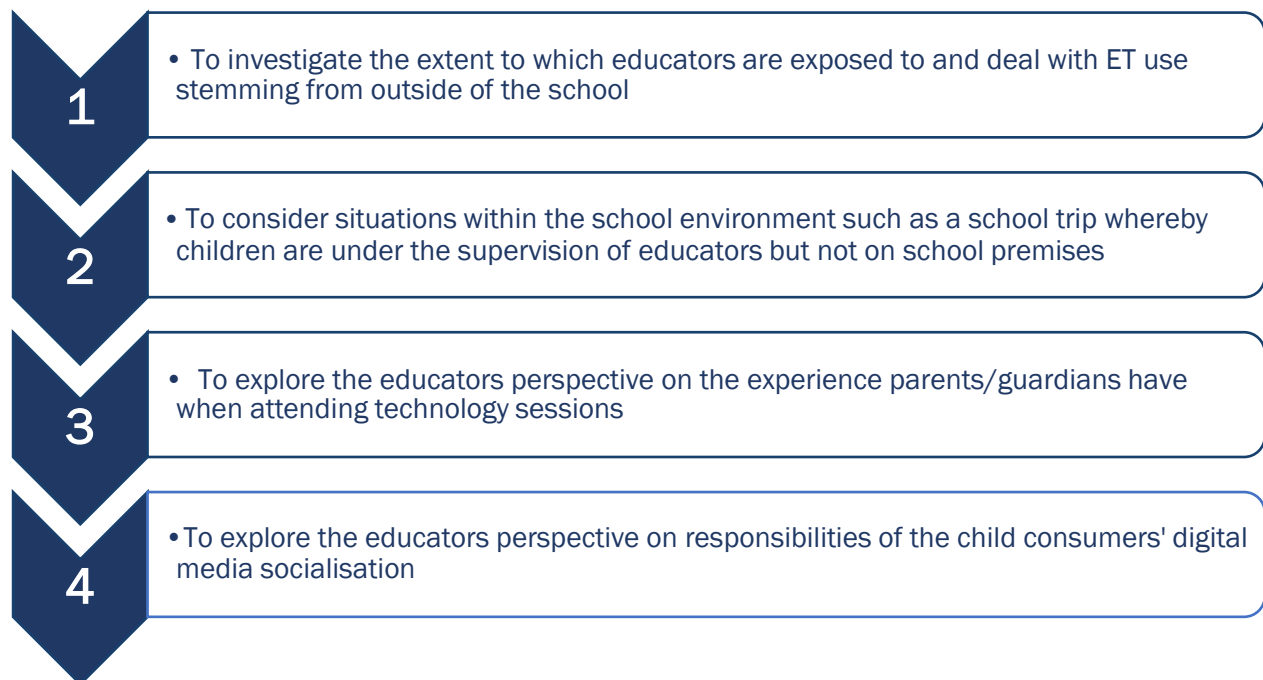
### 4.13.2 SURVEY: TEACHERS

An online self-administered survey was chosen as the first alternative method for the teachers. The survey allowed insight from individual teachers without being influenced by an overall group consensus, as a result the alternative method was more closely attuned to the ontological position of the study. The survey was also beneficial in recruiting participants and generating contacts for the interviews (Bryman, 2016 pp. 222).

#### Key outcomes from pilot studies

The focus group was analysed to help inform the design of the survey for the teacher participants.

Figure 4.12: Outcome of pilot study for teacher survey



## Changes made as a result of the teacher focus group

Findings that were significant to the design of the survey included the extent to which educators are exposed to and deal with ET use from outside of school. This identified that a distinction between issues in school that stem from the school environment (e.g., disruptive ET usage in class), and those from outside school (e.g., children having an argument or disagreement the night before), needed to be made when exploring the teacher view on ET consumption for young children.

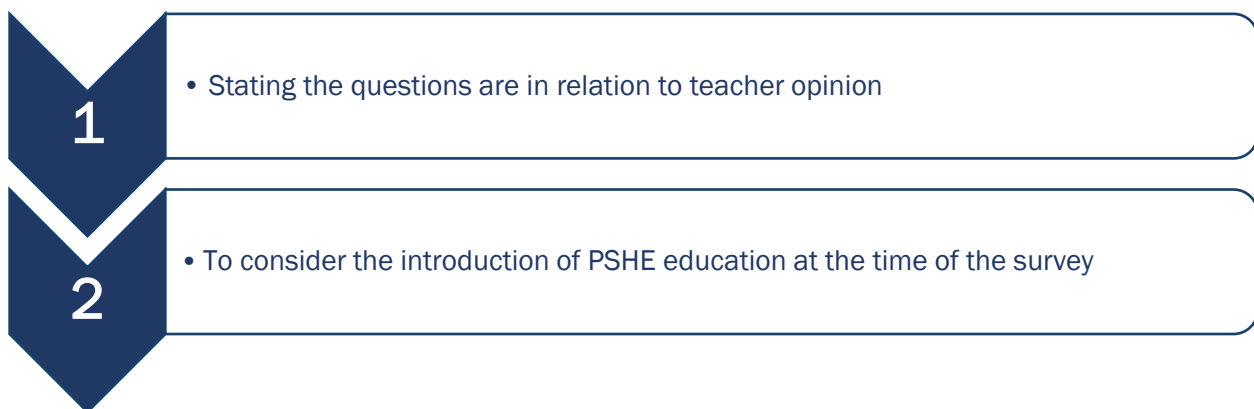
Another consideration was school trips. This represents a situation where the boundaries and rules of school are somewhat relaxed for the children because they are not in the education environment, are away from home, and parents therefore may request they take ET with them, which at times lead to conflict between the guardians and teachers.

Although the researcher was aware that some schools hold technology sessions aimed at parents/guardians, it wasn't until the focus group that the experiences of the parents who came was also of interest to the study. Both educators within schools and parents are key socialisation agents to young children, where the meso influencer (educators) tried to aid the child consumer's micro influencers (the family), it was interesting to explore (from both sides) what the experience was like. This was also added as a question to the parent/guardian survey within phase three of the study, asking whether they identified a need for support, and where they would like or expect that support from.

Throughout the focus group, it came to light that some teachers were resistant toward the role educators are forced to play with regard to the child consumers use of ET. This type of education (at the time of the focus group) was not yet mandatory within schools. A question surrounding school responsibilities was added to the teacher survey, as well as a question surrounding the degree to which it is a home issue, and later whether (in their view) if parents had the skill/knowledge required to deal with these issues at home. An additional question relating to this was around the teacher view on whether or not they felt their school was doing enough to support this, rather than simply asking what the school does, but their personal view on this also.

Once the outcomes of the focus group were considered, the survey was designed and further pilot studies took place.

Figure 4.13: Outcome from the pilot survey for teachers



It was understood by the researcher that any questions whereby the teachers were not in a position to accurately know the answer, would be based on their opinion/perspective. This however was

understandably not obvious to the participants. Within the first pilot, teachers hesitated to answer if they did not know for sure. It highlighted that a prerequisite was needed and questions were re-worded to 'in your opinion...'

Over the course of the project, some internet safety topics became mandatory in schools and others were the result of the schools' individual agency. Although not a direct outcome of a pilot study, this awareness was carried forward. PSHE as a subject was introduced in September 2020 (DfE, 2020). Internet safety is a component of this topic with schools encouraged to interrelate this topic throughout other subject area's; Computing studies (how to use technology safely), citizenship (topics surrounding literacy within the context of differentiating between facts and opinions, digital responsibilities, rights and freedom), as well as relationship studies (what do healthy and respectful online relationships look like, considering their behaviour and that of others online). Prior to the mandatory implementation of this subject, an all-rounded approach to teaching internet safety and behaviour was advised (DfE, 2019). With this in mind, questions surrounding internet-safety support ensured to identify which were compulsory and which educational environments showed a higher level of concern here.

## Justification of questions

**Table 4.2: The justification of the teacher focus group and survey questions**

<b>THE TEACHER'S PERSONAL CONSUMPTION</b>
Questions were asked surrounding the teachers personal consumption of ET as the literature showed teacher experience and frequency of use of ET can impact their confidence to use it within the classroom. This may indicate whether teachers are skilled/not skilled enough to use ET within the classroom or whether its their attitude toward how it can be used.
<b>TEACHER OPINION ON CHILD CONSUMPTION OF ET</b>
The literature showed that teacher attitude toward how ET can be used within classrooms, and by young children, will influence whether or not they integrate ET into the classroom. Understanding their opinion on this identified whether the decision to introduce ET was led by the school or individual teacher.
<b>TEACHER OPINION ON FAMILIAL CONSUMPTION OF ET</b>
As the parents/guardians were also taking part in the study, it was of interest to consider the teacher's account of how ET is used in the home.
<b>TEACHER OPINION ON HOW ET HAS HAD AN IMPACT ON SOCIETY</b>
The literature showed teacher attitude can have a bearing on whether or not they use ET in the classroom, questions surrounding their general view on the topic was desired to see whether teachers had the same general view of ET, as they did toward the children they teach
<b>HOW ET IS USED IN THE EDUCATIONAL SETTING</b>
The aim was to highlight how ET is currently used in the educational setting and to see whether this stemmed from an individual teachers personal passion toward this, or policy and school leaders.

## Process

Initially, the researcher continued to contact schools as gatekeepers to see if they could distribute the survey to be completed online, however it was much harder to get in touch with schools during the COVID-19 lockdown environment. Many advised email traffic had peaked for both parents and teachers and priority had to be given to essential updates and communications. Given these constraints, the participants were recruited using online methods. The researcher followed the ethical procedure outlined earlier in the chapter when contacting participants through social media.

Firstly, the researcher used social media platform Facebook, and created a profile specifically for this purpose. Facebook was used mainly because it is the only social media platform that has the affordance of groups. This affordance meant the researcher had access to a large community of consumers who are teachers. It is also the most popular social media platform in the UK (with the most active users) (Statista-a, 2022). Groups that appealed to teachers were searched. Facebook groups are pages on the platform that allow consumers to communicate about shared interests with certain people and can be public or private spaces, administrators are able to manage the community page and can add or remove users, delete posts or comments ect. (Facebook, 2022). The type of groups searched ranged from those sharing experiences, buying/selling teaching or educational resources, sharing ideas for teaching during lockdown, as well as comedy pages. Once an appropriate page was identified, the researcher contacted the administrators to give them the information surrounding the study, if their consent was gained, the survey was then posted to the page and users of the group were able to complete the survey if they fit the criteria and wanted to do so.

#### 4.13.3 ONLINE INTERVIEWS: TEACHERS

Interviews were conducted following the analysis of the focus group and survey responses from the teachers. Although the survey questions were similar to those asked within the focus group (with the aforementioned changes) the interview aided the exploration of how ET was embraced by consumers within the education environment during the COVID-19 context.

#### Key outcomes from previous research

Given this was the last data collection method to be used, there were only three topics to be discussed which would solidify the findings of the previous data collection methods.

#### Justification of questions

**Table 4.3: Justification of the teacher online interview questions**

<b>ET USE PRIOR TO THE COVID-19 PANDEMIC</b>
Questions were asked surrounding how ET was used by the teachers prior to the pandemic, not only was this of interest to see how the lockdown environment changed things, but asking this first may have helped prompt teachers to consider all the changes.
<b>CHANGES RESULTING FROM THE COVID-19 PANDEMIC</b>
Questions were asked about changes that resulted from the pandemic to fully understand how the pandemic impacted how ET use changed for teachers, and the impact this had on the child consumer.
<b>CHANGES CARRIED FORWARD</b>
Questions surrounding which changes were carried forward were asked to allow insight toward what changes may become permanent and part of the child consumers future experience of ET in the classroom as a result of the lockdown.
<b>CHANGES NOT SUITABLE TO BE CARRIED FORWARD</b>
When considering which changes were not suitable to be carried forward, it highlighted which changes the teachers did not like and why as well as the impact this would have on the child consumer.

#### Process

The recruitment method for the interviews entailed asking teachers who completed the survey's to leave their contact details if they were willing to be contacted in the future about similar research. The researcher got in touch with information regarding the interview and asked whether they would be willing to take part. For those that did, the process outlined by Finch & Lewis (2003) was followed.



Figure 4.14: Teacher online interview process

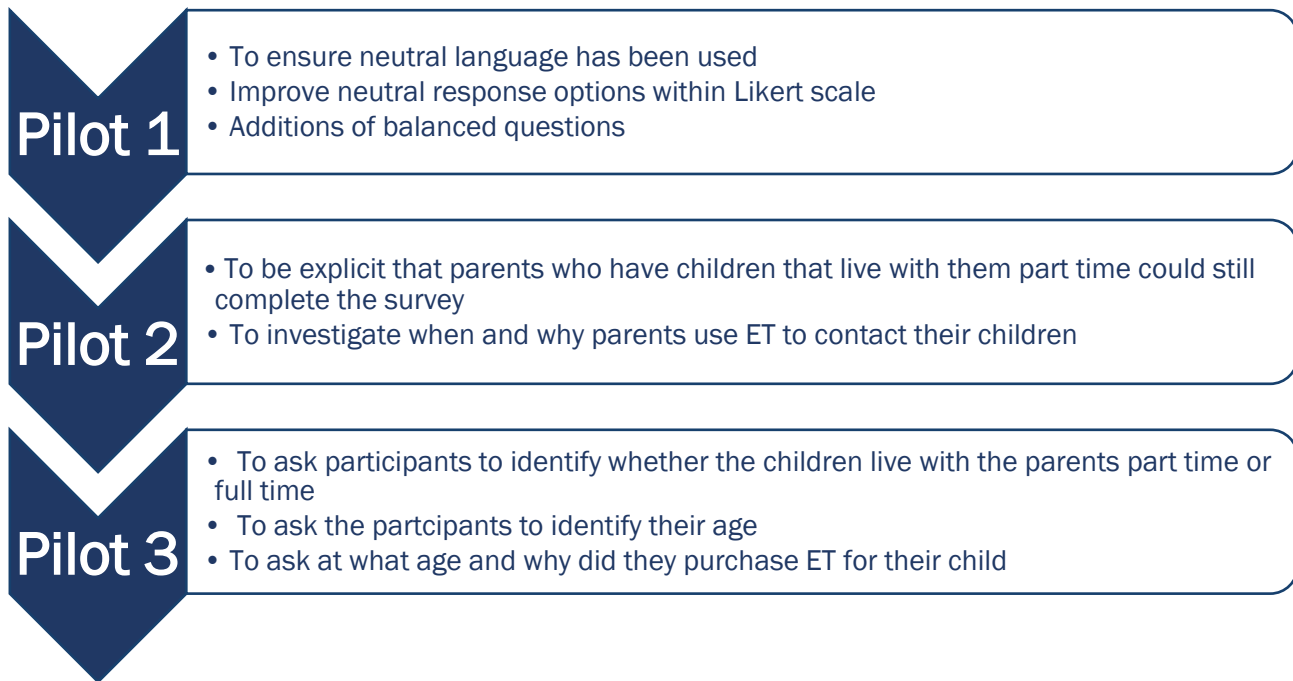
<b>SETTING THE SCENE &amp; GROUND RULES</b>
Before getting started, the researcher ensured the connection was suitable and that the participant could hear and see clearly. After this, introductions were made and the researcher expressed their gratitude for the teachers' participation. Some participants expressed preference toward giving verbal consent during the email communication where they were provided with the full information sheet and had the opportunity to ask any questions before arranging a date and time for the interview. If verbal consent was to be given, this process was explained (that the researcher would start the recording to take consent, stop and then start recording again for the actual interview). When the interview recording began, some of the 'ground rules' were outlined, reminding the participants of their right to withdraw, what to do/expect if there was a connectivity issue and were also asked if they had any questions prior to getting started.
<b>INTRODUCTIONS</b>
Whilst setting the scene and ground rules, introductions took place and time was made for more personable conversation before the formal 'ground rules' were set.
<b>OPENING TOPIC</b>
The opening topic was broad in nature and allowed a rapport to be built between the participant and the researcher. The question was open for the participants to discuss what came to mind and was a nice warm up to the discussion which required reflection and thought as opposed to a descriptive answer.
<b>DISCUSSION</b>
Within the main discussion, topics were covered such as what the teachers were happy to see the back of when we were no longer in a lockdown environment, and what changes as a result of the lockdown period they would be keen to take forward when the schools returned to normality.
<b>ENDING DISCUSSION</b>
When ending the interviews, the teachers were asked to consider and reflect on the discussion by thinking about if there was anything else they wanted to mention. Finally, they were thanked for taking part and reminded that the researcher contact details were available on the participant information sheet if they wanted to get in touch.

#### 4.13.4 SURVEY: PARENTS/GUARDIAN'S

Callegaro & Disogra (2008) identified that self-administrated surveys decrease the prevalence of social desirability bias as the participants are less concerned about negative evaluations or judgement. Whilst this is a broad benefit of the self-administrated survey, considerations had to be made toward wording techniques. It was with this in mind that open-ended questions were utilised throughout the survey, giving parents/guardians freedom to express answers unique to their experiences (Burrell & Nicolini, 2017). Without pre-defined responses or categories, exploration was enabled allowing versatile responses whereby the participants had autonomy in the topics, language and descriptions that were meaningful to them. Burrell & Nicolini (2017) highlight unanticipated responses would suggest there has been misunderstanding in how the question was interpreted, thus pilot studies took place to help highlight where some questions may require restructure.

#### Key outcomes from the pilot study

#### Figure 4.15: Outcome of pilot survey for parents/guardian's



### Changes made as result of the pilot study

The first pilot identified the importance of the language used within the questions; changes ensured the questions asked were completely neutral to minimize response bias as much as possible. In doing so, some questions were also broken down to minimize the burden of the task (Villar, 2008). An example of this included asking a question and asking a probing question underneath to make sure answers were explained and the question was not as onerous. The most significant change to the questionnaire was adding neutral-positive and neutral-negative response options to the Likert scale: 'to an extent, I agree' and 'to an extent, I disagree'. This gave participants the option to select a 'neutral' option within the Likert which is a draw back of scale type questions, but still indicated which way the participant was leaning. To warrant response bias further, consideration was made toward the question wording and order, however Villar (2008) acknowledges taking steps to minimise this is only one side of the coin. Including validation data such as the use of balanced questions of the positive and negative were included to avoid acquiescence within the response set (Bryman, 2012, p. 227) and provided insights toward patterns of response bias that could be identified during the analysis stage (Villar, 2008).

Within the second pilot it was identified that for parents/guardians with children who live with them part-time, it was not clear they could also complete the study. When analysing this survey, a key question surrounding the child's media socialisation process was also missing: how parents/guardians themselves use SM and ET to contact their children, as well as the nature of this contact.

The third pilot helped identify what aspects of the family unit were important to consider. For example, parents/guardians contacting their children for general chat may be more likely to do so if the children live with them part time.

### Justification of questions

**Table 4.4: The justification of parent/guardian questionnaire questions**

### THE FAMILY UNIT

Questions were asked to better understand the family unit which allowed exploration into how/if ET was used in the familial environment, whether family members shared devices or had their own ET to use.

### PARENTS PERSONAL CONSUMPTION

Just like the teachers, the parents views toward ET was likely to dictate whether or not they allowed their child access to devices as well as the type of use that is encouraged.

### CHILD CONSUMPTION

Questions surrounding child consumption allowed the researcher to understand how children used ET within the house during the COVID-19 lockdown environment, and what this means for their digital skill development.

### PARENTAL VIEWS ON CHILD CONSUMPTION

It was important to understand not just how children used ET within the familial home, but the parent views on this also. Although access might be granted, there were certain restrictions toward this access and the outcomes of use that were encouraged based on the parental views of consumption.

### MANAGEMENT OF DEVICES

Understanding how devices were managed within the household allowed further understanding toward the socialisation experiences of children within the familial home. Given it was expected each family would manage devices slightly differently, questions were also asked to see whether parents felt they needed more support with this to consider how confident they were with their management tactics.

Further contemplation took place surrounding issues of under or over reporting. Fuchs (2008) suggests overreporting stems from participants holding a strong opinion on a topic, tending to overreport this, whereas underreporting can stem from minimising what the participant believes to be socially undesirable behaviours. Although these behaviours may be reported, fewer instances may be acknowledged by participants which could be deliberate or subconscious. The aim of the study is not to 'uncover' circumstances of under or over reporting, however it is within the interest of the researcher to ensure data upholds truth value. Villar (2008) suggests where researchers are aware the topic may lead to under or over reporting, balanced questions should be included by including questions that favour and oppose the attitude the researcher is seeking to explore. This does however mean adding additional questions to the survey, or re-wording the same question and asking this at different points within the survey. The addition of questions however can then lead to respondent fatigue whereby the participants attention, motivation and quality of responses deteriorate (Ben-Nun, 2008). This was especially concerning given the survey questions are open-ended and exploratory in nature as this relies on participants taking the time to reflect and consider their answers. If fatigued, the level of processing may not be sufficient. For this reason, the final section of the questionnaire surrounding the management of devices, mostly contained yes/no type answers. For example- 'Are there parental controls on the Wi-Fi?', questions that could be sufficiently answered without as much cognitive processing were left toward the end when respondents were the most likely to be fatigued. Minimising the weight on the cognitive process was also something that was considered. Within the third section (parental views on child consumption) Likert scale questions were incorporated.

Likert scale questions are usually incorporated to measure a participant's attitude. Within this survey, it was not desired to measure or quantify attitudes, the justification for including these questions meant the participants could reflect on their attitude, before answering an open-ended question to discuss why this was the rating they chose. Although scale questions at the point of participant fatigue can lead to recency effects whereby respondents will choose the response option at the end, or primacy effects, choosing a response at the beginning (Given, 2008); asking participants to justify their

answer would highlight whether this had occurred (or not). If participants were able to explain their reasoning for picking a certain item on the scale, it indicated reflection had gone into this.

## Process

Within the original design, participants were recruited using schools as gatekeepers. During the COVID-19 pandemic environment, Facebook groups that were of interest to this participant group were approached. If consent was given, the researcher posted the recruitment text and a URL link of the survey.

### 4.13.5 ONLINE INTERVIEWS: PARENTS/GUARDIAN'S

Online interviews took place for the parent/guardian participants given the changes throughout the pandemic period; it was not possible to keep updating the survey to capture the essence of the familial environment throughout the pandemic, or to stop data collection and wait. Interviews were therefore incorporated as the last data collection method to contextualise the turbulence of this time period.

## Key outcomes from the pilot study

The questions within the teacher interviews were able to capture the influence of the COVID-19 lockdown environment for the parents/guardian's.

## Justification of research questions

Table 4.5: The justification of the parent/guardian interview questions

CHANGES RESULTING FROM THE COVID-19 PANDEMIC
It was desired to understand how the use of ET within the family, for the child and for the parents changes as a result of the COVID-19 lockdown environment to understand how the pandemic directly impacted the child's consumption of ET, but also how the family and parent usage would have impacted them.
DESIRABLE CHANGES
It was desired to understand which changes the parents felt were beneficial resulting from the pandemic, to see if there were any positive changes toward the child's digital consumption that emerged as a result of lockdown.
UNDESIRABLE CHANGES
Questions to understand what aspects of the changes deriving from the lockdown environment were not going to be carried forward were asked. This highlighted consumption within the family, for the parent and the child, that was deemed negative and not going to be carried forward. In doing so, this indicated the impact that lockdown had on the child's digital socialisation experiences.

## Process

Further reading took place surrounding response bias within interviews; understanding the importance of ensuring the researchers pace of speech and facial expressions were similar to the informal chat at the start of the interview as well as throughout (Villar, 2008). Broad questions were asked, gaining insight from the topics the participant group felt were important to highlight as opposed to asking specific questions that could lead to a socially desirable answer.

Figure 4.16: The parent/guardian online interview process

Before getting started, the researcher ensured the connection was suitable and that the participant could hear and see clearly. After this, introductions were made and the researcher expressed their gratitude for their participation. If verbal consent was to be given, this process was explained. When the interview recording began some of the 'ground rules' were outlined, reminding the participants of their right to withdraw, what to do/expect if there was a connectivity issue and were also asked if they had any questions prior to getting started.

#### INTRODUCTIONS

Whilst setting the scene and ground rules, introductions took place and time was made for more personable conversation before the formal 'ground rules' were set.

#### OPENING TOPIC

The opening topic was broad in nature and allowed a rapport to be built between the participant and the researcher. The question was open for the participants to discuss what came to mind and was a nice warm up to the discussion which required reflection and thought as opposed to a descriptive answer.

#### DISCUSSION

Within the main discussion, topics were covered such as what the parents were happy to see the back of when we were no longer in a lockdown environment, and what changes as a result of the lockdown period they would be keen to take forward as a family.

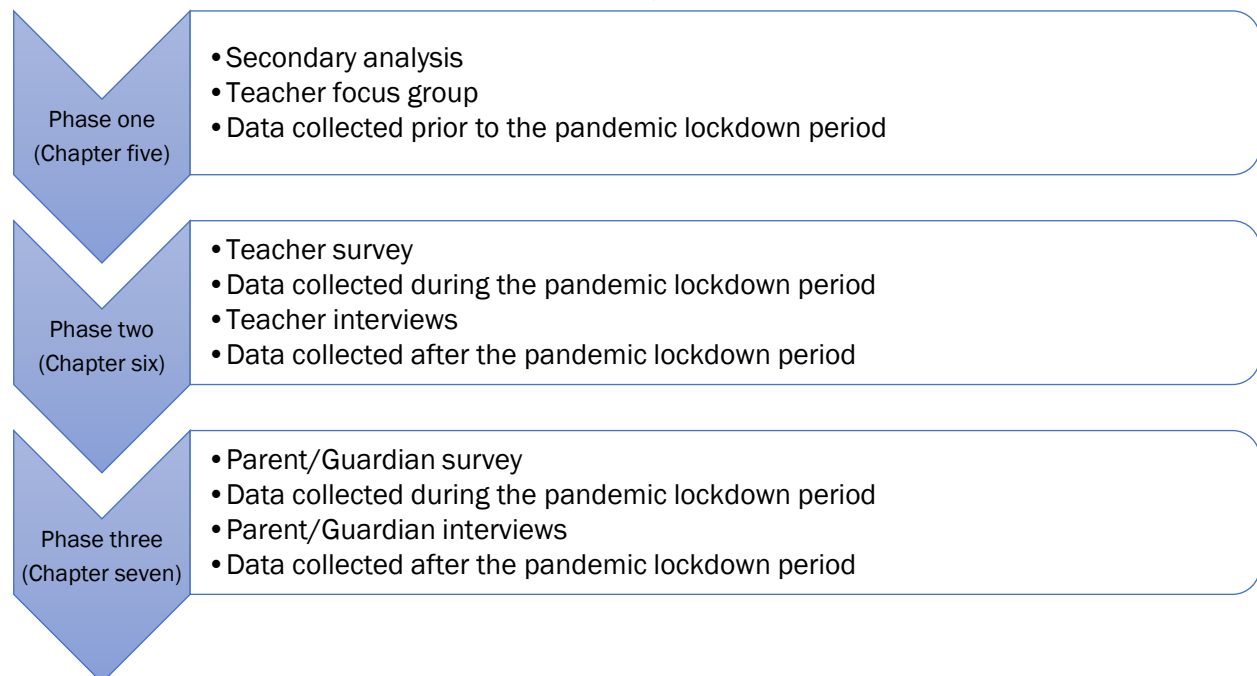
#### ENDING DISCUSSION

When ending the interviews, the parents were asked to consider and reflect on the discussion by thinking about if there was anything else they wanted to mention. Finally, they were thanked for taking part and reminded that the researcher contact details were available on the participant information sheet if they wanted to get in touch.

## 4.14 CHAPTER SUMMARY

This chapter has deliberated the different approaches to the method, methodological design and the design of the data collection instruments of this research project. In doing so, it highlighted and justified the most appropriate for this research and how the COVID-19 lockdown influenced this. The project will be considered within three phases:

Figure 4.17: Outline of phases one-three of the research project



# CHAPTER FIVE

· PHASE ONE ·

## 5.1 INTRODUCTION

Within chapter five: phase one, a secondary analysis took place as part of the sampling method. The analysis and findings of this secondary research are outlined and address objective two: to identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected. The primary data collection method followed a qualitative, inductive approach and consisted of a focus group for teachers within an educational setting. Schools within Merseyside acted as gatekeepers. Focus groups for children aged 8-11 also took place during this time but this participant group were removed from the study as a result of the ethical issues of data collection during the lockdown period.

Figure 4.17: Outline of phases one-three of the research project

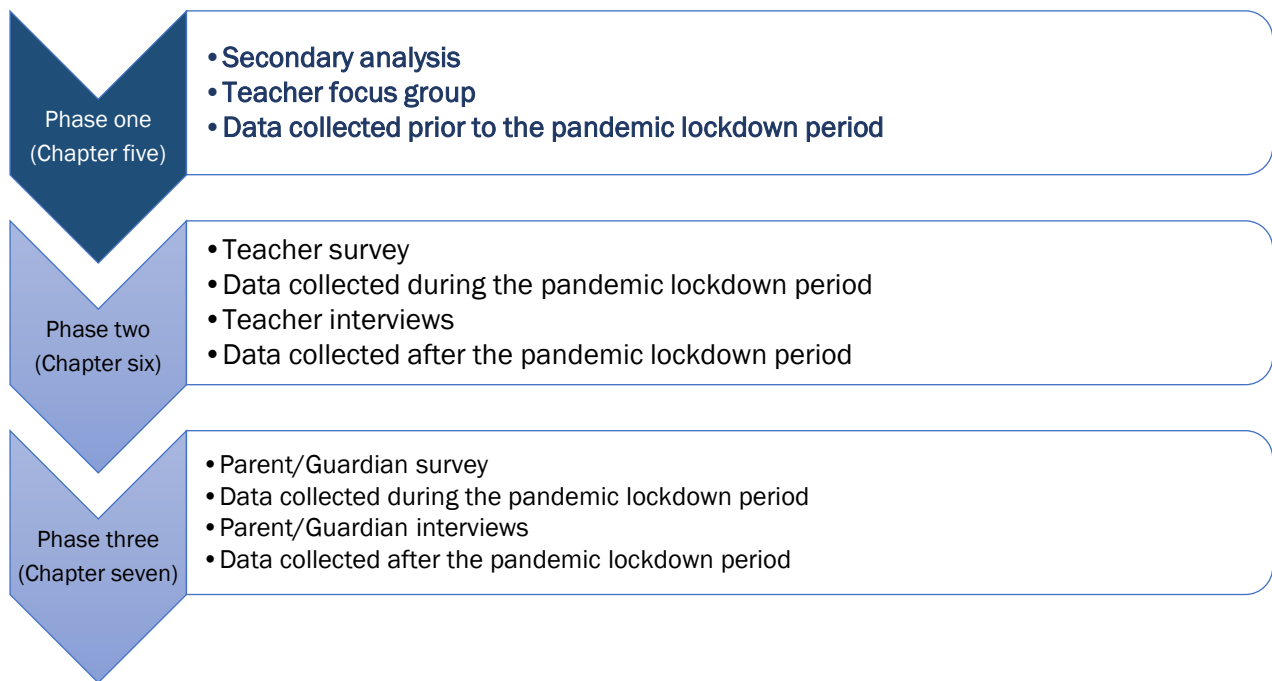
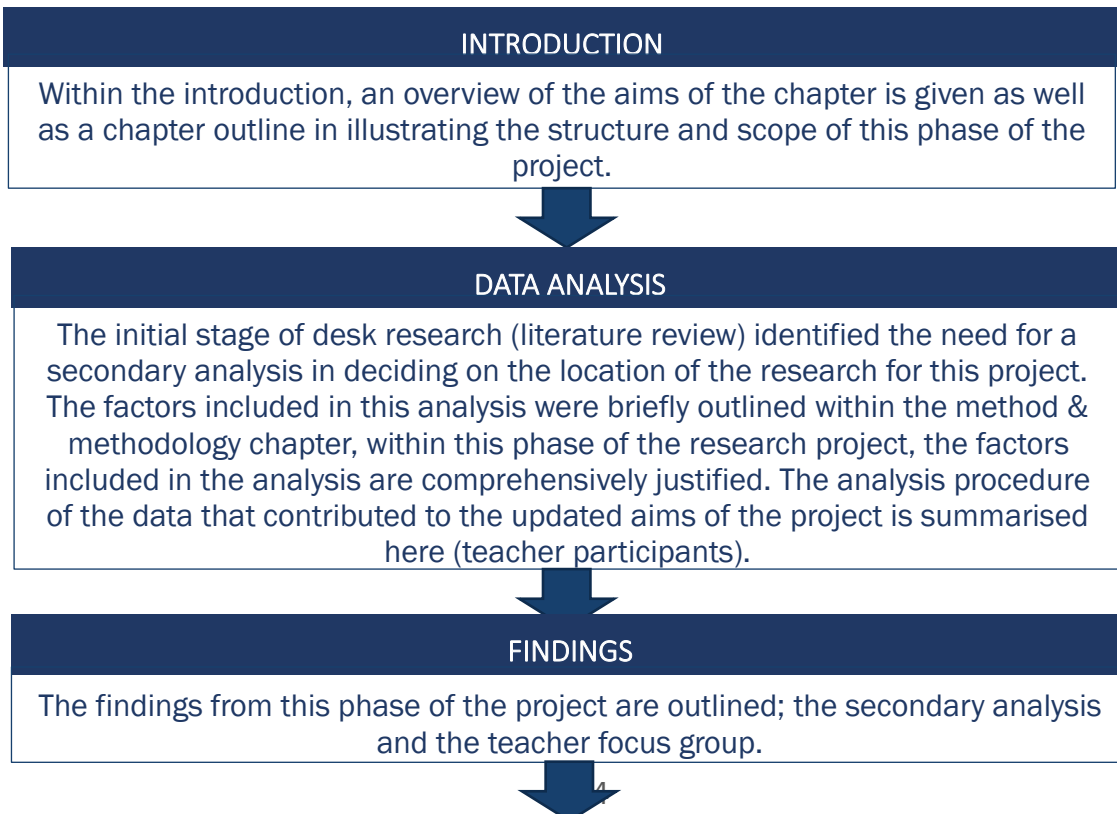


Figure 1.3: The project flow



PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator's perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator's perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

Figure 5: Phase one findings chapter outline



## SUMMARY

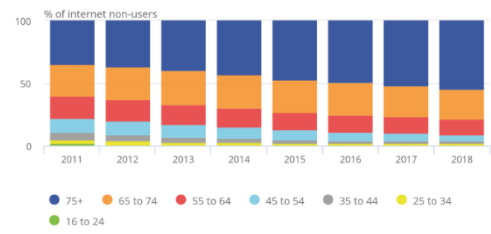
The chapter is summarised before moving on to chapter six: phase two of the project, which includes further data collection of the teacher participants.

## 5.2 DATA ANALYSIS

### 5.2.1 SECONDARY ANALYSIS

The sampling method used numerical data to ensure a purposive sample (Given, 2008). This comprised of the analysis of industry, age, income, education, ethnicity, differently abled (disabled) groups, lone parent households, economic activity, IMD and IDACI score (table 5).

**Table 5: Justification of socio-demographic factors considered**

FACTOR	JUSTIFICATION
<b>SELECTING GEOGRAPHIC LOCATION</b>	Across the industries of information and communication, and professional, scientific and technical, the North West elucidated a median within the UK. A median sample was desired as this represents the mid-point in the representation of technology industry within England (Bryman, 2012, p. 713). Merseyside, Lancashire and Greater Manchester were the top three regions for each industry. The rich demographic diversity within the region of Merseyside justified the geographic selection for the next stage of the secondary analysis.
<b>INDUSTRY</b>	The industry locations within which schools are based have historically shown an impact on the motivation or culture toward technology use (Carnoy & Levin, 1986). Lack of motivation is a significant factor in digital exclusion (ONS, 2019) which contributes to a school's resistance toward technology use (Xiao, 2020; Haddon & Vincent, 2015). The UK Government encourages educational institutions to gain Institute of Technology (IoT) status, however key features of IoT's are reliant on partnership with local businesses, further underlining that the industries available in the area may have an impact on the schools' active encouragement of technology use. The industries chosen to represent the technical sector were information and communication, and professional, scientific and technical, other sectors will be inclusive of technology use, however these industries represent a higher need for technological skill.
<b>AGE</b>	<p>Research signifies for various reasons, older age contributes toward digital exclusion (Ball, et al., 2017; Prensky, 2001; ONS, 2019). The average age of guardians with dependent children was not available, the average age of the population where the schools are based was considered. The younger age group is the average of 0-44-year old's, 65+ represents the elder age category given this age group epitomize the largest proportion of adult non internet users in the UK since 2011 (ONS, 2019):</p> <p><b>Figure 5.1: Age composition of internet non-users, UK, 2011-2018</b></p>  <p style="text-align: right;">(ONS, 2019)</p>
<b>INCOME</b>	Income is an inclusion criteria where not only do the cost of devices have an effect but implications on the cost of the infrastructure needed to support internet use

	<p>is present in exclusion criteria (ONS, 2019). Concerns over the cost of technology in terms of allowing young children access is another important factor; allowing a child a smartphone entails the parents trusting children with the maturity and responsibility of looking after an expensive item, with the risk of it becoming lost, stolen or damaged (Haddon &amp; Vincent, 2015).</p>												
<p><b>EDUCATION</b></p>	<p>Studies investigating digital divides have focussed on the qualifications held by participants, when the studies are inclusive of children or students, they have considered the qualifications held by the participants' parents as lower education levels are seen to utilise less capital enhancing activities (Hargittai &amp; Hinnant, 2008; Hargittai, 2010; Hargittai &amp; Kim, 2010; Pearce &amp; Rice, 2013; Park, 2015; Preradovic &amp; Lesin, 2016; Cho &amp; Lee, 2017; PRC, 2018; ONS, 2019). To ensure a fully representative sample in this sense, this project included wards which are likely to source participants from a range of educational backgrounds. The different levels of education and qualifications held within each level in the UK are demonstrated within <a href="#">figure 5.2</a>.</p> <p><b>Figure 5.2: The nine qualification levels across England, Wales and Northern Ireland</b></p> <table border="1"> <thead> <tr> <th>QUALIFICATION LEVELS ACROSS ENGLAND, WALES AND NORTHERN IRELAND</th> <th>QUALIFICATIONS</th> </tr> </thead> <tbody> <tr> <td>Entry Level- Each entry level is available at Levels 1, 2 and 3 (3 being the most difficult)</td> <td>Entry level award, Entry level certificate (ELC), Entry level diploma, Entry level English for speakers of other languages (ESOL), Entry level essential skills, Entry level functional skills, Skills for Life</td> </tr> <tr> <td>Level 1</td> <td>First certificate, GCSE - grades 3, 2, 1 or grades D, E, F or G, Level 1 award, Level 1 certificate, Level 1 diploma Level 1 SOL, Level 1 essential skills, Level 1 functional skills, Level 1 national vocational qualification (NVQ), Music grades 1, 2 and 3, O Level grades D, E, F or G</td> </tr> <tr> <td>Level 2</td> <td>CSE - grade 1, GCSE - grades 9, 8, 7, 6, 5, 4 or grades A*, A, B, C, Intermediate apprenticeship, Level 2 award, Level 2 certificate, Level 2 diploma, Level 2 ESOL, Level 2 essential skills, Level 2 functional skills, Level 2 national certificate, Level 2 national diploma, Level 2 NVQ, Music grades 4 and 5, O level - grade A, B or C</td> </tr> <tr> <td>Level 3</td> <td>A level, Access to higher education diploma, Advanced apprenticeship, Applied general, AS level, International Baccalaureate diploma, Level 3 award, Level 3 certificate, Level 3 diploma, Level 3 ESOL, Level 3 national certificate, Level 3 national diploma, Level 3 NVQ, Music grades 6, 7 and 8, Tech level</td> </tr> <tr> <td>Level 4</td> <td>Certificate of higher education (CertHE), Higher apprenticeship, Higher national certificate (HNC),</td> </tr> </tbody> </table>	QUALIFICATION LEVELS ACROSS ENGLAND, WALES AND NORTHERN IRELAND	QUALIFICATIONS	Entry Level- Each entry level is available at Levels 1, 2 and 3 (3 being the most difficult)	Entry level award, Entry level certificate (ELC), Entry level diploma, Entry level English for speakers of other languages (ESOL), Entry level essential skills, Entry level functional skills, Skills for Life	Level 1	First certificate, GCSE - grades 3, 2, 1 or grades D, E, F or G, Level 1 award, Level 1 certificate, Level 1 diploma Level 1 SOL, Level 1 essential skills, Level 1 functional skills, Level 1 national vocational qualification (NVQ), Music grades 1, 2 and 3, O Level grades D, E, F or G	Level 2	CSE - grade 1, GCSE - grades 9, 8, 7, 6, 5, 4 or grades A*, A, B, C, Intermediate apprenticeship, Level 2 award, Level 2 certificate, Level 2 diploma, Level 2 ESOL, Level 2 essential skills, Level 2 functional skills, Level 2 national certificate, Level 2 national diploma, Level 2 NVQ, Music grades 4 and 5, O level - grade A, B or C	Level 3	A level, Access to higher education diploma, Advanced apprenticeship, Applied general, AS level, International Baccalaureate diploma, Level 3 award, Level 3 certificate, Level 3 diploma, Level 3 ESOL, Level 3 national certificate, Level 3 national diploma, Level 3 NVQ, Music grades 6, 7 and 8, Tech level	Level 4	Certificate of higher education (CertHE), Higher apprenticeship, Higher national certificate (HNC),
QUALIFICATION LEVELS ACROSS ENGLAND, WALES AND NORTHERN IRELAND	QUALIFICATIONS												
Entry Level- Each entry level is available at Levels 1, 2 and 3 (3 being the most difficult)	Entry level award, Entry level certificate (ELC), Entry level diploma, Entry level English for speakers of other languages (ESOL), Entry level essential skills, Entry level functional skills, Skills for Life												
Level 1	First certificate, GCSE - grades 3, 2, 1 or grades D, E, F or G, Level 1 award, Level 1 certificate, Level 1 diploma Level 1 SOL, Level 1 essential skills, Level 1 functional skills, Level 1 national vocational qualification (NVQ), Music grades 1, 2 and 3, O Level grades D, E, F or G												
Level 2	CSE - grade 1, GCSE - grades 9, 8, 7, 6, 5, 4 or grades A*, A, B, C, Intermediate apprenticeship, Level 2 award, Level 2 certificate, Level 2 diploma, Level 2 ESOL, Level 2 essential skills, Level 2 functional skills, Level 2 national certificate, Level 2 national diploma, Level 2 NVQ, Music grades 4 and 5, O level - grade A, B or C												
Level 3	A level, Access to higher education diploma, Advanced apprenticeship, Applied general, AS level, International Baccalaureate diploma, Level 3 award, Level 3 certificate, Level 3 diploma, Level 3 ESOL, Level 3 national certificate, Level 3 national diploma, Level 3 NVQ, Music grades 6, 7 and 8, Tech level												
Level 4	Certificate of higher education (CertHE), Higher apprenticeship, Higher national certificate (HNC),												

		Level 4 award, Level 4 certificate, Level 4 diploma, Level 4 NVQ
	Level 5	Diploma of higher education (DipHE), Foundation degree, Higher national diploma (HND), Level 5 award, Level 5 certificate, Level 5 diploma, Level 5 NVQ
	Level 6	Degree apprenticeship, Degree with honours - for example bachelor of the arts (BA) honours, bachelor of science (BSc) honours, Graduate certificate, Graduate diploma, Level 6 award, Level 6 certificate, Level 6 diploma, Level 6 NVQ, Ordinary degree without honours
	Level 7	Integrated master's degree, for example master of engineering (MEng), Level 7 award, Level 7 certificate, Level 7 diploma, Level 7 NVQ, Master's degree, for example master of arts (MA), master of science (MSc) Postgraduate certificate, Postgraduate certificate in education (PGCE), Postgraduate diploma
	Level 8	Doctorate, for example doctor of philosophy (PhD or DPhil), Level 8 award, Level 8 certificate, Level 8 diploma
<b>ETHNICITY</b>	Those from ethnic minorities are found most likely to be non-internet users within the UK, although this has narrowed over time, the gap in this area is prominent (ONS, 2019). Hargittai & Kim (2010) found proactive use of smartphone technology varied based on gender, parental education, ethnicity and experience of autonomous use of the internet.	
<b>DIFFERENTLY-ABLED/ DISABLED GROUPS</b>	The amount of individuals differently-abled are considered as an external factor as defined by the Governmental Statistical Service as "someone who has a current physical or mental health condition(s) or illness(es) lasting or expected to last 12 months or more and that limits their ability to carry out day-to-day activities" (GSS, 2010). The data showed this factor could hinder the likelihood of internet usage. When considering specifically the reasons for preferring to shop in person in comparison to online for example, a lack of interest was suggested to be from not fully understanding the benefits of internet use in terms of saving money, concerns of security and privacy, and the belief from individuals within the group of 'disabled' that they lack the skills and knowledge needed (ONS, 2019). Data for this external factor was considered for households with dependent children (aged 0-15), that had at least one person in the household having a long term health problem or disability.	
<b>LONE PARENT HOUSEHOLDS</b>	In 2018 only 1% of households with 2 adults aged 16-65 had no internet connection in comparison to 9% of households with a single adult aged 16-65 (ONS, 2019). Lone parent households in this sample are those with dependent children, a child aged 0-15, and/or 16-18 in full time education.	
<b>ECONOMIC ACTIVITY</b>	Lutz (2019) found an issue of accessing the internet from mobile devices only are that they are restrictive in terms of screen size which hindered the compatibility of smaller and/or local business websites that did not have mobile friendly websites. When considering the self-employed, economically inactive and the unemployed, the differences were minimal between their likelihood to be non-internet users, whereas employees were the most likely to be internet users (ONS,	

	2019). Lutz's (2019) findings toward the restrictive nature of mobile technology highlighted digital inequalities found in the self-employed, thus it may not be the devices that hinders the website design, but the skill of the small or local business owners to make their businesses compatible with handheld devices. Economic activity was used as a factor within the secondary analysis including the self employed, employees (part time and full time), those actively unemployed, meaning they are actively seeking employment (not including full time students), and those inactive through unemployment including ages 16-24, ages 50-74, those who have never worked and those who are long term unemployed.
<b>INDEX OF MULTIPLE DEPRIVATION (IMD)</b>	The broadest sense of deprivation index across England comprises of the following measures: income, employment, education, skills and training deprivation, health, disability, crime, barriers to housing and services, and living environment deprivation (Ministry of Housing, Communities & Local Government, 2015). The further indices of deprivation within this index such as crime, barriers to housing and services and living environment deprivation are being considered through a more general sociological scope to ensure the wards from which the schools were selected are representative in terms of general deprivation factors also.
<b>INCOME DEPRIVATION AFFECTING CHILDREN INDEX (IDACI)</b>	The Income Deprivation Affecting Children Index (IDACI) is a sub domain of the IMD and was considered as an external factor given the focus of this research is young children. The IDACI comprises a subset of the income deprivation domain whereby income deprivation considers those who are out of work and those in work but who have low earnings, the IDACI considers households within the Income Deprivation criteria who also have children aged 0-15 within their care (Department of Communities and Local Government, 2015).

### Justification for the institutional factors considered

**Table 5.1** identifies the outcomes of the above secondary analysis in selecting the boroughs within Merseyside that were considered in gaining a representative sample, and identifies the pool of wards within which the next stage of desk research began: The selection of schools to approach as gatekeepers. The selection of schools was based on school type, equality data, historical ICT spend, overall performance and gender (**table 5.2**).

**Table 5.2: Justification of institutional factors considered**

<b>SCHOOL FACTOR</b>	<b>JUSTIFICATION</b>
<b>SCHOOL TYPE</b>	School type in terms of primary or secondary was the initial factor to be considered as this study aimed to speak to children aged 8-11. Primary schools within the UK comprise of ages 3-11 and national curriculum key stages 1 and 2, secondary schools are inclusive of ages 11-16 and key stages 3 and 4 (Gov.uk, 2019a). Ages 8, 9, 10 and 11 will be from primary schools and ages 11 from secondary.
<b>SCHOOLS UNDER THE NATIONAL CURRICULUM</b>	Schools were divided between those who have to follow the national curriculum and those who have more freedom, this is to enable an overall consideration toward the influence of the English national curriculum education policy. Those who have to follow the national curriculum include: <ul style="list-style-type: none"> <li>• Community schools: Controlled by the local council but not influenced by businesses or religious groups</li> <li>• Grammar schools: The selection of pupils is based on academic ability</li> </ul>

	<ul style="list-style-type: none"> <li>• Faith schools: Follow the curriculum but not when it comes to religious studies.</li> </ul> <p>Schools that do not have to follow the national curriculum include:</p> <ul style="list-style-type: none"> <li>• Academies: Run by a governing body, but are independent from the local council</li> <li>• Free schools: Such as foundation and voluntary schools are funded by the Government but are not run by the local council. Examples relevant to the participant age groups include those who are set up by charities, universities, independent schools, community and faith groups, teachers, parents and businesses.</li> <li>• Private or independent schools: Charge fees to attend rather than being funded by the Government</li> </ul>
<b>EQUALITY DATA</b>	<p>Edgerton &amp; Roberts (2014) highlight the importance of habitus in concern to socio-economically disadvantaged groups where Bourdieu (1990) recognised those from disadvantaged backgrounds may be more likely to employ expectations that reinforces this pattern from early ages. On the same token Bourdieu demonstrates this type of socio-economic background may demonstrate an increased motivation to do well, although there is a possibility that this opportunity may be hindered by a disadvantaged individual's lack of knowledge or understanding in what may attribute to success. Factors such as these include skills within reading, writing, mathematics, communication, analytical, reasoning and behavioural skills in terms of achievement motivation, self regulation and delay of gratification which lead to socio-economic success (Farkas, 2003) in (Edgerton &amp; Roberts, 2014). Socio-economic factors that contribute toward basic level digital exclusion are likely to translate toward the effectiveness of new technology use, where those from disadvantaged backgrounds in this regard may be less likely to use technology for beneficial means such as furthering education for young children, delisted as proactive use in comparison to passive and potentially harmful use (Preradovic &amp; Lesin, 2016). These perspectives are outlined within the UK Government's scheme to introduce free early learning apps to families eligible for free school meals (Department for Education, 2019) indicating that those who are from disadvantaged backgrounds are more likely to need this kind of encouragement and support when using technology outside of the school. To ensure the sample of schools selected were representative of pupils from both disadvantaged and non-disadvantaged backgrounds, factors that highlight this were considered.</p> <p><b><u>Free school meals (FSM)</u></b></p> <p>An equal sample of schools will be represented where FSM will be used as a disadvantaged indicator. Eligibility for FSM is determined by a net earned income threshold of £7,4005. This equates to an estimated total household income between £18,000-£24,000 once benefits have been considered.</p> <p><b><u>Pupil attendance</u></b></p> <p>Pupil attendance was considered as an equality indicator where Zhang (2003) recognised that within England, lack of attendance signifies child poverty factors and Reid (2009) identified school absence in England was a causation of a dislike of school generally, 'difficult' background's and psychological problems. Later research by Carroll (2011) notes the effect of attendance understandably impacts a child's relationships with their peers which may in turn significantly impact this age group's social use of smartphones and tablets. For this reason, pupil attendance was a significant factor to consider.</p>
<b>HISTORICAL ICT SPEND</b>	<p>Bowker &amp; Star (1999) rank the social drivers toward a subject's perceived importance where schools are individually responsible for the allocations of their budget to an extent. This factor is being considered where research indicates that the ethos an institution holds toward technology use and/or teacher attitude can impact how technology is used in the classroom (Tapscott, 1998;</p>



	<p>Crawford, 2000; Prensky, 2001; Parnell &amp; Bartlett, 2012; Flewitt, et al., 2015; Haddon &amp; Vincent, 2015; Povah &amp; Vaukins, 2017). The Roehampton annual computing education report (Kemp, et al., 2018) suggests where computing studies is no longer mandatory within Progress 8 (DfE, 2016; DfE, 2017; DfE, 2019) schools may be less encouraging toward students undertaking the qualification at GCSE and A level; thus a high ICT spend per pupil may demonstrate the schools culture or value toward IT education to achieve the standards desired.</p>
<b>OVERALL PERFORMANCE</b>	<p>Studies investigating digital divides consider the qualifications held by adult participants or the participants' parents (Hargittai &amp; Hinnant, 2008; Hargittai, 2010; Hargittai &amp; Kim, 2010; Pearce &amp; Rice, 2013; Park, 2015; Preradovic &amp; Lesin, 2016; Cho &amp; Lee, 2017; PRC, 2018; ONS, 2019). To ensure a representative sample in this sense, the schools overall performance indicators have been considered.</p> <p><b><u>Ofsted reports</u></b></p> <p>Ofsted reports and national assessments were considered, enabling a representative sample concerning overall school performance. Although there are authenticated critiques regarding the reliability and validity of Ofsted reports (Perryman, et al., 2018; Richmond, 2019), the government recently published a report outlining the argument and evidence for keeping the 4-point grading system (Gov.uk, 2019b). As such the consideration of this system was considered by including schools within each borough that show a 1,2,3 and 4 grade.</p> <p><b><u>Students overall performance</u></b></p> <p>The students' overall performance was considered as this may impact the type of affordances realised through their smartphone use. This factor correlates with the influence of education levels on the level of skill (Hargittai &amp; Hinnant, 2008).</p> <p><b><u>Pupil to teacher ratio</u></b></p> <p>Blatchford, et al. (2007), found students within larger class sizes had less individual attention, were more likely to engage in 'off task' activities, had less opportunity for practical learning which made teachers more superficial and shifted students toward an 'audience' role, teachers were less likely to spot problems and give feedback, identify specific needs and set individual targets, but overall had less flexibility in terms of adventurous classroom activities that supported different styles of learning. Although curriculum coverage does not depend on class size, the increased time spent on marking with large class sizes contributed to an inability for teachers to introduce a more hands-on experience that might include technology use.</p>

## 5.2.2 FOCUS GROUP: TEACHERS

Barbour (2007) recommends listening to the recording, transcribing the data, re-reading and re-listening to the recording to correct any area's before starting the analysis process. Within the analysis of the focus group, the thematic method was used the below process was followed:

Figure 5.3: The analysis process: Teacher focus group

<b>1. READ THROUGH AT LEAST A SAMPLE OF THE MATERIALS TO BE ANALYSED</b>
<p>This was achieved through transcribing the data and re-reading the data prior to coding, making some initial notes surrounding potential codes to help develop a coding framework.</p>
<b>2. BEGIN CODING THE MATERIALS</b>
<p>The transcribed data was uploaded to NVivo 12 software to aid the organisation of the themes, sub-themes and codes. Within this first stage or initial coding stage, sub-themes were not yet prominent. Codes were developed and the order of the codes were identified as parent-code and child-codes.</p>

An analysis diary was kept during this time to offer explanations toward the code and the sub-codes. When this was reflected upon, it allowed broader codes to be developed which amalgamated some of the codes and sub-codes identified within this initial stage.

**3. ELABORATE MANY OF THE CODES INTO THEMES**

Once the codes had been reduced, sub-themes were developed which represented medium level themes (referred to as subthemes), further contemplation took place when finding commonalities within the sub-themes. Further considerations were made within the analysis diary here as a point of reference for the researcher- justifying why certain sub-themes had been grouped together at this stage.

**4. EVALUATE THE HIGHER-ORDER CODES OR THEMES**

After reflecting on the justification for the link between the sub-themes, consideration was made toward the higher-level themes (referred to as themes). These were broad in order to encompass the subthemes. Names or labels were given to these themes with memo's attached detailing why the sub-themes had been grouped together.

**4A. GIVE NAMES OR LABELS TO THE THEMES AND THEIR SUB-THEMES (IF THERE ARE ANY)**

The initial names were very descriptive and captured the data clearly which acted as a point of reference for the researcher. It wasn't until further data analysis took place within each theme, that a more sophisticated label was given. The standard of sophistication here interrelates common terms in the literature that encapsulated the theme in comparison to a basic descriptor.

**5. EXAMINE POSSIBLE LINKS AND CONNECTIONS BETWEEN CONCEPTS AND/OR HOW THE CONCEPTS VARY IN TERMS OF FEATURES OF THE CASES**

Stage five took the form of two phases. First, the researcher examined relationships within the themes themselves, interrelating the sub-themes and codes and outlining the relationships and intensity of these relationships (if apparent). The second phase of this stage took the form of stating the interconnections between the themes themselves, more broadly interconnecting the themes and relating this to the research objectives.

**6. WRITE UP THE INSIGHTS FROM THE PREVIOUS STAGES TO PROVIDE A COMPELLING NARRATIVE ABOUT THE DATA**

Stage six takes place within the discussion chapter (chapter seven), whereby the researcher moves beyond stating the findings from the data and starts to interrelate the literature. In doing so, the data from the focus group gains deeper insight by considering where this fits within current research as well as the project.

**6A. JUSTIFYING THE THEMES**

Within this stage, the discussion chapter moves beyond discussing the data with focus on each objective and moves toward a holistic focus encompassing the overall aims of the project. In doing so, the data from the focus group gains deeper insight, not only through interrelating the literature, but also seeing how this data ties together with the other phases of the project.

(Bryman, 2016, pp. 587-588)

Figure 5.4: Analysis overview: Teacher focus group

FOCUS GROUP	PARTICIPANTS	DURATION	WORD COUNT	TOTAL SUB THEMES	TOTAL THEMES
1	8 Female: 7 Male: 1	41.31	7,445	10	4

Figure 5.5: Themes overview: Teacher focus group

THEME	SUB-THEMES
TEACHERS PERSONAL CONSUMPTION	Childhood nostalgia Technology ideology Teachers' own consumption

	Teacher skill rating
<b>TEACHER'S VIEWS SURROUNDING CHILD TECHNOLOGY USE</b>	Teacher opinion on parental management of devices Teacher opinion of device usage at home Teacher opinion on the impact of device usage within the education environment
<b>MANAGEMENT OF DEVICES WITHIN SCHOOL</b>	Management of devices School ethos toward technology use
<b>DIGITAL INEQUALITY</b>	Digital inequality among children

Kozinets (2008) research on technology ideologies has been used as a tool to categorise some of the data. Please see below for a reminder of the meanings attached to these categories:

**Figure 2.2: Kozinets (2008) technology ideology categories**

<b>IDEOLOGICAL FIELD</b>	<b>DESCRIPTION</b>
<b>GREEN LUDDITE</b>	Technology consumption as destruction of the natural. Compliments the emotion of techspressive ideology. Contrasts in morality of Techtopian position. Contradictions of individualism with the work machine ideology.
<b>TECHTOPIAN</b>	Technology consumption as social progress. Complimentary of reason for work machine ideology. Contrasts in morality of the green luddite ideology. Contradicts the standards of techspressive.
<b>TECHSPRESSIVE</b>	Technology consumption as pleasure. Compliments the emotion of green luddite. Contradiction of standards with Techtopian ideologies. Contrariety of indulgence with the work machine ideology.
<b>WORKMACHINE</b>	Technology consumption as economic engine. Compliments the reason of Techtopian. Contradictions of individualism with green luddite ideology. Contrariety of indulgence of techspressive ideology.

(Kozinets, 2008)

## 5.3 FINDINGS

The findings section of phase one includes the results from the secondary analysis which was used for the original sampling method and the teacher focus group that took place in the days leading up to the national lockdown.

### 5.3.1 SECONDARY ANALYSIS

**Table 5.1: Secondary analysis findings: Location**

<b>1<sup>ST</sup> PRIORITY GEOGRAPHIC AREA'S</b>			
<b>WARD</b>	<b>AMOUNT OF TIMES REPRESENTED</b>	<b>BOROUGH</b>	<b>SOCIO-ECONOMIC FACTOR/S</b>
Heswall	11	WIRRAL	Industry- Professional, scientific and technical (H1), Average gross annual income (H2), No passports held

			(HiL1), Education- Level 1(L2), Education-Level 4 and above (H2), Disabled groups with dependent children (ML1), Disabled groups without dependent children (ML1), Lone parent households (ML1), Economic activity- Self-employed (MH1), Economic activity- Actively unemployed, not including students, (ML1), Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (ML1)
Central	7	LIVERPOOL	Average age 0-44 (H1), Industry- Information & Communication (H2), Industry- Professional, scientific and technical (MH1), Education- Level 2 (L2), Education- Level 3 (H2), Economic activity- Self-employed (L2), Economic activity- Employed (L1)
Page moss	6	KNOWSLEY	Industry- Information and communication (L1), Industry- Professional, scientific and technical (L2), Education- Level 3 (L2), Education- level 4 and above (L1), Disabled groups with dependent children (H1), Lone parent households (H1)
Haringt on	4	SEFTON	Lone parent households (L1), Economic activity- Actively unemployed, not including students (L1), Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (L1), IMD (10H2)
Parr	3	ST HELENS	Average age 0-44 (MH1), Hours worked- Inactive to look after home or family (MH1), No passports held (MiH1)
<b>FACTORS INCLUDED WITHIN 1<sup>ST</sup> PRIORITY GEOGRAPHIC AREA'S</b>			
			<p><b>Age</b> Average age 0-44 (H1), Average age 0-44 (MH1)</p> <p><b>Industry</b> Industry- Professional, scientific and technical (H1), Industry- Information and communication (L1), Industry- Professional, scientific and technical (L2), Industry- Information &amp; Communication (H2), Industry- Professional, scientific and technical (MH1)</p> <p><b>Average gross annual income</b> Average gross annual income (H2)</p> <p><b>Hour's worked- full, inactive, part</b> Hours worked- Inactive to look after home or family (MH1)</p> <p><b>Passports held</b> No passports held (HiL1), No passports held (MiH1)</p> <p><b>Education</b> Education- Level 1(L2), Education-Level 4 and above (H2) , Education- Level 3 (L2), Education- level 4 and above (L1), Education- Level 2 (L2), Education- Level 3 (H2)</p>

			<p><b>Disabled groups with dependent children/without dependent children</b>  Disabled groups with dependent children (ML1),  Disabled groups without dependent children (ML1),  Disabled groups with dependent children (H1)</p> <p><b>Lone parent households</b>  Lone parent households (ML1) , Lone parent households (H1), Lone parent households (L1)</p> <p><b>Economic activity- self-employed, employee, actively unemployed, inactive</b>  Economic activity- Self-employed (MH1), Economic activity-Actively unemployed, not including students, (ML1) Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (ML1), Economic activity-Self-employed (L2), Economic activity- Employed (L1), Economic activity-Actively unemployed, not including students (L1), Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (L1)</p> <p><b>IMD</b>  IMD (10H2)</p>
--	--	--	---

**2<sup>ND</sup> PRIORITY GEOGRAPHIC AREA'S**

<b>WARD</b>	<b>AMOUNT OF TIMES REPRESENTED</b>	<b>BOROUGH</b>	<b>SOCIO-ECONOMIC FACTOR/S</b>
Everton	3	LIVERPOOL	Education- No qualifications held (H1), Economic activity-Actively unemployed, not including students (H1), Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (H2)
Greenbank	3	LIVERPOOL	Average age 0-44 (H2), Education-Level 2 (L1), Education- Level 3 (H1)
Norris green	2	LIVERPOOL	Industry- Professional, scientific and technical (ML1), Economic activity-Actively unemployed, not including students (H2)
Northwood	4	KNOWSLEY	IDACI (1H1), Hours worked- Inactive to look after home or family (L1), Disabled groups with children (H2)
Halewood north	4	KNOWSLEY	Hours worked- Full time (LH1), Education- No qualifications (L1), Economic Activity- Self employed (H2)
Stockbridge	3	KNOWSLEY	Education- Level 3 (L1), Education- Level 4 and above (L2), Disabled groups without dependent children (H1)
Newton	3	ST HELENS	Hours worked- Full time (MH1), Disabled groups without dependent children (L1), Economic activity-Employees full and part time (H2)
Earlestown	2	ST HELENS	IDACI (M1H1), Average gross annual income (MR)

Parr	3	ST HELENS	Average age 0-44 (MH1), Hours worked- Inactive to look after home or family (MH1)
Birkdale	4	SEFTON	Education- No qualification (ML1), Education- Level 1 (MH1), Education- Level 2 (ML1), Education- Level 3 (MH1)
Linacre	3	SEFTON	Industry- Information and communication (ML1), Education- No qualifications held (MH1), Economic activity- Employed full or part time (ML1)
Dukes	3	SEFTON	Average age 65+ (L1), Education- Level 3 (ML1), Disabled groups with dependent children (L1)
West Kirby and Thurston	3	WIRRAL	Industry- Professional, scientific and technical (H2), Average gross annual income (H1), Education level- 4 and above (H1)
Birkenhead and tranmere	4	WIRRAL	Hours worked- Inactive to look after home or family (H1), Ethnicity- % of white British or Irish (ML1), Economic activity-Actively unemployed, not including students (MH1)
Seacombe	4	WIRRAL	Education- Level 2 (H1), Disabled groups with dependent children (MH1), Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (MH1)
<b>FACTORS INCLUDED (1<sup>ST</sup>) &amp; FACTORS INCLUDED (2<sup>ND</sup>)</b>			
			<p><b>Age</b> Average age 0-44 (H1), Average age 0-44 (MH1)</p> <p><b>Industry</b> Industry- Professional, scientific and technical (H1), Industry- Information and communication (L1), Industry- Professional, scientific and technical (L2), Industry- Information &amp; Communication (H2), Industry- Professional, scientific and technical (MH1)</p> <p><b>IDACI</b> <b>IDACI (1H1): added from 2<sup>nd</sup> stage</b></p> <p><b>Average gross annual income</b> Average gross annual income (H2)</p> <p><b>Hour's worked- full, inactive, part-time</b> Hours worked- Inactive to look after home or family (MH1), <b>Hours worked- Inactive to look after home or family (L1): added from 2<sup>nd</sup> stage</b></p> <p><b>Education</b> Education- Level 1(L2), Education-Level 4 and above (H2) , Education- Level 3 (L2), Education- level 4 and above (L1), Education- Level 2 (L2), Education- Level 3 (H2)</p> <p><b>Disabled groups with dependent children/without dependent children</b> Disabled groups with dependent children (ML1), Disabled groups without dependent children (ML1),</p>



			<p>Disabled groups with dependent children (H1), <b>Disabled groups with children (H2): added from 2<sup>nd</sup> stage</b></p> <p><b>Lone parent households</b> Lone parent households (ML1) , Lone parent households (H1), Lone parent households (L1)</p> <p><b>Economic activity- self-employed, employee, actively unemployed, inactive</b> Economic activity- Self-employed (MH1), Economic activity-Actively unemployed, not including students, (ML1) Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (ML1), Economic activity-Self-employed (L2), Economic activity- Employed (L1), Economic activity-Actively unemployed, not including students (L1), Economic activity- Inactive through unemployment ages 16-24, 50-74, never worked, and long term unemployed (L1)</p> <p><b>IMD</b> IMD (10H2)</p>
--	--	--	--

Across the five boroughs within Merseyside, specific wards were selected based on the richness of demographic diversity (this richness was based on wards which were added to the sample pool, the most amount of times which increased representativeness).

Schools from these wards were added based on school factors, however only one school took part before the COVID-19 lockdown. The below data is from the school that participated:

**Table 5.3: Secondary analysis findings: Schools**

<b>SCHOOL TYPE</b>	<b>PRIMARY</b>
<b>STATUS</b>	<b>MAINSTREAM</b>
<b>FSM %</b>	15% (Highest within Borough)
<b>PERSISTENT ABSENCE</b>	7.70%
<b>OFSTED RATING</b>	GOOD
<b>% PUPILS MEETING EXPECTED STANDARD OR HIGHER- PROGRESS 8 SCORE FOR SECONDARY SCHOOLS 0 OR HIGHER</b>	82%
<b>PUPIL TO TEACHER RATIO</b>	27.8
<b>ICT SPEND AS % OF TOTAL INCOME: YEAR 2013-14</b>	1.5%
<b>ICT SPEND AS % OF TOTAL INCOME: YEAR 2014-15</b>	0.67%
<b>ICT SPEND AS % OF TOTAL INCOME: YEAR 2015-16</b>	1.24%
<b>ICT SPEND AS % OF TOTAL INCOME: YEAR 2016-17</b>	0.79%
<b>ICT SPEND AS % OF TOTAL INCOME: YEAR 2017-18</b>	2.35%

### 5.3.2 FOCUS GROUP: TEACHERS

Flick (2014) indicates where the observation of how participants reached a consensus is one of the reasons for choosing the focus group method, it is important this is highlighted within the findings. Quotes are therefore not used individually, the process of conversation is evidenced. The first theme, the teachers personal consumption of devices shed light throughout many of the other themes whereby the teachers' personal consumption was often used as a benchmark or justification for the views they held surrounding ET use within schools. Their ideological position enriched understanding toward their considerations of positive views of technology for the child consumer. The teachers used ET for affordances mainly within the Work machine and Techtopian ideologies which were similar to their recognition of positive use of ET for young children. The teacher's frustration with their need to 'catch up' after being restricted from ET was illuminated through their view of child technology use where they highlighted the child's need to take a break. Techpressive capacities of child usage was mainly viewed negatively. When discussing the children's etiquette when using online platforms, social media and gaming devices, they suggested children struggle with this which in turn causes issues for the children's social relationships. Consideration toward education in this area suggested the teachers felt they were too young, whereas others felt not educating them on this was delaying the inevitable (social media use). Although a current issue, the teachers did not make long-term considerations that the children they teach will someday use ET for the same purposes as the teachers/adults; using WhatsApp for work purposes which requires etiquette in maintaining collegiate relations. Obviously, maturity comes with age, however the teachers recognised children in this school were currently experiencing issues with this. Interventions or education surrounding ET usage was overshadowed by their negative experiences of ET use for the child consumer which interrelated the teachers view of management tactics that surrounded exclusion as opposed to education or mediation. Management was very much seen as a 'home issue' that impacts the school day, inequality therefore was recognised but acceptable (which from the teachers view) was understandable given to them, usage results in issues, issues that are not their responsibility to manage.

Theme two represented the teachers' view surrounding ET use for young children which mirrored their views of the management of devices. As school is a central place for the child consumer, negative outcomes of ET use are more likely to be seen by teachers and are possibly unrecognised in the family home. With the teachers central role being to educate children, these negative outcomes are extremely disruptive, making it impossible at times to actually teach children. Furthermore, other issues of ET use for the children means them being exposed to inappropriate content that can be harmful, parents do not always have the same opportunities as teachers to uncover this type of exposure. This led to management tactics that included exclusion, restricting children from the opportunity to engage with ET that may lead to the negative experiences teacher's deal with. Understanding was shown as to how ET can be used as a behaviour management tool for parents, later themes surrounding the school ethos of technology highlight this also takes place within the school. The institutional ethos toward ET use was not reflected in the teacher's view. When it came to consider the teacher view of digital inequality, social considerations were made but as shown within the previous themes, the overall negative view of technology use for young children did not see inequality as an immediate issue for the children.

#### Theme one: Teachers' personal consumption

The higher theme of the teachers' personal consumption found or rather confirms that a consumers' individual relationship with technology influences their projections of technology use for others. The prevalence of this finding within phase one of the project was that this was explored within the context of teachers as consumers with regard to the children they teach. Unlike the family environment where socialisation experiences can differ for young children, the institutions the teachers belong to,

represent a meso environment that is shared for many young consumers. The different sub-themes or aspects to a teachers' personal consumption were also found to be interlinked. Examples include the restraint of their own ET use during day and culture toward using the affordances of mobile devices for work purposes resulted in a level of 'catch up' that speaks to the temptation of the devices, and their management strategies.

Their personal need to catch up from a break without device usage, translated toward the dynamism of their technology ideology, viewing the device as an important tool but frustrations toward the need for a healthy balance impacted opinions of device usage on school trips whereby they consider this a good time for children to take a break from their devices.

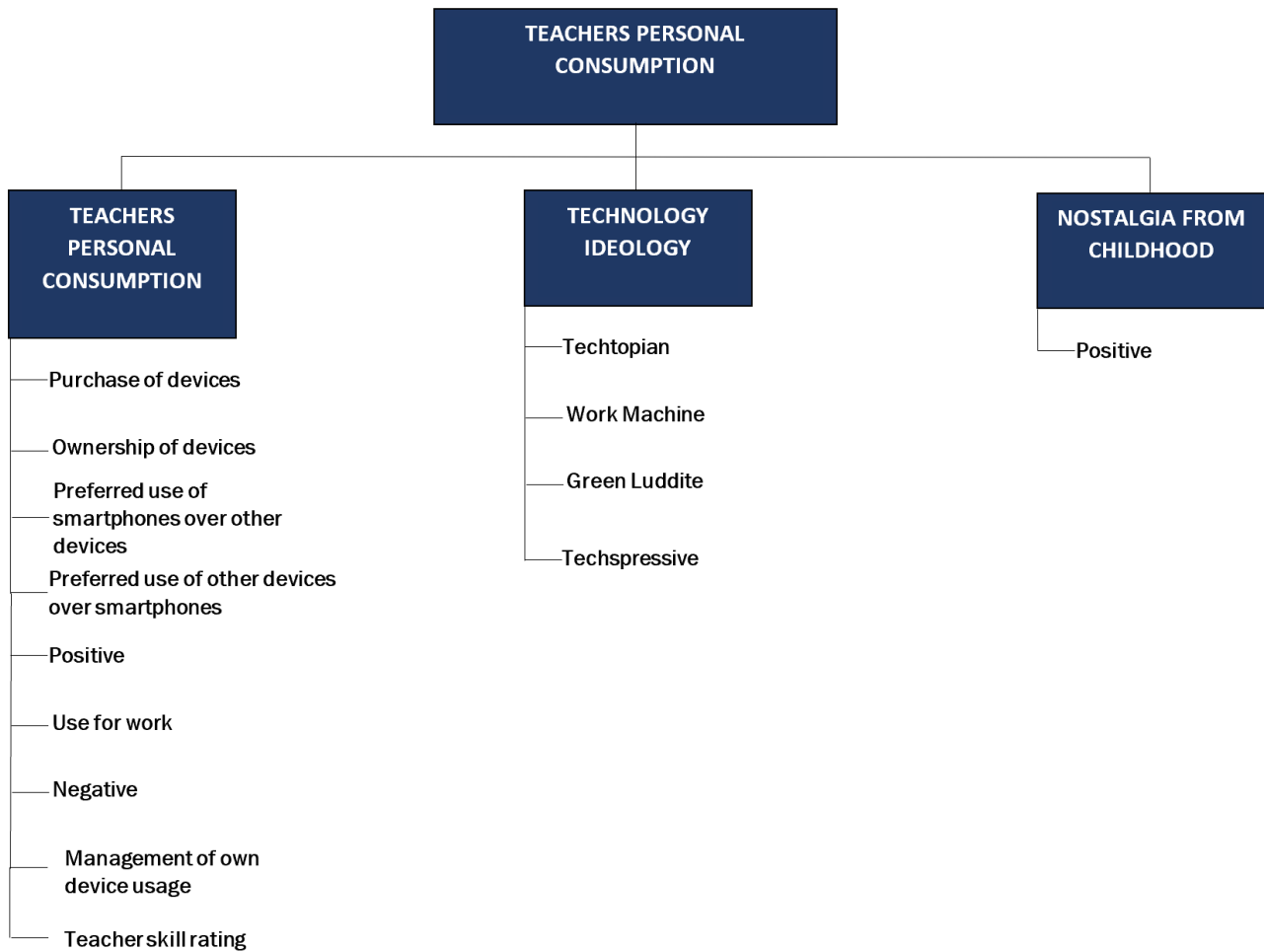
This directly related to their perspective on the use of ET within schools whereby negative perceptions of their personal consumption were similar in nature when considering the negative opinion of children's ET use.

This does not take away from the negative aspects of young children using technology, however it does exemplify where patterns emerged within the teachers' personal consumption that effects their interpretation of ET usage and how this translated to their ethos toward technology, which in turn foster's the school ethos toward technology use. Considering the teachers' consumption of technology has illuminated patterns toward their perspective on the use of ET within schools.

**Figure 5.6: A detailed summary of theme one from the teacher focus group higher: Teachers personal Consumption**

THEME	SUB THEMES	MEMO
<b>TEACHERS' PERSONAL CONSUMPTION</b>	Teachers' own consumption	This sub- theme centered around the first topic of the focus group, where questions around the teachers' own consumption were the first to be asked. The codes within this theme transpired from this discussion topic, however the code surrounding the teachers' skill rating resulted from comparisons being made between the teachers' positive view of child consumption, suggesting the children showed a higher level of skill in comparison to the teacher here.
	Technology ideology	References toward this subtheme were populated throughout the focus group, many resulting from questions around the teachers' personal consumption of devices, but also when the participants were reflecting on child consumption, parental management of devices and issues surrounding child usage of ET.
	Childhood nostalgia	The participants frequently made comparisons to their childhood throughout the focus group. This sub-theme acted as a benchmark for the participants at times, but also as a comparative tool when the participants were explaining their position on other topics or contextualising their interpretations/views.

**Figure 5.7: A summary of theme one from the teacher focus group: Teacher's personal consumption**



## Teachers personal consumption

### Purchase of devices

When it came to the purchase of smartphone devices, the teachers' motivation was passive to a degree:

*Teacher 1 (F) focus group: I'm not very good on phones to be honest, I just get a thing through that says I need an upgrade*

*ALL: [Laughter]*

*ALL: Yeah*

*Teacher 2 (F) focus group: Haha, I'm the same*

*Teacher 1 (F) focus group: I go in I speak to the advisor, and he says aww based on your current data usage this is, would be a good one to use*

*Teacher 2 (F) focus group: Haha, me too*

*Teacher 1 (F) focus group: I look at the colour and then I go ahead and get it, I don't need anything like properly high tech, so mines pretty basic to be honest*

*Teacher 3 (F) focus group: Mines basic*

*Teacher 4 (F) focus group: Yeah same*

*Teacher 5 (F) focus group: Hmm same*

*Teacher 7 (F) focus group: Whatever's cheapest*

*Teacher 1 (F) focus group: And easy to use*

*Teacher 5 (F) focus group: Cheapest*

*Teacher 3 (F) focus group: Same*

### Ownership of devices

The teachers identified the technology they owned were primarily those that had multiple affordances:

*Researcher: What sort of technology do you own yourselves?*

*Teacher 1 (F) focus group: Smartphones*

*Teacher 2 (F) focus group: Smartphone*

*Teacher 3 (F) focus group: iPad*

*Teacher 4 (F) focus group: Yeah*

*Teacher 5 (F) focus group: Kindle*

*Teacher 4 (F) focus group: iPad's*

*ALL: Yeah*

*Teacher 1 (F) focus group: Laptops*

*Teacher 2 (F) focus group: PC*

*ALL: Yeah*

*Teacher 6 (F) focus group: Do you mean at home?*

*Researcher: Yes*

*Teacher 6 (F) focus group: Oh I only have a phone; I'm really behind I don't have Wi-Fi or anything at home*

#### Use for work

The participants discussed how they used their personal devices for work purposes:

*Teacher 2 (F) focus group: We've got a WhatsApp group with work*

*Researcher: Oh okay*

*Teacher 2 (F) focus group: We have a few different chats with work there's one for everybody, one for teachers, we had a little key stage two one going at one point*

*All: Yeah*

*Teacher 2 (F) focus group: Which was really useful*

*All: Yeah*

*Researcher: So, with that type of group chat, do you prefer it to an email?*

*UI (unidentified): Hmm*

*UI: Yeah*

*UI: Yeah*

*Teacher 1 (F) focus group: Yeah, because its quicker isn't it, you've got your phone*

*Teacher 2 (F) focus group: If you don't go on your email to check*

*Teacher 3 (F) focus group: Yeah, it's definitely easier on the group*

*Teacher 2 (F) focus group: Yeah you can rely on seeing a WhatsApp probably before an email*

*ALL: Agreeable, yeah*

*Teacher 4 (F) focus group: But obviously it depends on what it is about*

*Teacher 2 (F) focus group: Right yeah*

*Teacher 4 (F) focus group: So, if it was a bit more sensitive*

*Teacher 2 (F) focus group: It would be on an email, yeah*

*Teacher 4 (F) focus group: You'd probably put it in an email*

*Teacher 2 (F) focus group: Yeah that's right*



*Researcher: So, if it was something where you needed a response quite quickly, you'd be more likely to put it in a WhatsApp?*

*ALL: yeah*

#### Preferred use of smartphones over other devices

Although the technical capabilities of the devices they used were the same, teachers showed preference toward portable, handheld ET:

*Teacher 1 (F) focus group: It's got everything on it*

*All: Yeah*

*Teacher 1 (F) focus group: Email, text, WhatsApp, family*

*All: Yeah*

*Teacher 1 (F) focus group: It's all in one*

*Teacher 2 (F) focus group: Yeah, it's all there*

*Teacher 3 (F) focus group: Lots of different things*

*Teacher 4 (F) focus group: Yeah, it's all in one you haven't got to have lots of different things*

*Teacher 1 (F) focus group: It's not like laptop which is just... I do sometimes wish I didn't have it though*

#### Preferred use of other devices over a smartphone

When it came to the preference of using laptops over a smartphone, it was shown this was for work purposes:

*Teacher 3 (F) focus group : Yeah, you generally tend to sit better at a table when you are with a laptop but a smartphone, you'd also use on the couch*

*Teacher 2 (F) focus group: Yeah, when you're lounging on the couch with your phone*

*Teacher 3 (F) focus group: Yeah, it's not really the time to do work*

#### Negative

The negative sentiment toward device usage was also discussed:

*Teacher 1 (F) focus group: It's not like laptop which is just... I do sometimes wish I didn't have it though*

*ALL: Yeah*

*Teacher 2 (F) focus group: It's too easy isn't it*

*Teacher 1 (F) focus group: Because when I'm sat down on the sofa at night and it's in my hand*

*Teacher 2 (F) focus group: That's it, tempting isn't it*

*Teacher 4 (F) focus group : Yeah*

*Teacher 1 (F) focus group: Whereas I think if I just put it in a drawer, I'd go and do something more interesting*

*UI: Yeah*

*UI: Yeah*

*UI: Hmm*

*Teacher 4 (F) focus group: I know what you mean*

### Management of own device usage

When managing device usage, the teachers discussed how they did not have access to their smartphone during the work day, which put pressure on their usage at home:

*Teacher 1 (F) focus group : We have time where we just put phones away at home, coz my husband and I realised, sometimes we'll both be sat on the sofa and we are both on our phones and you just think well that's not really good quality time together is it, so we'll put our phones to one side and just won't look at our phones. I think it's easier to do at school though isn't it, because you can't have it with you all day, it's not easy to just whip out, but you can't do that, so sometimes when you get home you feel like you are just going through like everything*

### Teacher skill rating

When considering their classes aptitude to use certain devices, the teachers used their skill as a benchmark:

*Teacher 4 (F) focus group: Yeah, they are confident with the iPad aren't they.*

*Teacher 5 (F) focus group: They know more than we do, when they go on it they know, aww you go on to this and what's happened is you do that, so I think they are quite, I think ours are quite independent with technology actually.*

### Technology Ideology

#### Techtopian

When it came to Techtopian views, the teachers both viewed this as a positive:

*Teacher 5 (F) focus group: Research wise children, when I think back to when they first sat down in front of a PC, but if you think about them research wise, now they are really competent, they know how to search for things, they find things really quickly.*

As well as in a negative light:

*Teacher 4 (F) focus group: Yeah, it's an enabler*

*Teacher 5 (F) focus group: Yeah, I think its increased anxiety because they can know that information, whereas before they couldn't find that*

*Teacher 1 (F) focus group: Well that's where phones have gotten us isn't it, we're in this instant world where you can get knowledge, we can get answers to questions, we can get, anything we want really*

*UI: Hmm*

*Teacher 1 (F) focus group: Like seconds away, and so people are becoming anxious when they have to wait for things*

*Teacher 6 (F) focus group: Yeah*

*Teacher 7 (F) focus group: It's not good*

### Work Machine

In terms of the teachers' indications toward the work machine ideology, dynamism was shown when it came to the children they teach:

*Teacher 1 (F) focus group: That is the world they are getting in to*

*UI: Hmm*

*Teacher 1 (F) focus group: So I use mine, continuously, I have to, like I say because I have too, or I like to say I have to, but I check my emails constantly because it's what I need to do, so if we stop children using them because of these things, that's you know, that's not the reality of what their lives are going to be like*

*Teacher 4 (F) focus group: Well its delaying, its only delaying it though isn't it, saying oh are they just too young, do they need that now*

*Teacher 2 (F) focus group: When their older*

*Teacher 1 (F) focus group: Hmm*

*Teacher 2 (F) focus group: Maybe their older and a bit more mature*

*Teacher 1 (F) focus group: Even when their older, I think even when their teenagers they still don't really understand*

*Teacher 3 (F) focus group: Understand, no*

*Teacher 1 (F) focus group: What they're doing when they put things on social media*

Some teachers preferred some devices over others:

*Researcher: Do you prefer using a laptop or computer for some things?*

*Teacher 5 (F) focus group: Yeah, for work*

*Teacher 8 (M) focus group: Work*

*Teacher 6 (F) focus group: Work*

*Teacher 3 (F) focus group: Work*

*Teacher 5 (F) focus group: I wouldn't do any kind of work on my phone*

*Teacher 1 (F) focus group: No?*

*Teacher 5 (F) focus group: I do all my like my planning and stuff I do that on a computer or laptop just because it's easier*

*Teacher 1 (F) focus group: It's easier?*

*Teacher 8 (M) focus group: Yeah*

*Teacher 6 (F) focus group: Yeah*

*Teacher 5 (F) focus group: Yeah, it's easier to see*

*Teacher 6 (F) focus group: Yeah, and its more faffy with the buttons, it's just much easier, when you've got to work*

*Teacher 5 (F) focus group: Obviously, there are things that you might use for work. On my iPad, I did get a keyboard that I can just plug in, which is better because I got fed up of just touching it, so that's easier, if I want to do something quickly on it, but I'd rather have my laptop*

#### Green Luddite

Teachers felt balance is key to a healthy relationship with ET:

*Teacher 5 (F) focus group: They need to go out and play*

*Teacher 1 (F) focus group: Yeah*

*Teacher 5 (F) focus group: They need fresh air*

*Teacher 6 (F) focus group: And to go out and socialise, and I've seen the secondary school, I've got two teenage children and they will all be sat in a row, talking to each other on their smartphones, about, and they are sat next to each other, and you don't want that*

*Teacher 5 (F) focus group: It's some secondary schools, they ban them now between break times and I think they should do that*

## Techspressive

Findings surrounding the more playful and relaxed nature of ET use, was seen to cause issues when the children came into school:

*Teacher 8 (M) focus group: Yeah and even over the weekends and holidays and things where normally they would get a break from each other, they are playing against each other, so Fornite, well that seems to have died down a bit now, but Fornite, people were bragging about each other, so second they walk in, it's the first time they have seen each other, and they are ready to confront each other.*

*ALL: [Laughter]*

*Teacher 8 (M) focus group: And their angry because of what each other had done and said*

*Teacher 1 (F) focus group: Hmm*

*Teacher 8 (M) focus group: And because it's a platform where they don't see each other, some of them would say things to one another that they wouldn't normally say in the yard*

## Nostalgia From Childhood

### Positive

Considerations were made between the opportunity to escape when they got home in comparison to the children they teach:

*Teacher 8 (M) focus group: Well we didn't have the technology*

*ALL: [Laughter]*

*Teacher 8 (M) focus group: I think from what I said before, about the escape, you know at the end of the day, you went home, alright you might phone your friend up or something, but err, I never even did that*

*ALL: [Laughter]*

## Theme two: Teachers' views surrounding child technology use

Within theme two, relationships were shown between the impact device usage had on the educational environment (that took place within the educational environment), the teacher view on device usage at home and their view on the parental management of devices. In terms of device usage within the educational environment, issues emerged such as children being exposed to inappropriate content which manifested in various ways; whether this be through their social contact with each other, the impact on how lessons are taught, the lack of consistency within the children's technology use (due to older siblings or parental separation) and how this inconsistency impacted the teachers.

Teacher opinion surrounding child ET use within the home environment showed prevalence toward activities they perceive are the catalyst to their experiences of child ET use within the school environment. For example, negative sentiment toward device usage at home was not specific, but simply time spent on ET was problematic whereas data that spoke to how ET was used and impacted

the school environment was always related to specific outcomes. In turn, this spoke to the idea that many issues that are the outcome of ET usage, are not known within the home environment and do not always materialise until children are within the school environment.

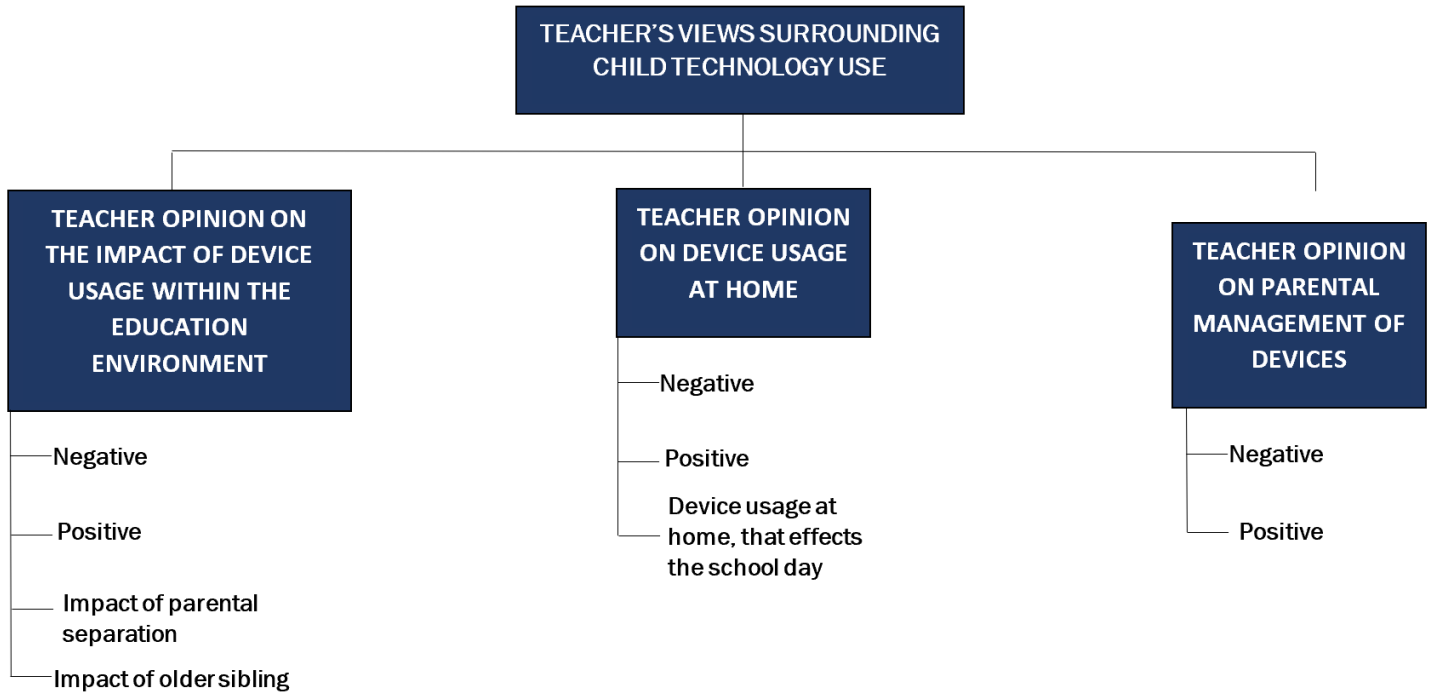
This speaks to the teachers view on ET use for young children, where they are often presented with issues surrounding this usage that are unlikely to occur within other environments the child consumer may be in. This view on technology use, specifically with how it can impact the school day indicated why for the teachers, parental management of devices was often viewed as being successful if restricted and it is noted to be positive that a child’s experience of ET is dictated by the parent/guardian’s confidence/skill (as the appropriate managers) of this usage. The teachers did not consider this as problematic or an inequality issue, but more that if the parent needs to rely on the school to help manage the device (knowingly or not) this is not a school responsibility. In terms of how this particular theme speaks to objective five, it is clear that the teachers experience of ET use is overwhelmingly negative, their view of positive usage within all sub-themes are underlined by methods that ultimately reduce the tax teachers pay as a result of child consumption of ET.

**Figure 5.8: A detailed summary of theme two teacher focus group higher theme: Teachers’ views surrounding child technology use**

THEME	SUB THEMES	MEMO
TEACHER'S VIEWS SURROUNDING CHILD TECHNOLOGY USE	Teacher opinion on the impact of device usage within the education environment	This sub-theme illuminated the aspects of ET use that was prevalent to the teachers when expressing an opinion about child technology use.
	Teacher opinion on device usage at home	This sub-theme is distinguished from the previous sub-theme by highlighting the impact of ET usage specifically within the home environment that impacts a teachers’ opinion.
	Teacher opinion on parental management of devices	This sub-theme was going to be considered as a high-level theme however commonalities were found between other sub-themes relating to the teachers’ views on device usage that takes place outside of the school. This particular subtheme focuses on the teachers’ perspective on the effective management of ET usage within the home environment, ultimately what they regard as effective management.

**Figure 5.9: A summary of theme two from the teacher focus group: Teachers’ views surrounding child technology use**





### Teacher opinion on the impact of device usage within the education environment

#### Negative

The teachers felt ET use meant children saw inappropriate content:

*Teacher 5 (F) focus group: And some of the language we've seen, erm, I'm thinking not with current year 6 but last year six*

*Teacher 2 (F) focus group: Yeah awful*

*Teacher 3 (F) focus group: Yeah that's a point*

*Teacher 6 (F) focus group: Hmm yes*

*Teacher 5 (F) focus group: Using words and you just think oh my god. How have they learnt this?*

*Teacher 2 (F) focus group: Some of them were disgusting weren't they*

*Teacher 5 (F) focus group: Words that just... You wouldn't expect them to understand*

#### Impact of parental separation

It was found that parental separation impacted the teachers' views:

*Teacher 8 (M) focus group: There is also the case though, of split families. So, there's different rules in different houses*

*UI: Hmm*

*UI: Yeah*

*Teacher 8 (M) focus group: So, I've dealt with a particular case where a child was up watching all kinds at his mums house, well it was his nans house, his mum was living with his nan, and then it would be the dads house was a completely different thing*

### Impact of older siblings

Having older siblings sometimes meant younger siblings saw unsuitable content:

*Teacher 6 (F) focus group: It makes a difference as well if they have got older siblings*

*UI: Hmm*

*Teacher 6 (F) focus group: Because if they have older siblings, so like TikTok now, that has now become very prevalent but a couple of years ago, the teenagers ones were on that, and the younger ones saw that so they use the ones their brothers and sisters are on too, so they learn a lot from their older brothers and sisters by seeing which ones they are on too*

Children with older siblings were also seen to gain access to devices earlier:

*Teacher 6 (F) focus group: I'd say so, and I'd say they get their phones earlier as well so quite often if they have had a brother and sister, they have been the ones to have the phones*

*UI: Hmm*

This impacted lessons:

*Teacher 5 (F) focus group: And possibly it would have, they would have seen things from brothers and sisters as well and older friends, and that also brings complications because you've got children who are very knowledgeable about the wider world*

*Teacher 6 (F) focus group: Hmm yeah*

*Teacher 5 (F) focus group: But not necessarily informed correctly*

*UI: Hmm*

*Teacher 5 (F) focus group: Its, it changed the way that we are able to teach them about some things too*

### Positive

The positive outcomes of a child's ET use centred around the benefit to classroom activities:

*Teacher 1 (F) focus group: For example I was sat with a child the other day, I said what I really need is some lights in this room, because apparently now when you're gaming if you put lights under the desk and they shine down, and you can make them multi-coloured, and it looks really effective, and I thought ooh we could do with those, and within 2 seconds this child had found it for me.*

*Teacher 1 (F) focus group: Told me how much it would cost, told me how he'd measured to see how much we need to go around the computer screen, said it would cost about £240. Mr Jackson will probably say no to that. But it was quite interesting that he was able to do that because if I'd asked him in a maths lesson, he'd of had no chance, but because it was purposeful he was able to do it.*

**Teacher 8 (M) focus group:** That would be like online books for the little ones, then their only like 4, you were more interested in 8 year olds, but the 4 year olds, they are able to look at it, and actually it will read the books to them, so that's one thing I've purchased, that's something I'm working on.

**Teacher 8 (M) focus group:** Some interventions, so some children that are a bit behind we can use the technology to do that specifically, its better with the PCs and laptops really, but you can use the others as well, so yeah we use them for interventions really and things like that.

**Teacher 8 (M) focus group:** We also use them for behaviour as well, so we have a lot of children, some autistic children, a lot of children with high anxiety so we do okay you do this, you have this next so we do a lot of strategic, and use it as a reward, particularly with iPads, and erm I don't think they ever actually phone anyone, that's what the phone is for, isn't it phoning.

## Teacher opinion on device usage at home

### Negative

The teachers' recognised that ET can be a vital tool in parenting but was seen as a negative when it resulted in more free time to use devices:

*Teacher 6 (F) focus group: A lot of parents find it difficult to say no to their children because the children, the behaviour is difficult so they let them have a lot more access to the internet than they, probably, than they should.*

## Issues at home that effect school

The children's lack of digital etiquette when interacting online outside of school caused issues during the school day:

**Teacher 8 (M) focus group:** *Whereas they have no, they just have no regard, or no understanding of what it means to add someone to a group and then take them out of a group, so people find themselves being added or taken away from a group and they don't know why, and then there's all, so they are coming into school when all these things have happened over night, I mean I would never add or take anyone away from a group without having a conversation first, but they do. They just*

**Teacher 8 (M) focus group:** *And it has a huge impact on the whole day as well, we've had a few quite big incidents with people posting things and saying things and so on, and its effected the whole day because we've had to unpick it, so even though it's an out of school issue, its effected the learning for the whole day*

**Teacher 8 (M) focus group:** *Yeah and even over the weekends and holidays and things where normally they would get a break from each other, they are playing against each other, so Fornite, well that seems to have died down a bit now, but Fornite, people were bragging about each other, so second they walk in, it's the first time they have seen each other, and they are ready to confront each other.*

Other instances of how ET use at home impacts the school day is also within specific subjects they teach:

**Teacher 1 (F) focus group:** So, they are allowed to watch phones, allowed to see things on social media that years ago we wouldn't have allowed them to do and that also brings problems that, so when we are teaching things like SRE (Sex and Relationships Education) later in the year, some of the children know way too much. Erm and have really massive misconceptions because that hasn't taught to them in a nurturing environment from school, it's been watched on social media

## Positive

Positive usage within the home environment was viewed as well managed and/or restricted:

**Teacher 1 (F) focus group:** *Well, most of the parents, most of the parents for those in year 5 do not have proper sim cards*

**Teacher 6 (F) focus group:** *So, they control it a bit more, but they do start to let them to use things like Fortnite.*

## Teacher opinion on parental management of devices

### Negative

The teachers indicated a lack of consistency between the school and home environment as a negative:

**Teacher 1 (F) focus group:** *The parents are usually supportive, verbally, but then there is a lack of discipline at home*

**Teacher 8 (M) focus group:** *And other parents were then picking them up and coming in, and we're the central place in it all, it's not done at school, they have not done it at school, it's not being taught at school, it has nothing to do with the school, but obviously school is the thing they all end up having in common so that's where it gets dealt with ultimately*

**Teacher 8 (M) focus group:** *Well this morning, there was this case, we had this child come in, who has some issues themselves anyway, but the father had said to them they couldn't go on social media, erm no screen time before school, and that was it, he's done no work all day today because he just hasn't been able to cope at all.*

**Teacher 8 (M) focus group:** *Because he was unsettled all day, so*

**Researcher:** *Because his dad said he couldn't use the screen?*

**Teacher 8 (M) focus group:** *Yeah and because he already has problems himself, that was a big thing for him, so for some children if they have particular issues, you can see that was a big thing for him because some parents, if they have got a child that is going to struggle with that, you can see why they might not want to have that conversation*

**Teacher 3 (F) focus group:** *Hmm*

## Positive

Teachers felt it was positive if parents/guardians managed ET use depending on their confidence:

**Teacher 1 (F) focus group:** *Like some of them are more confident than others about how to, some parents are really hot on things like spy where and stuff and using phones and stuff, but others may be less so, so I think, I guess it depends more on the parent*

**Teacher 6 (F) focus group:** *Well yeah. Think of how the year 6's, I mean, what year 6 doesn't have a mobile phone?*

**Teacher 3 (F) focus group:** *Well, a couple*

**Teacher 1 (F) focus group:** *I don't think so...*

**Teacher 3 (F) focus group:** *Amanda actually*

**Teacher 1 (F) focus group:** *But Amanda is interesting because Amanda's mum cannot use technology herself*

**Teacher 1 (F) focus group:** *When I uploaded a video to the social media she said can you attach it as an email because she can't use technology herself, she gets her husband to use it, she contacted me because she doesn't understand it herself, so she doesn't want to encourage Amanda to do it, because she doesn't understand it, which is good*

**Teacher 3 (F) focus group:** *Yeah*

## Theme three: Management of devices within school

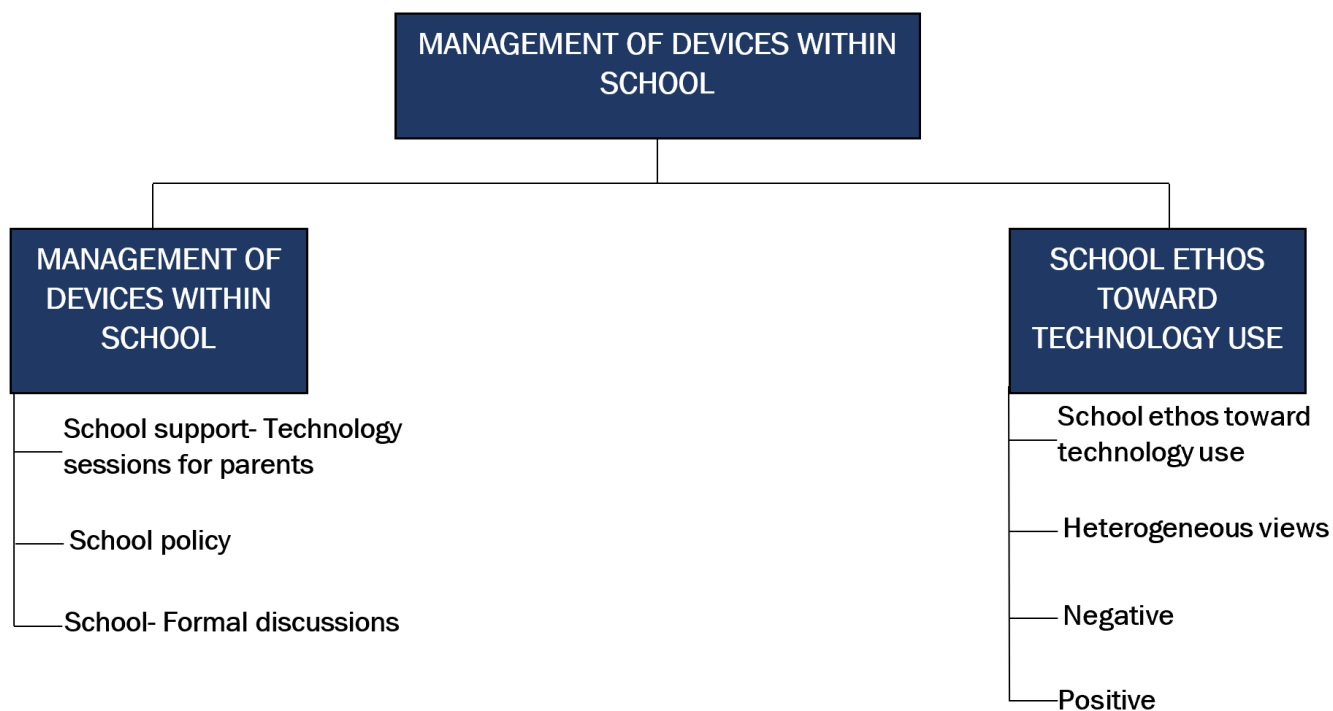
The management of devices within school interrelated earlier subthemes whereby many issues of child ET use do not materialise until they are in the school environment. Teachers therefore tend to deal with ET issues that parents are not aware of. The teacher's perspective on the guardian's management of ET use seems insufficient where certain outcomes only materialise at school. It may also be because they are with the children for long periods and are focussed on their learning, they have a unique perspective of ET use for young children which may not be comparable to the home environment.

It is clear within the management sub-theme, that teachers feel they carry the weight of ET usage for young children, noted within their disheartened position when support is not welcomed by parents and the mainly formal discussions they have with children. The school policy is therefore to restrict usage, parents are not seen to care or prefer to stay ignorant to the harms of ET use for the children. This interlinks the school ethos of ET use for young children whereby the institutional ethos toward ET usage seems forward thinking, however this is drowned by the teachers' personal experiences. The teacher's personal ethos toward technology is differentiated from the institutional ethos whereby they use themselves as benchmarks and generalisation of ET is taking place. Individual teachers differed in that some viewed child technology use as a negative blur and others noted consideration toward specific activities, outcomes, or devices. This indicated that the teachers' view surrounding the management of devices is reflected within the school ethos (dynamic) between the benefits of inclusion versus the drawbacks.

**Figure 5.10: A detailed summary of theme three from the teacher focus group: Management of devices within school**

THEME	SUB THEMES	MEMO
MANAGEMENT OF DEVICES WITHIN SCHOOL	Management of devices within school	This data within this subtheme was a result of questions surrounding technological support that is available to parent's/guardian's, the school policy around ET use and the nature of discussions surrounding ET that teachers have with the child consumer.
	School ethos toward technology use	Here, data that represented the school ethos toward ET use within the school environment is represented, this came from discussions surrounding ET usage for young children as well as policies in place.

Figure 5.11: A summary of theme three from the teacher focus group: Management of devices within school



### Management of devices within school

#### School support- Technology sessions for parents

To support parents in their understanding of ET, the teachers recalled a workshop from a charitable organisation:

**Teacher 5 (F) focus group:** Yeah, the NSPCC came in and did a workshop for parents

**Teacher 6 (F) focus group:** I think we got about 14 out of about 220 ish

**ALL:** [Laughter]



Teacher 5 (F) focus group: And often the ones that do come

Teacher 1 (F) focus group: Yeah, they are the ones that are usually good with it anyway

Teacher 4 (F) focus group: Yeah, they already know about it

Teacher 1 (F) focus group: Often when you organise an initiative like that, whether it be for reading

Teacher 2 (F) focus group: Yeah

Teacher 1 (F) focus group: The ones that do come, are the ones, not the ones that you really want to come, it's the ones that already do it

The teachers were asked why they think parents attended these sessions:

Teacher 8 (M) focus group: *They want help because they are worried and nervous, and we've done all of that. Like lots of different types of training with all the different types, I email the parents regularly about this type of stuff, they full well know that they shouldn't be on Facebook until they are 13, and WhatsApp and things and the parents will say yeah, well it's okay*

UI: Yeah

Teacher 8 (M) focus group: *It's okay because I'll keep an eye on it, or coz it's a closed account so I can, whatever that means, but yeah, we have lots of these conversations*

Although not all parents could or wanted to attend:

Teacher 3 (F) focus group: *Busy lives*

Teacher 6 (F) focus group: *They can't cope with the information either, ignorance is bliss*

Teacher 5 (F) focus group: *It disengages them*

Teacher 1 (F) focus group: *Hmm*

Teacher 2 (F) focus group: *Yeah*

Teacher 6 (F) focus group: *I think that's a big thing for parents, they know it's going on but they don't want to recognise its going on because then they have to deal with it, and they know that's going to be a confrontation with their child*

Teacher 1 (F) focus group: *Hmm*

Teacher 6 (F) focus group: *So, in some way's ignorance is bliss, because then they can kind of pretend it wasn't really happening*

## School policy

The teachers discussed the school's policy toward ET use:

**Teacher 1 (F) focus group:** *Well children, they are allowed to have phones with them aren't they, but they can't use them. The year 6's often have phones, don't they? But they put them in a box at the beginning of the day, they go in the office at the start of the day.*

**Teacher 5 (F) focus group:** *Then they leave it in the office*

**Teacher 6 (F) focus group:** *And they have to be switched off and not used on school grounds*

**Teacher 1 (F) focus group:** *And then they get them back at the end of the day*

Instances where ET is integrated into school policy for classroom use was shown:

**Teacher 8 (M) focus group:** *That would be like online books for the little ones, then their only like 4, you were more interested in 8 year olds, but the 4 year olds, they are able to look at it, and actually it will read the books to them, so that's one thing I've purchased, that's something I'm working on.*

ET can help children who are struggling and need interventions:

**Teacher 8 (M) focus group:** *Some interventions, so some children that are a bit behind we can use the technology to do that specifically, its better with the PCs and laptops really, but you can use the others as well, so yeah we use them for interventions really and things like that.*

As well as a behaviour management tool:

**Teacher 8 (M) focus group:** *We also use them for behaviour as well, so we have a lot of children, some autistic children, a lot of children with high anxiety so we do okay you do this, you have this next so we do a lot of strategic, and use it as a reward, particularly with iPads, and erm I don't think they ever actually phone anyone, that's what the phone is for, isn't it phoning.*

## School-Formal discussions

Conversation surrounding the use of ET was usually formal:

**Teacher 1 (F) focus group:** *And obviously, if they alert us to something when they ask a question, or they put it in the question box, and we are concerned then we would talk to the parents about it. And go from there.*

## School ethos toward technology

### Positive

The below data represents the school's positive ethos toward technology use:

**Teacher 8 (M) focus group:** *That would be like online books for the little ones, then their only like 4, you were more interested in 8 year olds, but the 4 year olds, they are able to look at it, and actually it will read the books to them, so that's one thing I've purchased, that's something I'm working on.*

*Teacher 8 (M) focus group: Some interventions, so some children that are a bit behind we can use the technology to do that specifically, its better with the PCs and laptops really, but you can use the others as well, so yeah we use them for interventions really and things like that.*

*Teacher 8 (M) focus group: We also use them for behaviour as well, so we have a lot of children, some autistic children, a lot of children with high anxiety so we do okay you do this, you have this next so we do a lot of strategic, and use it as a reward, particularly with iPads, and erm I don't think they ever actually phone anyone, that's what the phone is for, isn't it phoning.*

### Heterogeneous views

The institutional ethos toward technology can be overshadowed by individual teachers who have a different relationship with their experience and/or consumption of ET:

*Teacher 1 (F) focus group: Are we having problems with year 5?*

*Teacher 6 (F) focus group: I think a few of them are in year 5, well they're just starting now in year 5*

*Teacher 1 (F) focus group: Well, most of the parents, most of the parents for those in year 5 do not have proper sim cards*

*Teacher 6 (F) focus group: So, they control it a bit more, but they do start to let them to use things like fortnight*

*Teacher 1 (F) focus group: They don't bring them into school though, do they?*

*Teacher 7 (F) focus group: Well yeah, they do, a couple of them*

*Teacher 6 (F) focus group: They bring them in to the office, there are a couple, not many. But they do game online*

*Teacher 7 (F) focus group: Because your class last year*

*Teacher 1 (F) focus group: Ours are on fortnight aren't they, and then that creates problems for more vulnerable children doesn't it*

*Teacher 7 (F) focus group: Yeah, take some of our SEN children, we really notice it because they don't have the emotional maturity to like deal with it, so quite often it can spill out into class sometimes*

*Teacher 1 (F) focus group: Is that with phones though?*

*Teacher 7 (F) focus group: That's just with playing with Xbox and things like that, but some of them have got phones as well*

*Teacher 1 (F) focus group: Hmm*

## Negative

Negative sentiment toward ET usage stemmed from adult's negative usage as well:

**Teacher 6 (F) focus group:** *I think you know, and even as adults we see adults do things without thinking, so I certainly don't think primary school children are ready to use it, social media properly*

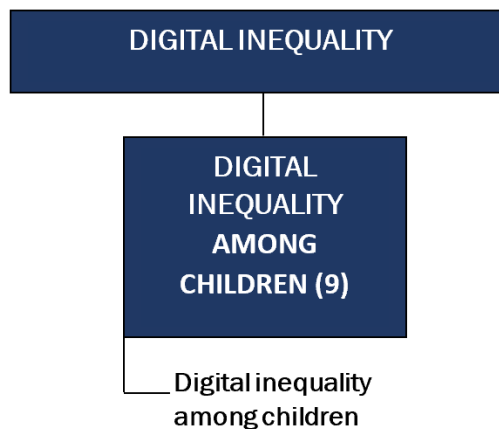
## Theme four: Digital inequality among children

Consideration of social inequality that exists among consumers from ages 8-10 (UK school year's 5 & 6) was prominent for the teachers when considering inequality. Mentioned within earlier themes was also the nature of child technology use for gaming and socialising over the school breaks. The teachers are exposed to issues surrounding this, thus the beneficial aspects such as socialising positively for the most part, is overshadowed by the prominence of negative issues.

Figure 5.12: A detailed summary of theme four from the teacher focus group: Digital inequality among children

THEME	SUB THEMES	MEMO
DIGITAL INEQUALITY AMONG CHILDREN	Digital inequality among children	The data from this theme encompasses discussion that was instigated by the researcher when asking the teachers if (after all things considered) they felt there were issues within inequality surrounding ET use for the child consumer.

Figure 5.13: A summary of theme four from the teacher focus group: Digital inequality among children



## Digital Inequality

### Digital inequality among children

### Digital inequality among children

Inequality surrounded the social aspects:

**Teacher 1 (F) focus group:** *Things that, the children will chat about things, they will have WhatsApp groups and things, mainly year 5 and 6, they will discuss things, and if they don't have a phone that. Or are included in that, it causes social issues, and friendship issues*

**Teacher 5 (F) focus group: *You sort of know the etiquette that goes on with things like WhatsApp, you know in terms of setting up a group***

## **5.4 CHAPTER SUMMARY**

This chapter has provided an introduction to the findings of the project by outlining the process of analysis used within phase one whereby objective two has been achieved through the secondary analysis and objective five has started to be addressed through the use of a teacher focus group. This chapter adds to the thesis by giving transparency toward the data analysis methods within this phase of the project and outlining the findings which will later aid the overall discussion. The next chapter is phase two, phase two encompasses the further data collection from the teachers through an online survey and interviews.

# CHAPTER SIX

## · PHASE TWO ·

### 6.1 INTRODUCTION

Phase two of the research project surrounds the data collection and analysis of teacher participants.

Figure 4.17: Outline of phases one-three of the research project

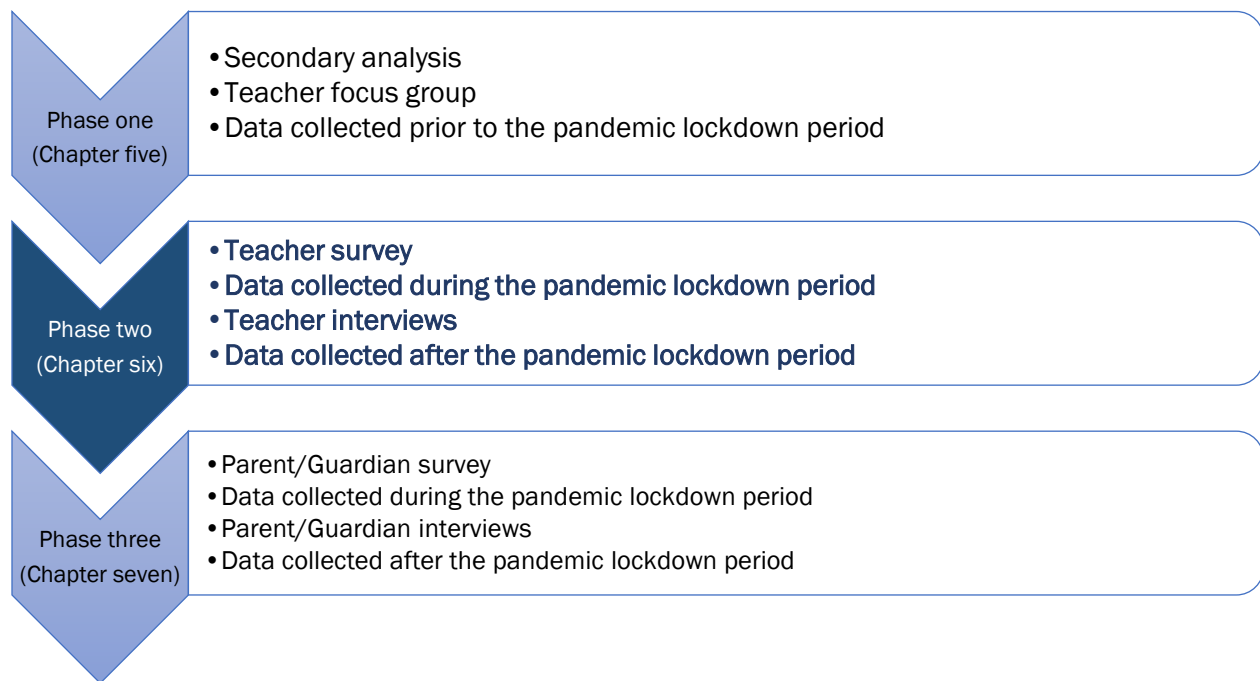
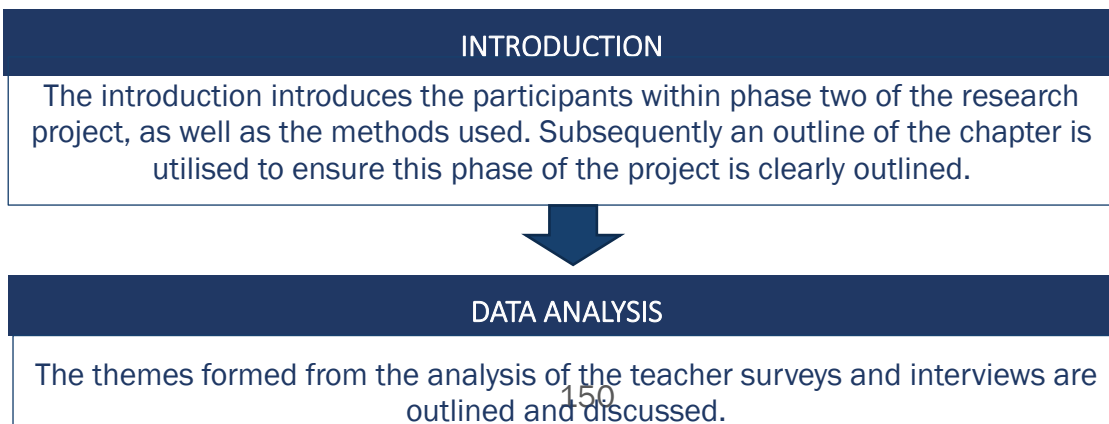


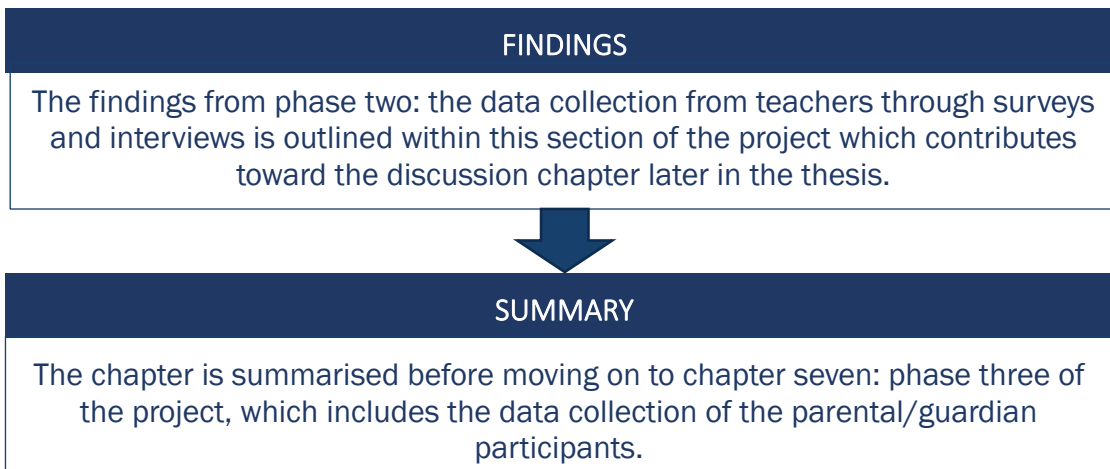
Figure 1.3: The project flow



PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator's perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator's perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

Figure 6: Phase two findings chapter outline

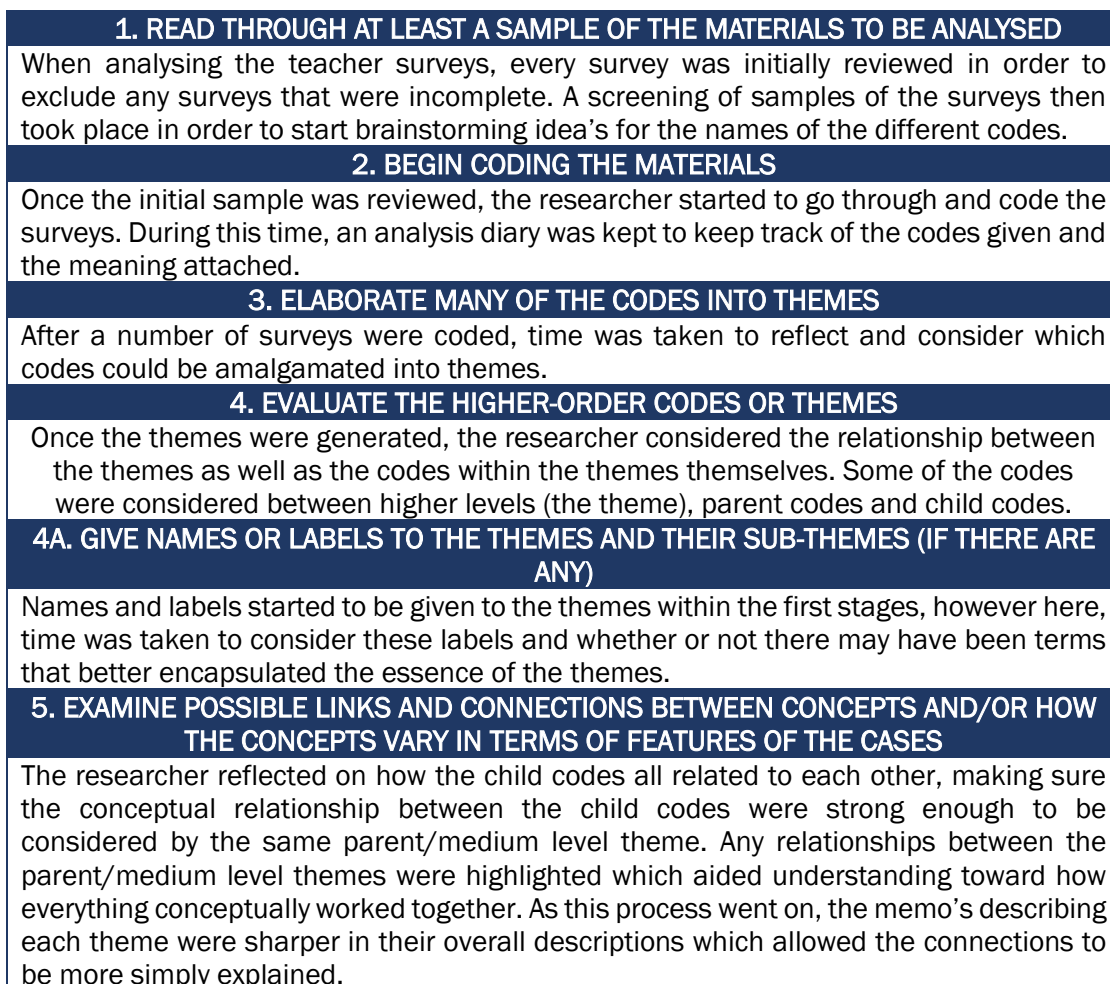




## 6.2 DATA ANALYSIS

### 6.2.1 TEACHER SURVEY

Figure 6.1: The analysis process: Teacher survey



6. WRITE UP THE INSIGHTS FROM THE PREVIOUS STAGES TO PROVIDE A COMPELLING NARRATIVE ABOUT THE DATA
The memo's enabled the write up of the findings from the teacher survey, outlining an accurate depiction of the data. This was extended within the discussion chapter by interrelating the literature.
6A. JUSTIFYING THE THEMES
The themes were justified earlier within the process, but this is formally written up within the discussion chapter where the themes within this data collection method are discussed with consideration toward how these fit in with other data collection methods within this phase. This is then considered holistically, tying in the multiple methods used for this project outlining conceptually the meaning of the data.

(Bryman, 2016, pp. 587-588)

Figure 6.2: Analysis overview: Teacher survey

SURVEYS COMPLETED	TOTAL PARENT CODES	TOTAL THEMES
68	21	5

Figure 6.3: Demographic overview: Teacher surveys

GENDER	SCHOOL TYPE	SCHOOL TYPE	AGE RANGE OF TEACHER SURVEYS	WI-FI ACCESS AT HOME	SCHOOL STATUS	AGE RANGE OF CHILDREN TAUGHT	SUBJECTS TAUGHT
91% Female 9% Male	68% Primary 32% Secondary	98% Mixed 2% Single sex-female	22-62	Yes	57% Mainstream 23% Academy 13% Faith 4% Community 3% Independent	3-18	65% Primary subjects 9% English/Drama 5% P.E 5% IT 5% MATH 2.5% GEOGRAPHY 2.5% ART 2.5% MUSIC 2.5% LANGUAGES

Figure 6.4: Themes overview: Teacher survey

THEME	SUB-THEMES
<b>TEACHERS PERSONAL CONSUMPTION</b>	Technology ideology Teachers' own consumption Teacher skill rating
<b>TEACHER'S VIEWS SURROUNDING CHILD TECHNOLOGY USE</b>	Teacher opinion of device usage at home Teacher opinion on child technology use Teacher opinion surrounding responsibilities for socialisation
<b>THE IMPACT OF DEVICE USAGE WITHIN THE EDUCATION ENVIRONMENT</b>	Issues in school Teacher opinion toward child ET use within the educational environment Teacher opinion on the impact of ET usage
<b>MANAGEMENT OF DEVICES WITHIN SCHOOL</b>	Management of devices School ethos toward technology use Teacher engagement with parents surrounding ET usage Teacher engagement with children surrounding ET usage
<b>DIGITAL INEQUALITY</b>	Digital inequality among children

Kozinets (2008) research on technology ideologies has been used as a tool to categorise some of the data. Please see below for a reminder of the meanings attached to these categories:

Figure 2.2: Kozinets (2008) technology ideology categories

IDEOLOGICAL FIELD	DESCRIPTION
<b>GREEN LUDDITE</b>	Technology consumption as destruction of the natural. Compliments the emotion of techspressive ideology. Contrasts in morality of Techtopian position. Contradictions of individualism with the work machine ideology.
<b>TECHTOPIAN</b>	Technology consumption as social progress. Complimentary of reason for work machine ideology. Contrasts in morality of the green luddite ideology. Contradicts the standards of techspressive.
<b>TECHSPRESSIVE</b>	Technology consumption as pleasure. Compliments the emotion of green luddite. Contradiction of standards with Techtopian ideologies. Contrariety of indulgence with the work machine ideology.
<b>WORKMACHINE</b>	Technology consumption as economic engine. Compliments the reason of Techtopian. Contradictions of individualism with green luddite ideology. Contrariety of indulgence of techspressive ideology.

(Kozinets, 2008)

## 6.2.2 TEACHER INTERVIEWS

Figure 6.5: The analysis process: Teacher interviews

<b>1. READ THROUGH AT LEAST A SAMPLE OF THE MATERIALS TO BE ANALYSED</b>
Prior to analysing the interviews, the transcription process acted as the first step when reading through the materials prior to coding. An analysis diary was created to record the names given to certain codes, this was done to lessen the time taken merging codes together during stage three of the process.
<b>2. BEGIN CODING THE MATERIALS</b>
The data was coded and a coding framework developed for the teacher interviews.
<b>3. ELABORATE MANY OF THE CODES INTO THEMES</b>
Once codes were created and the coding framework finalized, the researcher reflected on the codes created and how they may be organised into medium level themes.
<b>4. EVALUATE THE HIGHER-ORDER CODES OR THEMES</b>
After the medium level themes were identified, further reflection took place in considering any relationships or patterns that helped derive the higher level themes. It was decided to broadly consider the data within three high level themes that reflected the questions asked.
<b>4A. GIVE NAMES OR LABELS TO THE THEMES AND THEIR SUB-THEMES (IF THERE ARE ANY)</b>
Names were given to the higher level themes and further consideration was made toward the medium level themes, the finalization of the naming process ensured the labels were clear and accurately reflected the themes.
<b>5. EXAMINE POSSIBLE LINKS AND CONNECTIONS BETWEEN CONCEPTS AND/OR HOW THE CONCEPTS VARY IN TERMS OF FEATURES OF THE CASES</b>
This was easier to do in comparison to the survey data, within stage five the researcher started to consider features of the data that explained the relationships outlined.
<b>6. WRITE UP THE INSIGHTS FROM THE PREVIOUS STAGES TO PROVIDE A COMPELLING NARRATIVE ABOUT THE DATA</b>
The findings chapter highlights a descriptive overview of the data whereas this stage is not achieved until the discussion underlines the meaning of the narrative within the wider scope of how the data collected prior, during and post-lockdown help achieve the studies overall aim and objectives.
<b>6A. JUSTIFYING THE THEMES</b>
The themes are able to be justified earlier on in the process, however it is not until after the findings from all the data collection methods have been written that the justification of the themes acknowledges where the theme fits within the overall scope of the project, as well as the data collection method the theme derived from.

Figure 6.6: Analysis overview: Teacher interview

INTERVIEWS COMPLETED	TOTAL RECORDING TIME	WORDS TRANSCRIBED	TOTAL PARENT CODES	TOTAL THEMES
3	64.35 minutes	10,653	12	4

Figure 6.7: Demographic overview: Teacher interviewee's.

GENDER	SCHOOL TYPE	SCHOOL TYPE	AGE RANGE	WI-FI ACCESS	SCHOOL STATUS	AGE RANGE OF	SUBJECTS TAUGHT
--------	-------------	-------------	-----------	--------------	---------------	--------------	-----------------

			OF TEACHER	AT HOME		CHILDREN TAUGHT	
100% Female	2 Primary  1 Secondary	100% Mixed	46-53	Yes	100% Mainstream	7-18	2 Primary subjects  1 English

Figure 6.8: Theme overview: Teacher interviews

THEME	SUB-THEMES
<b>PRIOR TO PANDEMIC</b>	School ethos toward ET use Teacher use of ET
<b>CHANGES AS A RESULT OF THE COVID-19 PANDEMIC</b>	Teachers' use of ET Child use of ET Family use of ET Misconceptions of ET
<b>CHANGES CARRIED FORWARD</b>	Teachers' use of ET Child use of ET Family use of ET
<b>NOT SUITABLE TO BE CARRIED FORWARD</b>	Teachers' use of ET Child use of ET Family use of ET

## 6.3 FINDINGS

### 6.3.1 TEACHER SURVEY

Within the first theme, trends started to form between the more confident users of ET and their optimism toward the ever-evolving nature of technology; thus, the importance of integrating the socialisation of these skills. The teacher's personal consumption reflected their views surrounding child technology use, however within the lockdown context, further concern was shown toward balance and preparing children for the real world. Theme two: the teachers view surrounding child technology use was heavily interconnected here whereby none stated they felt the parents were doing enough to help socialise their children toward the right use of ET; most felt the schools were doing the best they could with the resources they have, and some felt the school and familial contexts were responsible for different elements of the child's digital socialisation. Within the focus group, exclusion was seen as a good thing to a degree, whereas the survey (the lockdown context), clearly illustrated how important these skills are to the child consumer and the positive outcomes realised.

Theme three considered how the teachers felt ET usage impacted the education environment. Theme two clearly illustrated that teachers felt these skills were important, however by using devices to



develop these skills, one outcome was that issues are sometimes experienced within school. It was found the majority of issues resulted from ET usage at home but disrupted the school day. The teachers therefore felt parents were not doing enough to educate their children to use ET. Nonetheless, most teachers felt the development of these skills were essential, however there was disagreement toward the age this education should start. When considering the teacher role within the child's digital socialisation, some felt it was important they had this education, but parents should consent to it. Technology use prior to the pandemic was based on the teacher using and integrating ET throughout their lessons, as opposed to the children using and developing these skills. The main reasons were that schools did not have the appropriate equipment or resources for all children to use ET, with many devices being bought but becoming slow and therefore not fit for purpose. The impact of ET usage within schools during COVID-19 was positive however, showing that if the resources are there, this would be possible.

Engagement with young children surrounding the management of device usage took place in mainly formal, scheduled sessions. Within some schools this was discussed weekly, but for others, only one day a year. Informal conversations were not used to encourage positive use of ET and took place in reaction to issues that emerged. Most schools felt their school was doing enough to manage the children's use of ET, however the teachers did show frustration toward parents for not engaging as much as they would like. Most schools arranged technology sessions and times to accommodate parents but many did not attend. Contact with parents took the form of promoting safe usage through one-way communication styles or in reaction to any issues that occurred. Because of the lack of engagement, this meant most conversations surrounded problematic usage or warning against this as opposed to encouraging positive use, although some schools did help give guidelines toward suitable apps to use. Within most schools, ET use is banned, only some indicated children were permitted to use ET within specified times. The view on this was turbulent whereby teachers felt more could be done to integrate devices, but concerns toward inequality and safeguarding issues were too high; children then do not use ET responsibly enough to be able to do this within schools. Whilst the outright ban was frustrating, it was understandable to help mitigate these issues that in turn take away from the time spent educating children and focussing on the key subject area's.

Theme five surrounded digital inequality, however concerns were mainly based on exclusion (first level divides). Many primary school or first year secondary school children were the most likely to be excluded. The teachers felt this hindered mainly social and educational opportunities (second level divides) which ultimately meant not all children had access to the same opportunity to develop in these area's and realise beneficial outcomes (third level divides). A lot of teachers showed concern toward children feeling excluded or not having the latest tech, and many felt this meant the use of ET or discussions surrounding how it could be used for beneficial means was inappropriate.

### Theme one: Teachers' personal consumption

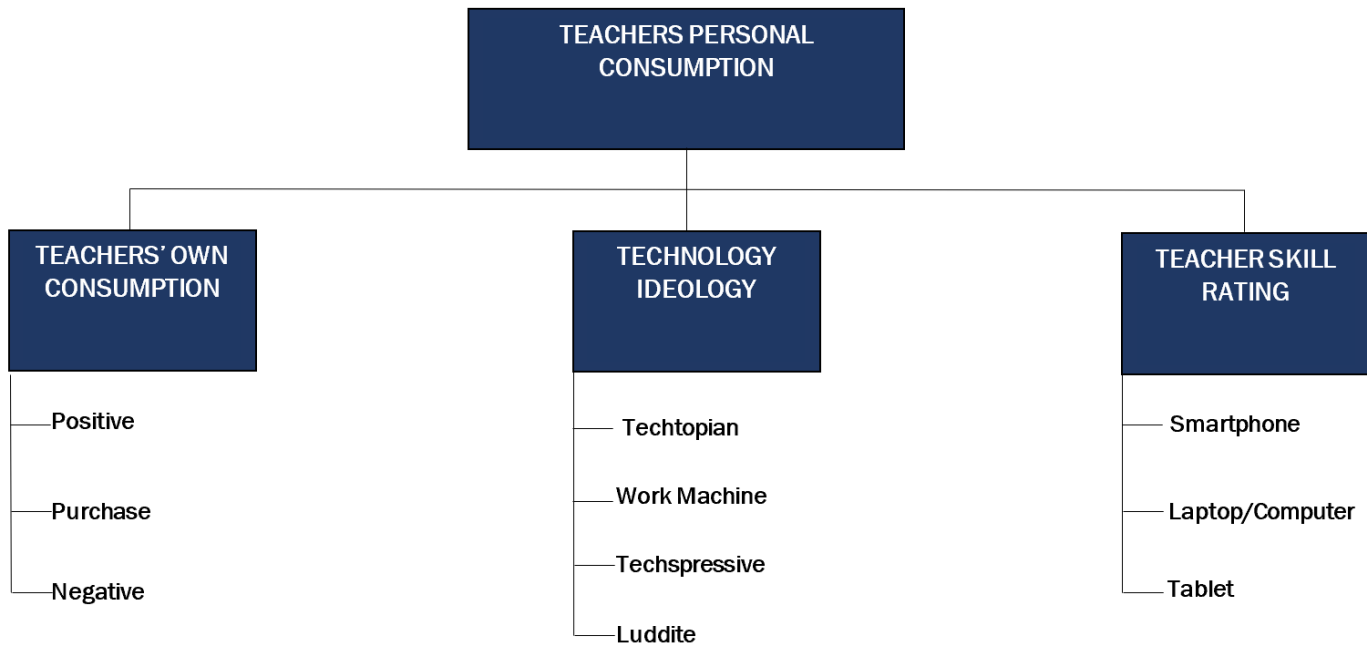
The findings from theme one of the teacher surveys strengthened findings from the teacher focus group in that the teacher consumers individual relationship with technology, influences their projections of technology use for the children they teach. This was evident throughout the survey by considering their own consumption of ET; it was evident that affordances or activities that could be viewed as positive, were also negatively considered because it can act as a catalyst for issues in school. Because of this, balance was strived, however during the pandemic this was not always possible. This translated toward the teacher's technology ideology, whereby those with Work Machine and Techspressive views were very concerned about this balance for young children. Teacher consumers with Techtopian views were more concerned with what age to start the socialisation (not wanting to cause a delay) and Green Luddite views were concerned about starting this socialisation too early, if at all. Techspressive activities were the most negatively viewed for both their own consumption and as

evidenced when comparing their skills to the children they teach, for the child consumer also. Some viewed the Work Machine activities as more valuable, meaning they were therefore more skilled, others considered a child's aptitude in comparison to their own but mainly, experience of use was obviously a factor here. Data from their personal consumption such as teacher habits when it comes to updating technology and the frustrations shown when the technology deteriorates/isn't updated, was reflected within the Tectopian ideology. These teachers viewed technology as constantly evolving, showing a willingness to make continuous efforts to introduce ET into the classroom in comparison to others. Those teachers were more optimistic about the child consumers skills in comparison to their own.

Figure 6.9: A detailed summary of theme one from the teacher survey: Teacher's personal consumption

THEME	SUB THEMES	MEMO
TEACHER'S PERSONAL CONSUMPTION	Teachers' own consumption	This sub-theme highlights the teachers' sentiments toward their own consumption of ET, which can be reflective of positive, neutral or negative sentiments.
	Technology ideology	This sub-theme illuminated the aspects of ET use that was prevalent to different technology ideologies of the teachers when expressing an opinion about ET use.
	Teacher skill rating	This sub-theme was condensed within the teachers' personal consumption theme as their skill rating represents their self-confidence toward ET use.

Figure 6.10: A summary of theme one from the teacher survey: Teacher's personal consumption



### Teachers' own consumption

The sub-theme surrounding the teachers own consumption illuminated insight toward the consumption habits of the teacher consumers. It was clear for teachers that balance is integral with it comes to ET

use, with positive affordances also translating to their negative view of ET. For example, the multiple affordances of smartphones act as a catalyst to their addictive nature:

***Teacher survey: They are portable, so can be used anywhere there is signal/internet and can be used to contact anyone anywhere in the world. They have GPS access.***

***Teacher survey: Addictive nature or pulling people away from 'real world', time spent is not quality time***

The social benefits can translate to literacy issues in their view:

***Teacher survey: Facetime and being able to speak to loved ones whenever you want.***

***Teacher survey: As an English teacher, my job is to develop people's communication skills. Over use of technology is impacting handwriting, spelling and grammar and understanding of more traditional texts.***

This understanding is important when considering the lockdown environment whereby there was an enforcement of technology use to a degree, meaning balance was far harder to maintain. When it came to the purchase of devices, it was clear some schools provided various technology but tablets were the most commonly used within the classroom:

***Teacher survey: We use iPads and laptops at school. Most of the children have no clue how to use a laptop. They are more clued up on the iPads, particularly when using apps, but have less idea how to navigate the internet / what to select / where to type.***

For teachers whose school provided the technology but did not keep on top of updates, the devices were redundant and too slow to use within lessons or in some cases, at all:

***Teacher survey: Not worth using the laptops, they were a nightmare as they were so old. Also, getting a new app on the iPad took so long, as it needs to be put on my IT department. All very time consuming and frustrating.***

## Technology ideology

The teachers who saw technology as progressive (Tectopian ideology), were willing to go above and beyond to integrate ET within the classroom:

***Teacher survey: Have to give children the chance to try the technology, not all of them will be distracted and will work well. If the technology works and not time consuming, it is fun for kids and they remember more about what they found in their own research.***

However, they didn't want to turn every lesson into an IT session:

***Teacher survey: Maturity and responsibility with access to technology. Allow young children to be children and use a vast array of activities to help them learn and develop. Technology should aid their education; not be their education.***

Teachers could be let down by the schools' equipment not being maintained appropriately:

***Teacher survey: We used iPads and laptops for research sometimes, but technology continued to let us down such as laptops taking an hour to login or iPads not being charged properly, or not always available. This let lessons down, so I used them less and less. Used the smart board at the front of the class daily, and used Activ Inspire to deliver maths lessons.***

Despite enthusiasm around this, there were differences of opinion surrounding when to introduce technology:

***Teacher survey: I think young children don't need to but older children need a good understanding***

***Teacher survey: If we over-limit the technology exposure to our students we are doing them a disservice. We are delaying and limiting their potential***

Teachers who felt skills needed to be developed for work purposes (Work Machine ideology), did not feel this was appropriate for young children however:

***Teacher survey: In their working life, children will need to have digital skills and be online aware. However I don't believe that young children need as much exposure to technology.***

Although teachers used ET for entertainment/Techspressive use, this was not seen as positive unlike the Tectopian and Work Machine ideologies:

***Teacher survey: Messaging apps for work and socialising, eg WhatsApp, entertainment when out and about***

However, those who viewed technology as disruptive and detrimental (Green Luddite ideology) felt very strongly that ET could not be used positively in comparison to the previous ideologies mentioned:

***Teacher survey: Children (and most adults) are addicted to them. Most people don't look up from their phone in public. I find this anti-social, dangerous and pointless.***



***Teacher survey: As an English teacher, my job is to develop people's communication skills. Over use of technology is impacting handwriting, spelling and grammar and understanding of more traditional texts.***



***Teacher survey: It has had plenty of benefits but hasn't been able to completely replace the power of personal contact teaching.***

## Teacher skill rating

### Smartphone

The teacher's rating of their skills in comparison to the children they teach illuminated that there is an appreciation for the child consumers' young age inhibiting the development of skills in comparison to teachers (particularly primary school children):

***Teacher survey: As they are only 9 and are not exposed to their own phones (mostly)***

***Teacher survey: I grew up using computers but they grew up using smartphones and tablets.***

For secondary school teachers, age was a less prevalent factor than the type of activities children spent their time engaging with:

***Teacher survey: I use a MacBook daily for work. Children use iPads and smartphones daily for just about everything.***

When comparing the teachers' attitude toward this, skills within Techspressive (entertainment/play) capacity were not as highly regarded, but it was agreed the children had more knowledge here:

***Teacher survey: We use iPads and laptops at school. Most of the children have no clue how to use a laptop. They are more clued up on the iPads, particularly when using apps, but have less idea how to navigate the internet / what to select / where to type.***

Access was also highlighted as an issue whereby children were more likely to use a smartphone or tablet outside of school in comparison to a laptop or computer. Aptitude was only mentioned when it came to tablets. Some teachers identified that although they felt more skilled at the moment, the intuitive approach some children took toward this type of ET made them feel as though they were more skilled:

***Teacher survey: The children have picked skills up much more quickly than me and use their technology more often***

## Theme two: Teachers' views surrounding child technology use

The first sub-theme surrounding the teachers' views of the child consumer's socialisation was illuminating toward the sub-themes surrounding their general opinions of child ET use and child ET use within the home environment. Where the majority of teacher's saw this as a home issue, this was related toward their distaste of ET usage that impacted the school day.

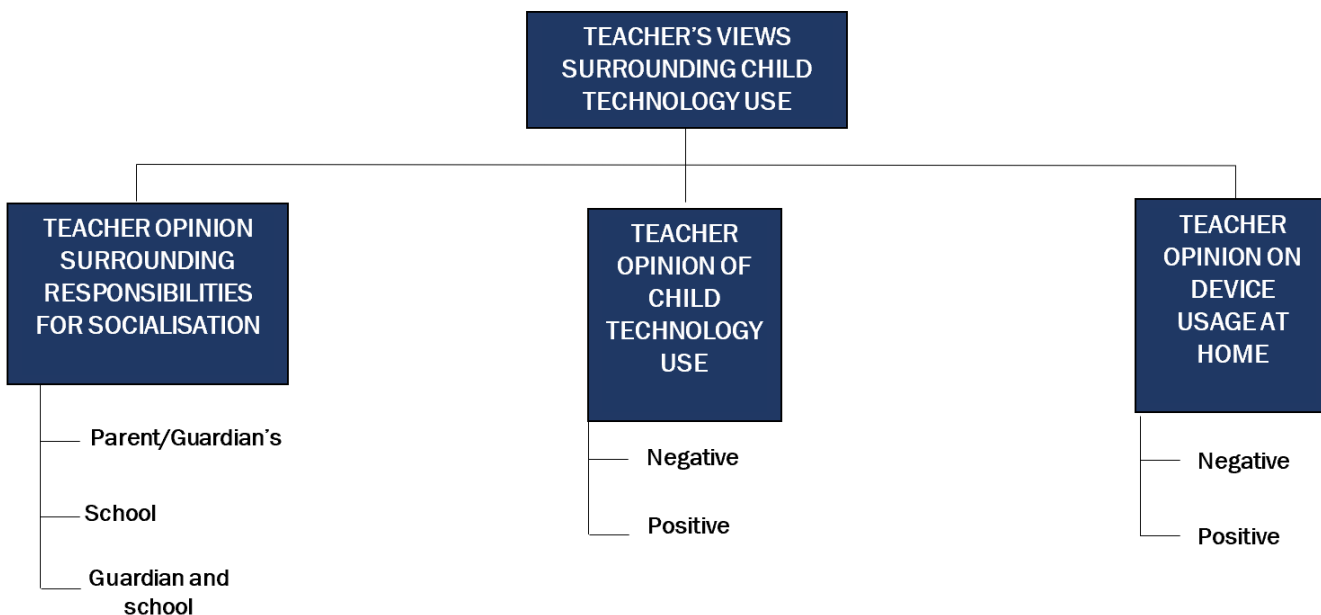
When it came to ET use within the home environment, overwhelmingly parental guidance was important to the teachers; this was apparent within each code, whether the opinion was neutral, negative or positive, guidance and the role of parents and guardians dictated their opinion on the perceived outcomes of use, even if the activities were the same. When the teacher's discussed child ET use generally, the negative aspects related heavily to short-term outcomes. When discussing negative aspects within the home environment, long-term outcomes were more likely to be considered, interrelating the earlier sub-theme of socialisation responsibilities; indicating that parents were not doing enough. For teachers who felt this socialisation was a joint effort, it's clear throughout this theme that teachers acknowledge parents/guardians to be responsible for the child's long-term wellbeing, whereas the teacher's role is short term in terms of how to use devices safely. For the most part however, teachers felt their schools were doing enough to support this already, acknowledging that there are issues with the sector as a whole, thus policy, which can act as a barrier here.

Interestingly, autodidacticism was viewed positively when it came to the child's general use of ET, but within the home environment (where parents/guardian's are more likely to be present) this was not the case, and the teacher's felt supervised access was the most appropriate. Most teacher's felt parents/guardian's do not have the necessary skills here however, thus the teacher opinion on child ET usage is largely dependent on their view of socialisation within the familial environment. Specific ET activities were consistent when discussing positive, negative or neutral outcomes of use, how the activities were viewed were dependent on those that were balanced as a result of parental support/supervision.

Figure 6.11: A detailed summary of theme two from the teacher survey: Teachers' views surrounding child technology use

THEME	SUB THEMES	MEMO
TEACHER'S VIEWS SURROUNDING CHILD TECHNOLOGY USE	Teacher opinion surrounding responsibilities for socialisation	This sub-theme was going to be considered as a high-level theme, however relationships were found between the teachers' perspective on the effective management of child ET usage (ultimately what they regard as effective socialisation) and their opinion on child ET usage.
	Teacher opinion on child technology use	This sub-theme is distinguished from the previous by illuminating the more general aspects of ET use that was prevalent to the teachers when expressing an opinion about child technology use.
	Teacher opinion on device usage at home	This sub-theme highlighted the impact of ET usage specifically within the home environment that influences a teachers' opinion when forming a view on child ET use.

Figure 6.12: A summary of theme two from the teacher survey: Teachers' views surrounding child technology use



### Teacher opinion surrounding responsibilities for socialisation

The researcher asked the teachers for their opinion surrounding where responsibilities for the child socialisation of ET use was best placed and this is how the sub-theme was organised. This ranged from schools, parent's/guardian's and both schools and parent's/guardians. Many teachers felt this was a home issue and the full responsibility of parent's/guardian's:

***Teacher survey: Parents have the best access and influence on their kids, as well as the principal responsibility for their care. Children need to be protected and empowered by understanding technology use.***



It was highlighted that none of the teachers felt parents were doing enough to support their children's ET use however:

***Teacher survey: I would have loved to just say parents, but many do not know enough about the negative aspects to teach about this, so teachers are useful to fill in the gaps.***

Teacher's felt parents may not have the skill or knowledge to support their children to use ET:

***Teacher survey: Keep access to minimum and know what kids are on***

•

***Teacher survey: Read our newsletters and take an interest in what their children are doing***

•

***Teacher survey: They may themselves be using them negatively and there is not compulsory training for parents on these necessary skills***

Barriers included speed of innovation:

***Teacher survey: Some do. Technology moves so quickly it is hard for most parents (and teachers) to keep up to date***

Education and language:

***Teacher survey: Lack of education in issue, language barriers.***

•

***Teacher survey: Lack of their own engagement with technology, or access to technology. Lack of understanding of the risks and rewards of technology. Lack of parenting knowledge and understanding of child development. And general poor parenting.***

As well as age:

***Teacher survey: Older parents are less confident using smartphones and younger ones are less aware of the dangers***

Many teachers felt parents had responsibility for some area's and schools for others, but ultimately a partnership was required to successfully socialise young children on a well-rounded approach to ET usage.

***Teacher survey: support each other reinforce benefits and negative impact***

•

***Teacher survey: It takes a village to raise a child. How can we raise children into a safe environment if we aren't all working towards the same goal?***

When asked whether the teacher's felt the school was doing enough to support this, the majority of teachers agreed they were; barriers included limited resources and lack of parental engagement:

***Teacher survey: Yes at current with the resources we have***

•

***Teacher survey: We do a lot but not sure it gets through to parents***



Examples as to how the schools were supporting the socialisation of children's ET use ranged from staff CPD, workshops for parents, e-safety within the curriculum, external quality schemes, and information proactively given to parents/guardians:

*Teacher survey: Yes- lots of support and teaching available to parents and students. CPD for staff.*



*Teacher survey: We have taken part in a tech safety quality mark scheme and drawn up extensive action plans and curriculum to use all tech safely*



*Teacher survey: E-safety newsletter / meetings for parents about safety on devices / computing lessons etc*

Barriers toward the school's ability to be more active here were not seen within the control of the school and were issues within the education sector as a whole, they do not have the funding, time or resources, digital exclusion was a barrier as well as identifying that more support was needed from parents:

*Teacher survey: Recent events reveal it as an issue for some, not a school based issue, more an issue for our sector.*



*Teacher survey: Funding? We're busy teaching children and can't find time to teach parents as well? Plus how many of them would be bothered to actually show up*



*Teacher survey: Too many additional responsibilities and workload*



*Teacher survey: Smartphones are not something every child has access to. It would be a dreadful thing to put kids through*



*Teacher survey: Lack of time, money, interest from parents.*



*Teacher survey: Home issue*



*Teacher survey: Nothing offered to parents to help in this area*

For those who recognised this topic as both a sector, school and home responsibility, dual responsibilities were highlighted:

*Teacher survey: Parents need to be responsible for what is happening at home and monitoring usage as well as making sure children know the pros and cons. Teachers have responsibility from an educational point*

### Teacher opinion of child technology use

The teacher consumers' opinion of child technology use was mostly neutral, listing known affordances of the devices for the child consumer such as communication, keeping up to date with latest trends and pop-culture, as well as socialising and educational use. It was noted however that ET such as tablets and gaming consoles were (in their view) more likely to be managed in comparison to smartphones. Negative comments therefore surrounded smartphone devices:

*Teacher survey: I think they are too young for phones as can't regulate time spent on them*

•  
**Teacher survey: Talking/messaging to each other, but also photos shared and unfortunately nasty comments - as a pastoral leader - usually at least an incident per day from parents/child of nasty things shared/said**

Where more prominent opinions surrounding the negative outcomes were shown, teachers showed distaste toward how young some children are when accessing ET, and many outcomes of ET use for young children impacted the school day such as bullying, accessing inappropriate content, having no escape, inequality or the sense of missing out for those who do not have access:

•  
**Teacher survey: Distractions, bullying, taking pictures of others without permission, lost or broken and parents will complain, time wasting if having to give to teacher and hand out at end of day.**

•  
**Teacher survey: No escape from problems or arguments at school- often fuels them further and doesn't allow pupils time to think about something else and move on.**

•  
**Teacher survey: Children accessing information that is beyond their maturity**

•  
**Teacher survey: deprived children not having same opportunities.**

Conversely, those with more positive sentiments tended to form these views based on long-term views of use, whereas the negative considered the immediate impact on the child consumer. For example, gaming (working together), autodidacticism, communication, socialisation, creating content and safety:

•  
**Teacher survey: More active participating. Minecraft. Fortnite. Working together to win games**

•  
**Teacher survey: Self-taught of using a device**

•  
**Teacher survey: Bring able to operate technology**

•  
**Teacher survey: communication, having the ability to talk to their friends, play games, share pictures and watch current videos.**

•  
**Teacher survey: Creating dance videos, Movie trailers and E-books.**

•  
**Teacher survey: Keeping in touch with friends, asking questions about homework, having contact with parents to and from school**

•  
**Teacher survey: I'm not sure I have negatives. I think our streets have become more unsafe for children than even when I was younger so they need to have the ability to contact people or help if needed. I have no issues with children using smartphones just parents interest of what they children are doing on them/ control or lack their of**

This was especially prominent throughout the pandemic, indicating some teachers observed the positive impact of devices during this unique time-period, especially for children with special educational needs or those who may be too shy to form these relationships face to face:

•  
**Teacher survey: sharing work, making encouraging videos/ messages to their community.**

•  
*Teacher survey: They don't use them in school. But during covid classes set up WhatsApp groups to keep in contact and talking about the work they were doing.*

•  
*Teacher survey: Children being supportive of one another. Children staying touch throughout the pandemic.*

•  
*Teacher survey: Over lockdown they have been able to remain in contact with each other and arrange face to face conversation which I think has been an immeasurable positive. Particularly for children who struggle with their mental health.*

•  
*Teacher survey: For shy/ hearing impaired children this increased their interaction*

•  
*Teacher survey: It is so helpful for our SEN students that can record things more easily, take photos and make learning easier for them. It also gives students more accessibility to information that is up to date. We can share text books with them when we cant afford to buy textbooks for all students*

### Teacher opinion on device usage at home

The sub-theme surrounding teacher opinion on device usage at home showed the most important factor to the teachers was the involvement of parental guidance when it came to child use of ET within the home environment:

*Teacher survey: Bad, as many parents leave their child with the phone expecting them to do work but not necessarily being aware what they are accessing.*

Neutral sentiment toward activities such as entertainment, socialising and safety purposes were shown but it was noted this depended on specific familial environments:

*Teacher survey: In small amounts it's ok but so many use it as a babysitter and this means children lack responsive conversations.*

Light was shed further on this when it came to the negative opinions on ET usage at home, whereby the teachers felt many parents used ET as babysitters (without parental guidance), long term concerns were made surrounding the development of the child consumers communication skills:

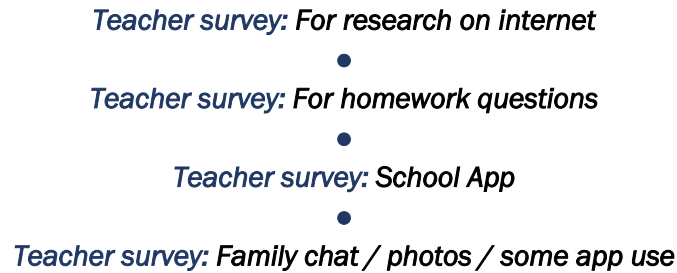
*Teacher survey: Sometimes used more as a babysitter rather than supporting social and academic learning.*

Specific issues with smartphones were shown because they are not a substitute for other ET; previously seen as more beneficial for education and less likely to be used unsupervised or for communication purposes:

*Teacher survey: To try to do homework but screens are too small*

This finding was strengthened when it came to the positive aspects of ET use within the home, showing that many activities such as use for educational, safety, entertainment and communication purposes

were viewed positively, but again was dependent on how the ET was introduced as opposed to unsupervised access:



Overall, this sub-theme showed the teacher’s views toward unsupervised versus supervised use of ET.

### Theme three: The impact of device usage within the education environment

Theme three identified important links between a teacher’s opinion on ET usage centring around how usage can contribute toward digital skills and benefit a child’s education and the age of which this usage and skill development is the most appropriate. For the most part, the older the age groups (from 10-11+) were found to be the most suited when educating children on the beneficial and harmful uses of ET, although some felt this education could start from age 2.

With regard to the impact of ET use during the COVID-19 lockdown environment, the impact was mainly positive given ET acted as a great substitute to facilitate learning during this time. It was clear that concerns toward inequality surrounding access and skills was prevalent, not just for the children but their parents as well.

In terms of ET use prior to lockdown, many felt their school did not have suitable equipment to help facilitate this, most ET was used by the teachers rather than the children, although a few schools very well integrated student led ET use into the classroom.

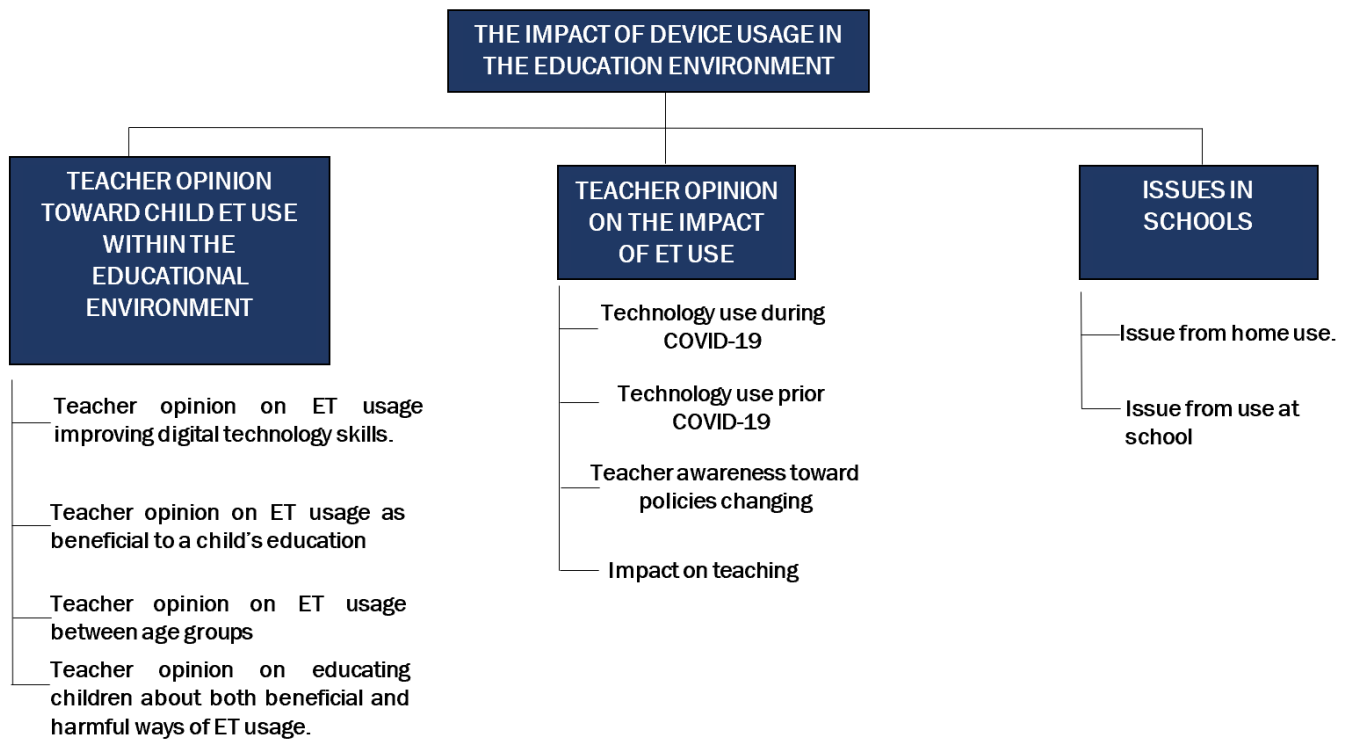
With regard to political influence surrounding ET use in the education environment, most teachers were not aware of anything specific. Looking at the issues that occur as a result of ET use illuminated that many of these take place outside of school but impact the school day. This finding interlinked with the teacher opinion of ET use, whereby they are dealing with many negative aspects of child ET use.

Figure 6.13: A detailed summary of theme three from the teacher survey: The impact of device usage within the education environment

THEME	SUB THEMES	MEMO
THE IMPACT OF DEVICE USAGE WITHIN THE EDUCATION ENVIRONMENT	Teacher opinion toward child ET use within the educational environment	This sub-theme highlights the teachers’ view toward the capacity of ET use within the educational environment.
	Teacher opinion on the impact of ET use	The codes within this sub-theme shed light on how teachers perceive the impact of child ET use within the education environment and their teaching practice.

	Issues in school	This sub-theme highlights any issues during the child consumers' time within the school environment, indicating whether these are a result of ET use within or outside the education environment.
--	------------------	---

Figure 6.14: A summary of theme three from the teacher survey: The impact of device usage within the education environment



### Teacher opinion toward child ET use within the educational environment

This sub-theme illuminated knowledge toward teachers favoring the child consumer is aware of both the benefits and harmful impact of ET usage:

*Teacher survey: Yes and are taught this in primary school*



*Teacher survey: Absolutely*

But parents should give consent:

*Teacher survey: It's a parental decision*

However, equality was an issue:

*Teacher survey: There are plenty more things to learn, when all students don't have them then this is very selective. I'm actually appalled by the suggestion.*

The sub-theme showed that teachers felt there were important digital skills that should be developed in order to socialize children for life within a digital world:

***Teacher survey: Younger children need basic skills first THEN digital skills. Talking, eating, toileting and playing THEN technology.***



***Teacher survey: IT skills from an early age - yes but using different hardware. There are too many safeguarding issues for younger children. A smartphone without a sim card limits this but with a simcard there is too much availability of information they are not equipped to deal with. A smartphone is in essence a phone and therefore limits how much IT skills they can actually achieve through this hardware.***

Insight was also shown toward the idea of balance, whereby teachers felt digital skills were important, but concerns were shown toward children being overly reliant on technology:

***Teacher survey: In their working life, children will need to have digital skills and be online aware. However I don't believe that young children need as much exposure to technology.***

The data shows that overwhelmingly, teachers felt these skills were more important as children got older:

***Teacher survey: Children need to learn how to live in a growing digital world***



***Teacher survey: Strong digital skills help with other curriculum areas.***

For younger age groups, teachers felt ET was less beneficial to the child's education, however the teachers felt older age groups are more likely to be distracted, devices like computers and laptops were the better option then:

***Teacher survey: Because the students find it really difficult to do their school work on them. Remote learning really shows this, many student upset that they have not got computers to use. They cannot access the work properly. They write on paper and take a photo.***

The teachers did not discuss how ET can be used for educational purposes at home, but it was highlighted that ET devices were useful during the pandemic.

***Teacher survey: I agree they have been useful during the pandemic, allowing students to access work which they may not otherwise have been able to get.***

The teachers felt that as children got older, ET use was more appropriate:

- 12-13 year olds: 91%
- 14-15 year olds: 84%
- 16+ year olds: 81%
- 10-11 year olds: 78%
- 8-9 year olds: 34%
- 6-7 year olds: 22%



- 4-5 year olds: 16%
- 2-3 year olds: 9%
- Never: 9%
- 0-1 year olds: 0%

### Teacher opinion on the impact of ET use

In comparison to the teacher's opinion of ET use for young children, the actual impact of this prior to and during the lockdown has been mostly positive:

**Teacher survey:** *It has been a really vital way of maintaining contact with my pupils and supporting their families in continuing their learning.*

•  
**Teacher survey:** *Group Email has helped to distribute work, offer support and collect work to feedback on. Zoom has helped department meetings. Doodle has helped to check on individual pupils' work rate.*

Teachers enjoyed the increased interaction with parents:

**Teacher survey:** *Sharing resources with parents, messaging parents and for video meetings*

It was a good substitute, but face to face contact was preferred:

**Teacher survey:** *It has had plenty of benefits, but hasn't been able to completely replace the power of personal contact teaching.*

Others are looking forward to using technology more as a result of using it during lockdown:

**Teacher survey:** *It's been incredibly successful and we plan to continue to do this through Google classrooms for home and pre-learning in the future.*

•  
**Teacher survey:** *It has been very useful, but some have found it difficult to access or they / their parents do not have enough knowledge of technology to navigate it properly. In the future, used in small amounts, I think this could complement classroom teaching nicely though.*

•  
**Teacher survey:** *I enjoyed seeing their confidence increase in navigating their technology*

Concern toward inequality was shown here:

**Teacher survey:** *Not all children engage in online learning platforms and it makes me worried about how it has affected both their academic and social abilities*

•  
**Teacher survey:** *Limitations- not all parents engaged in the work.*

With regard to political impact stemming from children's access and consumption of ET, teachers were not aware of exact policies. Many were confident that changes would be introduced throughout teaching training although they didn't feel changes would be proactive:

*Teacher survey: Not currently, and I imagine neither do the DFE, given their current unpredictable track record over the Covid - 19 pandemic.*



*Teacher survey: They are not proactive in their decisions, they are reactive to situations, which often are knee jerk.*



*Teacher survey: Needs to be constantly updated as the way we interact with technology is constantly changing.*

In terms of issues of the impact of ET, inequality was mentioned, as well as over reliance on ET and potential harms to development:

*Teacher survey: Engaging for pupils but problematic for accessibility depending on the soci economic background of some pupils. Needs to be approached sensitively and always have a back up e.g buddy up.*



*Teacher survey: Lazy way to research. Use of biased sites*



*Teacher survey: Negatively. The children are too tired to learn and preoccupied with the online world. Very hard to find things stimulating enough to compete with the dopamine hit of technology*

Those who tried to use ET prior to lockdown mentioned that outdated equipment let them down a lot of the time:

*Teacher survey: We used iPads and laptops for research sometimes, but technology continued to let us down such as laptops taking an hour to login or iPads not being charged properly, or not always available. This let lessons down, so I used them less and less.*

For the majority, technology was used by teachers and not the children in the classroom:

*Teacher survey: Very little for children, smartboard for teaching, laptop for planning etc*



*Teacher survey: Helps planning, and visual aids for children. Quizzes are helpful for assessment and gaining quick feedback.*

## Issues in schools

The sub-theme highlighted that the origin of the 'issues' may not always occur at school, however it is teachers who have to deal with them despite where they have stemmed from:

*Teacher survey: Outside of school issues are brought into the school environment by children and parents, usually involving smartphone or console use*



**Teacher survey: This varies but at least on a weekly basis. There's always issues brought in from home from messages and games.**

Issues that occurred in school were fewer mentioned:

**Teacher survey: Both. Teacher being filmed chairs and tables thrown (years ago), sex act carried out of school and shared (not able to go into detail but underage minors), multiple bullying in and out of school, sexting. Fights filmed out of school. School is far safer without smart phones.**

#### Theme four: Management of devices within school

Within theme four, the focus was on how devices were managed within the school environment. Relationships were shown between the sub-themes in that teachers engaged with children about ET within formal scheduled sessions, but informal conversations were in reaction to issues that occurred. This same form of contact took place with the parents whereby most teachers engaged with parents in reaction to issues that occurred. This interrelated school policies surrounding ET in that smartphones were mainly banned to reduce any issues in school, which in turn meant discussions about informal use of technology were less frequent. When discussions did take place, these focussed on online safety. To reinforce this message, most schools tried to engage parents, however communication tended to be one-way, two-way communication was less frequent with teachers feeling as though this topic did not interest parents.

Unique contexts occurred within school such as school trips, although this was not prevalent during lockdown, it was interesting to see that most parents wanted their children to take devices with them, but schools were less keen. The general view was that school policies were effective and teachers did the best they could to help manage devices within school. The lack of use of ET as a general rule within school means this was more of a shock within the lockdown environment, with many teachers identifying this as a sector wide, rather than a school issue.

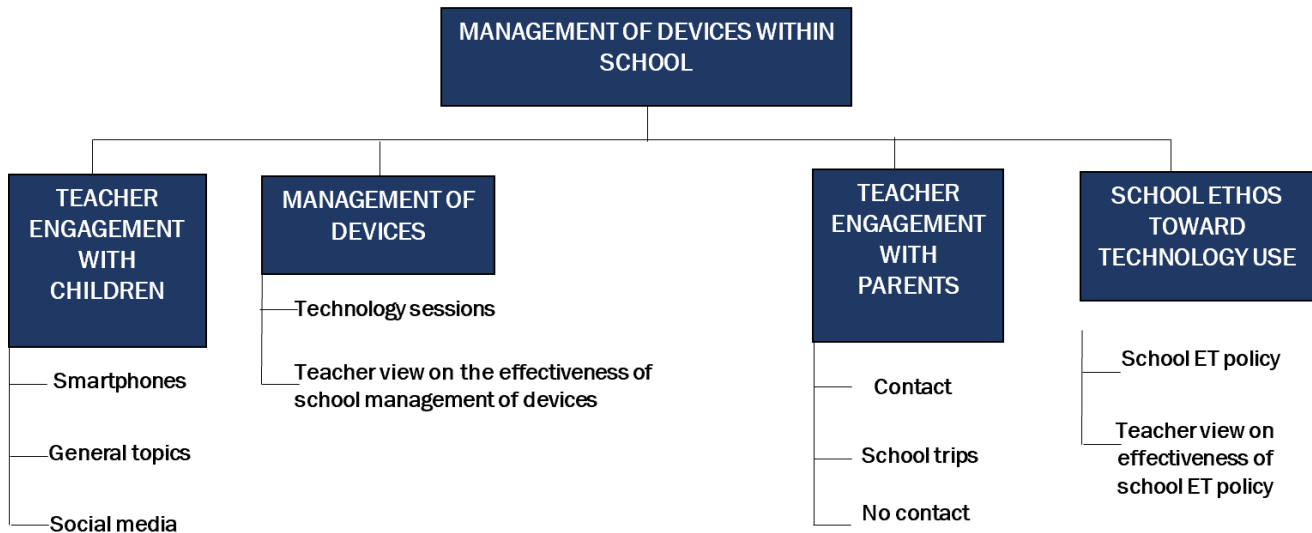
The school ethos toward technology use tended to lean toward educating children to be safe online, however many teachers expressed frustration that devices such as smartphones could not be used more effectively within schools, indicating a total ban may be necessary to a degree, but some teachers wanted to incorporate ET within their classrooms.

**Figure 6.15: A detailed summary of theme four from the teacher survey: Management of devices within school**

THEME	SUB THEMES	MEMO
<b>MANAGEMENT OF DEVICES WITHIN SCHOOL</b>	Teacher engagement with children surrounding ET usage	This sub-theme looks at data surrounding the frequency of communication that teachers have with children about their ET usage and the type of discussions that take place.
	Management of devices	This sub-theme looks at steps the school has taken to manage device usage outside of school, through the engagement with parents as well as the teacher view on the effectiveness of how the school manages devices within school.
	Teacher engagement with parents surrounding ET usage	This sub-theme examines the relationship between the school and parents when it comes to children's ET usage

	School ethos toward technology use	The school ethos toward technology encompasses data around school policies and the teacher view of school policies toward ET use.

Figure 6.16: A summary of theme four from the teacher survey: Management of devices within school



### Teacher engagement with children

The findings demonstrated that each school has different standards when it comes to how regularly the use of ET is discussed:

*Teacher survey: At least termly but more often of an issue comes up or if children start the discussion*

•

*Teacher survey: We have a Technology Bootcamp every year*

•

*Teacher survey: A lite bit in online safety week. Not much other than that.*

Only one teacher mentioned discussing positive ways of how ET is integrated into the curriculum:

**Teacher survey:** Usually if we are considering non fiction writing and access to new stories.  
Encourage using phones to read and research

•

*Teacher survey: In a primary school we follow the children so it could be that there is a need and we talk about it constantly for a few days/weeks or it could be that it only needs to be discussed in the scheduled IT/PSHE lessons*

The main topic of conversation here is staying safe online:

**Teacher survey:** *Mainly about games console use and game appropriateness*



**Teacher survey:** *Sometimes. Warning of age restrictions and about not using their parents' accounts*

## Management of devices

It's clear that the majority of teachers felt their school was doing enough to manage device usage for young children, however there are key issues that hold them back when trying to do so effectively:

**Teacher survey:** *Technology constantly changes as well as the needs of children.*



**Teacher survey:** *We do a lot but not sure it gets through to parents*



**Teacher survey:** *Lots of work with pupils more could be done with parents*



**Teacher survey:** *Parents tend not to be receptive to being advised on how to parent their children, especially when we are new to them 11 years into their child's life.*



**Teacher survey:** *Nothing offered to parents to help in this area*

Teachers felt they were limited in their ability to do more:

**Teacher survey:** *Funding? We're busy teaching children and can't find time to teach parents as well? Plus how many of them would be bothered to actually show up*

Key themes here are parental engagement, even if schools do reach out, many do not engage:

**Teacher survey:** *Work commitments, not wanting to show that they don't know the technology*



**Teacher survey:** *Parents are not bothered about online safety*



**Teacher survey:** *Parents feel they are aware of what is happening*

## Teacher engagement with parents

The data here has shown that whilst teachers do communicate with parents surrounding ET usage, for the most part this is one directional:

**Teacher survey:** *Regularly through internet safety newsletters*

In instances where two-way communication is present, it tends to be in reaction to an issue that has occurred:

**Teacher survey:** *Rarely, unless a safeguarding issue has been noted and raised.*

Parents tended to want their children to have devices with them on school trips:

**Teacher survey:** *Contract signed by parents prior to trips - students allowed to take with them*

•

**Teacher survey:** *Yes, they tend to want children to have phones on them. This is only allowed for residential and some long distance trips so they can take photos*

•

**Teacher survey:** *Yes - they want them to take phones to call them when they arrive / every night at bedtime etc. But we do not allow this, as teachers will call if necessary.*

•

**Teacher survey:** *Yes, parents have asked but we do not allow it. It would not be appropriate for pupils to phone/ message or even video other adults.*

In some schools, parents and teachers had no contact regarding ET use because they had a direct contact for this:

**Teacher survey:** *No. This is a pastoral issue and one for our 'Director of e-learning'.*

### School ethos toward technology use

It seems most schools were on the same page when it came to ET use in that there was a total ban:

**Teacher survey:** *Not allowed in school*

Some schools were slightly more flexible and let students use ET within lessons, however use outside of these times were banned. Many teachers felt this was a shame because the devices can be used proactively, however the risks outweighed these benefits:

**Teacher survey:** *Good, they can be distracting and it's a safeguarding issue.*

•

**Teacher survey:** *It's helpful having a clear, unambiguous rule for behaviour and safeguarding purposes, but it's a shame we can't harness the students' personal tech for learning purposes.*

•

**Teacher survey:** *Not helpful and not preparing young people for the world they are entering we should teach them to be responsible with tech and use it effectively. A waste of a resource.*

### Theme five: Digital inequality

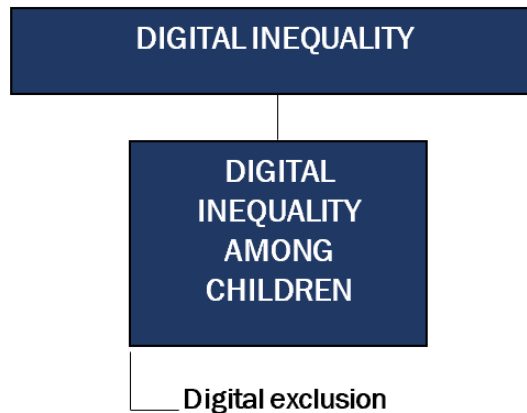
This theme has evidenced how online and offline outcomes are linked when it comes to access of ET for the child consumer. This was intensified throughout the lockdown environment whereby children were not at school and were reliant on ET to communicate with their friends as well as complete their school work. In terms of the reasons for exclusion, it appears socio-economic factors play a key role here, however some students' carers were not keen to introduce them to ET whether this be because of the responsibility, the cost or not knowing how important the device would be for their child's social outcomes.

Figure 6.17: A detailed summary of theme five from the teacher survey higher theme: Digital inequality



THEME	SUB THEMES	MEMO
DIGITAL INEQUALITY	Digital inequality among children	This sub-theme identifies the different elements of exclusion that were evident throughout the discussion within the survey. These elements include reasons why children were excluded and what impact inequality has within the school environment and lockdown context.

Figure 6.18: A summary of theme five from the teacher survey higher theme: Digital inequality



### Digital inequality among children

The theme of digital inequality indicates that children without access to ET are hindered from opportunities to develop their digital skills which in turn realises both educational and social outcomes within the context of the school environment:

*Teacher survey: They can't talk about the same thing as their peers, they might not be able to do the same work*

•

*Teacher survey: Children will talk about games or conversations they had the night before, and children without these games can feel left out.*

•

*Teacher survey: Absolutely. They miss out on opportunities for education, world view, socialising, entertainment and leisure etc*

Some teachers noted that exclusion prohibits some schools from rolling out e-safety to all students because it is insensitive to do so when some do not have access. It can also make it more difficult to use ET within schools if not all students have the same technical skill or knowledge of the apps/systems:

*Teacher survey: Engaging for pupils but problematic for accessibility depending on the soci economic background of some pupils. Needs to be approached sensitively and always have a back up e.g buddy up.*

•

*Teacher survey: Not really, very discreetly when schools closed for covid19. This can cause embarrassment and upset for those who can't afford it.*

For some, this was a parental choice:

***Teacher survey: Yes, those without smartphones during lockdown have not has as many social interactions as in school. However, I understand why some parents are sceptical and don't allow their children to have smartphones***

The discussion differed depending on the age of children:

***Teacher survey: Not at this age. Smartphone use age 9-10 is still in a minority***

•  
***Teacher survey: Yes. Especially as they reach year 5 and 6. There are complete social groups that they are not part of when their friends have smartphones and they don't.***

•  
***Teacher survey: By the time they get to Year 9, yes probably. I had some students in my year 7 class this year who did not have them. This lasted till about Christmas - by then they all had them and I suspect this was because of wanting to fit in.***

One teacher did not see this as a bad thing:

***Teacher survey: It is not necessarily a bad thing and the children without smartphones are still included and well-liked at school.***

### 6.3.2 TEACHER INTERVIEWS

Theme one added to the findings of the focus group and the survey by further demonstrating how schools were exemplifying ET use in different ways. One school gave every child access to their own iPad, another had a very enthusiastic IT lead who was given a lot of responsibility, and another felt technology could have been better utilised prior to the pandemic. Theme one also highlighted how crucial teacher engagement with ET is, although the school provided iPad's to every child, if the teacher was not keen on this, they were not used in their lessons. In other situations, the IT lead was particularly motivated to utilise ET, so although the school did not have the funds to give every child access to an iPad, this teacher was the driving force behind the training of other staff members to ensure ET was well embedded. The impact on the child consumer speaks to how there can be such variances within schools, and these variances are deeply embedded. For example, the school that was well funded, did not have the staff support and ET was not utilised in their lessons; whereas schools that were less well funded, had more proactive staff who made more effort to embed ET.

Key findings from theme two were how teachers viewed the changes within their use, the child and familial use of ET as a result of the COVID-19 lockdown environment. This interrelated the findings of theme one whereby simply having the time and experience of using ET and seeing the benefits of this (although under difficult circumstances) meant changes were made resulting from this experience. For example, the teacher who was not keen on using iPads in lessons, realised many other benefits of ET that were previously unknown. The teacher who was already keen to train staff, was forced to make this a more efficient process. For the child, most changes were significant, and shown through the new ways the teachers used ET, the permanence of these changes were detailed within theme three and four. Inequality was an issue for the child consumer during this time, which was difficult for teachers to manage, of all the negative connotations mentioned surrounding the changes forced by the pandemic, this was the most severe. Especially given how reliant children were on ET for education and teacher support.

Theme three highlighted which changes were suitable to be carried forward in a post-pandemic education environment. For the teachers, there were many efficiencies gained which helped lessen

their workload such as how in-class work was set and managed, how homework was set, marking and feedback, engagement and communication with parents and colleagues. For most schools, these changes were being made permanent, although one noted their school would not go back to this. Other changes included having plans in place if a child was absent for any reason, as well as the promotion of independent learning, an outcome of the child's digital skills (if developed enough).

Theme four exemplified changes as a result of the pandemic that were not suitable to be carried forward within the education context. The most significant here were online lessons, not only was it tiresome to have so much screen time in a day, but not all children had access to the lessons at the same time, and it was difficult to communicate and give feedback on a more individual level, meaning although lessons were delivered, the intended outcomes were not always met without face to face opportunities.

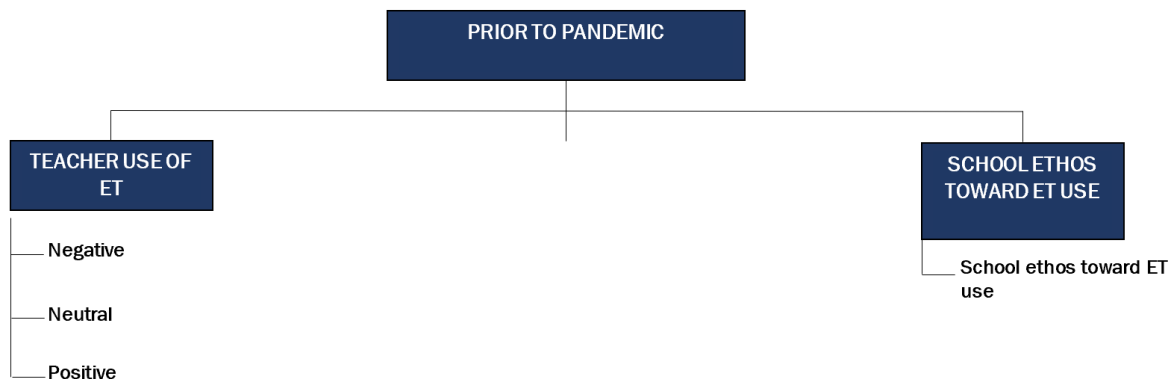
### Theme one: Prior to pandemic

Theme one has shown insight toward the differences between school culture and how this translates to the classroom. All teachers interviewed had some aspect of ET integrated within classrooms, however the best example of good practice came from the teacher taking the initiative to seek outside help and advice as opposed to being influenced by the school. This has demonstrated an independence of the teacher and school ethos toward ET use. It is clear overall that more could have been done to utilise ET within these schools prior to the changes of the pandemic.

Figure 6.19: A detailed summary of theme one from the teacher interview: Prior to pandemic

THEME	SUB THEMES	MEMO
PRIOR TO PANDEMIC	School ethos toward ET use	This sub-theme illuminated the aspects of ET use that represented the school ethos surrounding it's use prior to the pandemic.
	Teacher use of ET	Data here shows how the teachers used ET prior to the pandemic.

Figure 6.20: A summary of theme one from the teacher interview: Prior to pandemic



## Prior to pandemic

When making considerations about the school prior to the pandemic, one teacher described the school as an iPad school. However, they did not conform to this culture until they had to during lockdown:

**Teacher 1 (F) interview:** *Erm well my school is an iPad school, all students have iPads as part of their equipment so we are quite up with technology anyway as a school*



**Teacher 1 (F) interview:** *But personally, I wasn't a fan so I didn't use them very often erm in fact I avoided them all costs really. Erm during lockdown that err obviously completely changed – everything we do was over Zoom.*

Others felt more could have been done to integrate ET prior to the lockdown:

**Teacher 2 (F) interview:** *I felt like I was not contributing as much as I wanted to, or could*

There were also examples of schools that introduced some of the necessities of lockdown prior to the pandemic and teachers who excelled when integrating ET during this time:

**Teacher 3 (F) interview:** *I was leading the school through the changes for IT and I was introducing Google classroom before COVID-19 was a word, you know?*



**Teacher 3 (F) interview:** *I needed to stay a step ahead of the rest of the staff anyway. Erm and it just meant, I mean I ended up doing lots of online extra Google Classroom training and such like and then starting to use things like screen cast and things I had no use for in the classroom as such but suddenly, you know, I had huge use for. And actually I found that I'm now using it in the classroom as well.*

For this particular teacher, the motivation to integrate ET stemmed from them reaching out to friends in other schools:

**Teacher 3 (F) interview:** *How we could integrate technology more into our day to day class room without it being onerous sort of was the idea. And then it was a case of speaking to various people, erm a good friend of mine is a, erm a deputy head at a local comprehensive school.*

**Teacher 3 (F) interview:** *Obviously in secondary school's things are very different, you know your uses of things. He's also been seconded out a few years ago to work for Microsoft and such like so he's very very IT, even though he's head of music [laughter], he's IT minded. And so I spoke to Graham [name changed] and said how can I integrate, what can I do to sort of make that as simpler process so that, because whenever you give them IT, the children are always like [moaning voice] Miss this doesn't log in, Miss, I can't remember how to... It was that, okay how do we get past that, to make it independent learning.*

**Teacher 3 (F) interview:** *So he suggested looking into using Google Classrooms*

**Teacher 3 (F) interview:** *So that was the reason we had started using it*

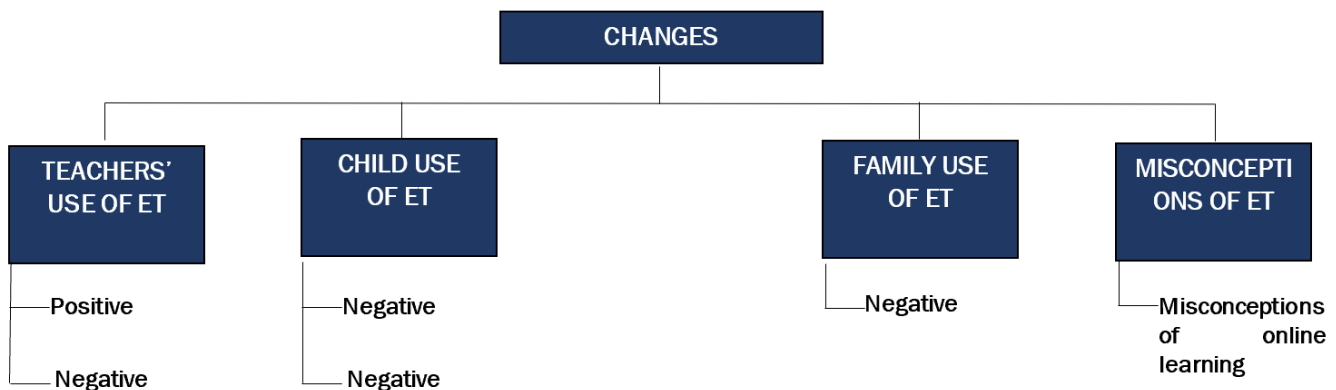
## Theme two: Changes as a result of the COVID-19 pandemic

Theme two detailed the changes stemming from the lockdown environment. It is clear for the teachers there were many positive changes, particularly relating to efficiencies within their workload. For the children, some changes were positive as some enjoyed using ET for their homework etc. But accessibility was sometimes problematic, especially if devices were shared within the household. For the carers of children, the teachers felt that apart from communicating or being able to engage with the teachers with more ease, the burden of online schooling was immense. This may have stemmed from their lack of skills or devices within the household.

Figure 6.21: A detailed summary of theme two from the teacher interview: Changes as a result of the COVID-19 pandemic

THEME	SUB THEMES	MEMO
<b>CHANGES AS A RESULT OF THE COVID-19 PANDEMIC</b>	Teachers use of ET	The sub-theme shows data that speaks to how the teacher's use of technology changed as a result of the COVID-19 pandemic.
	Child use of ET	The children's use of ET changed both in and outside of the context of the school environment, data here reflects the teacher's knowledge of this.
	Family use of ET	Data showed that the way teacher's communicated with families changed as a result of the pandemic, and enabled insight into how ET was being used at home during this time.
	Misconceptions of ET	This sub-theme indicates where teachers had their perception of ET changed as a result of previous misconceptions.

Figure 6.22: A summary of theme two from the teacher interview: Changes as a result of the COVID-19 pandemic



## Teachers' use of ET

It is clear from looking at the changes as a result of the pandemic that teacher use of ET changed dramatically, for the most part, these changes were viewed positively as they enable efficiencies toward teacher workload, engagement with parents and communication with colleagues:

*Teacher 1 (F) interview: Erm but once you've grasped the technology and you know what you're doing then now its....you know not having to print off all your worksheets or you know [unclear word used] [5 second silence on recording] so you don't have to print it. Its just....you know it saves money as well*

*Teacher 1 (F) interview: Yeah never print a worksheet out anymore*

*Teacher 1 (F) interview: Erm so that....and its something that because obviously because our students have iPads so automatically in a lesson they get out their iPad as part of their equipment along with their book*

*Teacher 1 (F) interview: And then we....you know...its just go to your class, you'll find in there this information so they read it on the screen and then do the work in their book*

*Teacher 1 (F) interview: So its completely changed the way...[laughter] certainly in the way that I work*

*Teacher 1 (F) interview: Its amazing really erm yeah so I sort of wish I had done it sooner I suppose*

Other efficiencies included communication with parents:

*Teacher 1 (F) interview: We've got a higher turnout now I think on the last two parent's evenings that we would normally have on a walk in parents evening*

Efficiencies were made with written communication to parents also:

*Teacher 1 (F) interview: Sorry, we use another erm system which is called 'Edulink'*

*Teacher 1 (F) interview: Which is erm kind of a whole school sort of communication system and again it was in place but we only used certain bits of it. So during lockdown we started using this facility where you can email parents...all the parents of a class*

As well as communication with colleagues:

*Teacher 1 (F) interview: Meetings as well for me*

*Teacher 1 (F) interview: Face to face meetings what for?*

It also made communication with the school boards more accessible to parents:

*Teacher 2 (F) interview: I found it actually so good to do those meetings online where I didn't actually have to be in a certain place, at a certain time.*

Other efficiencies included how feedback was given:



*Teacher 1 (F) interview: Erm they write their answers to questions and what have you in Showbie, I mark it electronically. Erm so everything changed really.*

As well as how homework is set:

*Teacher 1 (F) interview: So that students, you know obviously that's like a kind of knowledge quiz so that's it, that's their homework, and they do it electronically, it comes back to us electronically. We can see who's done it, who hasn't done it, we can see how many they've got right. So yeah*

Some schools experienced changes, because of lack of access to ET:

*Teacher 3 (F) interview: The three that ended up without, there was no, erm, they, with one of them it was a case of the child was struggling educationally anyway, and so was mum. Mum was like oh I don't know what to do on it, so I said don't worry, we'll sort your paper work. So we were posting paper work to that family every week. And the other two were a brother and sister in the same house, and they just couldn't, they had no Wi-Fi, you know, they just had no way of being able to log on*

Prior to, and during the pandemic, it was the norm for teachers to have written lesson plans, however some school leaders were happy to utilise the online format and create efficiencies:

*Teacher 3 (F) interview: Some schools have head teachers who made them write incredible amounts of paper work to go with what they were doing and things. Ours actually just said look, just give me one word, two words for each task, I can go into your Google Classroom, I can see the whole plan, I can see the whole journey, I can see the tasks*

The school leader prioritised the teacher's upskilling, and was able to support this as best they could:

*Teacher 3 (F) interview: And then you didn't have that, you didn't have that consistency through your school, so you didn't have that at all, but I dunno how much of that is teaching. I mean at one point, quite early on, the boss, our head, did erm, she said right this week, I'm teaching your class, you're supporting staff. Just get in there, and support staff.*

This in turn prompted further efficiencies when it came to supporting staff:

*Teacher 3 (F) interview: And I did um, I did an online training every day with them and they were all recorded, so they had all that.*

*Teacher 3 (F) interview: I did sort of bespoke training to where their problems were and did sort of er, drop in sessions you know like I'll be available between this time and this time and if you've got anything, drop me a message and we'll, we'll Teams or whatever and we'll sort it out. So there are, I don't know how many video's stored on my computer of me teaching how to do, how to log in to this, how to log in to that, how create a video on castify, all those little things that were, were just so invaluable.*

The main negatives stemmed from the pro-longed screen time that often lead to fatigue and difficulty managing their workload:

**Teacher 1 (F) interview:** *Erm I had one day where I had....we did a taster, a taster day for our sixth form and I did five sessions back-to-back during the day. Then had a parent's evening straight afterwards and it was, I think it was nine hours in total just on a screen. I never realised how, you know, how draining that is. Just by the end of it your kind of bog eyed it was awful*

Unless school leaders knew the kind of work that went into preparing online sessions, workload was problematic:

**Teacher 3 (F) interview:** *I don't need onerous planning on top of it, before we do it, because she understood the amount of time it takes to prepare those video's. I mean just to stand and jump for a two minute video takes you at least 20 minutes [laughter]. By the time, you know, the cats walked across the screen, or the dogs barked, or the door bell's gone, or you've forgotten what you were saying mid-sentence and then you know, all those things, even with a two minute video. While you're in the class room you'd just say did I say that then? Have I told you about this? And then you'd just get on with it wouldn't you? But, in that situation, she understood that it was taking us, many, many, many more hours to prepare things and get things up online, so she basically scrapped planning. We had erm, we kept excel sheets which showed, erm, I mean mine might say, say on Monday's it might say literacy- comprehension, math's- addition, topic- researching this, you know it was as simple as three or four word things so that was quite nice not to be, not to be expected to do those extra things. Which was rather lovely, I know a lot of schools are glad to see the back of, you know having to do everything in duplicate, but, so we didn't have that issue.*

Equality of access was also an issue within some schools whereby online access was not possible in all households, and logging in during school hours was not always possible because parents needed to use the technology for work:

**Teacher 2 (F) interview:** *Erm where you know the teachers then would be calling their house and saying you need to be doing more of the work that we assign. Erm and some children didn't have the, erm, equipment that was necessary to do things online, so the school provided laptops for those families, and hand delivered them to...you know brought them to the family's houses. Erm, and then some of those children were able to do more work and some of them still weren't able to do any work because internet connection was choppy or non-existent. So that was errr a different erm situation as well. And some of the children erm, some of the parents/families made a request for the work to be delivered by hand printed out. So that the children would be able to do it with no technology whatsoever necessary, and some of those children did do a good response, with, you know, the paper, so I think the school tried to like make it as easy as possible for everybody in every situation.*

Sometimes the concern was from not being able to see and interact with certain children every day:

**Teacher 3 (F) interview:** *I mean we have got a few families where we have concerns and things and you know and not knowing that those children were okay and sometimes children not being online for maybe you'd miss them for four or five days and you're like, what's happening, what's wrong, why are they not there.*

Although infrequent, some children's behaviour was a lot more difficult to manage within the online setting, leading to some upsetting instances for teachers:

*Teacher 1 (F) interview: You know it was really difficult, erm, we had a few incidences of erm people/students erm kind of infiltrating other students identities*

*Teacher 1 (F) interview: and [unclear word] and erm shouting abuse at staff*

### Child use of ET

In contrast to the teacher's use of technology, for the child consumer, the lockdown environment presented many challenges. The challenges mentioned were based on not having the option to come into school, this meant issues of equality and no face-to-face lessons:

*Teacher 2 (F) interview: Some children loved using Seesaw, they loved you know having the online work, but they still would have preferred to be in school because they could see their friends that way. Some children didn't like the Seesaw work, including my daughter, because it was really annoying to have to do even though she liked the.....even though the young children liked the content of the work it was made more difficult by being, you know, yes something you had to do digitally. And then some children didn't participate very much.*

*Teacher 2 (F) interview: Some children didn't have the, erm, equipment that was necessary to do things online, so the school provided laptops for those families, and hand delivered them to...you know brought them to the family's houses. Erm, and then some of those children were able to do more work and some of them still weren't able to do any work because internet connection was choppy or non-existent. So that was errr a different erm situation as well*

*Teacher 2 (F) interview: Erm and....let me think [pause]. I think some of the children said they hated it but then some of the children don't enjoy being at school anyway [laughter]*

Bullying also took place:

*Teacher 1 (F) interview: Just awful, and then you know the odd incidence of kind of name calling within the class.*

Although some aspects were positive, this was underwhelming in comparison to the positives for the teachers:

*Teacher 1 (F) interview: Erm they write their answers to questions and what have you in Showbie, I mark it electronically. Erm so everything changed really.*

*Teacher 1 (F) interview: Erm also scan and take a photo of students work and have it in, erm, an app called 'Explain Everything'*

*Teacher 1 (F) interview: That majority of students I think dealt really well with it.*

### Family use of ET

The main issues with the family use of ET stemmed from the child's lack of appropriate access to technology, meaning children and parents could not work or go to school at the same time as would be the norm. This resulted in children completing their schooling later on in the day or having offline work to do:

**Teacher 3 (F) interview:** *The creative or physical and there was always a topic lesson then, so we tried to stay as close to normal as we possibly could. Erm, we held, we had, everything was um, whats the official term? Asynchronous. We didn't do any live teaching, because we were very aware of our catchment where we had homes where there were devices being shared, homes where the children were at Grans and they wouldn't be doing their work until Mum got home type of thing. So people were for a lot of reasons were unable to log on at specified times.*



**Teacher 3 (F) interview:** *So we made the choice not to do any live teaching because the children had at least two videoed sessions a day. So it might not have been creative, they might have just written up this is what I want you to do, or this is what I want you to go off and do but there were actual teaching video's. We thought it was very important for them to make sure they were still being taught and still trying to continue with our curriculum as far as possible.*

**Teacher 3 (F) interview:** *we did set up three times each week where each class did a Google meet, sort of a wellbeing check in type, you know. And we just did, we had silly quizzes, you know, we had days where we said, you know someone has to bring something that helps you when you're feeling down and then you chat around the class, tell me why you brought that then? Why does that help you? And just sort of wellbeing activities three times a week, every week, every class had their individual time, and day to do those things on, so no classes clashed. So anyone who was sharing devices and things, you know, you could, there was a half hour block before the next class so you could, in their homes you could log out and then the next child could log in type thing. So there was a little bit of that face to face going on but, but basically, if they didn't attend that, it wasn't the end of the world, they hadn't missed actual teaching. So, and I think all children managed to attend at least once through the week you know.*

When discussing the online fatigue and issues of distinguishing between workspaces and other areas of the household, the teachers recognised this was also problematic for some parents:

**Teacher 3 (F) interview:** *Yes, and I know it was the same for our families wasn't it? The home space and school space became very much all one thing, didn't it? And erm, I'm sure it was the same for them as well.*

In some instances parents simply did not have the skills to facilitate their child's online learning, one school went above and beyond to support them, however with bigger schools this was not possible:

**Teacher 3 (F) interview:** *You know, it's not as much for them to try and re-learn it, I don't have to be going and knocking on doors and standing two meters away from a mother saying right if you click that button in the top, no, no, no, the top left... [laughter]*

**Teacher 3 (F) interview:** *I was 2 meters away, at the door step [laughter] that was very interesting at the beginning of the first lockdown, there were a number of times I went out and did that. And being the IT lead, I did it for children who weren't in my class as well as my own, so I was constantly out and about doing things.*

## Misconceptions of ET

The misconceptions surrounding online learning mainly stemmed from how easy it was felt people thought ET was being used during lockdown, whereas the reality was far different where both teachers

and children were learning how to work in this new dynamic, which was more time consuming than people thought:

*Teacher 1 (F) interview: Erm and I think people thought that teachers were all having a great time sitting at home*



*Teacher 1 (F) interview: Yeah I saw a lot of those little videos where all the kids were getting up and dancing in the class and I thought oh yeah that would be brilliant I wish my class would do that*

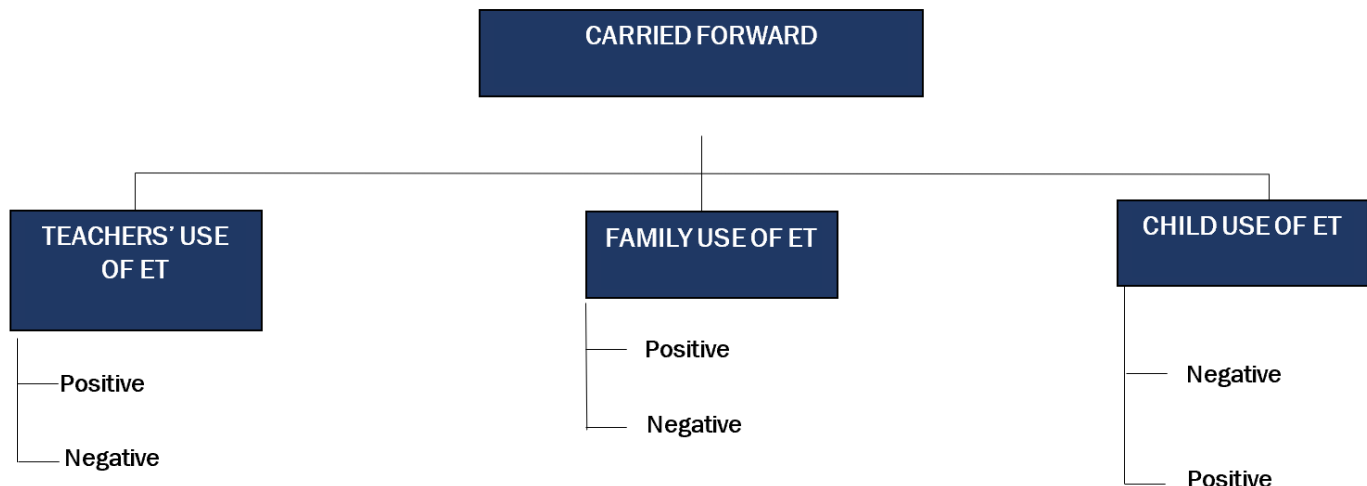
### Theme three: Changes carried forward

Theme three indicated there were many positive changes for teachers, the family and by extension, the child consumer as a result of how technology was used during the lockdown environment. Direct benefits to the children include the opportunity to use ET within the classroom and at home, not having to be concerned with remembering workbooks or sheets, as well as integrating skills of independent learning afforded through ET access. More indirect forms include their teachers gaining efficiencies with marking and feedback, as well as feeling less burdened by their workload as they do not have the need to do as much printing, to communicate to parents with updates, and can attend meetings online. The parents are also able to be more engage with the school and their children’s education, in turn this means they can take a more supportive role as they have access to more knowledge.

Figure 6.23 : A detailed summary of theme three from the teacher interview: Changes carried forward

THEME	SUB THEMES	MEMO
CARRIED FORWARD	Teachers use of ET	This sub-theme reflects permanent changes toward how teachers use ET as a result of the COVID-19 pandemic.
	Child use of ET	Data represents how the COVID-19 pandemic has influenced the way children use ET within the education context.
	Family use of ET	The teachers opinion on how COVID-19 is responsible for permanent changes surrounding the family use of ET is demonstrated here.

Figure 6.24: A summary of theme three from the teacher interview: Changes carried forward





## Teachers' use of ET

Overall, it seems the teachers will be making many permanent changes toward how ET is used in a post-lockdown environment. Many of these changes will mean time is saved so they do not have to print worksheets, mark work books or set written homework- this is all done online:

*Teacher 1 (F) interview: Yeah never print a worksheet out anymore*



*Teacher 3 (F) interview: We've actually made a conscious decision as a school to make sure we are continuing to use the IT. A, that independent learning, has hit a whole other level and B, I mean, we all, fingers crossed that it's all gone away and all that but there's no guarantee is it, that we don't get another. It's only one positive case in your classroom and then you're all back online learning again. So just keeping that ticking and using what we learnt, you know?*



*Teacher 1 (F) interview: And erm, yeah it is brilliant, its really good. Tend to only use it for A-Level students because you've got to upload it, then you've got to send it, and....so to do it for a lot of students is just, is just impossible. Erm but I use that a lot and that's something that you know I have carried on using, and I've carried on using Showbie*

This has also changed the way they communicate with parents as they can see what work has been set online, and whether this has or has not been completed:

*Teacher 1 (F) interview: Erm and I think the way that as well the school works - like Zoom Parents Evenings*

Online meetings:

*Teacher 1 (F) interview: Meetings as well for me*

Further to this, when they are doing quizzes either in class or as part of a homework assignment, the answer is automatically given to all students, without the need to mark the workbooks individually:

*Teacher 1 (F) interview: That I.....yeah so that's kind of everything again is done electronically so we've done away with you know homework diaries/planners that students used to have. Now we did have that pre-lockdown but erm but it was used a bit ad hoc really you know it wasn't a whole school thing. Now again everything is set electronically.*



*Teacher 3 (F) interview: All homework is set by Google classroom or SeeSaw.*



*Teacher 1 (F) interview: Erm we set electronic quizzes as homework now*

As well as how to mitigate issues such as temporary absence:

*Teacher 2 (F) interview: In cases of like a kid has to be out of the country for two months – OK well you can have your work on Seesaw, or a kid is sick and has to be off school or is like recovering from an illness or an operation or whatever. If there is any reason like a child can't be in school for a longer period of time, probably the school will be saying 'Ok you are used to Seesaw now and now you can have your work on Seesaw'.*

Some of the negatives surround the reliability of connections and fatigue that can result from starring at a screen for too long:

**Teacher 1 (F) interview:** *Yes that is the downside. I mean I had a parents evening last night and there were some parents who couldn't hear me so had to write down things on a piece of paper and hold it up in front of the camera*

●  
**Teacher 1 (F) interview:** *But yeah erm I agree Zoom meetings are....can be, especially if they are long*

**Teacher 1 (F) interview:** *Can be pretty, yeah, pretty draining*

### Family use of ET

When considering how the families use of ET changed during lockdown, and which changes are being made permanent, the teachers perception seemed to shift. During lockdown, they accounted many negative changes, however after some time of considering how this could work long term, there were mainly positive changes for the family. These changes included them being more engaged with their child's schooling whether this was because they didn't have to come in for meetings, or because they could log in and get a status update on how their child was doing with homework etc. Without having to make time to communicate with the teachers during teaching/work hours:

**Teacher 1 (F) interview:** *Erm but yeah parents get a login, students get a login so parents can go on everyday if they need to and check what homework's been set and whether its been done.*

●  
**Teacher 1 (F) interview:** *I know that some parents on the other side who've said they much prefer it because they just sit at home*

**Teacher 1 (F) interview:** *You know they don't have to come out of school, they don't have to sort out childcare its yeah.....so that we'll definitely keep.*

**Teacher 1 (F) interview:** *We've got a higher turnout now I think on the last two parent's evenings that we would normally have on a walk in parents evening*

This could be problematic for some who are not skilled to use ET:

**Teacher 1 (F) interview:** *Erm you know its like anything I suppose you've got some parental engagement erm but yeah they can absolutely keep up to date with it, and then if you have an issue erm, and you know you've got to ring the parent or whatever, and they say 'but they've done all their homework' you can just kind of point them to 'well if you look there you'll see what they've actually have*

### Child use of ET

When it came to the child's use of ET that teachers felt should be carried forward, this included the child's ability to stay up to date with work if they were absent:

**Teacher 2 (F) interview:** *If there is any reason like a child can't be in school for a longer period of time, probably the school will be saying 'Ok you are used to Seesaw now and now you can have your work on Seesaw'.*

As well as promoting independent learning:



**Teacher 3 (F) interview:** *We've actually made a conscious decision as a school to make sure we are continuing to use the IT. A, that independent learning, has hit a whole other level and B, I mean, we all, fingers crossed that it's all gone away and all that but there's no guarantee is it, that we don't get another. It's only one positive case in your classroom and then you're all back online learning again. So just keeping that ticking and using what we learnt, you know?*

On the other side of this, sharing equipment was not suitable during the adjustment phase after lockdown:

**Teacher 2 (F) interview:** *Talking about resuming school but still being in a sort of restricted, erm, time...I think some of the things that changed from when it was sort of 'normal' time at school is that we used laptops less frequently in the classroom*

**Teacher 2 (F) interview:** *Because they have to be wiped down.*

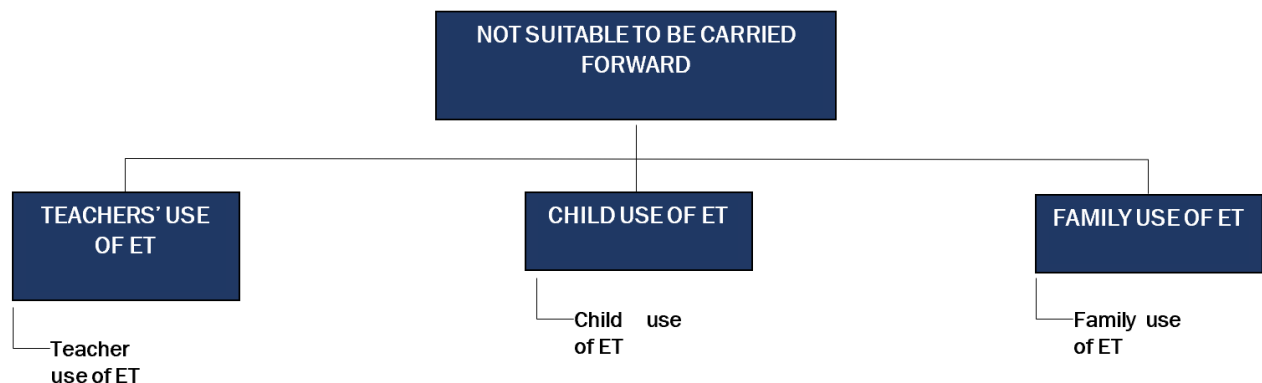
#### Theme four: Not suitable to be carried forward

Theme four has highlighted some of the negative changes that resulted from lockdown that many teachers do not think would be suitable when face to face teaching resumed. The main element here was zoom classes and the issues they brought, however not having to be online was also a prominent element that wouldn't be missed. In some instances, homework, feedback and engagement with parents will look different from school to school. Some felt this brought efficiencies and increased the parent's ability to communicate whereas others felt their pupils preferred the opportunity to use their workbooks and not have to be online.

Figure 6.25: A detailed summary of theme four from the teacher interview: Not suitable to be carried forward

THEME	SUB THEMES	MEMO
NOT SUITABLE TO BE CARRIED FORWARD	Teachers use of ET	Data here represents any negative changes that took place as a result of the lockdown environment that teachers will not continue to utilise.
	Child use of ET	This sub-theme interlinks the other sub-themes by considering what direct and indirect changes were put in place to facilitate online learning during the lockdown environment, but were temporary and not suitable when the lockdown was lifted.
	Family use of ET	The data within this sub-theme shows which use of ET that was expected from the family during lockdown, were not expected when the schools went back to face to face teaching.

Figure 6.26: A summary of theme four from the teacher interview: Not suitable to be carried forward



## Teachers' use of ET

### Teachers' use of ET

The main changes as a result of lockdown that will not be carried forward include online teaching and the difficulties or issues that came from this:

**Teacher 3 (F) interview:** *You know, it's that, it's having them in front of you, is very very different.*

•

**Teacher 1 (F) interview:** *You were able to.....you had a bit of a sort of debate and we used to use the chat box on Zoom to kind of ask questions, but it was just laboured.*

•

**Teacher 1 (F) interview:** *Just that screen time as well for hours*

As well as the task of having to manage the inequality of access and skills to use devices:

**Teacher 3 (F) interview:** *I was 2 meters away, at the door step [laughter] that was very interesting at the beginning of the first lockdown, there were a number of times I went out and did that. And being the IT lead, I did it for children who weren't in my class as well as my own, so I was constantly out and about doing things.*

**Teacher 3 (F) interview:** *Those things I won't miss*

What was a positive change for some schools (such as setting homework online), was negative and not suitable in a post-lockdown environment for others:

**Teacher 2 (F) interview:** *Yeah, I think that.....erm those...the....having homework assigned on Seesaw I think when that goes back to doing it in paper format with workbooks, I think everybody will be relieved but its not something that we absolutely hated or anything.*

School assemblies face to face will also be resumed:

**Teacher 2 (F) interview:** *Not that they were bad assembly's but I think people will be really happy to do school assembly's in the actual hall with the usual way of doing things, with everybody surrounding each other because that has such a nice sort of whole school feel to it*

Some changes that were preferred, were not going to be made permanent however:

**Teacher 2 (F) interview:** *Especially for Governor's meetings – its so much easier not to have to go back to the school in the evening and then come home again. Erm and so I'm hoping that I won't see the back of that but I'm pretty sure that we'll go back to face-to-face meetings when we can. But I think they'll probably because the school is very very cautious about things.*

However, positives were likely to be made permanent:

**Teacher 3 (F) interview:** *We take a very positive spin, and we will be keeping just about everything that we actually learnt*

### Child use of ET

#### Child use of ET

The majority of changes not suitable for children in the post-lockdown education environment included online lessons as they were no substitute for face-to-face teaching, one school found bullying was more likely in this setting:

**Teacher 1 (F) interview:** *Just awful, and then you know the odd incidence of kind of name calling within the class. To other students which erm yeah you get but yeah it's the kind of keyboard warrior thing I suppose isn't it. You're safe behind your computer screen and nobody can come and kind of do anything*

### Family use of ET

#### Family use of ET

The teacher perspective on what changes would not be carried forward for families included blending the home and school space, although to a degree, children will still be expected to do their homework at home and in the event of absence, these lines would be blurred again:

**Teacher 3 (F) interview:** *Yes, and I know it was the same for our families wasn't it? The home space and school space became very much all one thing, didn't it? And erm, I'm sure it was the same for them as well.*

For the most part, teachers felt the best thing about going back to face to face teaching was that they wouldn't have to deal with issues that stem from inequality as much:

**Teacher 3 (F) interview:** *You know, it's not as much for them to try and re-learn it, I don't have to be going and knocking on doors and standing two meters away from a mother saying right if you click that button in the top, no, no, no, the top left... [laughter]*

## 6.4 CHAPTER SUMMARY

This chapter has extended the contributions of the findings from phase one of the project by detailing the analytical method and findings from the teacher survey and interviews. In doing so, the education context which is the focus of objectives three, four and five have been achieved. In summarising phase two, it signifies the end of the data collection methods for the teacher participants. To summarise how each data collection added value to the triangulation technique, **figure 6.27** below has been used to summarise this:

Figure 6.27: A summary of the progression of data from the teacher data collection methods

TEACHER FOCUS GROUP: PHASE ONE	
THEME	SUB THEMES
1. TEACHERS PERSONAL CONSUMPTION	Childhood nostalgia Technology ideology Teachers' own consumption Teacher skill rating
2. TEACHER'S VIEWS SURROUNDING CHILD TECHNOLOGY USE	Teacher opinion on parental management of devices Teacher opinion of device usage at home Teacher opinion on the impact of device usage within the education environment
3. MANAGEMENT OF DEVICES WITHIN SCHOOL	Management of devices School ethos toward technology use
4. DIGITAL INEQUALITY	Digital inequality among children
TEACHER SURVEY: PHASE TWO	
THEME	SUBTHEMES
1. TEACHERS PERSONAL CONSUMPTION	Technology ideology Teachers' own consumption Teacher skill rating <b>Childhood nostalgia was not sub-theme within the survey, but was a subtheme of the focus group.</b>
2. TEACHER'S VIEWS SURROUNDING CHILD TECHNOLOGY USE	Teacher opinion of device usage at home Teacher opinion on child technology use Teacher opinion surrounding responsibilities for socialisation  <b>Teacher opinion on parental management of devices and the impact of device usage within the education environment were not sub-themes in the survey but were in the focus group.</b> Teachers were more specific around device usage that took place within each environment within the survey. The sub-theme of the impact of device usage within the education environment then became its own theme. The sub-theme of parental management of devices was better placed within the management of devices within school theme. Communication with parents was found to be a part of the school's device management process and was more appropriately placed there.  <b>Sub-themes that were added were teacher opinion on child technology use and teacher opinion surrounding responsibilities for socialisation.</b> The focus group identified there was a divide between a school issue and home issue and so more questions were asked around these topics which meant further sub-themes emerged.
3. THE IMPACT OF DEVICE USAGE WITHIN THE	Issues in school Teacher opinion toward child ET use within the educational environment Teacher opinion on the impact of ET usage

<p><b>EDUCATION ENVIRONMENT</b></p>	<p>Issues in school and teacher opinion on the impact of ET usage were added as subthemes within this theme for the survey.</p> <p>Because of learnings from how prominent the impact of ET usage was within the education environment from the focus group, questions were asked specifically around this. This theme extends on the findings within the focus group in more detail which translates to sub-themes within this theme.</p>
<p><b>4. MANAGEMENT OF DEVICES WITHIN SCHOOL</b></p>	<p>Management of devices School ethos toward technology use Teacher engagement with parents surrounding ET usage Teacher engagement with children surrounding ET usage</p> <p><b>Teacher engagement with parents and teacher engagement with children surrounding ET usage were added as sub-themes within the survey but were not within the focus group.</b></p> <p>As previously stated, at the time of the focus group PSHE was not a mandatory subject, therefore data from the focus group warranted questions surrounding how the schools worked with parents on this, but change within the curriculum meant questions surrounding engagement with children was also prominent.</p>
<p><b>5. DIGITAL INEQUALITY</b></p>	<p>Digital inequality among children <b>Same as focus group</b></p>
<p><b>TEACHER INTERVIEWS: PHASE TWO</b></p>	
<p>The interviews and surveys contextualised the themes from the previous data collection method (the focus group) within the context of the pandemic. The interviews added to the previous data by helping to organise the previous themes and sub-themes in such a way that allowed understanding toward changes as a result of the pandemic, the impact of this and the permanence of any changes that emerged. The sub-themes reflect similar themes/subthemes from the previous methods, but are organised within different themes that reflect the lockdown context.</p>	
<p><b>THEME</b></p>	<p><b>SUMMARY OF CODES</b></p>
<p><b>1. PRIOR TO PANDEMIC</b></p>	<p>School ethos toward ET use Teacher use of ET</p>
<p><b>2. CHANGES AS A RESULT OF THE COVID-19 PANDEMIC</b></p>	<p>Teachers' use of ET Child use of ET Family use of ET Misconceptions of ET</p>
<p><b>3. CHANGES CARRIED FORWARD</b></p>	<p>Teachers' use of ET Child use of ET Family use of ET</p>
<p><b>4. NOT SUITABLE TO BE CARRIED FORWARD</b></p>	<p>Teachers' use of ET Child use of ET Family use of ET</p>

# CHAPTER SEVEN

· PHASE THREE ·

## 7.1 INTRODUCTION

Chapter seven incorporates the data collection and analysis of the parental/guardian participants. The lockdown period also presented the opportunity to incorporate online interviews:

Figure 4.17: Outline of phases one-three of the research project

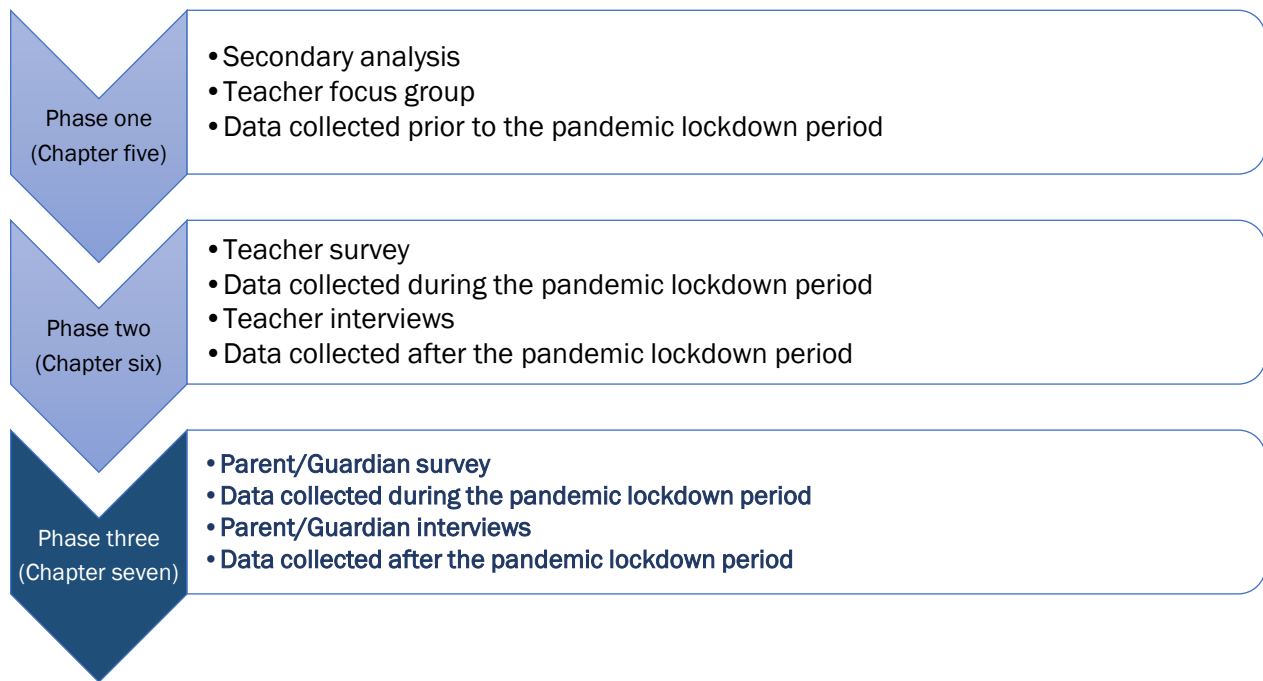
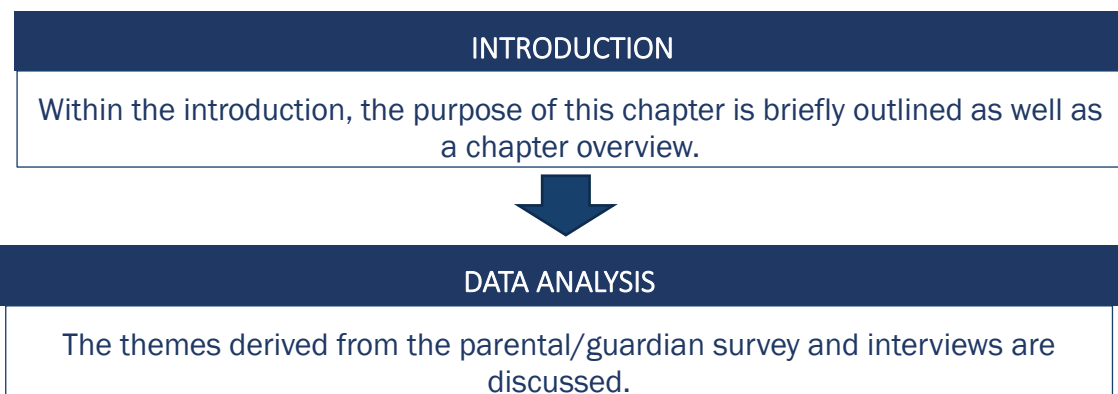


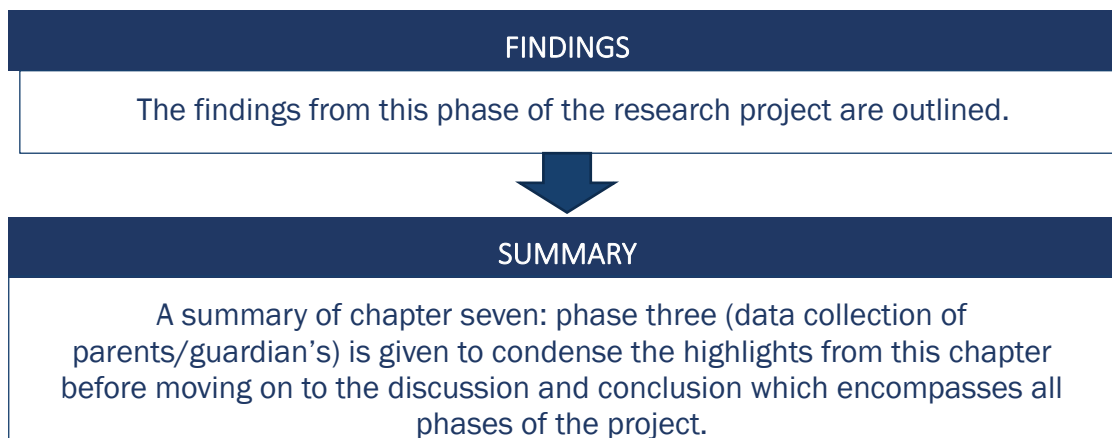
Figure 1.3: The project flow



PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator's perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator's perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

Figure 7: Phase three findings chapter outline





## 7.2 DATA ANALYSIS

### 7.2.1 PARENT/GUARDIAN SURVEY

Figure 7.1: The analysis process: Parent/guardian survey

<p><b>2. READ THROUGH AT LEAST A SAMPLE OF THE MATERIALS TO BE ANALYSED</b></p> <p>A review of all the surveys completed took place to exclude any that were not fully complete. Whilst doing so, a note of potential codes and themes were made within an analysis diary.</p>
<p><b>2. BEGIN CODING THE MATERIALS</b></p> <p>The surveys were analysed one by one, and a list of codes started to emerge. The meaning attached to the codes were recorded within an analysis diary. This meaning was sometimes expanded, or new codes developed.</p>
<p><b>3. ELABORATE MANY OF THE CODES INTO THEMES</b></p> <p>After saturation was reached, the codes and analysis diary was reviewed to start organizing the codes into themes.</p>
<p><b>4. EVALUATE THE HIGHER-ORDER CODES OR THEMES</b></p> <p>Once the themes were generated, the researcher considered the relationship between the themes as well as the codes within the themes themselves. Some of the codes were considered between higher levels (the theme), parent codes and child codes.</p>
<p><b>4A. GIVE NAMES OR LABELS TO THE THEMES AND THEIR SUB-THEMES (IF THERE ARE ANY)</b></p> <p>Names and labels started to be given to the themes within the first stages, however here, time was taken to consider these labels and whether or not there may have been terms that better encapsulated the essence of the themes.</p>
<p><b>5. EXAMINE POSSIBLE LINKS AND CONNECTIONS BETWEEN CONCEPTS AND/OR HOW THE CONCEPTS VARY IN TERMS OF FEATURES OF THE CASES</b></p> <p>The researcher reflected on how the child codes related to each other, making sure the conceptual relationship between the child codes were strong enough to be considered by the same parent/medium level theme. Any relationships between the parent/medium level themes were highlighted which aided understanding toward how everything conceptually worked together. As this process went on, the memo's describing each theme were sharper in their overall descriptions which allowed the connections to be more simply explained.</p>
<p><b>6. WRITE UP THE INSIGHTS FROM THE PREVIOUS STAGES TO PROVIDE A COMPELLING NARRATIVE ABOUT THE DATA</b></p> <p>Within this chapter the insights from the findings as well as relationships between the codes and themes have been written, this is extended within the discussion chapter.</p>

## 6A. JUSTIFYING THE THEMES

The themes were justified as part of stage 5 as the justification helped examine any links. The justification of the themes have been formally written within the findings chapter, however more detail is given within the discussion whereby the links between the themes within this phase of the data collection process is outlined in detail.

Figure 7.2: Analysis overview: Parent/guardian survey

SURVEYS COMPLETED	TOTAL PARENT CODES	TOTAL THEMES
62	15	4

Figure 7.3: Demographic overview: Parent/guardian survey

GENDER	COUNTY	AGE	INCOME	EDUCATION	EMPLOYMENT	INDUSTRY	PARENTS IN HOUSEHOLD	NO. OF CHILDREN
96% Female	34% Merseyside	23% 50-55	22% 20-30k	35% Degree	58% Full time-Employed	40% Education	88% 2	58% Full time (1 child)
4% Male	20% Lancashire	19% 46-49	19% 60-70k	42% Masters	20% Part time-employed	16% Healthcare	12% 1	18% Full time (2 children)
	8% Hampshire	19% 30-34	19% 40-50k	23% GCSE	14% Self-employed	4% Herbal medicine		8% Full time (3 children)
	8% Kent	15% 35-39	12% 70-80k		8% Unemployed - Not seeking work	4% Finance		8% Full time (4 children)
	4% Oxfordshire	4% 56-60	8% 10-20k			4% Sales		
	4% Russia (living in UK)	4% 20-25	8% 100k+			4% Social Housing		4% Full time (6 children)
	4% Norfolk					4% Courier		4% Part time (1 child)
	4% Cornwall					4% Insurance		
	4%					4% HR		

	Ireland (Living in UK)					4% Marketin g		
	4% UK					4% Foster Care		
						4% Media		

Figure 7.4: Themes overview: Parent/guardian survey

THEME	SUB-THEMES
PERCEIVED OUTCOMES OF USE	Motivations for inclusion Motivations for exclusion Influence of device type
TECHNOLOGY IDEOLOGY	Family consumption Parents consumption Sharing Socialisation Technology ideology
MANAGEMENT OF DEVICES	Management of devices Parental skill Parental support School policy Social media
OUTCOMES OF CHILD ACCESS	Type of access Child consumption

Kozinets (2008) research on technology ideologies has been used as a tool to categorise some of the data. Please see below for a reminder of the meanings attached to these categories:

Figure 2.2: Kozinets (2008) technology ideology categories

IDEOLOGICAL FIELD	DESCRIPTION
<b>GREEN LUDDITE</b>	Technology consumption as destruction of the natural. Compliments the emotion of techspressive ideology. Contrasts in morality of Techtopian position. Contradictions of individualism with the work machine ideology.
<b>TECHTOPIAN</b>	Technology consumption as social progress. Complimentary of reason for work machine ideology. Contrasts in morality of the green luddite ideology. Contradicts the standards of techspressive.
<b>TECHSPRESSIVE</b>	Technology consumption as pleasure. Compliments the emotion of green luddite. Contradiction of standards with Techtopian ideologies. Contrariety of indulgence with the work machine ideology.

<b>WORKMACHINE</b>	Technology consumption as economic engine. Compliments the reason of Techtopian. Contradictions of individualism with green luddite ideology. Contrariety of indulgence of techspressive ideology.
--------------------	--

(Kozinets, 2008)

## 7.2.2 PARENT/GUARDIAN INTERVIEWS

<b>1. READ THROUGH AT LEAST A SAMPLE OF THE MATERIALS TO BE ANALYSED</b>
Transcription took place of the parent interviews before any analysis took place, this meant that the researcher was able to screen the interview data and consider any codes.
<b>2. BEGIN CODING THE MATERIALS</b>
Once all interviews were transcribed, the transcriptions were uploaded to NVivo software where the data was then coded.
<b>3. ELABORATE MANY OF THE CODES INTO THEMES</b>
After all the interviews were coded, time was taken to reflect and consider which codes could be amalgamated into themes.
<b>4. EVALUATE THE HIGHER-ORDER CODES OR THEMES</b>
Once the themes were generated, the researcher considered the relationship between the themes as well as the codes within the themes themselves. Some of the codes were considered between higher levels (the theme), parent codes and child codes.
<b>4A. GIVE NAMES OR LABELS TO THE THEMES AND THEIR SUB-THEMES (IF THERE ARE ANY)</b>
Names and labels started to be given to the themes within the first stages, however here, time was taken to consider these labels and whether or not there may have been terms that better encapsulated the essence of the themes.
<b>5. EXAMINE POSSIBLE LINKS AND CONNECTIONS BETWEEN CONCEPTS AND/OR HOW THE CONCEPTS VARY IN TERMS OF FEATURES OF THE CASES</b>
The researcher reflected on how the child codes all related to each other, making sure the conceptual relationship between the child codes were strong enough to be considered by the same parent/medium level theme. Any relationships between the parent/medium level themes were highlighted which aided understanding toward how everything conceptually worked together. As this process went on, the memo's describing each theme were sharper in their overall descriptions which allowed the connections to be more simply explained.
<b>6. WRITE UP THE INSIGHTS FROM THE PREVIOUS STAGES TO PROVIDE A COMPELLING NARRATIVE ABOUT THE DATA</b>
The write up of the findings is outlined within this chapter, further detail toward how these findings relate to the other phases of data collected is detailed within the discussion chapter.
<b>6A. JUSTIFYING THE THEMES</b>
The themes were justified earlier within the process, but this is formally written up within the discussion chapter where the themes within this data collection method are discussed with consideration toward how these fit in with other data collection methods within this phase. This is then considered holistically, tying in the multiple methods used for this project outlining conceptually the meaning of the data.

Figure 7.5: The analysis process: Parent/guardian interviews

Figure 7.6: Analysis overview: Parent/guardian interviews

INTERVIEWS COMPLETED	TOTAL RECORDING TIME	WORDS TRANSCRIBED	TOTAL PARENT CODES	TOTAL THEMES
10	167 minutes	23, 141	9	3

Figure 7.7: Demographic overview: Parent/guardian interviews

GENDER	COUNTY	AGE	INCOME	EDUCATION	EMPLOYMENT	INDUSTRY	PARENTS IN HOUSEHOLD	NO. OF CHILDREN
90% Female	50% Merseyside	30% 50-54	30% 20-30k	40% Degree	70% Full time-Employed	30% Education	70% 2	80% Full time (1 child)
10% Male	10% Oxfordshire	30% 46-47	20% 60-70k	30% Masters	20% Self-employed	20% Healthcare	30% 1	10% Full time (2 children)
	10% Russia	10% 42	10% 10-20k	20% GCSE	10% Part time-employed	10% Herbal medicine		10% Full time (3 children)
	10% Lancashire	30% 34-36	10% 30-40k			10% Finance		
			10% 40-50k			10% Sales		
			10% 70-80k			10% Social Housing		
			10% 100k+			10% Courier		

Figure 7.8: Theme overview: Parent/guardian interviews

THEME	SUB-THEMES
CHANGES AS A RESULT OF THE COVID-19 PANDEMIC	Child consumption Family consumption Parent consumption
CHANGES CARRIED FORWARD	Child consumption Family consumption Parent consumption
NOT SUITABLE TO BE	Child consumption Family consumption Parent consumption



## 7.3 FINDINGS

### 7.3.1 PARENT/GUARDIAN SURVEY

The survey indicated that parents/guardians embraced ET as a positive during lockdown, and these benefits acted as a foundation for child inclusion of ET use (although some benefits were necessitated by the lockdown environment). For others, access may have been granted in lockdown but this was more troublesome as they felt ET was too harmful to be introduced and was avoided where possible. This was not so black and white for parents/guardians however, with some wanting to wait until their children were older before including them in the digital socialisation process; some devices were deemed more appropriate than others, with young children being granted access to tablets much earlier than smartphones or laptops/computers.

Theme two highlighted how devices were used by parents/guardians which transcended to how the children were both directly and indirectly socialised to use devices. The most prevalent usage was for work, entertainment and communication with others showing distaste at how ET is so commonly embraced. Parents/guardians were less involved with showing children how to use the same devices they used for work (laptops/computers), if they were introduced, children were using these devices for schoolwork during lockdown. Tablets were less likely to be used by parents and were often shared with the children who used them for entertainment purposes. Smartphones were used for multiple activities, for children without ownership of the devices, they used them for entertainment and/or communication; smartphones were only used for schoolwork if other devices were not available. The purchase of devices for young children usually took the form of a gift, although usage of devices increased during lockdown and were more likely to be shared. Device management took the form of restricting the time that children were allowed to use them. Most parents felt they did not need support when it came to managing their children's ET use, whereas others felt it was best to have as much knowledge as possible; the child's school was where this support was expected to come from. Most parents felt they were more skilled when using ET in comparison to their children because they had been using devices for longer and had more experience. However, most parents said their children knew how to use functions they had no interest in, and had a far better aptitude toward ET use, meaning the children would soon be more skilled than they were. When it came to managing popular social media platforms, parents were more concerned about their children being inappropriately contacted although concerns over their mental health and cyberbullying were present.

The final theme looked at the outcomes of child access to devices; many had access from ages 0-2, although they did not own their own devices, they used them jointly with carers for entertainment or educational purposes. The most popular device for younger age groups was tablets with smartphones and laptops/computers gifted when children reached secondary school age. Some devices were shared prematurely due to the lockdown environment. The overwhelming outcome of child access was parental concern toward the amount of time children spent on devices.

#### Theme one: Perceived outcomes of use

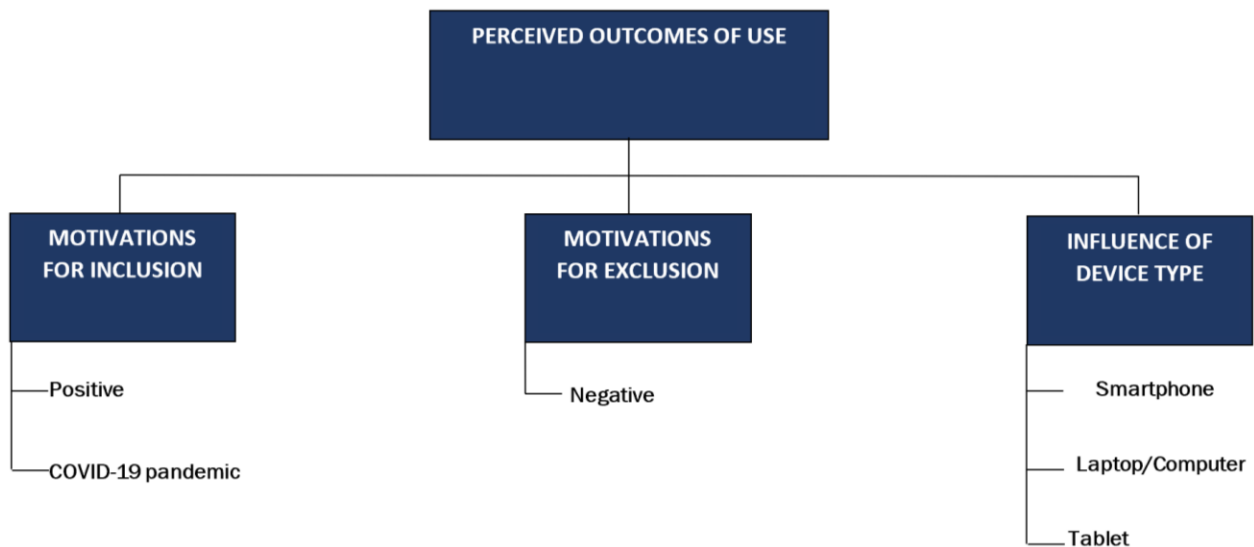
This theme has shown that the perception of the outcomes of ET use is highly individualised. Some parents feel strongly that there are benefits to their children using ET, whereas others feel very strongly that there are aspects which are too harmful and warrant exclusion. Some parents are happy to introduce ET very early on, whereas others feel it is best to wait until their children are older. When it comes to the perception of the type of device, smartphones

are viewed in the most negative light, with tablets being preferred and laptops/computers being deemed the safest for children to use. These perceptions form an important foundation that ultimately lead to exclusion/inclusion as well as the type of devices children are allowed access to.

Figure 7.9: A detailed summary of theme one from the parent/guardian survey: Perceived outcomes of use

THEME	SUB THEMES	MEMO
PERCIEVED OUTCOMES OF USE	Motivations for inclusion	This sub-theme allows understanding toward some of the factors that motivate parents to ensure their children are using ET.
	Motivations for exclusion	Within this sub-theme, the parent/guardian’s concerns toward ET are highlighted which shows why they exclude children from ET, or limit this usage.
	Influence of device type	The data within the previous sub-themes showed parents and guardian’s felt differently about different devices in terms of the benefits and harms they could bring. This sub-theme shows the relationship between motivations for exclusion/inclusion and the type of ET/device being discussed.

Figure 7.10: A summary of theme one from the parent/guardian survey: Perceived outcomes of use



### Motivations for inclusion

Some motivations were driven by positive intentions such as educational benefits, to improve digital technology skills and to prepare children for using ET as they got older:

*Parent survey: Use to support and reinforce learning activities. Answers at the touch of a button*

Many felt this was not the case until 11+:

*Parent survey: Infants don't developmentally need exposure to screens.*



*Parent survey: Its a digital age they need to know how to use these things*



*Parent survey: Tech is the future and need to be savvy*

Some parents were less eager to introduce their children to ET, but were still motivated to do so as they felt this would be an important part of their schooling and work life:

*Parent survey: It is all about moderation. My daughter learns a lot from YouTube and the cartoons she watches feed her imagination. We have also read her 3 books a night since she was 3 months old and this I think has also made a difference in her intellectual development. The older she gets the more the use of technology will be useful to her. We as parents need to teach her moderation and how not to be dependent on it. She will not be allowed to keep a phone in her bedroom.*

Many introduced devices as a result of the COVID-19 lockdown, with the main use being for educating, entertainment and communication:

*Parent survey: For school homework. During lockdown he used it to access his lessons online. For games*



*Parent survey: Occasional entertainment use but during lockdown it has been used to communicate with friends and to play certain games on.*

Overall, usage increased as ET was used for schooling, communicating with others and for entertainment:

*Parent survey: Online lessons More contact with family and friends Ironically she only uses it when she has to now, because she's fed up with online learning. I can honestly say she's never liked online learning, she much prefers face to face learning.*

This was not ideal for parents however, with many preferring their children use ET less:

*Parent survey: schools automatically assume that children have access to these devices. During the current situation it has been a good way for my child to keep in contact with his friends. I would prefer him to spend less time on it overall*

## Motivations for exclusion

When it came to the reasons why parents choose to exclude their children from devices, the motivations are similar to those who choose to include their children. Ultimately, it is by making decisions they feel are best for their current and future wellbeing. For some parents, exclusion is better for child development and therefore later on in life:

*Parent survey: I just believe that young children learn more from human interaction. Learning to read, to speak, to use fine motor skills.*



*Parent survey: I know schools use some educational games which have their place but they are not 'needed' but do get kids engaged.*



*Parent survey: Because kids are becoming less and less interested in education and learning and wanting to be smart. They'd prefer their phones being smart and themselves being dumb*

Those who excluded their children from devices felt there were more important skills to learn:

*Parent survey: they better improve other skills that involve thinking moving around and making things*

In terms of use of ET for entertainment, other activities were seen as more beneficial:

*Parent survey: I don't think they should be used for play. It wastes time.*

Although there were communicative benefits during lockdown, these could be achieved without the use of smart technology:

*Parent survey: Same as above. They need to stay in contact with family but they don't need their own smartphone for that, and they need to be contactable but all they need is a regular old phone not a smart phone*

ET was seen to be harmful to their child's development:

*Parent survey: Younger children should be learning during their imaginative play and not relying on technology to stimulate their minds*

## Influence of device type

The most beneficial aspect of smartphones was to communicate with others:

*Parent survey: Never used to FaceTime friends before. Also she and her friends have downloaded an app for messaging which is child friendly.*

Smartphones were viewed the most negatively out of all of the devices because they are more 'private', have smaller screens, are more difficult to monitor and because of their size and portability, are far more easy to access which leads to excessive use:

*Parent survey: Laptop use is useful, I think smartphones cause more harm than good. The only reason they need a phone is to contact people, which they can do with any old phone. Smartphones at additional benefit when it comes to access to GPS and taking photos, but that's not educational so no, I don't think they provide much educational benefit and even if they do, the risks far out way the advantages for me*



*Parent survey: because those you have handy all the time will provoke you to use them all the time*

Many felt it was important their children knew how to use them however:

*Parent survey: They should know how to use it in case it's needed in an emergency*

Some did not see using a smartphone as a skill that needs to be taught:

***Parent survey: They naturally will learn how to use them.***

Tablets were more likely to be used for educational and entertainment reasons in comparison to smartphones:

***Parent survey: We used it to access educational apps such as Reading Eggs and remote schooling such as Oak National Academy. YouTube was used to do phonics and Oxford Owl for reading. This was all with her parents.***



***Parent survey: It's something to do with the on-demand essence of smartphones. It becomes like an extension of the human body - this can't be a good thing. This isn't the case with laptops or tablets***

During lockdown the usage of these devices increased:

***Parent survey: More as they couldn't go anywhere so we allowed them more time when they where bored***

Laptops and computers were preferred. Parents felt they had more control over these devices, largely because they were shared and are less likely to be used in private settings:

***Parent survey: Smartphones are too easy to access and around all the time, huge source of time wasting and easy to see inappropriate content. At home, can have more parental control over what is viewed on a laptop and limit time on technology.***



***Parent survey: I think that the activity done with the device is likely to be the thing that is beneficial or harmful, not the platform on which is it used. Each of these devices can expose children to harm somehow if they are used in various ways, and each of them can be extremely beneficial in learning. I feel like smartphones are somehow more addictive, because they're associated more with distraction and lack of concentration - but that can happen on a tablet or laptop too.***

## Theme two: Technology ideology

Theme two has explored data surrounding the parent/guardian ideological beliefs when it comes to using ET personally, as a family and within the home. Parents/guardians valued the communicative affordance of ET and disliked how much time they spent on the devices. This translated toward Kozinets (2008) four domains of ideological beliefs whereby those with techtopian beliefs, felt the usage of ET was an important development in society, and it was important their children had these skills, but overuse was still a concern. When it came to using devices for entertainment purposes, the addictive nature was a prevalent concern. With those who used ET for work purposes also concerned about the merging of boundaries because devices they use at home are also used for work. This interrelated the sub-theme of socialisation whereby parents took an active role when teaching their children to use devices, however self-exploration was a key part in how children learned to navigate ET. It seemed parents relied on schools more to teach children how to use laptops/computers in comparison to tablets and smartphones. Children also play an important part in the digital socialisation of parents, whereby children would show parents how to use apps and features that they did not have a need for 'day to day'. Purchases for ET usually took the form of a gift, and replacing devices only

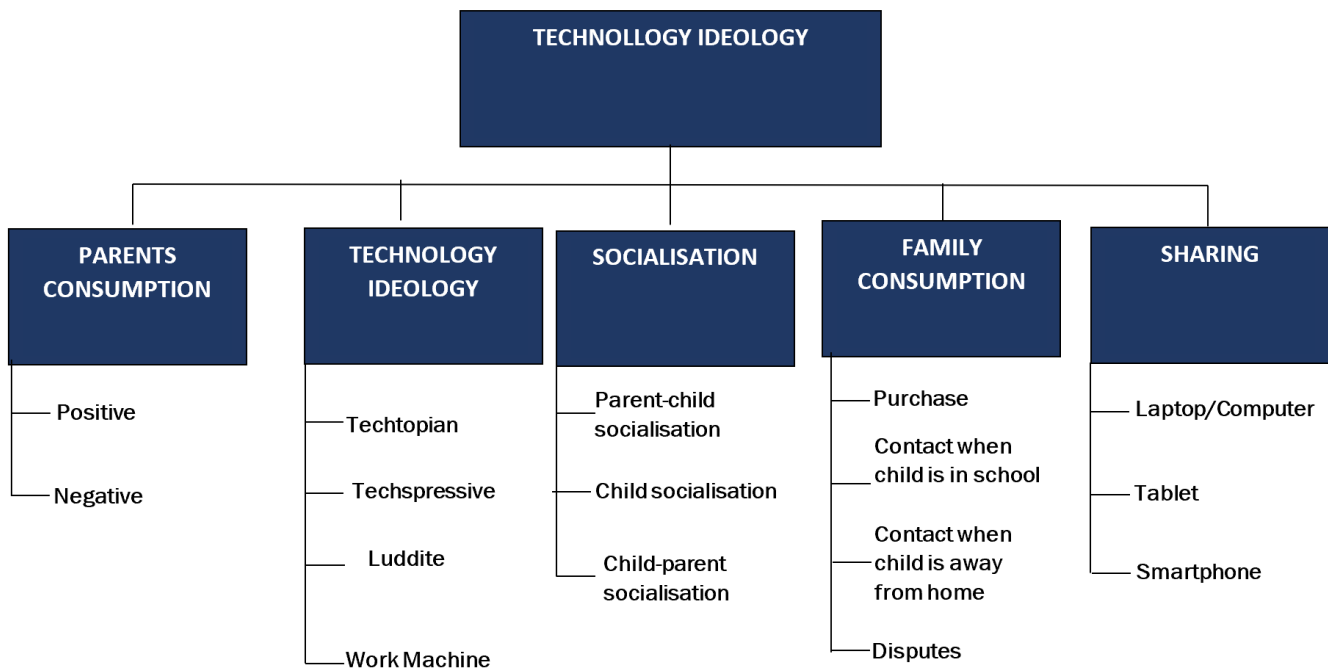
usually occurred if a device was faulty or broken. Contact through ET outside of the home was not a prevalent activity, partly because the children were too young but mainly because there was little need for parents to contact their children, this was more likely if the parents were separated. The parent/guardian technology ideology was also indicated through the sharing of devices within the home. Smartphones were highly personalised and laptops being used mainly for economic means meant the devices were less likely to be shared in comparison to tablets.

Figure 7.11: A detailed summary of theme two from the parent/guardian survey: Technology ideology

THEME	SUB THEMES	MEMO
TECHNOLOGY IDEOLOGY	Parents consumption	The sub-theme surrounding parent consumption details how parents of young children use devices, considered by positive, negative and neutral sentiments.
	Technology ideology	Within this sub-theme, both parental and child use of ET is categorised by Techspressive, Workmachine, Green Luddite and Techtopian behaviours which illuminates understanding toward how parents think and encourage ET to be used.
	Socialisation	When considering how children learn how to use ET, this sub-theme shows modes of socialisation within parent-child, child-parent socialisation, as well as socialisation that occurs outside of these contexts.
	Family consumption	This sub-theme evidences how the family consumes ET together (if at all) and any common disputes that may result from this joint usage.
	Sharing	Which devices are shared is shown throughout this sub-theme.

Figure 7.12: A summary of theme two from the parent/guardian survey: Technology ideology





### Parents' consumption

Communication and the ability to access information were the main benefits recognised when parents/guardians accessed ET:

*Parent survey: Keeping in touch and being contactable*



*Parent survey: Communication and information wherever and whenever you need it*

As well as the multiple affordances:

*Parent survey: Quick and easy to use for multiple things such as shopping, research and work*

The negative connotations surrounded how much time they spent on the devices and how they felt distracted by them as a result of finding it difficult to set boundaries with how often ET was used:

*Parent survey: It can be not so positive but also children can learn alot and be stimulated still its about finding balance an not relying heavily on technology*



*Parent survey: People, including myself, tend to reach for them without thinking.*



*Parent survey: Can be distracting when with others. Can spend more time than you intend to on it.*



*Parent survey: No let up from being accessible . Difficult to have a break and no boundaries between home /school/work anymore*

There were negative reflections when comparing their childhood experience:

*Parent survey: Too much pressure on children now to keep up to date with latest advances in technology. They talk about it in school. They need to engage in it to be in the loop. There is much*

### *less requirement for children to talk*

To a degree, this was worse for smartphones because they were more likely to be used for multiple reasons, whereas tablets were more commonly used for entertainment and laptops used for work. It was therefore the smartphone device that had less clear cut boundaries surrounding what it was used for.

### Technology ideology

This sub-theme has shown how the parental/guardian views toward their own and their child's ET usage can be categorized. The sub-theme also highlighted that just because a parent holds a certain ideological belief, it does not mean there are no contradictions within this, such as using ET for work, but not wanting to use this outside of work and encouraging children to use ET for educational purposes, but not starting this at too young an age.

Techtopian usage, put simply, is the use of technology in line with the progression of society:

***Parent survey: sometimes i think they're missing out and i do encourage them not to spend too long on them, but also they're world is expanded, they have access to more information quickly and they are just following the rest of society, we're all using technology a lot more***

Concerns surrounded the frequency of usage:

***Parent survey: It can be used to often and this can prevent real world interaction.***

Techtopian characteristics were displayed when the parents were discussing their child's ET usage:

***Parent survey: It is all about moderation. My daughter learns a lot from YouTube and the cartoons she watches feed her imagination. We have also read her 3 books a night since she was 3 months old and this I think has also made a difference in her intellectual development. The older she gets the more the use of technology will be useful to her. We as parents need to teach her moderation and how not to be dependent on it. She will not be allowed to keep a phone in her bedroom.***

Techspressive usage surrounds using ET for entertainment purposes, however this is not always positively considered:

***Parent survey: Too time consuming and very little benefit***

Many used ET as a family for entertainment outcomes:

***Parent survey: Playing on games together. Taking pictures. Making silly videos on tik tok***

Green luddite's see technology as the destruction of the natural:

***Parent survey: because the whole world is there to experience and it is such a shame to experience a device instead***

These concerns prompt some parents to wait until their children are at a more appropriate age before introducing ET (if at all):

***Parent survey: My children are very young and not used a tablet.***

The Workmachine ideology involves using ET for work purposes or economic gain:

***Parent survey: I use computers all day at work so I don't wish to use them too much out of work.***

When this is reflected within how children use ET, it was seen as a tool for educational purposes:

***Parent survey: There are so many educational apps which can help children with their education.***

However, there were concerns about using ET for this purpose too early on:

***Parent survey: Children are growing up in a world where they need to learn technology for the workplace but shouldn't start this too young. It is addictive and can be dangerous i.e internet surfing***

## Socialisation

The sub-theme of socialisation has shown the environments within which children are likely to be shown how to use certain devices, as well as how they are taught to use them:

***Parent survey: Learnt in school***



***Parent survey: Through school and us***

With tablets, environments were the school and home, although a lot of this was self-taught at home:

***Parent survey: School***



***Parent survey: taught themselves mainly***



***Parent survey: Self taught and watching adults use it.***

Smartphones were more likely to be shown by parents, although some children were self-taught:

***Parent survey: showed my eldest when he was younger, he showed the now 7 year old***



***Parent survey: Figured it out themselves***



***Parent survey: Self-taught and from friends***

The most common device mentioned when it came to parent-child socialisation was the laptop/computer. This took place in the home or school:

***Parent survey: school / parent / sibling***

The activities depended on the age group, for younger children they were shown how to watch video's or clips on a laptop for entertainment, whereas others discussed their school work together:

***Parent survey: Looking at random videos on YouTube.***



***Parent survey: Yes he will show me his homework on his laptop***

Socialisation through a tablet commonly started as a joint activity, and then children were allowed to self-teach themselves:

***Parent survey: Mainly through watching us and now figures out for self***

This mostly took place at home, although the school was mentioned:

***Parent survey: From parents and school***

The initial activities taught were mainly entertainment, although educational uses were also encouraged:

***Parent survey: play together and use them positively particularly for learning***

It was more likely to be parents that showed children how to use smartphone devices:

***Parent survey: Both parents.***

The early activities tended to be showing them things for entertainment and communication:

***Parent survey: We research stuff, we play draughts and some other logical games ... especially when in a cafe and waiting for Food or to use to kill time waiting for trains***

***Parent survey: Showing her photos or videos, or videos chatting with family***

These devices were not mentioned within the school environment, socialisation therefore took place at home:

***Parent survey: Show each other new Apps or something that has made us laugh. My daughter likes to photograph so she will send me her photos.***

This was especially prevalent during lockdown where children showed their parents how to use the platforms they were using for online learning:

***Parent survey: Shown me how to use some of the features in MS Teams. This is embarrassing as I am an IT tutor.***

At times it was to show parents how to use features they did not know about or how to use:

***Parent survey: I only use the basic function call text the children explain other features.***

## Family Consumption

This sub-theme shows that devices in the familial home are more likely to be updated when they are broken, however smartphones are usually updated because the contract has run out or a better deal is available:

**Parent survey:** *When it becomes sluggish and unreliable*



**Parent survey:** *If a better deal is available for my monthly contract.*

If new smartphones are bought for a child, this is usually as a gift, or else a good deal has come up:

**Parent survey:** *if one breaks or they ask for a birthday or Christmas*



**Parent survey:** *They don't have the latest devices but I eventually get them a better version when it's cheaper to buy because newer versions have come out*

Similarly to a laptop/computer, a tablet would be replaced when it becomes faulty:

**Parent survey:** *When it can no longer be updated.*

Most parents do not contact their children during the school day, and if they are away from home, direct contact is more likely if the parents are separated. Contact during the school day is more prevalent for secondary school aged children:

**Parent survey:** *I send a message to my daughter at the start of her school journey to wish her a good day. Then only at the end of a school day, to explain if I might be delayed in getting home*

In terms of disputes, these tend to revolve around the children spending too much time using ET:

**Parent survey:** *Amount of time spent using technology. Using phones for gaming instead of communicating with friends. Not answering the phone!!!*

Disputes were unlikely to occur when the children have their own devices:

**Parent survey:** *not really as they all tend to have the devices they would like to use for themselves*

## Sharing

Within this sub-theme it shows which devices were more available to the children and families within lockdown. Tablets were more likely to be shared and used by young children:

**Parent survey:** *Shared between whole family*



**Parent survey:** *Shared between children only*

With laptops/computers more likely to be owned and used by parents/guardian's:

**Parent survey:** *Not shared*



*Parent survey: Shared between parents and guardians only*



*Parent survey: Shared between children only*

Although young children did have access to the internet and some of the affordances of smartphones through a tablet, these devices were far less likely to be shared and were more personal:

*Parent survey: I'm thrilled she reads e-books on it, although it's sometimes frustrating that she's got it when I need it.*



*Parent survey: Not shared*

### Theme three: Management of devices

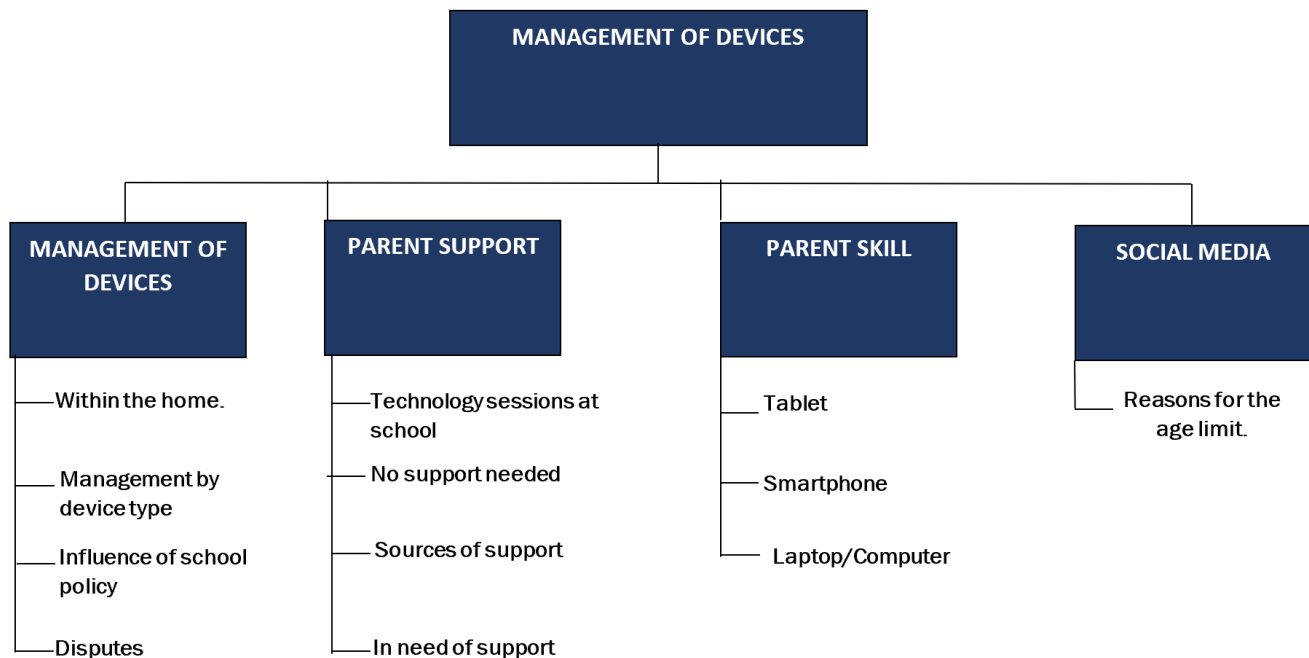
When actively managing device usage, most parents tended to restrict the time that was allowed to be spent on the device which interlinked the most common disputes surrounding device management (children wanting more time). Support to manage their children's device usage, or at least to be aware of potential harms was available to most parents through their child's school, however the majority felt they knew enough about the devices themselves and what their children were doing. If they did need further support however, most felt the school would be the best place to get this support from, with a few mentioning their GP. When considering whether the parents were skilled enough to successfully manage their child's ET use, many felt they were more skilled than their children but the majority felt this was only because they were more experienced, and children were more likely to use a wider range of affordances of the ET than they would. Although they felt they were more skilled and successfully managing the devices right now, it indicates this may change in the future. Parent concern and justification for the age limit on social media stemmed from strangers being able to inappropriately contact children, although many were concerned about the time spent on these platforms and the availability of inappropriate content.

Figure 7.13: A detailed summary of theme three from the parent/guardian survey: Management of devices



THEME	SUB THEMES	SUMMARY
MANAGEMENT OF DEVICES	Management of devices	The management of devices indicates how parents manage their child's usage of ET and whether this is different based on the type of device and location of the child.
	Parental skill	This sub-theme looks at how parents/guardians perceive their skill levels in comparison to their children, whether they feel they are more skilled and able to manage device usage (or not).
	Parental support	The sub-theme of parental support looks at whether parents feel they need further support when managing their child's ET use, and where they would expect to get this support from and whether they have done this already.
	School policy	This sub-theme looks at the parents' awareness of their child's school policy toward ET use and whether or not this influences how devices are managed at home.
	Social media	When looking at social media and the age limits in place for young children, this sub-theme highlights what parents perceive as the biggest dangers/threats to young children when engaging with these platforms.

Figure 7.14: A summary of theme three from the parent/guardian survey: Management of devices



## Management of devices

When managing devices, the main condition tends to be how much time children can spend on devices and the location the devices are allowed to be accessed:

**Parent survey:** *Limited times. Insist on breaks from it*



**Parent survey:** *No phones at table*



**Parent survey:** *No phones upstairs (unless specified eg FaceTime) no phone usage at bedtime Time limit restriction placed on screen time on phone (4 hours)*

School policy is to restrict devices usage (unless directed within lessons), which does not interrelate with how the parents manage devices at home. As a result of this, disputes surround children wanting more time on devices or sharing with their siblings:

**Parent survey:** *can bring them in but not use them! Prob to avoid being distracted*



**Parent survey:** *My daughter usually wants more time on them but we limit this time.*

Or children disagreeing over shared devices:

**Parent survey:** *yes, younger children can argue over using a device especially if not charged*

Within the home most carers allowed children to charge and have access to their devices at night, very few restricted this. The majority of children had permanent access to the broadband, although some parents had parental controls over the WiFi, the majority did not. The broadband was also left on all night. Restrictions then were based on device type, rather than having blanket rules whereby the broadband is switched off or restricted.

## Parent support

All parents had technology sessions available at the school, although most did not feel a need to attend, this interrelated with their identified need for support where most felt they had enough knowledge to manage their child's ET use effectively. For those who did identify a need for support, they felt it was always good to know more and would expect this support from schools or the child's GP:

***Parent survey: I feel i have enough knowledge surrounding technology as my husband and i use it during our working day***



***Parent survey: School/GP/Support groups***

Some felt the school would not be on the same page as them when it came to ET use:

***Parent survey: I don't think they are as much against the things as I am***

Whereas others feel they can approach the school if they have concerns, rather than going to these sessions:

***Parent survey: The school send out information weekly about being safe online and students are guided to websites or apps that will benefit their learning. I'm confident I can approach the school if I need support or have any concerns.***



***Parent survey: I'm aware of the harmful effects for what my daughter is using the phone for at this point in time, and I've explained them to her. However, I'll probably want more support when it comes to her wanting to use devices for more social things, which is at some point in the future.***

Many felt this the responsibility of the parents and not the school:

***Parent survey: If I have provided the technology then it's my responsibility as a parent to make them aware of the harmful effects and potential pitfalls of using technology.***

## Parent skill

Overall parents felt they were more skilled when using ET in comparison to their children. When it came to laptops/computers parents felt it was because they spent more time on the devices overall:

***Parent survey: I use a laptop daily for work, whereas my daughter is only using the basic necessities of a laptop***

This was similar to smartphones and tablets, however when it came to these devices, most parents felt it would not be long until their children were more skilled in these areas with some showing a greater capacity to self-teach and explore things the parents do not use day to day:

***Parent survey: Only slightly more due to length of using but he is starting to show me things***



***Parent survey: My 7-year-old daughter doesn't have a smartphone, although she uses mine to read e-books. She often needs to ask for help getting from one thing to another. Once she has her own (when she's a teenager) I'm sure she'll be able to use hers better than I can!***

●  
**Parent survey:** *My daughter is 5 but I am sure give her a few years and she will be more skilled. She does not have a phone of her own as yet.*

For those who said they were less skilled, it was because their children spend more time on the device in comparison to them:

**Parent survey:** *The iPad belongs to children so they know how to use it better as they spend more time on it than me*

Although some felt if they did have the time then they would be more skilled:

**Parent survey:** *I don't utilise it to its full potential but have the capacity to be able to get more from it if I wanted / had to.*

## Social media

When it came to the parental view surrounding why social media use should be managed and is banned for those under the age of 13, the majority of parents were concerned about their children being inappropriately contacted on the platforms:

**Parent survey:** *To protect children from seeing harmful materials and at that age they should know the dangers of talking to strangers*

Further to this, the viewing of content on the platforms could lead to issues of self esteem, as well as children struggling to manage their time on the platforms:

**Parent survey:** *I think 13 is too young but social media is exciting for young people and they are easily influenced. It's also used to harvest data to further influence the way young people think, spend their money, how they live their life, control their opinions to some extent.*

●  
**Parent survey:** *Because it's difficult for children under 13 to limit their use (and children over 13 as well!) and they also don't have the full capacity to understand what all the dangers are.*

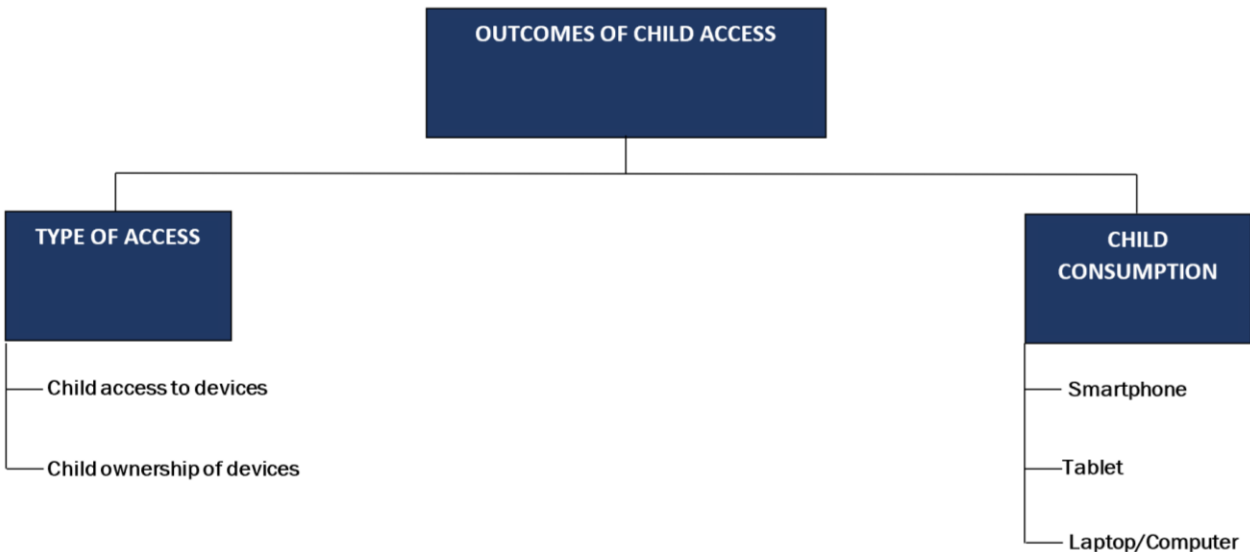
## Theme four: Outcomes of child access

Theme four evidences that children are given access to devices from as young as 0-2 years old, however the device they were more likely to be introduced to was a tablet over a smartphone or laptop. This rang true for the ownership of devices also, whereby tablets tended to be given or owned by children before they owned a smartphone or laptop/computer. Both smartphones and laptops/computers tended to be given when children reached secondary school age. The reasoning behind this type of access then interrelated with the activities children were undertaking on the devices, for the smartphones and laptops/computers, most of the activities were more prevalent for children in secondary school such as communication and benefits with education. Tablets however were more likely to be given earlier and were more commonly used to keep children entertained, although some of this entertainment surrounded learning outcomes also. The biggest concern with children accessing devices was how much time was spent on the device. This was discussed quite generally, however when it came to how much time was being spent on smartphones, more specific concerns arose toward bullying and impacts on the child's health and wellbeing such as the inability to develop certain social skills, or access resulting in problems toward children's physical health.

Figure 7.15 A detailed summary of theme four from the parent/guardian survey: Outcomes of child access

THEME	SUB THEMES	SUMMARY
OUTCOMES OF CHILD ACCESS	Type of access	This sub-theme considers the difference between child ownership and access of devices by highlighting the age and activity differences.
	Child consumption	The sub-theme considers what activities take place when children use ET and how these activities are viewed by guardians.

Figure 7.16 A summary of theme four from the parent/guardian survey: Outcomes of child access



### Type of access

For the child consumer they are likely to be given some form of access to ET from young ages, for the younger age groups (0-2) this was more likely to be a tablet:

**Parent survey:** *We started our daughter very early (only a few months old) watching baby shows on the iPad for entertainment. She learned the alphabet from an app at age 1.5 so we were very pleased and got her lots of other educational apps.*

When it came to the ownership of devices, again tablets were more popular for younger age groups with children being given a smartphone or laptop/computer from ages 11/12 when starting secondary school:

**Parent survey:** *Needed better processing for gaming and in prep for studies at GCSE and a level. Family PC not always available*

**Parent survey:** *Age 8 homeschooling During pandemic as we also work from home and needed him to have his own to access school*

There were exceptions to this if parents were separated:

**Parent survey:** *My daughter has access to a smartphone to enable her to communicate with her dad and vice versa. The smartphone was bought solely for this purpose.*

During lockdown some parents gave their children a smartphone that was no longer being used as this reduced the need for sharing:

**Parent survey:** *This is my old phone and has been used to play games and FaceTime friends during lockdown leaving other devices for me to use.*

Although ownership was granted, certain affordances were limited:

**Parent survey:** *9 - but with no phone access.*

### Child consumption

When it came to the child consumption of devices, smartphones tended to be used for more varied activities, but had more negatives mentioned such as time spent online and the impact this usage can have on their child's wellbeing:

**Parent survey:** *Reading e-books, watching YouTube videos, listening to music on Amazon Music*

Some felt these devices were essential to help enhance their digital technology skills and to keep children entertained:

**Parent survey:** *Digital skill acquisition, communication.*



**Parent survey:** *Lots more activities available than in real life*

In terms of the negative aspects, the biggest issue was how much time was being spent on the devices:

**Parent survey:** *That's life now but sometimes it does take over*



**Parent survey:** *That they are distracted and have a lack of concentration, that they don't want to stop using it even after a prolonged period.*

Other concerns were the ability to access inappropriate content:

**Parent survey:** *Only with games that have pretended to be suitable but actually weren't on inspection despite being for a 3 yr old*

Some concerns were focussed on how smartphone usage can impact them:

**Parent survey:** *That they become addicted to their use or derive their social confidence from them only. The use of social media and the potential for bullying etc.*



**Parent survey:** *Not being able to gauge the mood of a friend when texting them and being anxious as a result. Overthinking a situation. Also correcting the distance between face and screen.*

When it came to how long children spent on smartphones, the majority of parents restricted this during the week when they were at school, but they were allowed more time at weekends:

***Parent survey: 1.5 hours on the week 3 hours weekend days***



***Parent survey: Before and after school . Prob about 16 hours at weekend depending on what's on and where they go***

During lockdown this increased as some were using their smartphones for schooling:

***Parent survey: It's the new way of schooling in these hard times***

Although tablets had varied use as well, parents were slightly less concerned about the negative aspects, however time spent on the device was a consistent concern:

***Parent survey: iPad for art apps and playing games and watching a film (on a long journey).***



***Parent survey: Entertainment/Education - YouTube (child version) and games.***



***Parent survey: My daughter sometimes doesn't want to stop watching videos.***

When it came to the consumption of laptops/computers, children tended to focus on their school work, negative sentiment toward the outcomes of this access were not as prevalent as the usage was usually for school work, particularly during lockdown:

***Parent survey: Laptop is specifically used for school/homework and online drama lessons via zoom currently.***



***Parent survey: For school homework. During lockdown he used it to access his lessons in line. For games***



***Parent survey: they do use it too much, but i regularly check what they're watching and discuss any issues with them to teach them to avoid content that's not age appropriate***

### 7.3.2 PARENT INTERVIEWS

The parent/guardian interviews have shed further light on objectives three: to investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic and four: to discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer. Theme one added further understanding toward the changes as a result of the COVID-19 pandemic; the biggest being the amount of time that was spent using ET. For young children, the changes included using ET for their learning and communication, which contributed toward the development of new skills. However, the lockdown environment did have adverse impacts on some children's mental health. When it came to using ET as a family, not only did this activity increase, but parents felt more involved with their child's education and new skills were developed as a result. It was however frustrating sharing ET or the Wi-Fi. For the parents, the biggest change was working from home.



With consideration to these changes, theme two revealed which the parents felt were good for them, their children and the family. These positive changes included the parents communicating more with the school, working from home and keeping up with the positive changes toward how they used ET which resulted from the pandemic. When it came to the families use of ET, the most positive changes were being more involved in their child’s education, using technology together for educational and entertainment purposes. When it came to positive changes for the child consumer, using ET for educational means was important.

Despite these positive changes, there were many that children, the family and their parents would not want to continue outside of lockdown which was illuminated within theme three. The main being how much they were using devices, indicating that lockdown prohibited the balance they were looking for when it came to using ET and being offline. The children, family and parents were also happy to no longer solely rely on ET to communicate with those outside the household. It was found that although online schooling led to some positive changes in the child’s ET use, adverse outcomes such as missing face to face contact with teachers and friends, as well as staying motivated to learn online full-time were problematic. For the family, they felt this burden as parent’s did not like the responsibility of having to keep on top of their child’s schoolwork, when they also had their work to concentrate on. For the parents, the biggest negatives were communicating and some aspects of working from home such as working longer hours.

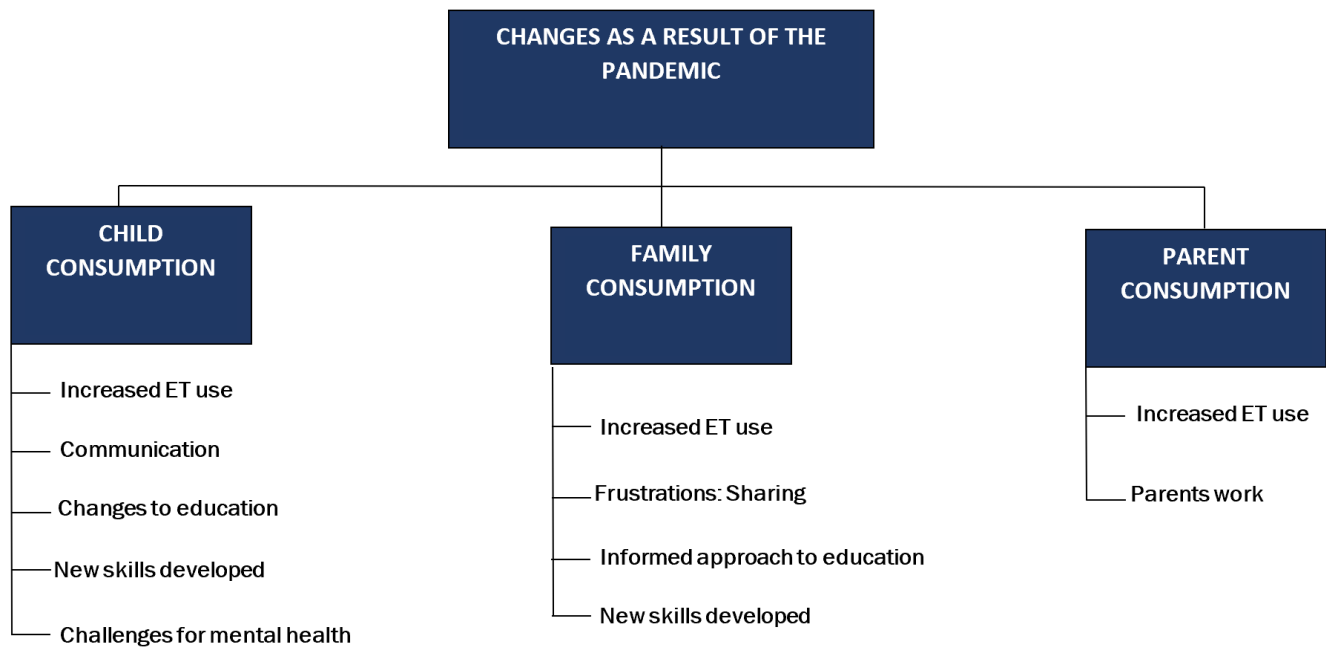
### Theme one: Changes as a result of the pandemic

Theme one has shown how technology was understandably used more during the lockdown environment. For young children usage focussed on schooling, entertainment and communication; this was not always positive however. For parents, this was mainly for work purposes. As a family, ET was more commonly used for entertainment, to help the children with their schoolwork or educational activities and to communicate with family outside of the home. This increased screen time often meant the children were learning new skills, this was also the same for older members of the family who wouldn’t usually use ET to communicate. The focus of any changes for the parents surrounded how they worked from home. This increased usage sometimes caused frustrations within the family when it came to sharing devices or trying to work in the same or different rooms. The increased load on the broadband and devices meant compromises had to be made to ensure that everyone was able to use ET the best they could during this time.

Figure 7.17: A detailed summary of theme one from the parent/guardian interviews: Changes as a result of the pandemic

THEME	SUB THEMES	MEMO
CHANGES AS A RESULT OF THE PANDEMIC	Child consumption	The sub-theme within theme one considers how ET use changed for the child consumer during the lockdown environment.
	Family consumption	Data here indicates how ET used changed as a family rather than the child and parent individually.
	Parent consumption	The parent consumption sub-theme shows how ET use changed for parents/guardians during the lockdown environment.

Figure 7.18: A summary of theme one from the parent/guardian interviews: Changes as a result of the pandemic



### Child consumption

This sub-theme has indicated all the ways in which ET consumption changed for the child consumer. Although there are benefits to some of these changes (such as the development of new skills), many were temporary but meant time online during this time dramatically increased:

**Parent/guardian 7 (F) interview:** So, hmm. My daughter, erm, she spent more time online for her school work, so she was on her tablet for most of the day. [connection lost]

**Parent/guardian 7 (F) interview:** She, er, would either be playing, contacting her friends or doing her school. Er, she was allowed to use technology more than usual. Er,

**Parent/guardian 7 (F) interview:** So she used her tablet a lot more often.

Children also used ET to continue their interests outside of school:

**Parent/guardian 10 (F) interview:** Yeah, so I don't know if you heard about what I was saying in terms of my daughter, her Guides group moved online. So, she did Guides through Zoom, once a week. Erm, the school dance clubs and after school clubs moved online. So she did dance through the Google calendar.

ET became the main source of entertainment also:

**Parent/guardian 8 (M) interview:** Well it's definitely increased, obviously because we were all sort of stuck inside, especially the first lockdown. Erm, and I suppose it changed a little bit as well because what we were using quite a lot was sort of YouTube, the YouTube app on the telly. Just so we could get, sort of the, we watched a lot of Joe Wicks live and stuff like that and um,

**SRM:** Yeah

*Parent/guardian 8 (M) interview: BBC teach, you know their short like bitesize video's and erm, red button as well so it was a lot of like smart TV stuff, like internet TV. Erm, so it definitely increased quite a bit.*

This increased screen time meant parents were concerned about giving their children a break from ET:

*Parent/guardian 10 (F) interview: Right, okay, so yeah what I was saying is, what we tried to do was go out for walks at lunch time as well so we both get a break from it. Erm, so, I'd say she made me better at that, and I need to get back into the habit of doing that now as well. I think I was more structured with it when she was at home*

Many parents (although they did not like the increased use), recognised this was important during this time:

*Parent/guardian 9 (F) interview: For the children, it's become more important for their social interactions. Erm, where we wouldn't leave them for hours with phones or devices, we tended to do it more because... Well, like my son, he wasn't really into playing his xbox but that has become sort of a networking place for him, that's where all his friends are that's where he's communicating with his friends and because of isolation, we tended to... That used to be our source of punishment, you know if he was being naughty we'd take the xbox away and then it became, we couldn't do that anymore because that was how he was communicating with his friends. And if we had, sort of taken that away from him, then we were actually taking his friendships away from him.*

Communication was not always positive however:

*Parent/guardian 9 (F) interview: Yeah probably with my son, there has been quite a lot of cyberbullying been happening, erm, with his class. Erm, I've never seen it with my eldest daughter, as I say, that's never occurred. Erm, my sons class, so he's year five, its predominantly boys in the class and a handful of girls. Erm, all of the boys are playing these, you know Xbox games or fortnite. And what we're hearing about is, that there is fighting on, going on in the game and that was actually coming back into the classroom as well, so we've had the teachers discuss that with all the parents. And yeah, I mean, my son has told us about some of the things that are being said, erm, and for that reason we have actually restricted him having his Xbox, coz we've said we don't want you playing games with those types of boys where that's happening.*

*Parent/guardian 9 (F) interview: So, that's probably the negative that we've seen.*

Communication through ET highlighted concerns that would not have been known had it not been for communicating online:

*Parent/guardian 4 (F) interview: It's been hard, but erm I think it's been hard for him as well. Because of his ADD and everything else he doesn't interact that well with his peers, and its made him more.....[pause] aware that he doesn't interact that well because when he has gone onto computer games it's like well, you know the clicker friends, well there all talking and doing stuff together and why aren't I doing that*

*Parent/guardian 4 (F) interview: But before, he didn't really notice stuff like that*

Those who were not concerned with access, showed concern toward having offline activities:

*Parent/guardian 10 (F) interview: They had them all set up on Google classroom erm, and then they just followed their normal timetable. So erm, some lessons there was like a teacher on a camera teaching them, some of them were doing set work, sort of go off and do. So they did try to give some like, like try to break in some technology breaks it wasn't all of, you know, she wasn't sat there all day, just you know, on a video call.*



*Parent/guardian 6 (F) interview: A questionnaire was sent out by my daughters school and when we actually worked out, sort of, how many hours she was spending online, erm, they then changed how they were doing it. So there would only be certain lessons online, and they would literally break it up so they were not constantly doing that. And that's what my husbands school did as well, they did part of the lesson, you know online teaching, and then the children would go off and do worksheets online and return. So it was to try and cut down the amount of time that you were, sort of spending.*

Not online did time online increase, but many children had to use new platforms as a result of the lockdown:

*Parent/guardian 1 (F) interview: Er we had to learn a few new....how to use a few new applications and things like that you know – uploading homework and things like that. It took a little bit of time, you know not never really done that before. Erm obviously schools were having to do it so that was it, so we just got....[unknown word] with some new applications and obviously IT was getting used a lot more.*



*Parent/guardian 7 (F) interview: Erm, it was useful for her to learn different ways to use the tablet, she is more confident using that now. But now they will be going back to face to face, I don't think it is necessary to, er for online school work.*



*Parent/guardian 6 (F) interview: Erm, I think it was a real eye opener for my daughter, because as much as she has used IT, it was a bit of an eye opener in that, there was so much she had to suddenly learn and how to negotiate the computer, how to negotiate different platforms because her school was setting the work on one platform, and asking it to be completed on a different platform.*

## Family consumption

The familial consumption of ET increased during the lockdown environment and new ways of using ET together emerged:

*Parent/guardian 5 (F) interview: Like myself and my daughter were both reading a lot of e-books at the time because we couldn't go to the library and so I think probably my use of my phone as a device for reading, increased a huge amount, but my phone as a device for talking to other people or texting or sending messages via WhatsApp or whatever, didn't increase. It may have decreased.*



*Parent/guardian 8 (M) interview: Well it's definitely increased, obviously because we were all sort of stuck inside, especially the first lockdown. Erm, and I suppose it changed a little bit as well because what we were using quite a lot was sort of YouTube, the YouTube app on the telly. Just so we could get, sort of the, we watched a lot of Joe Wicks live and stuff like that and um,*

SRM Yeah

*Parent/guardian 8 (M) interview: BBC teach, you know their short like bitesize video's and erm, red button as well so it was a lot of like smart TV stuff, like internet TV. Erm, so it definitely increased quite a bit.*

This wasn't always positive, sharing a workspace, the broadband and devices was problematic and using ET jointly to communicate with family outside of the home was better than nothing, but no comparison to face to face:

*Parent/guardian 3 (F) interview: Erm my daughter was home schooling, err, my son who is at university came home for a bit, but then he went back to just stay in his flat because you don't want to be in your parent's bedroom [laughter]*

*Parent/guardian 3 (F) interview: Can really, erm, yeah so. It's difficult in terms of access because everyone is on and then that then kind of puts a little bit of a strain, just on the network and the broadband full stop [laughter].*

*Parent/guardian 8 (M) interview: Erm, I mean, we had a, we had an issue with the Wi-Fi, because I use like a virtual desktop for work, I log in to like a system that you need particular security clearance for. They call my phone and I put a code in and I'm on, but if the kids are using YouTube downstairs, and the telly is on, it just slows it down and it just made my work that bit more difficult. Excel was lagging and stuff like that. So sometimes I had to shout down to them to switch it off for half an hour while I was on a meeting or something like that.*

*Parent/guardian 2 (F) interview: That was novel to the girls at first, facetimeing with the family, I think, toward the end of lockdown it was more frustrating, er, yeah frustrating. They missed them more as time went on. Especially the younger ones, they would spend quite a lot of time with their grandparents.*

*Parent/guardian 5 (F) interview: So we instituted a weekly, one day a week, on a Sunday sykke with parents and the brother and the wife, and it was a three way chat and I will be very happy to see the back of that. Not because I don't like them, because I love them but because it's a three way conversation, I find it like really difficult to like have the conversation going. I'm really a one to one kind of chat person so no chatting at all until we're face to face kind of person.*

Where possible, schools were able to loan ET:

*Parent/guardian 6 (F) interview: So, it ended up, she was using my laptop, my husband had his own laptop, but then the problem was, when I came home, all my meetings were going to be on Teams. So that impacted her ability to work then, so we were quite fortunate, the school erm, offered a laptop. Erm, for my daughter and that was really helpful actually. So we didn't feel as if we were kind of squeezing in or anything, er, our use of technology went up massively.*

In other ways however, it brought the family closer by using the device for entertainment as a family with parents/guardians enjoying being more involved with their children's education:



*Parent/guardian 1 (F) interview: Erm yeah more communication from school which was good. Erm you know I felt that you know if he didn't complete a piece of work they notified me fairly quickly erm which they don't particularly I don't think....I mean he's pretty good with doing his work but you know I've never been notified before so whether it was...he wasn't doing work because we were in lockdown or whether they didn't normally communicate that to me.*



*Parent/guardian 2 (F) interview: Erm, we definitely spent more time using technology. It was good in a way because they learned how to use different things they probably wouldn't have used if it wasn't for lockdown but it was hard to erm, to find the balance.*

## Parent Consumption

For the parents, the main changes to their ET consumption during lockdown was the increase in technology use, this was mainly for work purposes:

*Parent/guardian 3 (F) interview: We're in finance. So we immediately switched to working at home so erm our kind of use of Zoom/Teams, any other kind of forum for meetings. I'm an auditor so most of my work was then switched online and erm I guess our usage just went through the roof. Erm days are still filled with back-to-back zoom and skype and Teams meetings. Whereas previously we'd have been out in various hospitals, well I would have been out in various hospital settings across the North West, he would have been in his office department in North Wales. So that's really changed the way in which our world of work has changed.*

Some enjoyed this:

*Parent/guardian 3 (F) interview: Just erm putting in more regular meetings, at least once a week catch ups with every member of the team. And those regular check in points just to make sure that people are OK working at home.*

Whereas others missed being in their work environment:

*Parent/guardian 4 (F) interview: Erm, the work part was neither here nor there for me but I'm a support manager so I prefer being out doing the support managing out in the community, but also I have to do the paperwork anyway so. But erm obviously I missed going out and seeing people.*

Compromises also had to be made to ensure everyone could work from home:

*Parent/guardian 8 (M) interview: Yeah, well I used to use the main laptop and my daughter has got her own little laptop, it's just like a Chrome book type thing where it's not very powerful, it's just got a few like learning apps installed on to it and things like that. And shes got her own tablet as well, so generally we've all got our own devices to use, erm. My partner sometimes, she works freelance, so she would often use it once I've finished work, say about 4 O'clock in the afternoon. She would then do a few hours in the evening.*

## Theme two: Changes from the pandemic that will be carried forward

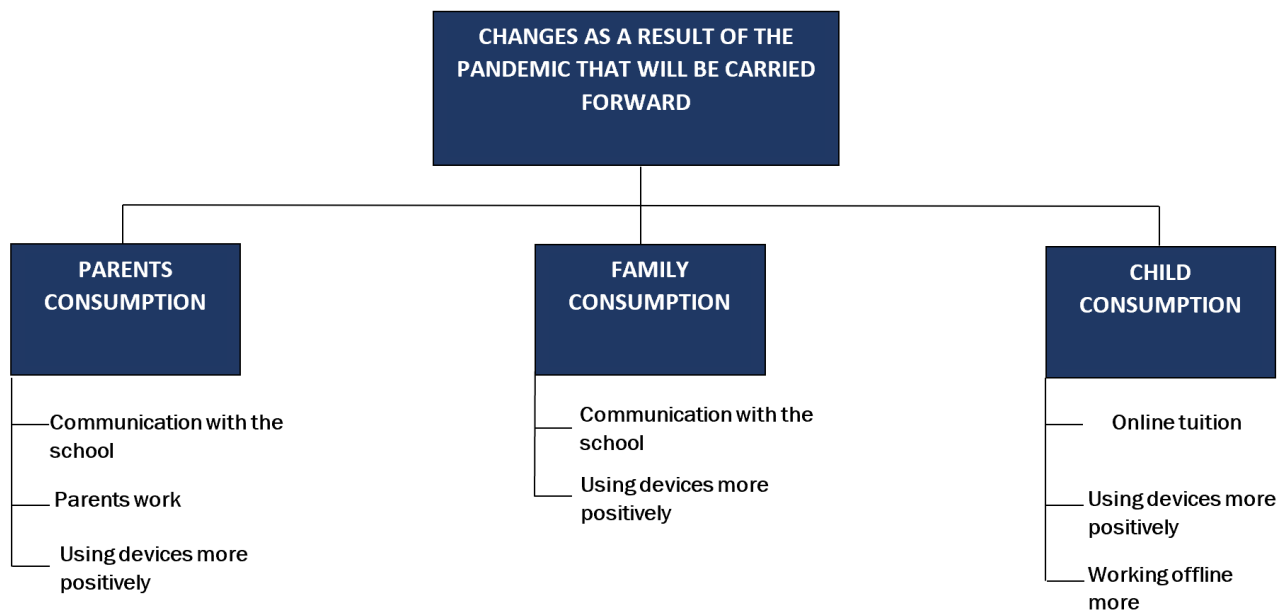
All the changes that parents/guardians wanted carried forward were ones the parents/guardians felt positive about; overwhelmingly parents liked being more involved in their child's education, which was something unique to the lockdown environment. When it came to their personal use, working from

home and more positive ET use wanted to be continued. This theme shows that as a family, parents enjoyed the educational and entertainment outcomes of ET use and would like to see technology used more like this. For the children themselves, further use of devices for educational outcomes was the main positive that they would like to see made permanent.

**Figure 7.19: A detailed summary of theme two from the parent/guardian interviews: Changes from the pandemic that will be carried forward**

THEME	SUB THEMES	SUMMARY
CHANGES AS A RESULT OF THE PANDEMIC THAT WILL BE CARRIED FORWARD	Parent consumption	This sub-theme details the components of parental/guardian consumption of ET that they would like to see carried forward within a post-pandemic environment.
	Family consumption	The data within this sub-theme evidences the familial consumption of ET that parents/guardians would like to be seen made permanent.
	Child consumption	The sub-theme of child consumption here indicates which changes to the child’s ET consumption that parents/guardians would encourage post-lockdown.

**Figure 7.20: A summary of theme two from the parent/guardian interviews: Changes from the pandemic that will be carried forward**



### Parent consumption

Parents were very keen to continue their involvement in their child’s education because it was a completely different experience for them in lockdown:



*Parent/guardian 10 (F) interview: I think, I genuinely think like the use of like Google Classroom to share a lot more with parents was really good. I think erm, there was kind of, a lot more parental involvement during that time. And I think, erm, well, now she's got back to school but we're separate now, she goes to school, she comes home, we get the odd comment but I think there was kind of, a lot more sharing of learning erm, in that time. Yeah, they are still using Google Classroom for some of their homework and stuff which is quite nice, erm but, yeah but I think I'd like to see much more of that shared responsibility again.*

*Parent/guardian 4 (F) interview: And that is better because obviously it was all.....[pause] you'd get a message 'the homework's not been done' and you'd be like well he hasn't had it, he can't do that anymore because it comes through me, it comes through my phone*

For others, they felt this would benefit the children having lessons recorded:

*Parent/guardian 3 (F) interview: Yeah erm so from I guess my daughters schooling perspective [sigh]. I liked some of the, erm, when they recorded the lessons and I think that's quite a good option going forward and I'm not quite sure why they haven't really embraced it? So if you've missed something in class, I don't know, just that facility to recap*

In terms of work, many felt the online gave them more time in a day. Some positive habits were formed, whether this was using devices for new things or being more consistent by ensuring the took breaks outside when working from home:

*Parent/guardian 3 (F) interview: So no longer stuck to this kind of old school anyway nine to five but what we said to them was take time out in the day, go for walks, if you want to go and do a class online, do a yoga class, whatever it is that you want to do that will help you with your health and wellbeing do it, and don't be worrying about slave-ishly sticking to the old rules of office hours*

## Family consumption

For the family, the most popular change continued to be using ET as a way to be more involved with their child's education:

*Parent/guardian 1 (F) interview: And we got to see a lot more of his work, you know what he was doing, where he was up to. You came more aware because you picked up on bits you know*

Because of this communication, they could be more involved which led to activities that didn't involve ET, but were still fun for everyone:

*Parent/guardian 6 (F) interview: [laughter] I don't know really, I think what was really lovely was being more involved in what my daughter was having to do.*

Other changes included using technology together for education and entertainment:

*Parent/guardian 8 (M) interview: Erm, I think just allocating some dedicated time to watching and doing educational things because obviously the school were doing things with Google Classroom but it wasn't a full school day, it wasn't you know, six to seven hours worth. They said to us, you know, do what you can, but we understand, you know, if its difficult. So try and allocate at least two hours a day. Even if it's just watching video's, educational ones. And erm, we've kept on with that now.*

*Watching something silly like a cartoon or something is a treat at the end, if they pay attention to the things we want them to watch. They can watch their own things at the end for a little bit. So that's how we're sort of working it at the moment, so that's something we've kept where we actually ask them to watch stuff that is good for them and that they will learn from. Which I suppose we weren't doing before because they were going to school and they were being kept occupied all day so when they came home, it was a bit like they had their downtime a little bit. Erm, but now we've got a bit more focus on them actually learning from their devices.*



*Parent/guardian 5 (F) interview: We instituted a movie night, which is Saturday night, you know we pick a movie to watch or a TV show, you know, and watch it all together. And that, I can't be sure whether that happened because of lockdown, or finding she is of the age now where we could do that together or whether we wanted more family time, I really cant tell. I think it's a mixture of all things.*

## Child consumption

When it came to positive changes with child consumption, there was again a high focus on education and not just entertainment:

*Parent/guardian 10 (F) interview: Yeah, pretty pleased on the positives. Just going back to schooling, I think what she did genuinely like was it kind of, it offered her more chance to work at our own pace a little bit. Which you don't always get in schools, you know if youre in a class on thirty you know, you've got to work at the same pace as that whole class of thirty at times, whereas if something took her a bit longer then there wasn't the pressure to get that done within the hour. Or, if she did something really quick, then you know, she could get it done in fifteen minutes or whatever. I think it did allow for more personalised learning in some ways.*

For others it was the ability to access class materials at a later date:

*Parent/guardian 3 (F) interview: Like the fact that there was always a Powerpoint presentation for each lesson – it was already recorded, erm having access to that post or at the end of each day just to recap for revision purposes would be fantastic as well.*

Lessons outside of school were more convenient online also:

*Parent/guardian 9 (F) interview: Without having to drive them to all different clubs so where they can do online things, its actually become a convenience for him to have his... He had his guitar tuition online and his 11+ tuition online, so we've kept that.*

Some parents encouraged more offline activities which they would like to see permanently:

*Parent/guardian 6 (F) interview: You know, as much as I've got lots and lots of books in the house, erm and we did use books, we sort of went back old school as we called it, to find information out because obviously we didn't have computers when I was at school. Erm, so that was another eye opener for her. The fact that we were using books to get information from. So erm, maybe that's what I'd like to keep*

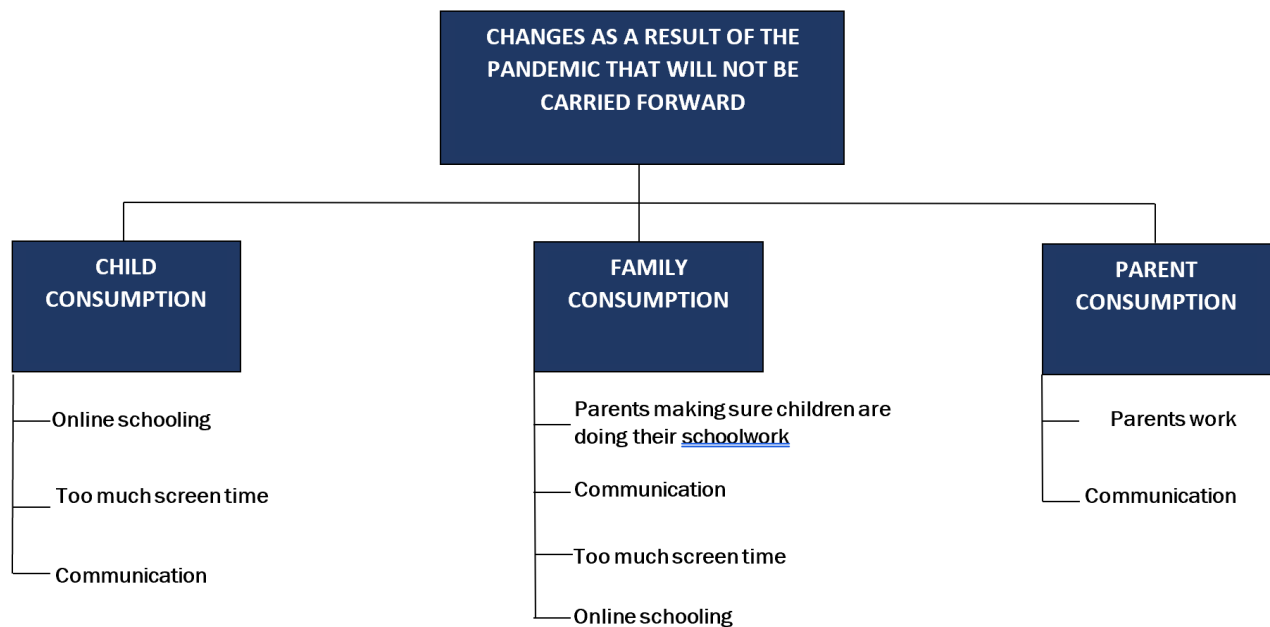
### Theme three: Changes from the pandemic that will not be carried forward

Theme three has demonstrated which components of ET use within the familial home during lockdown were not desired to be continued going forward. For the child consumer, this included using ET for online schooling, with parents feeling as though they missed the social aspect of being in a face to face environment, as well as the ramifications this had for the quality of their learning. When it came to the familial use of ET, parents were looking forward to teaching going back to face to face because it meant they were negatively involved in their children’s schoolwork by trying to keep them motivated to do the work and to stay focussed. Across the child and familial consumption of ET, the increased use of screens is not something that parents wanted to be made permanent. Communication was also something that was preferred in a face to face format for the child, family and parents. For parents, there were far less elements of ET use they did not want to see made permanent in a post-lockdown environment, however there were aspects to working from home such as working longer hours that they did not enjoy.

**Figure 7.21: A detailed summary of theme three from the parent/guardian interviews: Changes as a result of the pandemic that will not be carried forward**

THEME	SUB THEMES	MEMO
CHANGES AS A RESULT OF THE PANDEMIC THAT WILL NOT BE CARRIED FORWARD	Child consumption	Many changes to the child consumers use of ET was not desired to be carried forward after the lockdown context. The type of consumption that will not be encouraged by parents/guardian’s is detailed here.
	Family consumption	Some ways in which the family utilised ET during lockdown would not like to be continued after lockdown, this is detailed here.
	Parent consumption	This sub-theme highlights which changes to the parent/guardian consumption of ET that was not continued after lockdown.

**Figure 7.22 A summary of theme three from the parent/guardian interviews: Changes as a result of the pandemic that will not be carried forward**



### Child consumption

When it came to changes that would not like to be made permanent within the context of child consumption, using ET for education, using ET less and being able to communicate face to face were the most negative parts of lockdown that parents did not want to see carried forward:

**Parent/guardian 7 (F) interview:** *Sometimes they would set some fun activities to do so they were sent off to make things which she enjoyed. That was fun for her. She really missed her friends and teachers and, having the opportunity to see them and connect with them face to face*

The impact on their child's education was also noted, with many not being motivated to work from home or online:

**Parent/guardian 2 (F) interview:** *She found it hard to stay, er to concentrate with online learning but, er, yes with the learning apps it was fun. She was using learning apps before lockdown, but er, spent more time on them. I think its good, knowing how to use technology for learning and not just socialising so I think she saw the benefit of that more*

For some, it was frustrating using ET for everything:

**Parent/guardian 5 (F) interview:** *And, erm, and er, my daughter having done her homework via that particular website that the school uses, she is looking forward to not having to do that anymore. Because they assign homework via that every week and she doesn't like how long it takes, because actually doing it digitally takes about 5 times longer than if she were to do it on paper but they haven't switched back to paper yet at the school because it's safer to do it online, I know. So yeah she's looking forward to not having to use the laptop or the iPad for that purpose, but everything else that she does, she'll continue to do.*

It was not liked by any of the parents that children's screen time increased:

*Parent/guardian 2 (F) interview: Erm, er, less screen time. I like using technology, I think it is important for their learning and something they will need to use in the future, er, but it was hard to keep the balance right in lockdown. I think from speaking to other parents as well, everyone felt the same. It was too much having to work or do online learning all day and then they always used the iPad or something for games and they would argue over who is allowed more time so*

Face-to-face communication was missed:

*Parent/guardian 7 (F) interview: Erm, we both missed that, well I know through my work that a lot of people needed that, and missed that. It was hard not being able to see people during lockdown*

## Family consumption

The sub-theme here shows that the desired outcomes of ET use in a post-lockdown environment were similar for the children as for the family. Overall, parents/guardians were keen to go back to a normal school environment and be less reliant on ET:

*Parent/guardian 8 (M) interview: Just because, I mean, I think a lot of people said it, when lockdown first sort of hit in March, last year I didn't realise how much the teachers have to deal with, and how hard it is, to you know, teach children. Especially when their at home and they've got all their own distractions and they've got a box of toys right next to them and stuff like that. Erm, so I think the actual structured learning that had been sent by the school, it was quite a bit of pressure to get it all done and done to a decent standard because obviously er, there were kids who were staying at school the whole time, you know children of doctors and paramedics and whoever else, you know they were keyworkers children. So there was that of not wanting to be left behind a little bit. So I think just the actual mandated school work I was glad to see the back of, because now the school can handle that again [laughter].*

●  
*Parent/guardian 2 (F) interview: [laughter] well, not having to keep in touch, well I mean, not only being able to keep in touch through a screen*

●  
*Parent/guardian 7 (F) interview: It was, a huge sense of relief that we could, or had that opportunity to do different things again and not be as engaged with a screen*

●  
*Parent/guardian 7 (F) interview: Erm, it was useful for her to learn different ways to use the tablet, she is more confident using that now. But now they will be going back to face to face, I don't think it is necessary to, er for online school work.*

## Parent consumption

For the parents, there were less changes as a result of lockdown that they would not want to see made permanent. Although things did change for them, home working had elements they enjoyed and wanted to see improved going forward. For some however, this meant they were working longer hours:

*Parent/guardian 3 (F) interview: You, erm, its relentless the back-to-back meetings, you know the diary is just full of online meetings which can be quite exhausting.*

Communicating socially through ET was a change they did not want to see taken forward either:

*Parent/guardian 5 (F) interview: It's so much nicer to chat in person. I could talk to them for like two hours in person, after you know, fifteen minutes of it online, you know, I've had*

## 7.4 CHAPTER SUMMARY

Chapter seven, phase three findings concludes the data collection and analysis that took place throughout this research project. **Figure 7.23** summarises how the interviews added significance to the findings from the parent survey:

**Figure 7.23: A summary of the progression of data from the parent/guardian data collection methods**

PARENT SURVEY: PHASE TWO	
THEME	SUBTHEMES
1. PERCEIVED OUTCOMES OF USE	Motivations for inclusion Motivations for exclusion Influence of device type
2. TECHNOLOGY IDEOLOGY	Family consumption Parents consumption Sharing Socialisation Technology ideology
3. MANAGEMENT OF DEVICES	Management of devices Parental skill Parental support School policy Social media
4. OUTCOMES OF CHILD ACCESS	Type of access Child consumption
PARENT INTERVIEWS: PHASE TWO	
The parent/guardian interviews added to the previous data by helping to organise the previous themes and sub-themes in such a way that allowed understanding toward changes as a result of the pandemic, the positive impact of this and the permanence of any changes that emerged.	
THEME	SUMMARY OF CODES
1. CHANGES AS A RESULT OF THE COVID-19 PANDEMIC	Child consumption Family consumption Parent consumption The changes resulting from the COVID-19 pandemic were not always reflective of consumer choice, however how parents felt about these changes adds to the findings of the survey which were outlined within theme one and two of the survey findings.
2. CHANGES CARRIED FORWARD	Child consumption Family consumption Parent consumption This theme highlights which changes were deemed positive, which interrelates the parent/guardian



	<p>perceived outcomes of use that may or may not have changed during lockdown but also what parents value as a positive outcome of technology use, interrelating themes one and two from the survey. This theme from the interview also adds to the data from theme four from the survey; the positive outcomes of child consumption during this time.</p>
<p><b>3. NOT SUITABLE TO BE CARRIED FORWARD</b></p>	<p>Child consumption  Family consumption  Parent consumption  Considerations toward what changes were not suitable to be carried forward, adds depth to the survey findings theme three: the management of devices. The negative outcomes of ET use during the lockdown period also add context to the findings from themes one, two and four of the survey.</p>

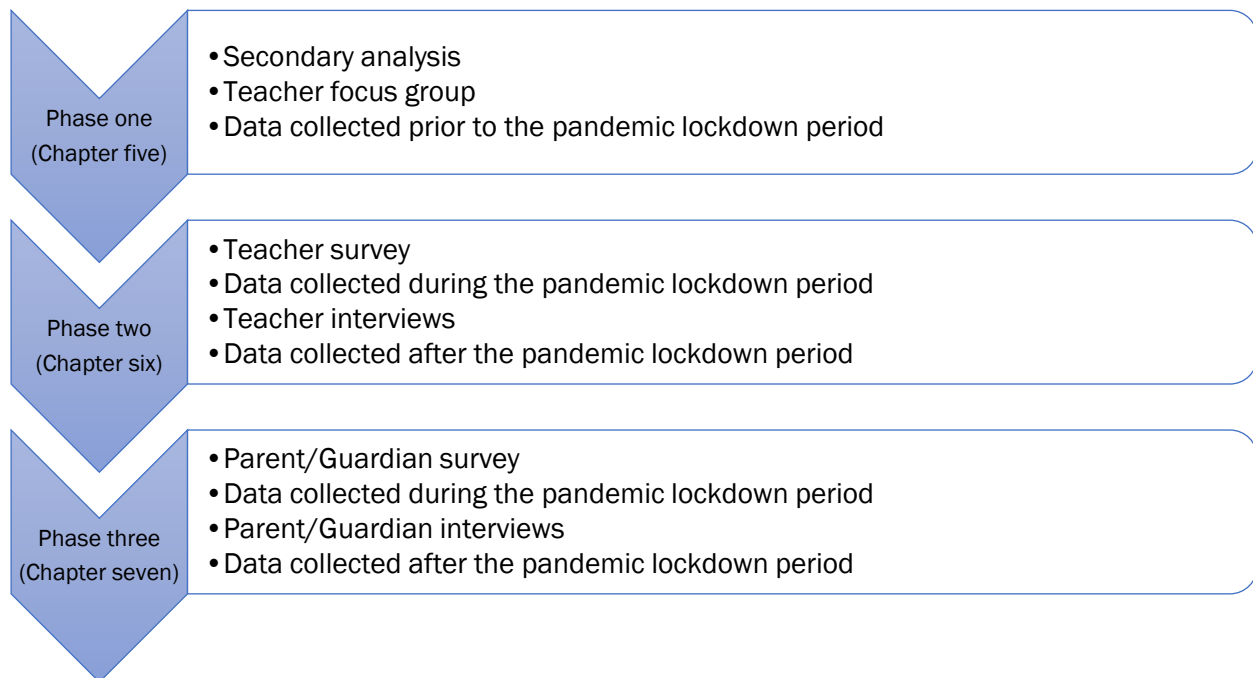
# CHAPTER EIGHT

## · DISCUSSION ·

### 8.1 INTRODUCTION

The discussion chapter of this project amalgamates the data collected from phases one, two and three of the project.

Figure 4.17: Outline of phases one-three of the research project



The chapter is structured firstly by addressing the research question: How has the COVID-19 pandemic impacted upon the digital divide for children? Followed by the research objectives:

- **Objective one:** To examine, critically discuss and articulate a LR interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic
- **Objective two:** To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected
- **Objective three:** To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic
- **Objective four:** To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic on the child consumer
- **Objective five:** To investigate and evaluate an educator's perspective on the use of ET within schools

- **Objective six:** To develop a conceptual framework encompassing how the parental and teacher consumers’ embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future

Each section discusses the achievement of these objectives by interrelating the findings and the literature. In doing so, it contributes to the achievement of the project aim: to explore how ET was embraced by consumers within the familial and education environment’s during the COVID-19 context with focus on the child consumer; addressing the research question: How has the COVID-19 pandemic impacted upon the digital divide for children? **Figure 1.3** illustrates all the chapters that this discussion chapter will refer to.

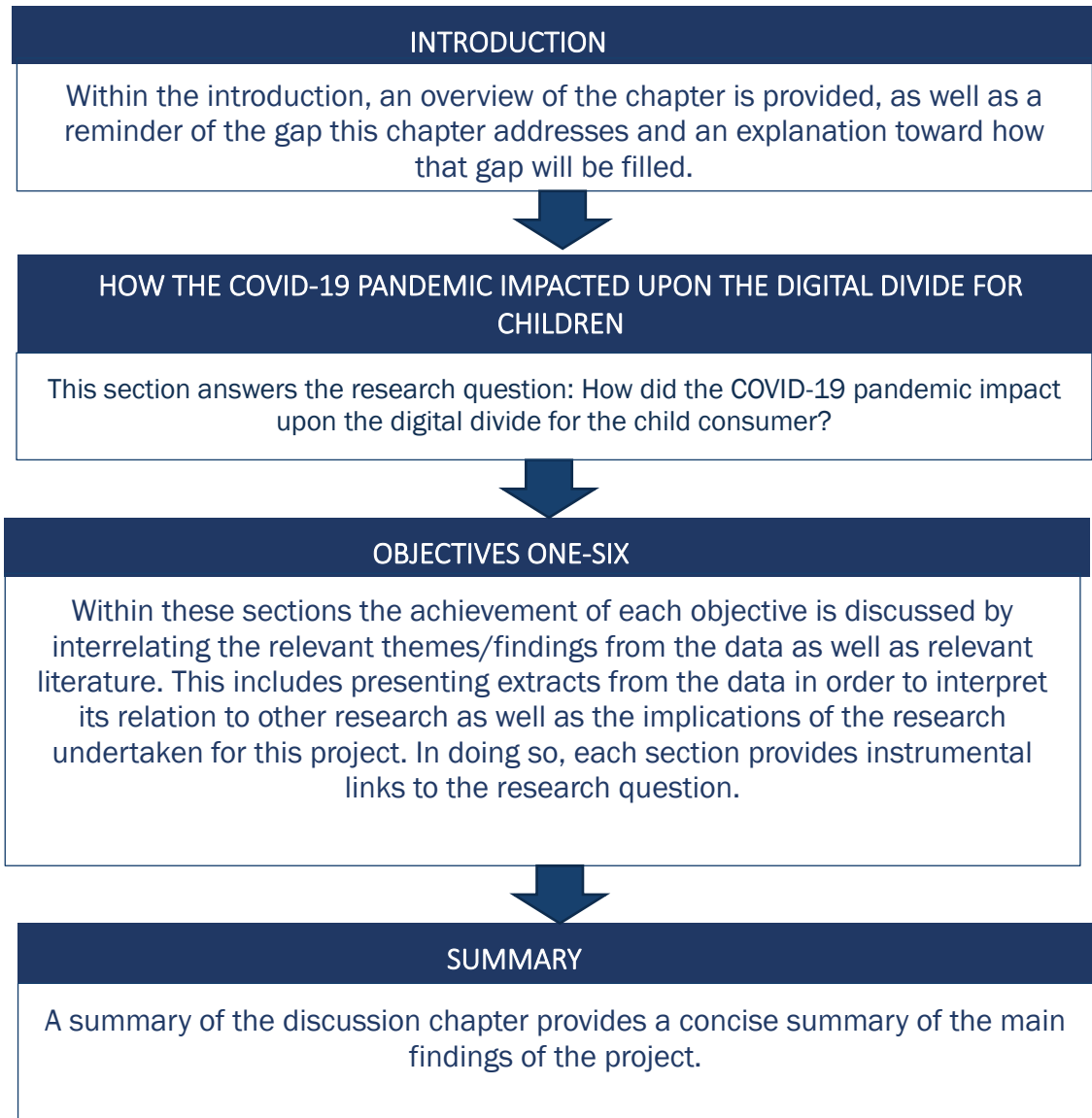
**Figure 1.3: The project flow**

PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child’s consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator’s perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator’s perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

The chapter examines three contributions to the field of consumer behaviour:

1. Addressing the research question: How has the COVID-19 pandemic impacted upon digital divides for young children?
2. Introducing the role of teachers as socialisation actors within consumer research (as these agents have been largely neglected within consumer research)
3. To help policy-makers and educators understand the existing condition of digital divides for young children within a post-pandemic environment

Figure 8: Discussion chapter outline

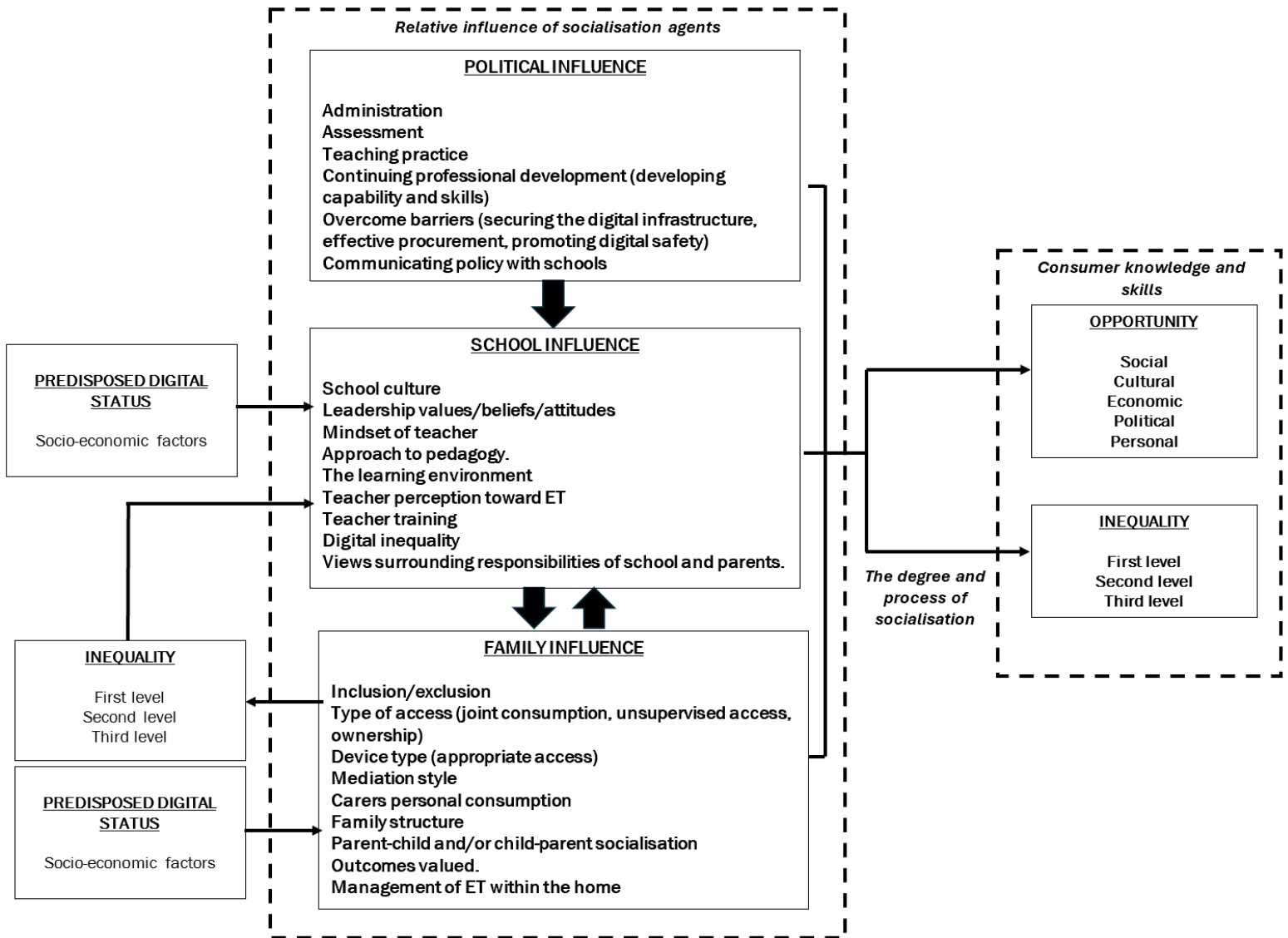


## 8.2 HOW THE COVID-19 PANDEMIC IMPACTED UPON THE DIGITAL DIVIDE FOR YOUNG CHILDREN

The framework conceptualised as a result of the LR has been updated to encompass the findings of the research in order to answer the research question. The discussion of this, which relates to objective six, can be found within [figures 8.2, 8.3 and 8.4](#).

### 8.2.1 THE CHILD CONSUMERS DIGITAL SOCIALISATION ECOSYSTEM: A FRAMEWORK

Figure 8.1: A framework of the child consumers digital socialisation ecosystem during the COVID-19 pandemic.



#### Predisposed digital status

Within the digital socialisation of young children, socio-economic factors predetermined the relative influence of socialisation agents during lockdown. For example, children within households with low income are more likely to share devices, have parents who feel negative toward their own and their child's consumption of ET and who also feel they need further support to manage their child's ET use; this can translate into a higher likelihood of exclusion, devices being less likely to be owned, children

being less likely to have access to appropriate devices, mediation styles were more restrictive, parents personal consumption was more likely to be negative, and management of ET within the home was less likely to be successful. Factors such as these predispose the child consumer’s digital status prior to the influence of agents within the familial environment. Other socio-economic factors pertinent from the literature and the findings can be seen below.

**Table 8.2: The significance of socio-economic factors on the relative influence of socialisation agents in the familial context during the COVID-19 pandemic**

	DEMOGRAPHIC FACTOR	RESEARCH FINDINGS	FINDINGS FROM EXISTING LITERATURE	IMPACT ON THE CHILD’S SOCIALISATION
1.	GENDER	<u>Not considered:</u> The majority of parent/guardian participants were female.	Correa, et al. (2015) suggests children are more influential with a female parent over the age of 35.	Children will have more weight in the socialisation process when engaging with their mothers than fathers.
2.	COUNTY (UK)	<u>Not considered:</u> The area’s of the UK were too varied.	Those in more rural area’s do not have access to the same level of internet speed and connectivity as those in urban areas (Department for Environment Food and Rural Affairs, 2023)	Children in rural area’s are less likely to have stable access to the internet.
3.	PARENT AGE RANGE	<u>The older the parent:</u> <ul style="list-style-type: none"> <li>• The more positive they felt toward their own consumption of ET</li> <li>• The more likely both child-parent and parent-child socialisation took place</li> <li>• The more likely they were to manage laptop and smartphone use</li> <li>• They are more likely to restrict access to charging ET at night</li> <li>• They are more likely to consider themselves less skilled</li> <li>• More likely to feel they don’t need support to manage ET use</li> </ul>	Older age correlates with the likelihood of digital exclusion (ONS, 2019).	If parents do not access ET, children have less opportunity for socialisation experiences.



		<p><u>The younger the parent/guardian:</u></p> <ul style="list-style-type: none"> <li>The more likely they are to say they need further support to manage ET use</li> </ul>		
4	HOUSEHOLD INCOME	<p><u>The lower the household income:</u></p> <ul style="list-style-type: none"> <li>The more likely to share a laptop</li> <li>Parents/guardian's felt more negative about their ET use</li> <li>Parents/guardians were more likely to say they needed support to manage their child's ET use</li> <li>Parents/guardian's are more likely to see child ET use as negative</li> </ul>	Lower income households are more likely to be excluded from internet use or access to appropriate devices (ONS, 2019).	This can hinder the development of digital skills.
5.	PARENT EDUCATION LEVEL	<p><u>The less educated:</u></p> <ul style="list-style-type: none"> <li>The more likely to share a laptop</li> <li>The more likely to manage tablet use</li> <li>The more likely to switch broadband off at night</li> <li>The more likely to see themselves as more skilled</li> <li>The more likely they are to see consumption as negative or neutral</li> </ul>	Lower education levels correlate with less capital enhancing digital activities (ONS, 2019).	Education level will have a bearing on the type and quality of digital outcomes achieved.
6.	PARENT EMPLOYMENT STATUS	<p><u>Not considered:</u> The majority of parent/guardian participants were employed</p>	Employees were the most likely to be internet users (ONS, 2019).	This can have implications toward the ability of guardian's to develop digital skills and outcomes.
7.	INDUSTRY OF EMPLOYMENT OF PARENT	<p><u>Not considered:</u> Too varied to see any trends</p>	Some industries represent a higher need for technological skill (ONS, 2019).	This can have implications toward the ability of guardian's to develop digital skills and outcomes.
8.	PARENTS IN HOUSEHOLD	<p><u>Not considered:</u> The majority of respondents were from 2 parent households</p>	Single parent households were less likely to have no internet connection (ONS, 2019).	Without internet connection, children have far less opportunity to build their digital skills.

9.	NO. OF CHILDREN IN HOUSEHOLD (PART TIME/FULL TIME)	<p><u>The more children living in the house:</u></p> <ul style="list-style-type: none"> <li>• The more likely tablet use is managed</li> <li>• The more likely that parents feel less skilled The more likely parents/guardian's feel they need support to manage devices</li> <li>• The more likely parents/guardian's saw child consumption as negative and neutral</li> </ul> <p><u>The less children living in household:</u></p> <ul style="list-style-type: none"> <li>• The more likely to manage laptop use</li> <li>• The more likely parents/guardian's feel more skilled</li> <li>• The more likely parents/guardian's feel they don't need support</li> <li>• The more likely they will see child consumption as positive</li> </ul>	The Income deprivation criteria considered how many children aged 0-15 lived in households (Department of Communities and Local Government, 2015).	It was assumed this would therefore have an impact on opportunities for the child's socialisation experiences given it was considered an indication of deprivation.
10.	VIEWS TOWARD THEIR OWN CONSUMPTION	<p><u>If parents felt positive about their own consumption:</u></p> <ul style="list-style-type: none"> <li>• They were more likely to socialise their children</li> <li>• They were more likely to share a laptop</li> <li>• They were less likely to hold views associated to the Green Luddite ideology</li> </ul>	Lack of motivation to use ET is a significant factor in digital exclusion (ONS, 2019).	If carers have negative views toward their own consumption, they may not feel digital socialisation will benefit children.

Predispositions toward digital status can also impact the education context within which digital socialisation occurs. These predispositions impact not just teachers as socialisation agents, but also school leaders and agents within the learning environment who act as influencers to the degree and process of socialisation that occurs in the education context. [Table 8.1](#) outlines the factors pertaining to this environment.

**Table 8.3: The significance of socio-economic factors on the relative influence of socialisation agents in the education context during the COVID-19 pandemic**

	SCHOOL FACTOR	RESEARCH FINDINGS	FINDINGS FROM EXISTING LITERATURE	IMPACT ON THE CHILD'S SOCIALISATION
1.	GENDER OF PUPILS	<u>Not considered:</u> The majority were from mixed gender schools	Hargittai & Kim (2010) suggest ET outcomes had gender variances.	Outcomes may be reinforced within same gender schools.
2.	SCHOOL TYPE (PRIMARY OR SECONDARY)	<u>Secondary schools:</u> <ul style="list-style-type: none"> <li>Digital inequality is more likely to be an issue in secondary schools</li> </ul>	School type was considered as children aged 8-11 will be in primary and those aged 11-16 in secondary schools (Gov.uk, 2019).	This was to consider different ages and certain age groups are more likely to utilise certain outcomes over others.
3.	AGE OF TEACHER	<u>The younger the teacher:</u> <ul style="list-style-type: none"> <li>The more likely for them to see ET use as positive</li> <li>The more likely to have Techtopian values</li> <li>The more likely for them to feel more skilled using ET than the children they teach</li> <li>The more likely they will see ET use as beneficial for children</li> </ul>	Older age correlates with the likelihood of digital exclusion (ONS, 2019).	Children with older teachers may be less likely to integrate ET within their classroom.
4.	TEACHER WI-FI ACCESS AT HOME	<u>Not considered:</u> All teachers had WiFi access at home	This would indicate the teachers chose to exclude themselves from the internet when at home.	If teachers do not value their own internet use, they may not see this as a skill that needs to be developed for young children.
5.	SCHOOL STATUS (MAINSTREAM, ACADEMY, FAITH, COMMUNITY, INDEPENDENT)	<u>Not considered:</u> The data did not show any significance toward the school status	This was to consider differences between schools who had to follow the national curriculum and those who didn't.	It may highlight that schools under the national curriculum were more/less restricted than in how ET is integrated in the classroom than those who did not follow this.
6.	AGE RANGE OF CHILDREN TAUGHT	<u>The older the children:</u>	The research is focussed on those aged 8-11	Different age groups may have different socialisation

		<ul style="list-style-type: none"> <li>• Digital inequality is more likely to be an issue</li> <li>• The more likely teachers are to see ET use as negative</li> <li>• The more likely teachers see usage at home as problematic</li> <li>• The more likely issues will occur at school</li> <li>• The more likely teachers will value Workmachine outcomes</li> <li>• The more likely teachers will feel less skilled</li> </ul> <p><u>The younger the children:</u></p> <ul style="list-style-type: none"> <li>• The more likely teachers will not talk to them about ET</li> <li>• The more skilled teachers feel in comparison</li> <li>• The more likely teachers will see ET as beneficial to children</li> </ul>	which is why this was considered.	experiences, with older age groups being more likely to own devices than younger age groups for example.
7.	SUBJECTS TAUGHT	<u>Not considered:</u> There was no significance surrounding the subjects taught.	Some subjects necessitate the use of IT, and does not show teachers trying to integrate ET in the classroom if that is the lesson being taught.	The research shows some subjects may welcome the use of ET whereas others may need more creative consideration from teachers.
8.	VIEWS TOWARD THEIR OWN CONSUMPTION	<p><u>Positive views toward consumption:</u></p> <ul style="list-style-type: none"> <li>• The more skilled they felt</li> </ul> <p><u>Negative views toward consumption:</u></p> <ul style="list-style-type: none"> <li>• The less skilled they felt</li> </ul>	Lack of motivation to use ET is a significant factor in digital exclusion (ONS, 2019).	If teachers view their own consumption negatively, they may not value the digital socialisation of young children.

## Digital inequality

Digital inequality stemming as a result of socialisation within the familial environment, impacts the relative influence of socialisation agents within the education context. Educators are less likely to want to integrate ET within lessons if they feel it is going to highlight disparities within the classroom. Problematic ET use causes teachers to have negative perceptions of ET which impacts their motivation to use ET within the school environment, some of the outcomes realised also deters teachers from integrating ET. Details surrounding this are shown within [table 8.2](#) below.

**Table 8.4: The impact of digital inequality on the child’s socialisation within the education environment**

LEVEL OF DIGITAL INEQUALITY	EVIDENCE FROM RESEARCH FINDINGS	IMPACT ON THE CHILD’S SOCIALISATION WITHIN THE EDUCATION ENVIRONMENT
FIRST LEVEL (ACCESS)	<p>Some schools alleviate disparities in access by giving all students access to ET, however not all schools have the funding or motivation to do so.</p> <p>Some children struggled accessing online platforms because devices were not always available. This impacted how many interactive lessons took place online, in some schools, online work was put up and the interactive sessions were focussed on wellbeing instead.</p> <p>Not all households had Wi-Fi, some children did not have access to teachers as socialisation agents during the pandemic.</p>	<p>Disparities with regard to access means some children are more knowledgeable and skilled than others, which puts teachers off utilising ET in the classroom as some students are able to use ET to support the learning activity and others do not have the experience to do this without further help. The need to give further help then takes the focus away from the subject being taught.</p> <p>Digital inequality deters teachers from wanting to integrate ET because they do not want to embarrass students who do not have the same level of access to devices as others in the class.</p> <p>Access to online platforms during school hours was problematic if families were sharing devices. Further issues included access to appropriate devices, with some children accessing their school work, completing tasks offline, and uploading pictures of their work rather than interacting with teachers and peers within the online setting.</p> <p>For those without Wi-Fi, contact with teachers did not take place, some teachers went to houses to speak to parents and give out school work. This meant the home environment was even more prominent with regard to digital socialisation, reinforcing or heightening inequality whereby some schools could lend devices and relieve this issue (if WiFi was available).</p>
SECOND LEVEL (SKILL)	<p>During the pandemic, some children were very skilled when it came to the use of ET which caused problems when learning online and subsequently deterred teachers from wanting to integrate</p>	<p>Some children were able to anonymise themselves during online zoom lessons and were rude to their teachers who could not identify them.</p>

	<p>ET in a post-pandemic environment.</p> <p>Skill surrounding the ability to navigate the online platforms was varied which impacted the contact they had with teachers.</p> <p>Skill surrounding the ability to focus on some tasks and manage their time spent online was problematic for some.</p>	<p>Many children did not put their camera's on which dampened the online teaching experience.</p> <p>Some children and parents did not have the skill to utilise online platforms during the pandemic, and worked offline as a result.</p> <p>Not all children were able to work online without getting distracted or had parents to help them manage this temptation.</p>
<p><b>THIRD LEVEL (OUTCOMES)</b></p>	<p>Some children had access to inappropriate content as a result of their ET use which caused issues in schools whereby children had some knowledge of topics, but not appropriate understanding of them.</p> <p>During lockdown many teachers saw positive social outcomes of using ET, however this was also varied. Some children had negative experiences which materialised within the school environment. This impacted the teacher's view of ET use.</p> <p>Problematic outcomes of ET use often materialised at school and not at home where the activity takes place. These negative outcomes can disrupt the school day and learning, impacting the teachers perception of ET and their motivation to use it within classrooms.</p>	<p>The negative outcomes of ET use can result in a negative learning environment, making it difficult for teachers to integrate ET. As a result, this type of socialisation does not take place in the education context.</p> <p>Positive outcomes are apparent, but this is not the case for all students. Again this deters teachers from integrating ET.</p> <p>Differential outcomes of ET use can leave some children to feel excluded socially whereby they cannot join conversations about the latest trends or topics of conversation. On the other side of this, children who are involved can stay up late, or feel pressure to keep up which makes teachers concerned about balancing their use of ET, and therefore not using ET within schools.</p>

### The relative influence of socialisation agents

The findings confirm that the political environment within the child consumers digital socialisation eco-system have a top-down approach and act as indirect agents within the socialisation eco-system. The role of policymakers is important, particularly for securing digital infrastructures within schools and Siljebo (2024) see's the integration of digital citizenship to the curriculum as transformative in transforming people and society. However, the relative influence within the child's digital eco-system is solidified as a context that does not have an active role as it is the teachers role to make this policy visible within the school.

The school environment had a significant role during the COVID-19 pandemic whereby they relieved first-level digital divides for many children, and ensured they had access to devices appropriate to their

needs (where possible). This indicated a relationship between the school and familial context when it came to first level divides (access). Socialisation agents such as school leaders had a huge bearing on the quality of influence teachers had on children; some school leaders made the move from offline to online learning easier by providing time for training and lessening administrative tasks such as lesson plans, whereas other school leaders made this a more difficult process. In turn the school culture and leader values/beliefs/attitudes shaped the mindset of the teacher, their approach to pedagogy, teacher training and perceptions toward how ET could be utilised in the classroom; piloting the need for education policies to consider the headteacher's professional and personal profile, their age, teaching, experience, school size, school complexity and the schools' digital culture (Navaridas-Nalda, et al., 2020). However, if teachers felt strongly about not using ET, they provided content and feedback but little support or influence when children engaged with online learning. For some teachers, the enforced experience of online learning during lockdown increased their motivation to use ET in a post pandemic environment. Therefore, experience aiding their ET related competence has a positive impact on their motivation to use it (Nelson, 2019). This further increases the relative influence of this environment on second level divides (skills).

This also had bearing within the familial context whereby some children learned new skills and others struggled to engage with their education, reducing the likelihood of educational outcomes being achieved at home during lockdown. The familial context had sway on the relative influence of the school environment; considerations around digital inequality and management of ET in the home had an impact on teacher views surrounding their responsibilities/role within the socialisation process, the mindset of the teacher, the learning environment, and teacher perception of ET. If inequality was an issue or problematic ET use from home presented at school, it meant teachers did not want to integrate ET within the classroom because it disrupted the learning, caused embarrassment by highlighting inequality, and led to views that the introduction of ET was a decision within the familial context, not the educational. If, however children were skilled at using ET as a result of familial influence, it made it more appealing for teachers to integrate ET into the classroom as it was less cumbersome if children already had a good skill level. This shows the family are the most influential when it comes to third-level digital divides (outcomes) (Zhao, et al., 2022).

This solidified the familial environment as the most influential of the three contexts within the child consumers digital socialisation eco-system as the degree and process of socialisation that leads to consumer knowledge and skills has an impact on many of the factors within the school context. Although schools did have some bearing on the familial environment such as inclusion, educational outcomes obtained, as well as some opportunities for child-parent socialisation during lockdown. The families relative influence was the strongest, most active and direct whereby they made decisions whether to include/exclude children from ET use. Although schools were able to help children with access, parents' mediation and management tactics influenced whether ET use was restricted for other outcomes such as entertainment and socialising if they were concerned about excessive screen time during lockdown.

## The degree and process of socialisation

The findings showed little evidence that policymakers have an active role within the degree and process of socialisation for the child consumer. Although the EdTech strategy highlights outcomes such as efficiencies within administration, assessment and teaching practice; the findings showed this was the result of the enforced experience of ET during lockdown or school culture rather than from policy proposals. CPD was shown within the findings, but examples came from teachers developing this, rather than using training provided or encouraged by policymakers. This is problematic when it comes to the teacher's ability to make policy visible within schools as key ways to do this are through engagement with CPD (Watson & Michael, 2016). Prevalent degrees of socialisation included the role policymakers had in schools securing digital infrastructure and promoting digital safety which manifested through formal discussions between teachers and children about e-safety. Effective procurement was evidenced, however maintaining and updating equipment caused issues within schools. The process of socialisation from the political environment includes securing schools with



access to the internet and requiring conversations around e-safety, however the frequency of this was different in each school. Teachers were confident policymakers would communicate with them about EdTech initiatives, but this would usually be in a reactive rather than a proactive manner. Overall, the relative influence of the political environment is low, but key socialisation processes are carried out by the school as a result of some policy initiatives (securing the digital infrastructure, procurement and promoting digital safety) although this is not standardised within schools. Valcke, et al. (2007) critiques the significance of schools as actors of policy, suggesting only parent/carer influence is significantly related to a decreased likelihood of unsafe internet behaviour and school-based interventions are less to ineffective.

School culture and leadership values/beliefs/attitudes are important within the degree and process of socialisation as schools without a culture and leader who is keen on the integration of ET, are unlikely to have a role within the digital socialisation process of young children (even if teacher mindset, approach to pedagogy and perception of ET is positive toward the use of ET in classrooms). If, however, the school culture and leader values the use of ET, the school is likely to have a higher degree of influence within the digital socialisation process. However, if teacher's have a negative mindset, and perception toward ET, it can mean their approach to pedagogy does not welcome the use of ET within the classroom. Pynoo, et al. (2011), found the main predictors of digital learning environment acceptance were performance expectancy which was heavily influenced by the social influence of superiors to use ET in the classroom. Expected effort and facilitating conditions were seen as minor in comparison, concluding that the usefulness of ET should be demonstrated and school boards and headteachers should strongly encourage it's use and not be passive in allowing teachers to ignore interventions.

In classrooms where ET use is integrated and encouraged, there is a high degree of socialisation, not just with access, but skill development and outcomes realised. In classrooms where ET use is not encouraged, no socialisation will take place. As a minimum, children receive information surrounding e-safety, however this ranges from yearly-weekly within different schools. The key finding here is that whilst policy is standardised, this standardisation only extends toward schools having access, some procurement support and a requirement to discuss e-safety. Outside of this, the degree and process of socialisation that takes place within the school context, is varied within individual schools. De Grove, et al. (2012) found the key differentiator between ET use and non-ET use in the classroom was down to curriculum relatedness, where it's easier to do in some subjects over others.

Within the familial environment the degree of socialisation is dependent firstly on whether children are included or excluded from ET use, although this was necessitated during lockdown, most parents valued educational outcomes over others. This meant some children were encouraged to utilise a range of skills and outcomes and others were restricted to using ET for their education only. The type of access also varied; joint consumption, supervised and unsupervised access carry degrees of socialisation, all of which are important, however the process is different depending on the type of access granted. For example, unsupervised access can help children build their digital resilience (Livingstone, 2019), however McArthur, et al. (2020) found early screen use can have a negative impact on child development milestones, especially if this took the form of unsupervised use. Unsupervised access was viewed as using ET as 'babysitters'; as a distraction when guardian's feel overwhelmed, because of the physical and mental immaturity of young children, this is said to be harmful to their development (Kim & Park, 2014) found in (Cho & Lee, 2017). Supervised access allows children to experience outcomes of ET safely and joint consumption gives parents the opportunity to impart knowledge. Wang & Xing (2018) and Levine, et al. (2019) found if ET was used jointly, this process of influence yielded positive outcomes. Levine et al, (2019) noted this depended on education levels, Wang & Xing (2018) did not note education level was as prominent as their involvement; finding children whose parents were more involved with their early ET use, had higher levels of digital etiquette and safety. Opportunities for socialisation processes can take place on any ET device and different forms of access has both negative and positive connotations toward digital

skills development, the key here is balance. The development of consumer knowledge and skills may vary depending on the device however.

Mediation styles, parents' personal consumption, family structure and management of ET within the home also influence the degree and process of socialisation; where ET use is encouraged, the degree of socialisation is higher, whereas restrictive mediators, families with multiple children and parents with negative views toward their own consumption are less likely to have/make opportunities to socialise their children. Clark (2009) found parents felt there were social benefits and opportunity to improve technical skills through ET use, but online risks heightened concern for their safety. This concern can therefore lead to restrictive mediation and impact the degree and process of socialisation.

Both forms of parent-child and child-parent socialisation are important within the socialisation process, as are the outcomes valued and management tactics of ET within the home, however the findings show that much like the education environment, the degree and process of socialisation is different between households.

## Consumer knowledge and skills

The child consumer would not accumulate digital knowledge and skills directly from the political environment, but policies surrounding the introduction of digital safety, ensuring schools have internet connectivity and procuring devices to be used within the school environment would have enabled knowledge and skill development within this context.

Although the degree and process of socialisation is varied within each school, at the best and highest levels of socialisation, the school environment can enable children access to ET, enable the development of digital skills and secure digital outcomes. These can take the form of social, cultural, economic, political and/or personal outcomes which can be enhanced further as they get older, and their interests and needs develop and change. At worst, schools provide access and socialisation opportunities within IT lessons and digital e-safety sessions, providing the child consumer with first level access, skill and the opportunity to reach outcomes through the use of computers. However, if the school does not purchase ET, it may mean this type of socialisation does not take place in the school environment.

Within the familial environment, there are opportunities for children to gain consumer knowledge and skills as a result of ET use. Again, the outcomes of this are varied within households, at best children have access, are encouraged to build a variety of skills and a range of outcomes which help them achieve social, cultural, economic, political and personal opportunities; giving them the best start in life to continue to achieve these outcomes as they get older and continually develop these skills as technology changes. At worst, children are excluded from ET use, are unable to develop their skills and achieve the aforementioned digital outcomes.

Within the COVID-19 lockdown context; it was evident that the role of policy could have been greater to help enable the development of the child consumers' digital knowledge and skills. The school context developed the child's digital skills by default as education was moved online, it meant children utilising ET for different outcomes and accessing new platforms. Some teachers were motivated to make this as engaging as possible, widening the development of digital skills; not only helping children to use certain aspect of ET for learning, but also using ET to support both online and offline learning opportunities such as subject activities, accessing feedback, uploading work and engaging with teachers and their peers appropriately and developing their digital etiquette. Within the familial environment balance surrounding inclusion/exclusion, the type of access, use of differing devices, mediation styles, carers personal consumption, parent-child/child-parent socialisation, outcomes valued, and management tactics was the most beneficial to the development of consumer knowledge and skills. The data showed within the lockdown context, different formations of the aforementioned factors were prevalent; concluding that inequality and unequal opportunities surrounding the degree

and process of socialisation within the familial context leads to unequal opportunities to access the outcomes pertaining to consumer knowledge and skills.

## 8.3 OBJECTIVE ONE

*To examine critically discuss and articulate a LR interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic.*

### 8.3.1 THE SIGNIFICANCE OF DIGITAL INEQUALITY WITHIN THE CHILD CONSUMPTION OF ET

#### The impact of first-level divides

The findings show that many carers choose to exclude their children from ET out of concern for their development whereas others will have access before starting primary school. This intertwines findings from Ofcom (2022). As children get older, it is acknowledged that the majority of households use ET as a form of 'material parenting' (Richins & Chaplin, 2015). This has taken a ritualistic stance in households in that ET is gifted at certain ages and signifies a child's maturity (Rook, 1985); forming part of the child's identity of self through the use of a material gift. "The crucial years for acquisition of a mobile phone were between 9 and 11 years old: 44% rising to 91%", however access starts much earlier (OfCom, 2022).

On the other side of this, many parents try to exclude their children from internet use for as long as possible. The literature identified the overarching issue when it comes to exclusion from the internet, is that child consumers do not have access to the same opportunities as those with access, leading to inequality within their socio-economic opportunities (Ólafsson & Mascheroni, 2015). van Deursen & van Dijk (2019), concludes inequality with regard to access, impacts how the child consumer uses the internet, the skills developed through internet use, and ultimately the outcomes of that usage. Within the digital age, this usage also plays an important role within consumer culture (Arnould & Thompson, 2005) and experiences (Hoffman & Novak, 2018). Those without this access, feel excluded:

***Teacher survey: Children will talk about games or conversations they had the night before, and children without these games can feel left out.***

This emphasizes the significance of the findings of Hutchinson et al (2020); the digital capital required when it comes to accessing the internet is not equally accessible to consumers. This is problematic for those who play a role within a child's digital socialisation, whereby this inequality inherently impacts the children they are responsible for guiding. Within the lockdown environment especially (although temporary), the internet was the main source of social, entertainment, educational and working resources, meaning those already on the wrong side of the digital divide prior to lockdown, were even more vulnerable (Sheth, 2020).

#### The impact of second-level divides

When it came to digital skills, most parents felt they were more skilled, however this was due to experience, they felt their children have a better aptitude toward ET. This is congruent with the literature, although age is presumed to be an automatic pre-requisite for digital skills, Gui & Argentin (2011) outline the importance of parental guidance. They found young people are better skilled to intuitively/operationally use technology and navigate interfaces, but parents play an important role in ensuring children are able to evaluate the information they find. Without this guidance, it hinders the development of digital skills. Most parents identified they were able to do the 'basics' but more complex tasks showed examples of child-parent socialisation.

The issue within this level of digital divides is that not only are skills developed at different rates, but what skills are deemed meaningful are also being developed unequally. The literature suggest this is problematic for the child consumer, whereby equal access provided later on in life, does not erase the impact of this inequality from a young age (Cotten & Jelenewicz, 2006).

Campbell, et al., (2020) suggested some parents were not able to support their children to use ET during lockdown because of insecurity, uncertainty and anxiety. Within this study, parents were increasingly involved with their child's educational use of ET, and wanted to see this continue in a post-lockdown environment:

***Parent/guardian 10 (F) interview: It was quite nice actually. Coz I think, I think for the first time, I got to see a lot more of what they do in an average day.***

As screen use understandably increased, many parents had concerns about this. However, experience with technology is seen to be the biggest indicator toward the development of digital skills (Hargittai, 2002); realising the most meaningful opportunities that can be afforded through ET use, is the result of experience of use (of which there was plenty of opportunity during lockdown). van Deursen & van Dijk (2014) disagree with this, highlighting it is the variety of use, and skills developed that can help realise the most beneficial outcomes. This was shown throughout lockdown, with children who were experienced users of ET, started to benefit from learning further skills because they were using ET within different ways, not just because they were using it more:

***Parent/guardian 6 (F) interview: Erm, I think it was a real eye opener for my daughter, because as much as she has used IT, it was a bit of an eye opener in that, there was so much she had to suddenly learn and how to negotiate the computer, how to negotiate different platforms because her school was setting the work on one platform, and asking it to be completed on a different platform.***

It is agreed that being skilled in one area, does not translate to skill in another (Hargittai, 2002). This finding is significant as it shows variety of use is more important to the development of digital skills than time spent online. The impact of inequality within the skills developed, means the type of beneficial outcomes of ET use that are available are not equally achieved. This was shown not just throughout households, but different schools concentrated on differing skills, some teachers felt more comfortable with ET and some schools had very supportive IT leads to help ensure ET was embedded within classrooms.

### The impact of third-level divides

For young children, negative outcomes took place at home but were experienced at school. Within the home environment, the biggest issue of ET use was time spent online. This led to teachers having a more negative view of ET use in comparison to parents, finding that negative outcomes hindered their ability to effectively teach:

***Teacher 8 (M) focus group: And it has a huge impact on the whole day as well, we've had a few quite big incidents with people posting things and saying things and so on, and its effected the whole day because we've had to unpick it, so even though it's an out of school issue, its effected the learning for the whole day***

Debate takes place about the type of digital access, skill and outcomes that can be developed as a result of ET use, however varied or balanced usage within economic, social, political, institutional and/or educational outcomes, is seen as more beneficial than consumers limiting this (van Deursen & Helsper, 2015). Tapscott (1998) generalises between passive and active use, with active use being seen as progressive and passive a setback. Within the findings, active and passive use was problematic in the classroom. Positive outcomes often came from interactive online experiences. The findings have evidenced digital divides for the child consumer are apparent in the education and familial contexts; the literature has identified the impact of this for the child's current experiences and future opportunities. The next element of objective one, considers the significance of these micro and meso levels of socialisation for the child consumer.

### 8.3.2 THE SIGNIFICANCE OF THE FAMILIAL CONTEXT WITHIN THE CHILD CONSUMPTION OF ET

The inclusion section within the LR was organised following the identified context within which digital inclusion can occur within the familial home for the child consumer: Joint consumption, unsupervised access, gift-giving and caregiving. This was evident throughout the findings whereby the family used ET jointly, children used ET unsupervised, ET was given as a gift and access was granted out of consideration for the child's long term interests. Inclusion can take many forms within the familial home, with the type of use encouraged differing between households. Inclusion then, while positive, can lead to dangers, harms or inequality among households within the UK, with some caregivers more digitally literate than others. As well as this, the importance of freedom to explore was highlighted as a necessary element of digital inclusion, but is not granted in all households. On the other side of this, the section considered why caregivers exclude children from technology use. Main themes were personal choice, socio-economic factors, the parents' personal consumption and planning. Whilst this can prevent young children from experiencing online harms, exclusion can be problematic because they do not have any exposure at all, hindering their ability to build their digital skills and resilience to content. Those included in technology use are not necessarily experiencing beneficial inclusion or at least not equally. Those excluded have none of these opportunities at all.

The findings here link to the research question by solidifying the significance of the familial context within the child consumers socialisation eco-system whereby families do not just include/exclude the child from ET use, but this context also encourages the type of use, thus the skills developed. This intertwines existing research exemplifying how influential the family are within the socialisation process. When applied to the concept of digital divides, the research findings imply that access and therefore inequality starts from ages 0-1. The COVID-19 pandemic saw the educational context as another key area of socialisation. The significance of which is considered below.

### 8.3.3 THE SIGNIFICANCE OF THE EDUCATION CONTEXT WITHIN THE CHILD CONSUMPTION OF ET

Within the education context, children are introduced to IT from primary school age, however the findings of this study coincide with Ofcom (2022) in that inequality within children this age is already apparent as access is given within the home. The LR exemplified the importance of the familial environment within the context of digital inequality for the child consumer. Although no parent identified it was through the school that their children were first granted access to ET, many felt the schools played an instrumental role when learning how to use it. This contextualises the importance of the education context within the socialisation of the child consumer. The literature considered the role of policymakers and their expectations when it came to the teaching of IT in the school context, whilst policy is unified, the findings established that the socialisation of ET within classrooms is not:

**Teacher 8 (M) focus group:** *That would be like online books for the little ones, then their only like 4, they are able to look at it, and actually it will read the books to them, so that's one thing I've purchased, that's something I'm working on.*

•  
**Teacher 1 (F) interview:** *Erm well my school is an iPad school, all students have iPads as part of their equipment so we are quite up with technology anyway as a school*

•  
**Teacher survey:** *Has potential but kit too old and no money in education to fund enough*

•  
**Teacher 3 (F) interview:** *I was leading the school through the changes for IT and I was introducing Google classroom before COVID-19 was a word, you know?*

•  
**Teacher survey:** *Engaging for pupils but problematic for accessibility depending on the socio-economic background of some pupils. Needs to be approached sensitively and always have a back up e.g buddy up.*

This intertwined the literature whereby the teacher's individual skill and motivation to use ET would differ (Miranda & Russell, 2011; Silber-Varod, et al., 2019). This is prominent because unlike the familial environment, there is an expectation that schools deliver the education needed to ensure equality within a digital world. The process of reaching equality when embedding ET practice requires teacher commitment to be at the heart of this (Cloonan, et al., 2014). Given the strain of the lockdown environment on educators, and an already unmanageable workload, the top-down approach of EdTech policy does not make this achievable. With some teachers avoiding ET use where possible, despite the school encouraging its use. The impact of this inequality was established within section one of the LR (digital divides). This is problematic for multiple reasons and adds to the research question/aim by legitimising the concern toward the supportive stance outlined within the EdTech policy. It seems the top-down approach is a catalyst to inequality within individual school classrooms, therefore within schools.

#### 8.3.4 THE SIGNIFICANCE OF THE COVID-19 CONTEXT WITHIN THE CHILD CONSUMPTION OF ET

The significance of the lockdown environment was mentioned within the LR, but there is a gap in knowledge here that was fulfilled through the data collection. The LR illuded toward the significance of COVID-19 lockdown environment given learning had to take place online and children were within the family home during this time. The ramifications of the significance of the education and familial context on the child consumers digital socialisation was clearly profound, although less explored. The biggest change caused by lockdown, was that the child consumers time online increased and children were learning to use different aspects of their ET because of the need to use devices educationally: although some struggled with this, and were not motivated or able to concentrate when learning online:

**Parent/guardian 2 (F) interview:** *She found it hard to stay, er to concentrate with online learning but, er, yes with the learning apps it was fun.*

Some schools were concerned with getting children online, where deprivation was an issue:

**Parent/guardian 1 (F) interview:** *Well we had lots of devices available for the deprived school and we give out very very few. They weren't you know....it was more data that they needed, it wasn't the actual technology, but most of them had erm tablets or phones that they could use. They might not*



*have had like a laptop or a desktop, but they did have things/devices that could be used. It was more like the access to data that they struggled with and we struggled to get hold of it for them.*

Others, where access to the internet was not a concern, were trying to encourage children to use ET less:

*Parent/guardian 10 (F) interview: So erm, some lessons there was like a teacher on a camera teaching them, some of them were doing set work, sort of go off and do. So they did try to give some like, like try to break in some technology breaks it wasn't all of, you know, she wasn't sat there all day, just you know, on a video call.*

It signifies that balance was the most important outcome for schools and families. Concerns surrounded too much or too little access, which were prominent issues during the lockdown. The role of the familial environment intensified for young children, given not every home could accommodate the child having access to ET and their online learning during the day. Others did have access, but were not able to be supported by their parents until they had finished work themselves.

## 8.4 OBJECTIVE TWO

*To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected*

**Table 8: The significance of demographic and motivational factors found within the parent/guardian data collected**

	DEMOGRAPHIC FACTOR	RESEARCH FINDINGS	RELATIONSHIP TO LITERATURE
1.	GENDER	<u>Not considered:</u> The majority of parent/guardian participants were female.	
2.	COUNTY (UK)	<u>Not considered:</u> The area's of the UK were too varied.	
3.	PARENT AGE RANGE	<p><u>The older the parent:</u></p> <ul style="list-style-type: none"> <li>• The more positive they felt toward their own consumption of ET</li> <li>• The more likely both child-parent and parent-child socialisation took place</li> <li>• The more likely they were to manage laptop and smartphone use</li> <li>• They are more likely to restrict access to charging ET at night</li> <li>• They are more likely to consider themselves less skilled</li> <li>• More likely to feel they don't need support to manage ET use</li> </ul>	<p>The literature does not consider parent age and ET management, however the literature does suggest that older age groups may be less trusting toward ET use, which interrelates why they more be more likely to manage this for their children (van Deursen &amp; van Dijk, 2019).</p> <p>Chang, et al. (2018) finds younger parents know more about the affordances of ET and have a higher perception of risks. They are therefore more likely to feel they need more support managing their child's ET use. However, this can only be inferred, it may be that older parents feel more knowledgeable and need less support. Issues with this were found within Shin (2015) whereby if parents feel confident about their ability to manage their child's internet use, it</p>



		<p><b><u>The younger the parent/guardian:</u></b></p> <ul style="list-style-type: none"> <li>• The more likely they are to say they need further support to manage ET use</li> </ul>	<p>makes them less motivated to engage with policy makers on this; this is problematic because carers with high confidence about their ability to manage their child's internet use were less likely to engage in purposeful communication about ET, and were less engaged in updating their internet knowledge.</p>
4	HOUSEHOLD INCOME	<p><b><u>The lower the household income:</u></b></p> <ul style="list-style-type: none"> <li>• The more likely to share a laptop</li> <li>• Parents/guardian's felt more negative about their ET use</li> <li>• Parents/guardians were more likely to say they needed support to manage their child's ET use</li> <li>• Parents/guardian's are more likely to see child ET use as negative</li> </ul>	<p>Families with lower income were more likely to share devices such as laptops. The data also shows lower income households are more likely to feel negative about their own ET usage, supporting Matthes, et al., (2021) explaining those who felt negative about their own ET use, were more likely to feel they need help to manage their child's ET use and see their child's ET use as negative</p>
5.	PARENT EDUCATION LEVEL	<p><b><u>The less educated:</u></b></p> <ul style="list-style-type: none"> <li>• The more likely to share a laptop</li> <li>• The more likely to manage tablet use</li> <li>• The more likely to switch broadband off at night</li> <li>• The more likely to see themselves as more skilled</li> <li>• The more likely they are to see consumption as negative or neutral</li> </ul>	<p>Parents/guardian's with lower levels of education are more likely to share a laptop, manage tablet use, switch broadband off at night and see themselves as more skilled interrelating Livingstone, et al. (2015) in that lower educated families were more likely to be restrictive. However being more likely to see consumption as negative does highlight the findings of Van Deursen &amp; van Dijk (2014) in that those with lower education levels are more likely to utilise ET for less capital enhancing activities such as game playing.</p>
6.	PARENT EMPLOYMENT STATUS	<p><b><u>Not considered:</u></b> The majority of parent/guardian participants were employed</p>	
7.	INDUSTRY OF EMPLOYMENT OF PARENT	<p><b><u>Not considered:</u></b> Too varied to see any trends</p>	
8.	PARENTS IN HOUSEHOLD	<p><b><u>Not considered:</u></b> The majority of respondents were from 2 parent households</p>	
9.	NO. OF CHILDREN IN HOUSEHOLD (PART TIME/FULL TIME)	<p><b><u>The more children living in the house:</u></b></p> <ul style="list-style-type: none"> <li>• The more likely tablet use is managed</li> <li>• The more likely that parents feel less skilled The more likely parents/guardian's feel they need support to manage devices</li> </ul>	<p>The literature does not discuss the impact of how many children are within the household, however the findings seem logical in that the more children living in the household, the more likely parents need to manage ET use as more children will want to use/share devices. The findings also suggest parents with more children in the household feel less skilled,</p>

		<ul style="list-style-type: none"> <li>The more likely parents/guardian's saw child consumption as negative and neutral</li> </ul> <p><u>The less children living in household:</u></p> <ul style="list-style-type: none"> <li>The more likely to manage laptop use</li> <li>The more likely parents/guardian's feel more skilled</li> <li>The more likely parents/guardian's feel they don't need support</li> <li>The more likely they will see child consumption as positive</li> </ul>	<p>although many parents recognised children would be more skilled than them with experience, so it may be that these households are more likely to have older children. The more children in the household, the more parents felt they needed support also; again with more children's ET use to manage, parents may feel less on top of this. They were also more likely to view their children's consumption as negative. With less children within the household, parents were more likely to manage laptop use, they felt more skilled, that they didn't need support and that they viewed child consumption as positive, which reinforces the above findings.</p>
10.	VIEWS TOWARD THEIR OWN CONSUMPTION	<p><u>If parents felt positive about their own consumption:</u></p> <ul style="list-style-type: none"> <li>They were more likely to socialise their children</li> <li>They were more likely to share a laptop</li> <li>They were less likely to hold views associated to the Green Luddite ideology</li> </ul>	<p>This interrelates the findings of Kozinets (2008) in that a parent/guardian's ideological belief will influence the likelihood of them to use ET for those outcomes.</p>

Table 8.1: The significance of school factors found within the teacher data collected

	SCHOOL FACTOR	RESEARCH FINDINGS	RELATIONSHIP TO LITERATURE
1.	GENDER OF PUPILS	<u>Not considered:</u> The majority were from mixed gender schools	
2.	SCHOOL TYPE (PRIMARY OR SECONDARY)	<p><u>Secondary schools:</u></p> <ul style="list-style-type: none"> <li>Digital inequality is more likely to be an issue in secondary schools</li> </ul>	<p>This interrelates the literature that suggests most children are bought their own phone around ages 11/12 (at the start of secondary school) (Haddon &amp; Vincent, 2015; Bettany &amp; Kerrane, 2016; OfCom, 2022). The findings support this in that inequality is prevalent in children who do not get their own devices at this age.</p>
3.	AGE OF TEACHER	<p><u>The younger the teacher:</u></p> <ul style="list-style-type: none"> <li>The more likely for them to see ET use as positive</li> <li>The more likely to have Techtopian values</li> <li>The more likely for them to feel more skilled using ET than the children they teach</li> <li>The more likely they will see ET use as beneficial for children</li> </ul>	<p>Although the literature did not evidence younger teachers were more proficient in ET use, it did show newly qualified teachers are more keen to use ET in comparison to those who have been in the profession longer which supports findings that younger, thus newly qualified teachers are more likely to see ET use as positive, feel more skilled than the children they teach and see ET as</p>

			beneficial and a necessary tool to learn/navigate (Loogma, et al., 2012).
4	TEACHER WI-FI ACCESS AT HOME	<b>Not considered:</b> All teachers had WiFi access at home	
5.	SCHOOL STATUS (MAINSTREAM, ACADEMY, FAITH, COMMUNITY, INDEPENDENT)	<b>Not considered:</b> The data did not show any significance toward the school status	
6.	AGE RANGE OF CHILDREN TAUGHT	<p><b>The older the children:</b></p> <ul style="list-style-type: none"> <li>• Digital inequality is more likely to be an issue</li> <li>• The more likely teachers are to see ET use as negative</li> <li>• The more likely teachers see usage at home as problematic</li> <li>• The more likely issues will occur at school</li> <li>• The more likely teachers will value Workmachine outcomes</li> <li>• The more likely teachers will feel less skilled</li> </ul> <p><b>The younger the children:</b></p> <ul style="list-style-type: none"> <li>• The more likely teachers will not talk to them about ET</li> <li>• The more skilled teachers feel in comparison</li> <li>• The more likely teachers will see ET as beneficial to children</li> </ul>	<p>The older children are, the more likely they are to have access to ET which interrelates why digital inequality is more likely to be an issue (OfCom, 2022). This age group is also more likely to have freedom to explore which could indicate why more issues emerge, and why teachers feel this use as problematic (Haddon &amp; Vincent, 2015).</p> <p>As younger children are less likely to own ET, teachers may feel less likely to need to speak to them about it. Younger children do not use ET for as wide a range of activities as those older than them which may be why they see ET as more beneficial for younger age children.</p>
7.	SUBJECTS TAUGHT	<b>Not considered:</b> There was no significance surrounding the subjects taught.	
8.	VIEWS TOWARD THEIR OWN CONSUMPTION	<p><b>Positive views toward consumption:</b></p> <ul style="list-style-type: none"> <li>• The more skilled they felt</li> </ul> <p><b>Negative views toward consumption:</b></p> <ul style="list-style-type: none"> <li>• The less skilled they felt</li> </ul>	Scherer, et al. (2023) found teachers confidence when using ET is important toward their motivation, and success at integrating devices within the classroom. The findings add to this by concluding the more positive teachers feel toward ET use, the more skilled they felt, and the more negative their views toward ET, the less skilled they felt.

## 8.5 OBJECTIVE THREE

*To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic*

### 8.5.1 HOW PARENTS/GUARDIAN'S EMBRACED ET DURING THE COVID-19 PANDEMIC

The findings showed that parents/guardian's utilised ET in new ways during the pandemic for the following reasons:

- Working from home
- Helping their children with their education
- Using ET jointly with the family for communication and entertainment purposes
- More time spent online

Outcomes of these uses included juggling work and supporting their children to use ET:

***Parent/guardian 8 (M) interview: Yeah, well I used to use the main laptop and my daughter has got her own little laptop, it's just like a Chrome book type thing where it's not very powerful, it's just got a few like learning apps installed on to it and things like that. And shes got her own tablet as well, so generally we've all got our own devices to use, erm. My partner sometimes, she works freelance, so she would often use it once I've finished work, say about 4 O'clock in the afternoon. She would then do a few hours in the evening.***

This exemplifies the caregiving context (Liu, et al., 2019) whereby children were granted access to technology out of consideration for their long term interests (education). The findings show sharing took place as a way to allocate resources during lockdown (Belk, 2010), with schools able to offer devices if this wasn't possible.

Parents enjoyed being more involved with their children's education, but at times this was difficult:

***Parent/guardian 1 (F) interview: And we got to see a lot more of his work, you know what he was doing, where he was up to. You came more aware because you picked up on bits you know***

•

***Parent/guardian 8 (M) interview: Erm, and I suppose, an issue with the kids was the fact that a lot of the things they were using, for their learning stuff, like watching educational videos, was only a few clicks until they got to all the silly stuff like cartoons and things like that. So, the concentration level was a bit of an issue. We had to pretty much supervise them sort of the whole time.***

The findings here suggest the parents valued ET for its intrinsic, utility and attainment outcomes (education) and enjoyed being involved with their child's use of ET for this outcome showing a preference toward benefits to their child's long term wellbeing. This supports and contextualises Lui et al. (2019) in that parents will be more likely to prioritise their child's long-term interests. However, many parents felt ET is detrimental, which led to exclusion.

Kozinets (2008) research shows parents may encourage Workmachine ideologies, using ET for education, but techspressive outcomes were also encouraged during this time. This supports literature in that use of ET is not necessarily an affordability issue, but the caregivers views on which outcomes are achieved is more influential (Helsper & Reisdorf, 2017). However this also intertwines the findings of OfCom (2022) in that children may not have had access to devices appropriate for their needs during lockdown as parents were working while their children were also using ET. This caused issues with connectivity and meant some parents were working in the evening after helping their children, or their children were going through their schoolwork in the evening. Whilst resources could be allocated, not all children had the opportunity to engage with their online schoolwork during the day; for some this is because there was a lack of access, appropriate access, or that parents were not available to supervise them while working.

There were many examples of child-parent socialisation whereby parents were learning new skills:

***Parent/guardian survey: Shown me how to use some of the features in MS Teams. This is embarrassing as I am an IT tutor.***

Foxman, et al. (1989) highlighted the extent of child influence within the family depends on the communication environment, the child's personal resources, perceived product knowledge and importance. The findings support this whereby the children had more product knowledge than their parents in some aspects of ET use. Correa, et al., (2015) found bottom-up technology transmission (children influencing parents) is negatively associated with parents' internet self-efficacy.

Time using ET increased as this was used as a source of entertainment, work, communication and as an education tool. Devices were used to engage with the consumer's hobbies and interests as found within van Duersen & van Dijk (2014) and Blank & Grosej (2014) supporting Husemann & Eckhardt (2019) that ET can be used to provide decelerating experiences which Chou et al., (2005) outlined could lead to addiction; these findings support this for the parent consumers.

Although utilising ET for varied outcomes was necessary during lockdown; many parents didn't like being so reliant on the devices for such varied use because it meant little time was spent achieving these outcomes through other means. This varied use however is seen to be beneficial to the building of digital skills, although parents prioritised economic outcomes, it did make it hard to switch off from work. Zillien & Hargittai (2009) suggest the outcomes of ET use reinforces socio-economic status, with some families exclusively encouraging their children to use ET for entertainment purposes.

It suggests socio-economic gaps were widened during lockdown as a result of digital inequality. This also supports findings from Pearce & Rice (2013) in that some devices are more likely to be used for capital enhancing activities over others, with computers/laptops being more likely to be used for work or education and smartphones and tablets for entertainment:

The increased ET usage, meant parents were managing how their children spent time online:

***Parent/guardian survey: No gadget during the week only for school hours to talk to teachers a a bit longer at the weekends***



***Parent/guardian 8 (M) interview: We had to pretty much supervise them sort of the whole time.***

This supports the findings of Sciacca, et al. (2022) who found restrictive mediation was more likely if parents were worried about excessive screen use whereas active mediation was most likely if parents were concerned about risks; the risk within the context of this study was children not concentrating on their school work.

## 8.5.2 HOW TEACHERS EMBRACED ET DURING THE COVID-19 PANDEMIC

For teachers, ET was utilised in new and different ways as a result of the pandemic:

- Working from home
- Socialising, entertainment

Outcomes of these changes included their experience of using ET for educational purposes increasing, for some this was positive:

***Teacher 1 (F) interview: Its amazing really erm yeah so I sort of wish I had done it sooner I suppose***

This supports the aims of EdTech (2019a) in that the integration of ET can improve teacher workload, save money and improve student outcomes. However, the practical issues highlighted within the LR are also supported (Schriever, 2021) suggesting that teachers need further support and training to realise the benefits of integrating ET. The teachers here did not have the motivation or opportunity until it was necessary in lockdown, it is likely this change will be permanent as this was not a one off, but something teachers facilitated over a long time period (Donohoe, et al., 2012; Seaton, 2018). However, this depended on the quality of ET available indicating the influence of school culture, thus spend on updated equipment heavily influenced this.

This impact of school culture was integral in lockdown, with some being more flexible toward encouraging teachers to spend time integrating the use of ET than others. This supports Kadjevich & Haapasalo (2008) who suggest achieving a good learning environment to embed ET requires positive experiences to help shape teacher attitude toward this. Although some teachers had negative experiences because of the students, making it difficult for them to teach online:

***Teacher 1 (F) interview: You know it was really difficult, erm, we had a few incidences of erm people/students erm kind of infiltrating other students identities***

This supports the findings of Turvey (2006) suggesting the learner is just as important the teacher when integrating ET within the classroom, although teacher's are able to empower the learners. Examples such as these indicate why in some schools, teachers had negative experiences when using ET which impacts their attitude and motivation to use it. Rana, et al. (2019) interrelates the theory of planned behaviour, finding that attitude was the strongest influence on 'cyberslacking'. Distracting others and perceived threats also influenced this attitude and cyberslacking intentions; poor student attitude and behaviour such as this can in turn influence the teacher (Ungureanu & Stan, 2013). However sometimes this disruptive behaviour comes from ET use at home and is not within the control of the teachers.

This reinforces the suggestions from the LR in that the diversity within the attitude of teachers to integrate ET is recognisable during lockdown given it stems from their personal experiences; Ifenthaler & Schweinbenz (2013) finds these views can muddy expectations surrounding how ET will be used in the classroom, however the unique context of the lockdown environment meant even those with negative views could see the benefit during this time:

***Teacher survey: I agree they have been useful during the pandemic, allowing students to access work which they may not otherwise have been able to get.***

The findings therefore support Hatlevik & Hatlevik (2018) in that individual teacher beliefs were more influential than school culture on the integration of technology, however this was only if the school was encouraging and the teachers were not motivated to integrate ET:

***Teacher 3 (F) interview: Oh yes. No the staff as well. Erm, I suppose the same as any staff, but we've got, you've got your three or four who can and then you've got your others who were constant. But it was, I felt it was, although it was demands on my time, I felt that wasn't the negative***



*thing, because it was that thing of, I think, they're all trying and they're all doing and I did hear stories in other schools where certain staff just said oh I can't do that, I'm going to do all mine as paper work.*

If the teachers were motivated to introduce ET but they did not have school encouragement or support, the school was more influential:

*Teacher survey: We used iPads and laptops for research sometimes, but technology continued to let us down such as laptops taking an hour to login or iPads not being charged properly, or not always available. This let lessons down, so I used them less and less.*



*Teacher survey: Not worth using the laptops, they were a nightmare as they were so old. Also, getting a new app on the IPad took so long, as it needs to be put on my IT department. All very time consuming and frustrating.*

The findings support Wang et al. (2022) in that the quality of ET available acts as a catalyst to teacher experience, attitudes and beliefs; they contrast the barriers DfE (2019a) found toward EdTech in that infrastructure, digital skills, procurement and privacy was not a concern for teachers but maintenance of the technology once purchased so it continues to be a sound purchase decision was a problem. Where teachers wanted to integrate technology and they had school support, exemplary practice took place in lockdown where teachers received support from school leaders and their colleagues to navigate the new way of teaching:

*Teacher 3 (F) interview: And I did um, I did an online training every day with them and they were all recorded, so they had all that.*

*Teacher 3 (F) interview: I mean at one point, quite early on, the boss, our head, did erm, she said right this week, I'm teaching your class, you're supporting staff. Just get in there, and support staff.*

The LR highlighted concerns of how teachers are compensated for this, showing that even if the integration of ET is out of their own interests, they need workload support for this to happen. One teacher made use of their personal contacts to help integrate best practice, as opposed to demonstrator schools (which is the policy of EdTech). Support from policymakers was not shown throughout the findings, which supported the speaker at The future for Edtech in England - standards, quality and accessibility, the experience of lockdown, and next steps for the Edtech Strategy (2021) who outlined schools do not utilise the DfE for support which causes issues for equality of practice.

Inequality continued to play a big role in other ways, with many teachers not wanting to use devices as not everyone had access at home. This shows that even if the school is supportive, and teachers are keen, some are concerned that this will highlight deprivation and is not fair to students.

During lockdown, being online was a concern for those with and without access. Teachers were trying to ensure those with ET had offline activities, and those without could get online:

*Parent/guardian 6 (F) interview: A questionnaire was sent out by my daughters school and when we actually worked out, sort of, how many hours she was spending online, erm, they then changed how they were doing it. So there would only be certain lessons online, and they would literally break it up so they were not constantly doing that. And that's what my husbands school did as well, they did*



*part of the lesson, you know online teaching, and then the children would go off and do worksheets online and return. So it was to try and cut down the amount of time that you were, sort of spending.*

**Teacher 3 (F) interview:** *We did, ooh let me think, we had three children across the school, we're quite a small school, we're a single form entry, nursery to year six, but we just had three children in the school who we had to do offline work for. Erm, but we gave out 52 iPads, so that's sort of a quarter of our school, that we gave. Sometimes there's four children in a family and they've got one iPad, so we give them a second one to use. Or there were homes where they were living with no devices, so we were making sure, we made sure everyone did, so, the three that ended up without, there was no, erm, they, with one of them it was a case of the child was struggling educationally anyway, and so was mum. Mum was like oh I don't know what to do on it, so I said don't worry, we'll sort your paper work. So we were posting paper work to that family every week. And the other two were a brother and sister in the same house, and they just couldn't, they had no Wi-Fi, you know, they just had no way of being able to log on, but other than that, so we gave out 52 iPads and we managed to get all our families on which was, which we're quite proud of.*

This evidenced the teachers concern toward balance, although inequality was an issue in the education environment during lockdown, those with access were striving to reduce their time online and those without access were striving to get online. Nguyen et al. (2022) suggests balance is subjective to individuals with consideration toward appropriate amounts of use, purposeful use, social connection, non-addiction and time for real life. This changed during lockdown however as screen time increased. Teachers also increased the time spent using ET for work, social and entertainment purposes during lockdown.

## 8.6 OBJECTIVE FOUR

*To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic on the child consumer*

### 8.6.1 THE IMPACT OF PARENT/GUARDIAN ET USE ON THE CHILD CONSUMER

The outcome of parents/guardian's working from home

- Juggling work and supporting children to use ET
- School loaning IT equipment
- Sharing devices
- Working flexibly

The findings showed that for some families there was enough devices for children and their parents to use at the same time; schools were able to loan devices if this wasn't the case and parents and children shared if this wasn't possible. The findings add to the literature by showing how the COVID-19 pandemic impacted upon digital divides positively where access to devices was concerned (as schools loaned these where possible), and children utilised them for new outcomes:

**Teacher 3 (F) interview:** *Erm, but we gave out 52 iPads, so that's sort of a quarter of our school, that we gave. Sometimes there's four children in a family and they've got one iPad, so we give them a second one to use. Or there were homes where they were living with no devices, so we were making sure, we made sure everyone did, so, the three that ended up without, there was no, erm, they, with one of them it was a case of the child was struggling educationally anyway, and so was mum. Mum was like oh I don't know what to do on it, so I said don't worry, we'll sort your paper work. So we were posting paper work to that family every week. And the other two were a brother and sister in*

*the same house, and they just couldn't, they had no Wi-Fi, you know, they just had no way of being able to log on, but other than that, so we gave out 52 iPads and we managed to get all our families on which was, which we're quite proud of.*

**Parent/guardian 6 (F) interview:** *Erm, I think it was a real eye opener for my daughter, because as much as she has used IT, it was a bit of an eye opener in that, there was so much she had to suddenly learn and how to negotiate the computer, how to negotiate different platforms because her school was setting the work on one platform, and asking it to be completed on a different platform.*

When devices were shared, it meant not all children had access to appropriate devices. Although better than having no access, this deepened divides for children with some able to fully benefit from educational outcomes, and others hindered by the limited capability of the devices they were using. This reinforces the findings of OfCom (2021) in that 25% of children did not have access to suitable devices.

Data from the teachers however showed some households did not have WiFi and could not get online at all, although OfCom (2021) said homes without internet access fell from 11% to 6% in lockdown. The impact on the child consumer was therefore varied, for those unable to get online, the teachers delivered printed workpacks, but they did not get the same feedback or opportunities.

For those already without first level access, digital divides deepened during this time with implications for education, social, wellbeing and entertainment opportunities. Some parents made the choice to exclude their children from ET prior to the pandemic, but allowed access during lockdown for educational purposes showing that parents valued these outcomes above others such as entertainment use. Although access to education was beneficial for the child consumer, the impact of encouraging only one outcome (education) can hinder their ability to develop digital skills and build their resilience to content online (Blank & Groselj, 2014), putting children who only utilised ET for single outcomes at a detriment to those who were permitted to use ET for varied use.

When engaging with their school work, some children did so while their parents were working, some guardian's worked flexibly to supervise, some children had to wait until the evening as parents could not supervise during the day, and others had offline work to do. Supervised access was important for some children as they would not complete their schoolwork without supervision.

This shows how the COVID-19 pandemic continued to impact the digital divide for young children as unsupervised access is more likely to result in harm, however it is also important in building digital skills (Livingstone & Helsper, 2010). Some children had more opportunities to use ET independently than others contributing toward knowledge that harms were likely to have increased for some children, and as a result their resilience to online content in comparison to others.

### The outcome of parents/guardian's helping their children with their education

- Allowing access to ET to help with child's education
- Parents enjoyed being more involved in their child's education.

In some instances, the children using devices for educational outcomes increased their digital skillset as devices were previously used for entertainment purposes only:

***Parent/guardian 7 (F) interview: Erm, it was useful for her to learn different ways to use the tablet, she is more confident using that now.***

This positively impacted the development of digital skills for some children, which put those who couldn't access ET online further behind.

The findings add to the literature by showing how parents enjoyed being more involved with their child's education, signifying that within the caregiving context (consideration of the child's long term wellbeing); parents saw educational outcomes as the most important. This experience of being more involved left the parents feeling they knew more about what their children did at school and the homework they had. This meant homework and school work could be discussed at home whereas outside of lockdown, most children did not involve their parents in what they did at school. This impacted the child consumer in that parents knew when homework was due and how they were doing in certain subjects, allowing parents to have a more prominent role in their education, alongside teachers. Further impacts meant teachers could communicate more easily and efficiently with parents:

***Teacher 1 (F) interview: Which is erm kind of a whole school sort of communication system and again it was in place but we only used certain bits of it. So during lockdown we started using this facility where you can email parents...all the parents of a class***

## The outcome of using ET jointly with the family for communication and entertainment purposes

### ➤ Child-parent socialisation

Child-parent socialisation took place in the lockdown environment however van Deursen, et al. (2011) finds although children have a better aptitude toward new applications and features of ET, their guardians will have a better ability to evaluate the information they find. The findings also support Wang et al (2018) whereby learning can take place with neither party having a dominant role. This means children may have the skill to work out how to navigate new platforms with parents able to help them understand them better.

Singh, et al. (2020) found children who are able to assist their parents to learn new skills are more likely to feel satisfied. Child-parent socialisation impacts the child consumer in different ways then; some may be able to help their parents use ET which encourages their confidence of their digital skills, and others may have parents who are more skilled, but they do not feel as empowered by their digital knowledge. In other instances, Mascheroni, et al. (2016) found parents less familiar with ET felt outsmarted by their children making child-parent socialisation less likely as it made parents feel uncomfortable.

## The outcome of increased usage

### ➤ Managing child's time online

Understandably children's use of ET increased during lockdown, Brauchli et al (2024) found this related to parent stress, although the parents/guardian's in the study saw this as a result of lockdown and the higher reliance on ET during this time. Many parents were concerned about this which led to restrictions. Some parents were stricter than others; allowing children to still use ET for entertainment and social purposes during lockdown. Others restricted this to weekends when they didn't have school work. These restrictions impacted the varied use of ET for the child consumer, although screen time was limited which may have left children to seek entertainment offline, Mascheroni & Vincent (2016) found social outcomes can help young people feel intimacy, proximity and security, which was only

facilitated through ET during lockdown. This interrelates the findings of Sciacca et al (2022) finding that 42.6% of parents increased their mediation activities during lockdown, and this mediation was related to how much time their child spent online. This restriction then would have meant some children perhaps feeling socially isolated until the weekend. The awareness of this was heightened within the online context:

***Parent/guardian 4 (F) interview: It's been hard, but erm I think it's been hard for him as well. Because of his ADD and everything else he doesn't interact that well with his peers, and its made him more.....[pause] aware that he doesn't interact that well because when he has gone onto computer games it's like well, you know the clicker friends, well there all talking and doing stuff together and why aren't I doing that***

Supporting Helsper (2012) in that offline and online social experiences influence each other, as opposed to a cause-and-effect.

Further impacts on the digital divides for young children meant whilst some household's restricted varied use out of concern for screen time, others didn't. This meant some households gave children more time to develop their digital skills such as educational, resilience building, positive content seeking, creating and exploring their identity, social, being mobile, and developing online skills which can lead to children taking more responsibility for their safety online (Vincent, 2015). The more outcomes realized, the more skilled, confident and experienced children become, the higher up the ladder of opportunities they climb and the more digital divide gaps are widened during the lockdown context. On the other side of this, children who had more time online were more likely to be exposed to online risks which is more problematic for vulnerable groups (Vincent, 2015). Concerns toward these risks can lead to parents restricting use or even excluding access. These findings support Matthes, et al., (2021) finding parents who consider their ET use problematic, are more likely to feel this way toward their children's use of ET, as well as Clark (2009) in that the possibility of facing online risks makes parents more likely to restrict access; supporting the findings of Mascheroni, et al. (2016); physical, mental, educational and social risks are of concern to parents. Sciacca, et al. (2022) found children whose parents restricted ET use were less likely to digitally upskill as they spent less time online. Contributing to how the lockdown context negatively impacted young children, where the need for increased screen time resulted in restrictions from other activities out of concern for children's wellbeing.

## 8.6.2 THE IMPACT OF TEACHER USE OF ET ON THE CHILD CONSUMER

### The outcome of teachers working from home

- Increasing teacher experience and knowledge surrounding using ET for learning
- Encouraging schools to be more flexible and supportive toward teachers utilising ET for education
- Diverse experiences of online education
- Issues of inequality
- Concern over increased screen time

The necessity to teach online during the COVID-19 pandemic meant teachers gaining experience when using ET for education, for many teachers this was positive and saw them gain the efficiencies outlined within the aims of the EdTech (2019a) strategy. This impacts the child consumer positively as ET use is more likely to be used in schools which will aid their digital development. This adds to the literature by suggesting the degree and influence of teachers within the child consumers digital socialisation process will intensify as it is used more; and supports Kadijevich & Haapasalo (2008) in that teacher attitude can be improved by experience. Some teachers still resisted using ET or had negative experiences however:

***Teacher 3 (F) interview: I think, they're all trying and they're all doing and I did hear stories in other schools where certain staff just said oh I can't do that, I'm going to do all mine as paper work.***



***Teacher 1 (F) interview: You know it was really difficult, erm, we had a few incidences of erm people/students erm kind of infiltrating other students identities***

***Teacher 1 (F) interview: and [unclear word] and erm shouting abuse at staff***

Further to their negative experience of ET use, the findings highlight many schools do not have suitable equipment. It's important the school provides and maintains suitable equipment, as well as teacher training to help show the benefits of using ET and how to foster positive experiences when using this in the classroom and time for the teachers to gain this experience. However, Xianhan, et al. (2022) found equipment is only one side of the coin, as reflection of ET use was more important which can come from colleague interaction, but this interaction was only helpful if perceived to be useful which was supported by the findings.

This impacts the child consumer in that examples such as these were varied and different depending on the school, as well as the availability of quality of ET within the learning environment. This supports Stošić (2015), finding the quality of ET available is important in fostering teacher motivation to include ET within the classroom and engage students (Wang, et al., 2022). The findings also support Turvey (2006) who emphasized the importance of the learner/student in fostering a positive learning environment which Fraser (2018) considers significant. Turvey (2006) sees it as a teacher's responsibility to empower learners to use ET more positively, however as Van Dam, et al. (2008) notes classroom culture is difficult to change.

The findings evidenced that not all school leaders give the same level of support to integrate ET, showing inequality within the education environment. At times, the use of ET was dependent on teachers' personal contacts; making digital divides more deeply embedded for the child consumer. This supports Ifenthaler & Schweinbenz (2013) in that this diversity impacts how teachers expect ET to benefit the classroom (or not) and interrelates Hatlevik & Hatlevik (2018) in that different teachers will value different benefits of ET, the skills developed in the classroom depends on individual teachers and their expectations (Mertala, 2019).

This helps settle arguments in the literature surrounding the importance of school culture versus teacher attitude (Perrotta, 2012) in that the data shows both are important but in different contexts; teacher beliefs are a stronger influence on ET integration if the school is supportive of ET use, however if the school is not supportive of ET use, the teachers perceived usefulness and motivation to integrate ET is less influential:

***Teacher 1 (F) interview: Erm well my school is an iPad school, all students have iPads as part of their equipment so we are quite up with technology anyway as a school***

***Teacher 1 (F) interview: But personally, I wasn't a fan so I didn't use them very often erm in fact I avoided them all costs really. Erm during lockdown that errr obviously completely changed – everything we do was over Zoom.***





***Teacher survey: We used iPads and laptops for research sometimes, but technology continued to let us down such as laptops taking an hour to login or iPads not being charged properly, or not always available. This let lessons down, so I used them less and less***

This supports Runge, et al. (2023), if schools empower teachers to integrate ET in a positive way, they are more likely to do so. This impacts the child consumer showing that schools need to be supportive of ET use, but they need to do so as Antonietti, et al. (2022) suggests, to help teachers see the usefulness of ET but also to feel competent in how it is used and provide them with the equipment, time and training to achieve this. For schools like this, it positively impacts upon the digital skill development for young children, however with schools who leave room for diversity in how ET is utilised, it deepens divides for the child consumer, with many not engaging with their education if the teachers were not motivated to use it during lockdown.

Damşa , et al. (2021) also found the scale of this variance to be vast with some teachers resisting these changes and others fully transforming to the new way of teaching. Issues of inequality were also prominent, finding even if the school is supportive and teachers integrate ET in classrooms; many do not like to do so because it can embarrass students without this experience:

***Teacher survey: Not really, very discreetly when schools closed for covid19. This can cause embarrassment and upset for those who can't afford it.***

One teacher tried to resolve this by buddying students up so that divides could be relieved in the school environment, but this was not the same in every school. During lockdown, some students could not get online at all. This impacted the child in that they could not access education or develop their digital skills during this time.

## The outcome of teachers using ET for socialising and entertainment

- Concern over time spent using ET for entertainment and social outcomes

Although lack of access was a concern, the findings showed that balance was a key theme within both affluent and deprived schools. This shows that teachers as socialisation agents are similar to parents in that balance is a key objective. Both socialisation agents share the desire for children to balance their activities using ET, to prioritise educational over entertainment and social outcomes and to not use screens too much. For those with access, teachers would set work to be done offline to facilitate this, and those without access were helped to get online (although this wasn't always possible).

This intertwines Mertala (2019) in that effective activities for digital education was using ET for non-tech activities as well as online activities. This impacts the child consumer in that their socialisation agents share a common desire to ensure they have a balanced experience when using ET which can be done using ET, or using ET to support activities.

## 8.7 OBJECTIVE FIVE

*To investigate and evaluate an educator's perspective on the use of ET within schools and what this means for policymakers*



## 8.7.1 THE TEACHER PERSPECTIVE ON ET USE IN SCHOOLS

### Positive perspectives

Positive perspectives on how ET can be used in schools tended to come from experience which supports (Kadijevich & Haapasalo, 2008):

**Teacher 1 (F) focus group:** *For example I was sat with a child the other day, I said what I really need is some lights in this room, because apparently now when you're gaming if you put lights under the desk and they shine down, and you can make them multi-coloured, and it looks really effective, and I thought ooh we could do with those, and within 2 seconds this child had found it for me.*

**Teacher 1 (F) focus group:** *Told me how much it would cost, told me how he'd measured to see how much we need to go around the computer screen, said it would cost about £240. Mr Jackson will probably say no to that. But it was quite interesting that he was able to do that because if I'd asked him in a maths lesson, he'd of had no chance, but because it was purposeful he was able to do it.*

The more skilled the children were (needing less support from teachers on how to use ET); the easier it was to integrate ET within the classroom:

**Teacher 5 (F) focus group:** *They know more than we do, when they go on it they know, aww you go on to this and what's happened is you do that, so I think they are quite, I think ours are quite independent with technology actually.*

The literature has identified this shows the important of teacher skill when using ET (Silber-Varod, et al. 2019; Kajamaa, et al., 2019), however the findings showed the majority of teachers felt they were more skilled than the children they teach. Issues came from children having different skill levels meaning ET use can take away from the subject specific learning activity and requires teachers to teach children how to use the devices while others can start the activity.

Positive experiences are important in order for teachers to be motivated to use ET in classrooms, however, balance was recognised between turning every lesson into an IT session in order to facilitate the use of technology which may then take the focus over the subject matter:

**Teacher survey:** *Maturity and responsibility with access to technology. Allow young children to be children and use a vast array of activities to help them learn and develop. Technology should aid their education; not be their education.*

Other aspects of positive perspectives toward ET use included looking at this as something that evolves rather than working against the progression of ET and its changing capabilities. This type of mindset (looking at ET integration as ever changing) was found to be essential for successful use in schools (Hattie, 2012). ET was also used in some schools to help children behind in their school work as they find this engaging. Other positive aspects come from how ET can be used to manage behaviour within schools. The literature supports this, showing children with special education needs benefited from ET use (Flewitt, et al., 2015). Others viewed ET as a necessity and that it was important all children have access:

**Teacher survey:** *Technological devices have become essential in 21st century life, I think lockdown has shown us this and that we need to do more to ensure every child has access.*

## Negative perspectives

Negative experiences stemmed from unsuitable equipment, teachers feeling ET use was detrimental toward child wellbeing, and their personal opinions rather than just experience, supporting (Schriever, 2021).

## 8.7.2 WHAT INFLUENCES THE TEACHER PERSPECTIVE ON ET USE IN SCHOOLS

### Personal use

The findings support the literature in that a teacher's personal use of ET mirrors how they view its use for the children they teach whereby teachers who felt distracted by spending too much time using ET, were concerned about this for the child consumer:

***Teacher survey: Too available. Constantly in use and able to be contacted about work. This means no switching off. Children can become unable to switch off. Internet bullying and over arching portrayal of everyday life and people can be unrealistic. This means the children (and adults) constantly compare themselves to the picture perfect view of life and people.***

Further considerations toward how teachers use ET includes the outcomes they prioritise. For example, some show preference toward economic/work machine outcomes, others suggested that the way in which ET devices are used by young children do not prepare them for working life:

***Teacher survey: I grew up when the focus was on computers and developing laptops. Advances in technology mean the children have grown up around smart phones and tablets. Their device use is mainly for entertainment and homework- not long working days and necessity.***

Others used technology from the Techtopian perspective (technology use benefits the greater good) and Techspressive (ET use for entertainment) however this was not necessarily positive. Others saw ET use as destructive (Green Luddite):

***Teacher 5 (F) focus group: They need to go out and play***

### Age of introduction

There was debate between teachers over when to prepare children for using ET and when would be too early:

***Teacher survey: I think young children don't need to but older children need a good understanding***

***Teacher survey: If we over-limit the technology exposure to our students we are doing them a disservice. We are delaying and limiting their potential***

### Device type

The type of device used also influences their perspective:

***Teacher 5 (F) focus group: I wouldn't do any kind of work on my phone***

***Teacher 1 (F) focus group: No?***

***Teacher 5 (F) focus group: I do all my like my planning and stuff I do that on a computer or laptop just because it's easier***

*Teacher 1 (F) focus group: It's easier?*

*Teacher 8 (M) focus group: Yeah*

*Teacher 6 (F) focus group: Yeah*

*Teacher 5 (F) focus group: Yeah, it's easier to see*

*Teacher 6 (F) focus group: Yeah and its more faffy with the buttons, it's just much easier, when you've got to work*

*Teacher 5 (F) focus group: Obviously, there are things that you might use for work. On my iPad, I did get a keyboard that I can just plug in, which is better because I got fed up of just touching it, so that's easier, if I want to do something quickly on it, but I'd rather have my laptop*

## Home use

Many influences on the teacher perspective came from how ET is used at home rather than at school, teachers felt boundaries needed to be put in place so that schools can focus on certain aspects of digital education, and parents focus on the others:

*Teacher survey: Parents need to be responsible for what is happening at home and monitoring usage as well as making sure children know the pros and cons. Teachers have responsibility from an educational point*

How ET is used at home has a huge impact on the teacher perspective on how ET can be used in classrooms as teachers deal with the negative impact of this. In turn, this stops teachers being able to actually teach which negatively impacts how they perceive ET being used in schools. Teachers try and communicate with parents to help lessen the impact of home use; frustrations here centre around the school having to deal with 'out of school issues' not seen to be within the remit or responsibility of the teachers, but ultimately where the situations come to light. There is also the issue of families with parents that have separated:

*Teacher 8 (M) focus group: There is also the case though, of split families. So, there's different rules in different houses*

*UI: Hmm*

*UI: Yeah*

*Teacher 8 (M) focus group: So, I've dealt with a particular case where a child was up watching all kinds at his mums house, well it was his nans house, his mum was living with his nan, and then it would be the dads house was a completely different thing*

Children being given information from older friends or siblings that is inappropriate for their age group has impacted the dynamic of teaching in certain subjects; teachers have incorporated methods such as not allowing questions to be asked out loud. Instead, questions are posted in an anonymous box to avoid the more 'knowledgeable' students causing issues within the classroom. Further considerations

from home use include how ET is managed. This showed that the parental management of ET usage at home translates toward the child consumers school experiences whereby the school is a common place for young children. This shows how some teachers find such ET usage frustrating, where some activities may not be known by the parents or fully understood, issues may not emerge then, until the child is at school. This interrelates Geržičáková, et al. (2023) in that parents are more aware of their child's less risky online behaviours.

When trying to help with this, schools communicate with parents about ET use:

*Teacher survey: Read our newsletters and take an interest in what their children are doing*



*Teacher survey: They may themselves be using them negatively and there is not compulsory training for parents on these necessary skills*



*Teacher survey: We do a lot but not sure it gets through to parents*



*Teacher 6 (F) focus group: I think that's a big thing for parents, they know it's going on but they don't want to recognise its going on because then they have to deal with it, and they know that's going to be a confrontation with their child*

*Teacher 1 (F) focus group: Hmm*

*Teacher 6 (F) focus group: So, in some way's ignorance is bliss, because then they can kind of pretend it wasn't really happening*

The data here showed that from the teachers perspective, the guardians of the children at the school are in receipt of regular updates surrounding responsible ET usage, but quite often this is not taken seriously. One key finding was not based on data, but the lack of; no data was coded as 'parents do enough' indicating that whilst some teachers showed more empathy and understanding than others, none of the teachers felt the parents were doing enough to keep their children safe when using ET.

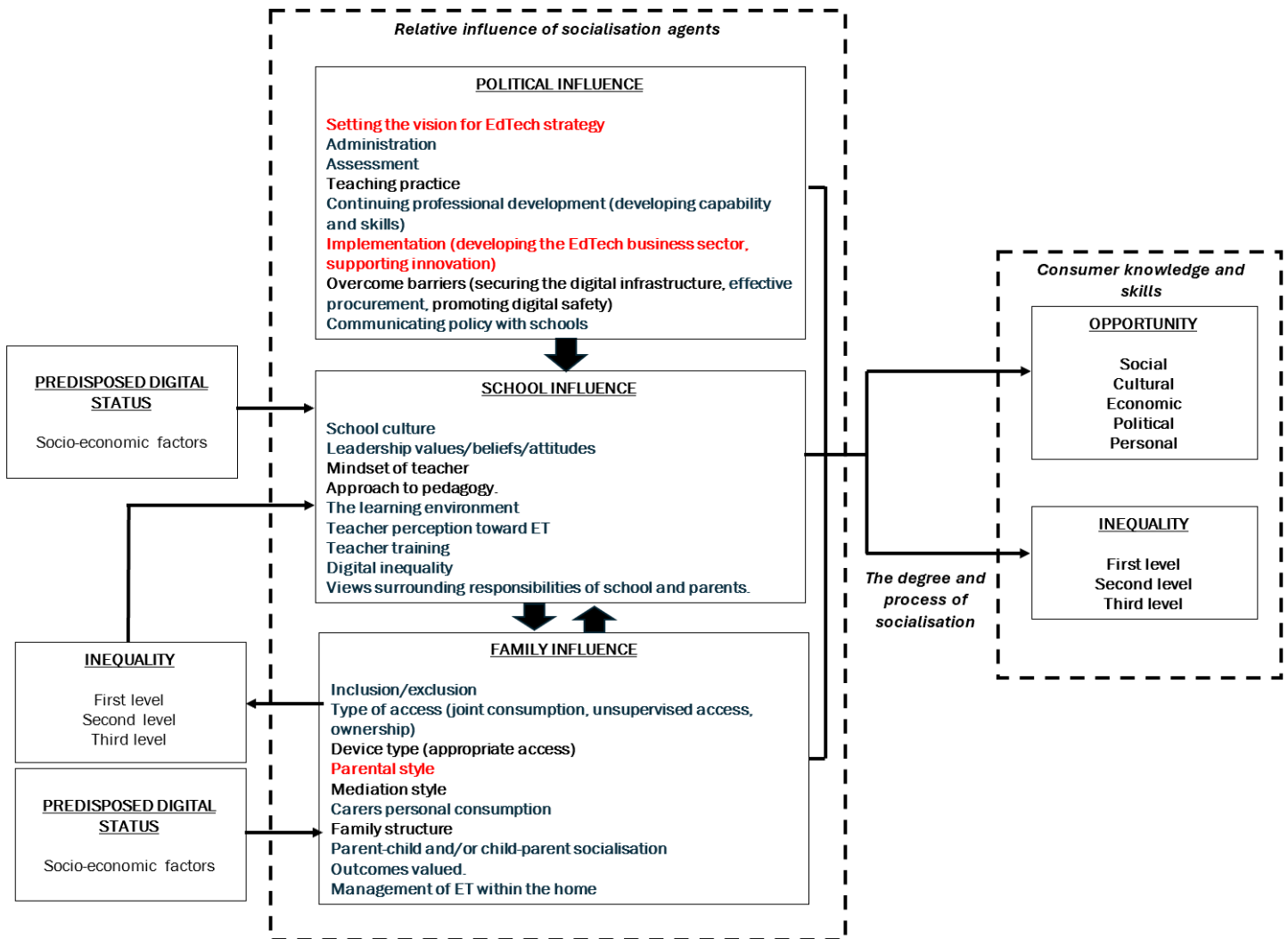
## 8.8 OBJECTIVE SIX

*To develop a conceptual framework encompassing how the parental and teacher consumers' embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future*

### 8.8.1 THE CHILD CONSUMERS SOCIALISATION ECOSYSTEM DURING THE COVID-19 PANDEMIC

The below framework highlights where the findings support what was found previously within the LR (in black font) and the elements in blue font represent the implications of this research, area's in red font were not evidenced throughout the findings, but were present within the literature.

Figure 8.1: The discussion of the conceptual framework: The child consumer's digital environment



Political influence

Figure 8.2: The discussion of the elements within political influence

<b>Setting the vision for EdTech:</b>	We know this based on the literature, however this vision wasn't mentioned or present within the data
<b>Administration and Assessment:</b>	The findings added to knowledge surrounding how policy-makers vision toward efficiencies within administration and assessment is evidenced in schools; this was a result of enforced use because of lockdown rather than policy initiatives previous to the pandemic.
<b>Teaching practice:</b>	It's clear teachers discussed digital safety as a result of formal/timetabled sessions which was initiated by the DfE through PSHE and digital safety. However the integration of ET in non IT subjects was teacher led, not policy led.
<b>CPD:</b>	The findings added to knowledge within the literature finding CPD was present, but this was as a result of work by an individual IT lead, not CPD through the DfE or EdTech initiatives.

<b>Implementation:</b>	There was no evidence of implementation supported by policy-makers in the findings, although teachers did use platforms such as Google Classroom, SeeSaw and Activ to help facilitate online learning as well as the affordances of devices for teaching.
<b>Overcoming barriers:</b>	All schools had access to broadband as did all teachers, showing the digital infrastructure was secure. The findings added knowledge surrounding effective procurement in that at times this took place, but effective maintenance let schools down. The promotion of digital safety within the curriculum was shown but the researcher did not ask questions around digital security.
<b>Communication with schools:</b>	The data did not suggest policy-makers communicated this strategy effectively with schools, however teachers felt confident they would be told of policy updates by school leaders and that training would take place. They felt this is usually reactive than proactive showing EdTech was not implemented prior to the pandemic, which the DfE acknowledged (Westminster Education Forum policy conference, 2021). There was no mention of policy when discussing post-pandemic practice.

## School influence

Figure 8.3: The discussion of the elements within school influence

<b>School culture:</b>	The findings add to knowledge surrounding the importance of school culture by finding this is less influential if the school is motivated to use ET and the teachers are not, and is more influential if the teacher is motivated to use ET and the school is not. For example, some teachers enjoyed aspects of online schooling but the leadership team wanted to stop this post-lockdown. Therefore motivated teachers cannot not integrate ET without school support and teachers who do not want to use ET can avoid this, even if the school provides suitable equipment. The most important factors when it comes to school support is discussed within the leadership teams values/beliefs and attitudes.
<b>Leadership values/beliefs/attitudes:</b>	The findings add to knowledge on the importance of school leadership support (Vermeulen, et al., 2016). If leaders want to overcome barriers of teachers unwilling to integrate ET, the following is important: suitable equipment, maintenance of equipment, teacher training, relieved workloads for training and opportunity to integrate ET, further education for children so they have the same basic skills to complete activities utilising ET so it can support the subject activity and not become an IT lesson, classroom support/assistance to ensure positive experiences, by doing this, it will increase teacher motivation to use ET.
<b>Mindset of teacher:</b>	The findings supported the literature surrounding this (Schriever, 2021), finding some teachers see ET



	education as necessary, debating when this should take place and others feel this is harmful to child development.
<b>Approach to pedagogy:</b>	Again the findings support the importance of this (Blau & Peled, 2012), some teachers see the ET as something that is continually developing, and so do teaching methods and practice which supports Blaschke (2021) on the importance of educators preparing children for lifelong learning.
<b>The learning environment:</b>	The findings support the literature on the importance of creating an adaptive learning environment (Debeer, et al., 2021), as well as the significance of the learner in shaping this environment (Turvey, 2006). The findings suggest digital inequalities impact the learning environment whereby teachers are concerned integrating ET will cause shame and embarrassment to students who do not have access and skill here. Further to this, not all students work well with ET causing disruption in class. The findings imply disruptions tend to be caused by home use of ET rather than ET use at school however. These factors indicate Turvey's (2006) suggestion that teachers can empower learners to make the integration of ET more successful does not fully encompass or dissolve the complications toward integrating ET.
<b>Teacher perception toward ET:</b>	The findings support the importance of teacher perception within the degree and process of socialisation for the child consumer (Baş, et al., 2016), they add to the literature by finding how influential home ET use is in the formation of this perception, whereby most teachers feel this negatively impacts their ability to teach
<b>Teaching training:</b>	The findings support the literature concluding the importance of ongoing rather than one-off teaching training as it was the prolonged experience of using ET through lockdown that was beneficial (Sailer, et al., 2021; Scherer, et al., 2023), however the data suggests this training (although widely available through CPD activities) was not mentioned or effective unless designed and promoted through teachers at the school with many teachers not feeling skilled enough to include ET within the classroom supporting Beavis, et al., (2014) and Schreiver (2021) on the importance of teacher confidence.
<b>Digital inequality:</b>	This was an added factor within the relative influence of socialisation agents; finding inequality deeply embedded throughout school culture, leadership, teachers and the pupils. The findings also showed the importance of balance within schools; those without ET were supported to get online, and those with access were supported to engage in offline educational activities.
<b>Views surrounding responsibilities of ET education:</b>	Many teachers felt devices such as computers formed part of their teaching responsibility but ET was something that was the responsibility of parents to introduce and teach. Despite its prevalence for socio-economic outcomes and opportunities; the findings showed not all teachers felt delivering equality surrounding skills of ET was within the schools' remit.

## Family influence

Figure 8.4: The discussion of the elements within family influence

<b>Inclusion/exclusion:</b>	The findings supported the literature surrounding the differing reasons for inclusion/exclusion; concluding all parents make this choice out of consideration for their child's long-term wellbeing rather than immediate needs or consideration toward their relationship. Some teachers however felt ET was used as a 'babysitter' or to avoid conflict.
<b>Type of access (joint consumption, unsupervised access, ownership):</b>	All types of access was shown throughout the findings. The data adds contextual significance, finding some families trusted their children to utilise education outcomes unsupervised while others didn't which impacted when the children engaged with educational activities. Joint consumption tended to be to communicate with family outside of the home during lockdown or for entertainment outcomes with many children owning their own devices.
<b>Device type (appropriate access):</b>	The findings supported the literature in that not all children had access to appropriate devices during lockdown (OfCom, 2021). It was also found that some devices were more likely to be used for economic outcomes (work/school) such as laptops and computers, and others for entertainment (tablets) whereas smartphones were used for everything. For this reason, parents and teachers found smartphones to be more problematic when it came to addiction. This supports Pearce & Rice (2013) finding laptops/computers are used for capital enhancing activities in comparison to others.
<b>Parental style:</b>	The literature identified parental style would have an impact on how ET is used and managed within the home, mediation styles were prevalent within the findings but parental style was not known based on the data.
<b>Mediation style:</b>	Different mediation styles were evidenced throughout the data, supporting Sciacca, et al. (2022) who found restrictive mediators were concerned about screen time and active mediators were concerned about risks.
<b>Carers personal consumption:</b>	During lockdown, parents increased use of ET centred around work, entertainment and communication. The findings highlight that guardian's feel more skilled than their children when it comes to activities they have more experience in. However, parents/guardian's who do not use the same apps/affordances as their children do not feel as skilled as them in these area's. For this reason the findings show parents feel their children will be more skilled than them when using ET after more experience of use.
<b>Family structure:</b>	The findings support the literature in that children with older siblings can also play a role in introducing them to ET and certain activities (Livingstone, et al., 2015).
<b>Parent-child socialisation:</b>	The findings showed parents feel they are mainly responsible for their child's digital socialisation, although it was noted schools also play a role here. Socialisation

	often takes the form of joint consumption, such as reading e-books, playing games, showing their children things, communication or using devices for entertainment/education purposes together. Although not observed, the literature suggests the children will mirror their parents consumption habits (Bandura, 1977).
<b>Child-parent socialisation:</b>	There are affordances and applications of interest to children which do not interest their parents, giving the children capacity to socialise their parents. The data showed at times this is a key way families use ET together. The literature outlines this is good for child satisfaction (Bao, et al., 2007), however parental support is key to help children evaluate the information they see online (van Deursen, et al., 2011). This indicates child-parent socialisation is beneficial, but it is important parents/guardian's are not solely reliant on their children to help them use ET.
<b>Outcomes valued:</b>	Parents valued different activities/outcomes of ET which supports the literature surrounding decisions for inclusion/exclusion. It finds parents with a relationship focus are more likely to utilise entertainment outcomes or educational activities that take place jointly such as e-reading or educational games. The data also showed which outcomes are encouraged by device type; parents used laptops for work, and if children were given access this was usually exclusively for school-work. Tablets were more commonly used for entertainment and smartphones for personal/private activities. It was only if children didn't have their own tablet that smartphones were shared for entertainment purposes. Its therefore not just the outcome valued; but which device parents feel is more appropriate for certain activities that impacts the outcomes realised.
<b>Management of ET within the home:</b>	The literature outlined different types of digital management styles (Livingstone, et al., 2015). The findings showed the effectiveness of management at home has implications for the school day. Finding if children are not socialised and helped to use ET responsibly, it may cause issues at schools. Further to this, inequality within the home impacts whether or not it is utilised in classrooms whereby parents who exclude children from ET usage (either as a choice or because of socio-economic factors); it stops teachers from feeling able to integrate ET because they do not want to embarrass children without access/skills or take away from the subject by turning every lesson into an IT lesson, rather than using it to support the activities. The findings showed because of the increased use of ET during lockdown, many parents restricted time spent on devices when it was not being used for educational purposes.

## Predisposed digital status

Objective two showed prevalent factors within the familial environment included:

- Parent age range
- Household income
- Parent education level
- Number of children in household
- Parent view toward their own ET consumption

These factors support the literature, the added implications from findings are the amount of children within the household.

Within the education environment factors shown within the findings included:

- School status
- Age of teacher
- Age range of children taught
- Teacher view toward their own ET consumption

These factors support the findings of current literature.

## Digital inequality

Inequality was added not just as a result of socialisation, but within the school environment, it's also a cause for a lack of socialisation which was discovered as a result of the findings.

## Outcomes

Within lockdown the same economic, cultural, social and personal outcomes could be reached (Helsper, 2012); however, ET was the only source of communication and social outcomes which heightened the severity of digital inequality during this time (Campbell, et al., 2020). Although there were other avenues other than ET to achieve cultural, economic and political outcomes; many activities that help reach these outcomes are facilitated through the use of ET and the internet.

## 8.9 CHAPTER SUMMARY

The discussion chapter has outlined how the objectives of the research have been met, contributing toward the aim of the study being achieved and the research question answered. It is clear based on the achievement of objective one that the impact of digital inequality is profound; particularly for young children whereby digital outcomes and opportunities are becoming increasingly embedded, available and accessible. Young children are disadvantaged by their different socialisation experiences within the familial and educational contexts, leading to inequality within their skill development and opportunities. This has implications for social, educational and entertainment outcomes, which translates into further disparities as they reach adulthood such as political, economic, personal and social. The findings support suggestions from the literature that digital inequality was heightened during the pandemic; highlighting the significance of the familial and education contexts during this time especially and the implications of this within a post-pandemic environment. When considering the impact of socio-demographic factors within the familial and education contexts, the literature highlights extensive variables toward digital inequalities, reinforcing the sociological implications of digital divides whereby socio-demographic factors can cause, reinforce and become an outcome of digital inequality. The research shed further light on this within the context of parents and educators finding the number of children in the household also implicates the socialisation experience of young children, with the more children in the household, the less likely parents will feel skilled and able to

independently manage their children's ET usage. Within the context of the school environment, the most significant implication of the research surrounds that digital inequality and problematic ET usage is more apparent as children get older.

Parents and teachers had to utilise ET in new and different ways during the pandemic, although this varied within different households and schools; the impact on the child consumer also varied, the overarching issue being that the pandemic environment increased the significance of the familial and education contexts further during lockdown. Inequality was therefore more deeply embedded and prevalent during COVID-19. The educator's perspective on ET use shed light on the relationship between the home and school context whereby teachers are overwhelming more likely to experience the negative outcomes of children's ET use. This experience informs how they view the use of ET within schools.

**Figure 8.1** conceptualised how the findings of this research were reinforced by existing literature and where the findings did not illuminate the same outcomes of existing research. The framework designed also conceptualises in what ways this research implicated existing research surrounding the digital socialisation eco-system for the child consumer and what this means for the future. This chapter has therefore conveyed how ET was embraced by consumers within the familial and education environment's during the COVID-19 context with focus on the child consumer; addressing the research question: How has the COVID-19 pandemic impacted upon the digital divide for children? The next chapter explores the theoretical contribution of this research in more detail.

# CHAPTER NINE

· CONCLUSION ·

## 9.1 INTRODUCTION

The concluding chapter encompasses a summary of all phases of the research project with the aim of condensing the main findings, highlighting the implications, limitations and recommendations for future research as a result of the project completion. **Figure 1.3** outlines the project flow and **Figure 4.17** summarizes the phases of data collection upon which the conclusions are drawn:

Figure 4.17: Outline of phases one-three of the research project

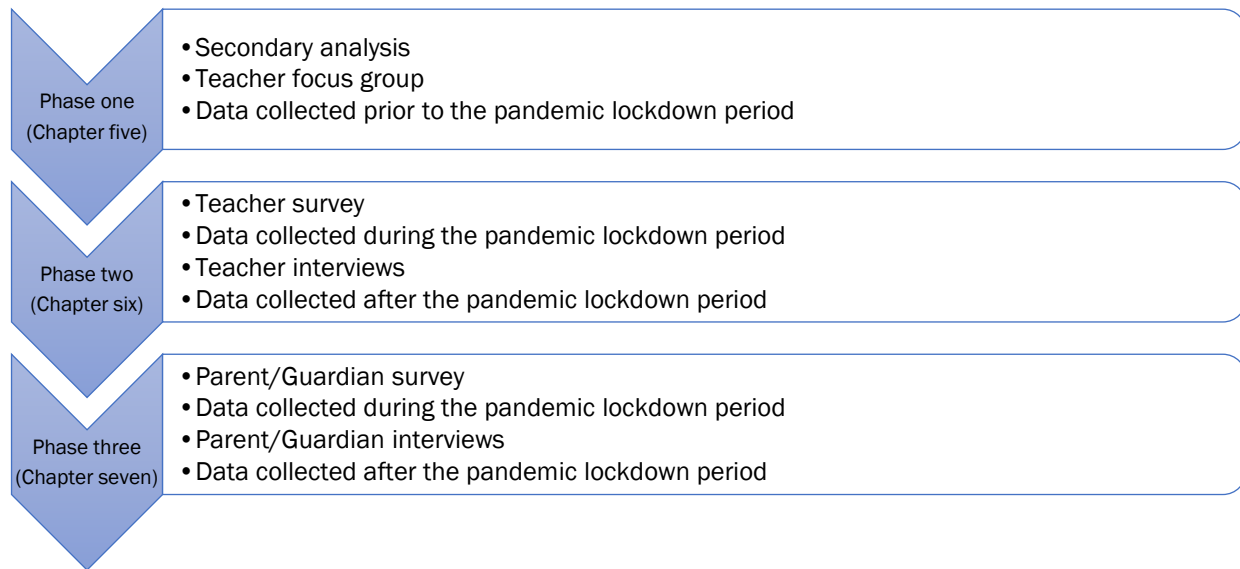
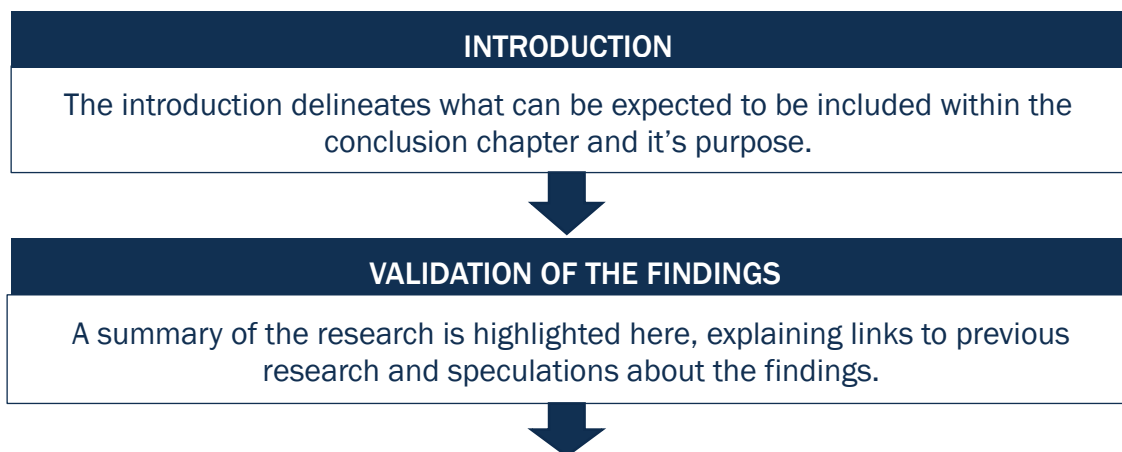


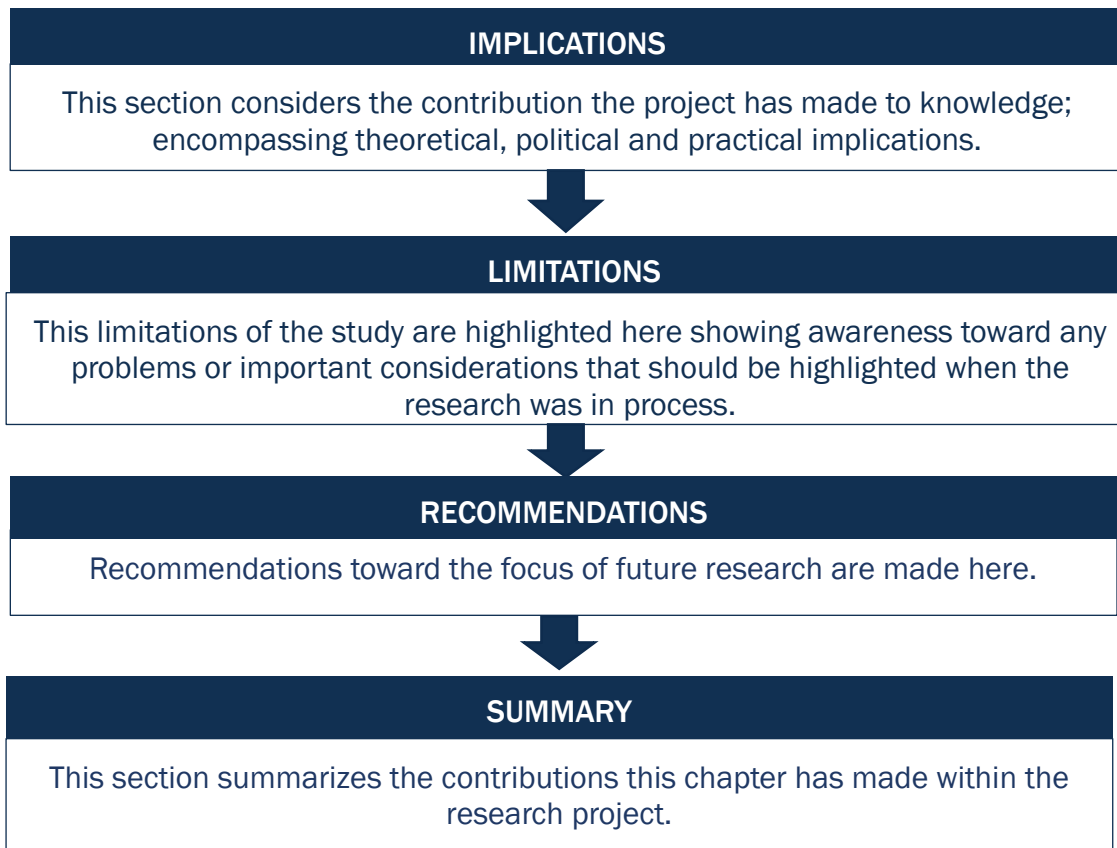
Figure 1.3: The project flow



PROJECT FLOW	OBJECTIVE	CHAPTER
LITERATURE REVIEW ↓	1. To examine, critically discuss and articulate a literature review interconnecting the impact of digital inequality within the child's consumption of ET, the significance of the familial and educational contexts and the impact of the COVID-19 pandemic	3
PHASE ONE: SECONDARY ANALYSIS & FOCUS GROUP ↓	2. To identify demographic and motivational factors that influence digital inclusion/exclusion aiding deeper understanding toward the data collected  5. To investigate and evaluate an educator's perspective on the use of ET within schools	5
PHASE TWO: SURVEY & INTERVIEW (TEACHERS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer  5. To investigate and evaluate an educator's perspective on the use of ET within schools	6
PHASE THREE: SURVEY & INTERVIEW (PARENTS/GUARDIANS) ↓	3. To investigate how parent/guardian and teacher consumers embraced ET during the COVID-19 pandemic  4. To discuss the impact of how consumers within the familial and educational contexts embraced ET during the COVID-19 pandemic, on the child consumer	7
DISCUSSION	6. To develop a conceptual framework encompassing how the parental and teacher consumers embraced ET during the COVID-19 pandemic with consideration toward how this impacted the child consumer and what this may mean for the future	8

Figure 9: Conclusion chapter outline





## 9.2 VALIDATION OF THE FINDINGS

The findings from the research project allow several conclusions; firstly what impact digital inequality within the consumption of ET can have on the child consumer, the ramifications of the COVID-19 pandemic on digital inequality for the child consumer, the significance of the political, educational and familial contexts within the child consumers digital socialisation process, how the COVID-19 pandemic impacted these contexts and the significance this had for the child consumer's digital socialisation, as well as the educators perspective toward their role within this process. A framework has been developed to conceptualise these conclusions to allow consideration toward what this may mean for the future.

Although the literature has well considered area's of digital inequality and socialisation, this research draws current knowledge together during an investigation of how the COVID-19 pandemic impacted digital inequality for the child consumer, and what digital socialisation looked like during this time. As previously highlighted by the literature, the COVID-19 pandemic heightened the awareness of the impact of digital inequality as consumers were more reliant on their digital skills than ever before. The research has identified an ecological approach to understanding the child consumers digital socialisation environment during the COVID-19 pandemic includes complex layers. Within these layers are different elements of socialisation processes and factors that influence the degree, influence and process of socialisation that takes place within each context. In addition to the conceptualisation of the framework, the research has given way toward understanding the current impact of the COVID-19 pandemic on the digital divides of young children, and in doing so, considering what this means for the future.

The conclusions toward what this means for the future and the relation to previous research is of interest to policymakers, school leaders and teachers, as well as families as the findings impact the understanding toward their role in the child consumer's digital future. In doing so, the findings will also

be of interest to researchers within the field of child consumption as this research has expanded existing knowledge by highlighting how the COVID-19 pandemic impacted the child consumer's socialisation and highlighted the role teachers as socialisation actors play within consumer research in helping policymakers and educators understand the existing condition of digital divides for young children, within a post-pandemic environment.

## 9.3 IMPLICATIONS

### 9.3.1 CONTRIBUTION TO KNOWLEDGE

Existing knowledge surrounding the COVID-19 pandemic focusses on the changes the lockdown environment necessitated and the experiences of consumers during this time. Current literature considers how socio-economic factors contributed toward different lockdown experiences across the country and in turn how digital divides were heightened during this time. This research identifies how the COVID-19 pandemic (thus these differentiated lockdown experiences), impacted the digital socialisation of the child consumer, giving a unique perspective on the impact of the lockdown environment by interrelating three important contexts. The literature helped identify the most significant contexts to focus on during this time, whereby peer-peer experiences were restricted, it heightened the significance of the political, educational and familial influence within the digital socialisation process. This research interrelates knowledge surrounding these contexts and their influence on the child's eco-system of digital socialisation and the impact they had on the development of digital consumer knowledge and skills during this time.

The findings show how socio-economic factors impacted the education and familial environments during lockdown, which the literature tells us heightened digital disparities. The literature also concludes digital inequality can stem from differential socialisation experiences within the familial home. The findings expanded this knowledge by exploring examples of this whereby some children were given different types of access, had access to different devices, experienced different mediation styles, and were impacted by their carers personal consumption, management tactics and the digital outcomes they valued and encouraged. For example; some carers allowed their children to use devices for different activities and outcomes every day, whereas others restricted this to educational outcomes during the week and restricted their freedom/protected them from the likelihood of experiencing online risks. The findings identified for some children, the COVID-19 pandemic positively impacted digital divides by encouraging more time using ET, which the literature suggests can equate to skill development, on the other side of this, the increased time also exposes them to online risks, although it is suggested this exposure can help build their resilience to harmful content. The research showed children were utilising ET for new outcomes such as education, and learning new skills when navigating online platforms. Some children experienced negative social outcomes of ET use however. For those excluded, whether by choice or because households didn't have broadband, digital inequality was intensified where children did not have opportunities to communicate with friends, engage in online school work or use ET for entertaining activities, putting them further behind children whose ET experience increased as a result of lockdown.

The findings also contributed knowledge toward the ways these different experiences impacted the motivation for schools and teachers to continue the integration of ET within classrooms in a post-pandemic environment. Many teachers felt integrating ET highlighted inequality or made lessons difficult because some children were more skilled than others. Further negative impacts of the child's digital socialisation included learners negatively impacting the environment when using their digital knowledge to cause issues; this in turn gave teachers a pessimistic view of their perception toward ET and their responsibilities as agents within the socialisation process. In more constructive ways, the COVID-19 experience positively impacted divides whereby schools ensured as many children as possible had access to ET to engage with their online schooling and the teacher's experience of using

ET to facilitate learning positively impacted their experiences, mindset, perceptions and approach to pedagogy; making the integration of ET within the classroom more likely in a post pandemic environment.

Overall the COVID-19 pandemic had the capacity to positively and negatively impact upon the digital divide for young children; the overarching concern is that for those included within ET use (before or as a result of the pandemic), children had the opportunity to enhance their digital knowledge and skills, relieve some levels of digital disparities or at the very least, lessening them which enabled the achievement of digital outcomes. In comparison, those excluded had no opportunity to develop their digital consumer knowledge and skills, thus, the pandemic reinforced and deepened digital disparities for those without access during this time, amplifying digital divides for young children.

### 9.3.2 CONTRIBUTION TO THEORY

The theoretical framework introduces a new ecosystem of the child consumers digital socialisation environment and introduces three contexts; the political, familial and the educational, highlighting the role of teachers as socialisation actors who have been relatively neglected within previous consumer research. The theoretical contributions surround the exploration and understanding of child socialisation within the COVID-19 lockdown environment, with consideration of the degree and process of influence within the political, educational and familial environments, as well as any links or relationships between them. It is evident through the literature that the political environment has a macro position within the socialisation process and is detached from having a direct impact on socialisation, however the literature suggests that the political environment should have had more of an influence on the education context than was evident within the findings, expanding understanding toward how detached this environment actually is, in influencing the education context, ergo the child consumer's digital knowledge and skills.

Teachers as socialisation actors have a profound and direct influence in lessening the digital divide of the child consumer, to a degree, it is expected that schools as institutions will have equal approaches to their engagement with children when it comes to enhancing their digital knowledge and skills. The findings showed however, that although many schools did utilise online learning during the pandemic, some teachers had a higher degree of influence when developing digital skills by introducing new platforms, giving feedback, communicating to children and encouraging the use of online and offline tools to complete their online schoolwork. Some teachers however, had a minimalistic approach, whereby content was distributed, but there was little engagement with the children. The different experiences of teachers during lockdown, stemming from their school's culture, resources, support from leadership and experiences of children using ET, shaped the likelihood of some teachers further enhancing their degree of influence within the child consumers digital socialisation process in a post lockdown environment, by continuing to/making the effort to integrate ET or not. At a minimum, e-safety is discussed on a yearly basis, at best, children have access to ET and this is integrated in both IT and non-IT related subjects. The outcome of this is integrated within the framework; the different degree and process of socialisation within classrooms (as the same school can have teachers who approach ET differently) leads to the unequal development of the child consumers digital knowledge and skill, thus causing disparities within first, second and third level opportunities, ultimately causing inequality within the digital outcomes realised.

### 9.3.3 CONTRIBUTION TO POLICY

The political contributions surround understanding the existing condition for digital divides for young children within a post-pandemic environment; the research shows children are experiencing different standards of digital socialisation within the home and education contexts. Lockdown heightened the significance of these contexts and heightened digital divides for the child consumer. The impact of which has been evidenced by the literature. This study evidences that policies need to be reviewed to

ensure the outcomes desired within the EdTech strategy are actually being achieved; the key considerations for policymakers and teachers are listed below:

1. Policymakers having an active role in supporting schools to integrate ET within the classroom. One way of doing this would be to review the commitments made within the 2019 strategic plan, and to actually take steps in achieving them.
2. Take a more active role; although schools are able to procure IT equipment with negotiated deals as part of the EdTech strategy, maintaining and keeping equipment updated is problematic. Distributors of this equipment often have policies/discounts available when recycling older versions, securing deals like this would mean equipment can be kept up to date at a lower cost. This is evidently not happening within all schools.
3. Look at best practice in schools and offer active training sessions to help others implement this best practice. Although this was supposed to be the role of demonstrator schools, it has not been effective and to date (2024), the trial of independent buying hubs has not been implemented. The research also showed the work with the Chartered College of Teaching to launch online courses is not as effective as training created by teachers themselves. Policymakers need to investigate and distribute best practice, not schools.
4. To alleviate workloads periodically giving teachers time to experience, practice, create and share ways to implement ET within their own schools. This is more effective than policy-led solutions that are not tailored to individual schools and is one of the aims of EdTech (for school-led solutions) however policymakers need to ensure all schools have the time and space to do this.
5. Rather than creating a change in digital services available to parents, students, teachers and education leaders; consider initiatives that encourage two-way communication between these groups. Lockdown forced parents to be more involved in their child's online schoolwork and schools by default were more involved in how ET is used at home because of online learning. Both teachers and parents value a balanced approach to ET use, encouraging ways the two contexts can work together would be beneficial.
6. Encourage the use of ET earlier; the recent policy banning the use of smartphones reinforces the findings of the research that ET use becomes more problematic as children get older. If introduced as a learning tool like computers and laptops, the outcomes of ET may be more likely to be educational, and less problematic whereby lockdown encouraged children to use devices for more than just social and entertainment purposes.
7. If the skill of using ET for educational outcomes is unified earlier, it not only decreases inequality, but levels the playing field of the child consumers digital skills; allowing devices to be used to support some subject activities rather than IT becoming the focus.
8. Formalize the role teachers have within the child consumers digital socialisation; what are the expectations to integrate ET within the classroom? If this is formalized, teachers have less room to reject their school initiatives, and to request training and time to ensure they are able to provide this. In doing so, consider what is a home issue and what is a school issue? The findings showed many schools find learning disrupted by ET use that happens at home, but that parents are not aware of. Could policymakers appoint a safe internet liaison staff member. If issues do occur, it does not take up the time of the teacher and is dealt with sensitively and appropriately between the school, child and family.
9. Review the standard of which the digital skills framework ([table 3.7](#)) is being achieved within each school; the findings showed the only standardised element of this framework was 'being safe and responsible online', introduced through e-safety, however the frequency differed in every school. Other elements/standards such as using devices and handling information, creating and editing,

communication, and transacting, were not being achieved equally within schools, in turn, this made the integration of ET difficult within classrooms because children do not have the skills to do so without causing disruptions to learning.

The ease of integrating further interventions within policy and schools is not a simple process, however if interventions do not take place; digital disparities will continue to be heightened, thus amplifying socio-economic disparities in the future. The cost of which impacts individuals, schools, government and society.

### 9.3.4 CONTRIBUTION TO PRACTICE

Practical implications encompass the political, educational and familial contexts whereby the research findings suggest that each context has their own agenda in the creation of the digitally incompetent child. This research evidences that policymakers, educators and those within the familial environment should better understand that the process of digital literacy will involve elements of risk, and they cannot protect children from these risks without exposure to them; this in turn builds their resilience and protection to/from online risks.

Policymakers, educators and guardian's want children to be an ideal consumer in that they can use devices, have digital skills and competence but without being exposed to risks. Existing research has well documented that it is not possible to have one without the other; creating barriers to socialisation only fails because they are not realistic in how digital divides are relieved, and digital outcomes achieved. Socialisation agents want the ideal type of digitally illiterate child consumer and share a govern mentality toward ideas of how they want the child to be and how they want the child to fit into the digital landscape and in what ways they don't want children to fit into this landscape. The socialisation agents within the child's digital socialisation eco-system want digitally literate children, but on that same token, they do not want children to go through the process to get to that point with concerns of risk. This intertwines Hammond et al (2024), finding there were only 11 studies since 2011 (across 14 countries) that focused on child consumers aged 8-12 and their experiences of digital resilience, finding the most common theme was the constant strive for balance that was shown throughout this study. Making the same conclusions as this project: children cannot digitally upskill without the opportunity to develop their digital resilience.

Practical implications surround increasing understanding toward how digital outcomes are realistically achieved; it's not about sheltering children from all risk, because freedom to explore and exposure to this risk helps build digital competence. Developing digitally literate children means allowing them to use devices and making time for teachable moments during their socialisation; changing the way agents within the child's digital socialisation see how digital outcomes and opportunities can be achieved, is an important step toward child consumers realising the most beneficial outcomes of ET use.

If this understanding is realised, it will in turn open dialogue in a myriad of ways; children can discuss what they see online more freely which increases opportunities for socialisation and teachable moments; constructive relationships between policymakers and schools can be fostered to discuss the ongoing and changing needs surrounding digital literacy so policymakers are aware of what is practically needed within individual schools to give children a well-rounded digital education; having someone within schools whose role it is to better relationships between the school and home contexts will ensure the risks children face are minimized as much as possible, whereby schools can communicate with carers and carers have someone within this context they can confide in appropriately.



## 9.4 LIMITATIONS

### 9.4.1 Timing

Although the updated aims and outcomes of the research account for the timing of data collection, the research has taken place in what will be a (hopefully) unique time period.

### 9.4.2 PARTICIPANT SAMPLE

The participant sample, from both the familial and educational contexts were mostly female. Research surrounding gender and the lockdown context explores how women were disproportionately impacted by the pandemic. To a degree this shows women may have been the best suited to account for the lockdown experience as they tended to take on household and childcare responsibilities whilst working from home.

### 9.4.3 DATA COLLECTION METHODS

Whilst the research methods are emblematic of the COVID-19 pandemic, it was not possible to recruit participants who did not have internet access or who were not engaged through social media during the pandemic.

There is the possibility the participants will have under reported socially undesirable behaviour within the surveys, but particularly within the interviews given the researcher was more embedded in the process.

### 9.4.4 THE RESTRICTIONS OF THE COVID-19 PANDEMIC

The impact of the COVID-19 pandemic on the project has been considered within the method chapter to ensure transparency. It is however important to summarise in what ways these implications translated to study limitations:

- **Uncertainty surrounding lockdown length:** Contingency methods were put in place such as collecting data from teachers and parents using online methods during the summer. This meant focus groups were no longer the data collection method used for teachers. The original method of focus groups to contact young children changed to interviews which were planned to take place later in the year. Lockdown lasted longer than expected however which meant the online methods continued, and the focus was adult participants only. This also meant that online interviews for teachers and parents/guardians were included.
- **School closures:** Data collection had to take place online.
- **Using schools as gatekeepers:** Schools became so busy during the pandemic, it was not feasible for them to help, recruitment methods then changed to using social media.
- **Online data collection methods:** Ethnography could no longer be used as the approach to qualitative data collection.
- **Sequence of data collection:** Data was originally going to be collected from teachers, parents/guardians and children at the same time, however because of the need to re-think and re-design the data collection methods, it meant a grounded approach to data collection and analysis could be utilised.
- **Sampling method:** Originally the sampling method was purposive only, this changed due to lockdown toward purposive and snowball sampling.
- **Ethical considerations:** Due to the revision of data collection methods within the first lockdown, a revision of the ethics application was submitted to include online recruitment and the interviews for young children. Following further lockdowns, another amendment was submitted to include online interviews for the adult participants and children were no longer included as a participant group.

## 9.5 RECOMMENDATIONS

1. **Continue longitudinal studies in this area to evidence the impact of digital disparities from young ages.**

It is recommended that further longitudinal studies take place highlighting the impact of unequal digital socialisation experiences for young children; following them into different stages of their life to see how these manifest and solidifying what this means for the future. In doing so, further evidence may encourage policymakers and schools to consider not just the importance of keeping children safe online (as online harms have an immediate and serious impact on children), but also the importance of socialising children to use ET. Thus, building their resilience to online risks and increasing the development of digital skills and outcomes.

2. **Quantify the level of socialisation inequality in schools to maximise evidence and support action.**

This research has explored and made significant steps toward understanding the different types of inequality that exists within schools; although in-depth exploration is integral, policymakers rarely act on explorative evidence in comparison to quantitative.

3. **Standardize the age and introduction of ET within schools**

This research and the findings of OfCom (2022) show the majority of children are given access to ET within the familial home by the time they reach primary school age, with the level increasing by the time children get to secondary school. Digital skills are therefore being unequally developed from increasingly younger ages, for schools to introduce ET at primary school age in a constructive and educationally appropriate way, it may lessen the impact of inequality of socialisation that takes place in the familial home.

Socialisation agents within the child's digital socialisation eco-system assume that equal opportunities later in life will eliminate any previous inequality, but some research would suggest this is not the case and equality within these early experiences are important for later life.

4. **To explore the role of teachers as socialisation agents within different contexts**

It is recommended that further research takes place surrounding the role of teachers as actors within the child consumers socialisation environment; although they were made more prominent by the conditions of the lockdown context, agents within this environment are often overlooked.

## 9.6 CHAPTER SUMMARY

This chapter has identified the contribution this research has made toward knowledge, theory, policy and practice as well as highlighting the limitations of the study and future recommendations. In doing so, it has highlighted that further research is needed toward understanding the role of digital divides for the child consumer, not just in how inequality impacts their consumer experience, but what this inequality means for them as future consumers and citizens. It implores significant agents within the child's socialisation eco-system to consider, practically, the steps and risks that need to be taken to ensure children and adults are able to fully utilise digital outcomes, whilst minimising but not eliminating risks completely. The findings of this research project hold a place in the contribution toward consumer research, policy, educators and families aiming to facilitate young children to become digital elites.

## REFERENCES

- Acikgoz, F., Elwalda, A. & Jose De Oliveira, M. (2023) Curiosity on Cutting-Edge Technology via Theory of Planned Behavior and Diffusion of Innovation Theory. *International Journal of Information Management Data Insights*, 3(1), pp. 1-15.
- Aldunate, R. & Nussbaum, M. (2013) Teacher adoption of technology. *Computers in Human Behavior*, 29(3), pp. 519-524.
- Antonietti, C., Cattaneo, A. & Amenduni, F. (2022) Can teachers' digital competence influence technology acceptance in vocational education?. *Computers in Human Behavior*, Volume 132, pp. 1-9.
- Arnould, E. J. & Thompson, C. J. (2005) Consumer Culture Theory (CCT): Twenty Years of Research. 868-882, 31(4), pp. 868-882.
- Asbali, N. (2024) The Guardian. As a teacher, I know the damage phones do to kids. But this new ban won't make a shred of difference. [Online]  
Available at: <https://www.theguardian.com/commentisfree/2024/feb/20/teacher-damage-phones-ban-kids-schools>  
[Accessed 2024].
- Asmar, A., Mariën, I. & Van Audenhove, L. (2022) No one-size-fits-all! Eight profiles of digital inequalities for customized inclusion strategies. *New Media & Society*, 24(2), pp. 279-310.
- Attride-Sterling, J. (2001) Thematic Networks: An Analytic Tool for Qualitative Research. *Qualitative Research*, 1, pp. 385-404
- Ba, H., Tally, B. & Tsikalas, K. (2002) Investigating Children's Emerging Digital Literacies. *Journal of Technology, Learning and Assessment*, 1(4), pp. 1-49.
- Ball, C., Francis, J., Ting Huang, K., Kadylak, T., Cotten, S., Rikard, R. (2017) The physical digital divide: Exploring the social gap between digital natives and physical natives. *Journal of Applied Gerontology*, 00(0), pp. 1-19.
- Bandura, A. (1977) Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2).
- Banihashem, S. K. et al. (2023) Modeling teachers' and students' attitudes, emotions, and perceptions in blended education: Towards post-pandemic education. *The International Journal of Management Education*, 21(2), pp. 1-15.

- Bao, Y., Fern, E. F. & Sheng, S. (2007) Parental style and adolescent influence in family consumption decisions: An integrative approach. *Journal of Business Research*, 60(7), pp. 672-680.
- Barkan, R. (2019) *The smartphone is our era's cigarette – and just as hard to quit*. [Online] Available at: <https://www.theguardian.com/commentisfree/2019/dec/23/smartphone-techology-iphone-mobile-cigarettes> [Accessed 2023].
- Barnes, N. (2022) Parents, carers, and policy labor: Policy networks and new media. *New Media & Society*, 24(9), pp. 2107-2126.
- Baumrind, D. (1991) The Journal of Early Adolescence. *The Journal of Early Adolescence*, 11(1), pp. 6–95.
- Baydas, O. & Goktas, Y. (2016) Influential factors on preservice teachers' intentions to use ICT in future lessons. *Computers in Human Behavior*, Volume 56, pp. 170-178.
- Beaunoyer, E., Dupéré, S. & Guitton, M. J. (2020) COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in Human Behavior*, Volume 11, pp. 1-9.
- Beavis, C. et al. (2014) Teachers' Beliefs about the Possibilities and Limitations of Digital Games in Classrooms. *E-Learning and Digital Media*, 11(6), pp. 569-581.
- Becker, W. J., Belkin, L. Y. & Conroy, S. A. (2019) Killing Me Softly: Organizational E-mail Monitoring Expectations' Impact on Employee and Significant Other Well-Being. *Journal of Management*. pp. 1 – 29.
- Belk, R. (2010) Sharing. *Journal of Consumer Research*, 36(5), pp. 715–734.
- Belk, R. (2014) You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67 (8), pp. 1595-1600.
- Belk, R. W. (1979) Gift-Giving Behavior. *Research in Marketing*, 2, pp. 95–126.
- Belk, R. W. (1996) *The Perfect Gift in Gift Giving: A Research Anthology*. Cele Otnes and Richard F. Beltramini, Bowling Green, OH: Bowling Green State University Popular Press, pp. 59–84.
- Ben-Nun, P. (2008). *Encyclopedia of Survey Research Methods*. Thousand Oaks, CA: Sage Publications.
- Bennett, T. (2013) *Teacher Proof: Why research in education doesn't always mean what it*. in Cukurova et al (2018). London: Routledge.
- Bettany, S. & Kerrane, B. (2016) The socio-materiality of parental style: Negotiating the multiple affordances of parenting and child welfare within the new child-surveillance technology market. *European Journal of Marketing*, 50(11), pp. 2041-206.
- Bettany, . S. M., Kerrane, B. & Hogg, M. K. (2014) The material-semiotics of fatherhood: The co-emergence of technology and contemporary fatherhood. *Journal of Business Research*, 67(7), pp. 1544-1551.
- Blank, G. & Groselj, D. (2014) Dimensions of Internet use: amount variety and types. *Information, Communication & Society*, 17(4), pp. 417-435.

- Blaschke, L. M. (2021) The dynamic mix of heutagogy and technology: Preparing learners for lifelong learning. *British Journal of Educational Technology*, 52(4), pp. 1629-1645.
- Blau, I. & Peled, Y. (2012) Teachers' openness to change and attitudes toward ICT: Comparison of laptop per teacher and laptop per student programs. *Interdisciplinary Journal of E-Learning and Learning Objects*, 8, pp. 73-82.
- Borgonovi, F., Pokropek, M. & Pokropek, A. (2023) Relations between academic boredom, academic achievement, ICT use, and teacher enthusiasm among adolescents. *Computers & human behaviour*, 200.
- Braun, A., Maguire, M. & Ball, S. (2010). Policy Enactments in the UK Secondary School: Examining Policy, Practice and School Positioning. *Journal of Education Policy*, 25(4), pp. 547–560.
- Brauchli, V., Sticca, F., Edelsbrunner, P., von Wyl, A., Lannen, P. (2024). Are screen media the new pacifiers? The role of parenting stress and parental attitudes for children's screen time in early childhood. *Computers in Human Behavior*, 152.
- Brown, C., & Donnelly, M. (2022). Theorising social and emotional wellbeing in schools: a framework for analysing educational policy. *Journal of Education Policy*, 37(4), pp. 613-633.
- Bronfenbrenner, U. (1994). Ecological models of human development. In M. Gauvain, & M. Cole, *Readings on the development of children: Vol. 3*, (pp. 37– 43). Oxford.
- Bruner, J (1999) *Culture, mind & education*. in Shamir-Inbal & Blau (2016).
- Bryant, A. Bryant, M. Casper, K. Charmaz, K. Henwood, K. Charmaz, R. G. Mitchell, A. Clarke, A. Coffey, B. Holbrook, P. Atkinson, I. Dey, E. Durkheim, W. B. Gallie, B. G. Glaser, B. G. Glaser, A. L. Strauss, B. G. Haig, R. M. Lee, N. Fielding, G. H. Mead, C. W. Mills, K. Smit, A. Bryant, L. S. Star, A. L. Strauss, A. L. Strauss, J. Corbin, A. L. Corbin, S. Titscher, M. Meyer, R. Wodak, E. Vetter & L. Wittgenstein (2007) Introduction: grounded theory research: methods and practices. The SAGE Handbook of Grounded Theory (pp. 1-28). SAGE Publications Ltd.
- Bryman, A. (2012) *Social Research Methods*. Fourth Edition. Oxford: Oxford University Press.
- Bryman, A. (2016). *Social Research Methods*. Fifth Edition. Oxford: Oxford University Press.
- Buelga, S., Martínez-Ferrer, B. & Jesús Cava, M (2017) Differences in family climate and family communication among cyberbullies, cybervictims, and cyber bully-victims in adolescents. *Computers in Human Behavior*, 76, pp. 164-173.
- Bulger, M., Burton, P., O'Neill, B. & Staksrud, E. (2017) Where policy and practice collide: Comparing United States, South African and European Union approaches to protecting children online. *New Media & Society*, 19(5), pp. 750-764.
- Burrell, N. A. & Nicolini, K. M. (2017). *The SAGE Encyclopedia of Communication Research Methods*. Thousand Oaks, CA: SAGE Publications.
- Butler, D. & Leahy, M. (2021) Developing preservice teachers' understanding of computational thinking: A constructionist approach. *British Journal of Educational Technology*, 52(3), pp. 1060-1077.

Cabinet Office (2020). *Coronavirus outbreak FAQs: what you can and can't do*. [Online] Available at: <https://www.gov.uk/government/publications/coronavirus-outbreak-faqs-what-you-can-and-cant-do/coronavirus-outbreak-faqs-what-you-can-and-cant-do> [Accessed 01 April 2020].

Callegaro, M., & Disogra, C. (2008). Computing Response Metrics for Online Panels. *The Public Opinion Quarterly*, 72(5), pp. 1008–1032.

Camerer, C. (1988) Gifts as Economic Signals and Social Symbols. *American Journal of Sociology*, Volume 94, pp. 180–214.

Campbell, M. C., Inman, . J. J., Kirmani, A. & Price, L. L. (2020) In Times of Trouble: A Framework for Understanding Consumers' Responses to Threats. *Journal of Consumer Research*, 47(3), pp. 311–326.

Carleton, R. N. (2016) Fear of the unknown: One fear to rule them all?. *Journal of Anxiety Disorders*, 41, pp. 5-21.

Carrington, B. & Skelton, C. (2003) Re-thinking 'role models': equal opportunities in teacher recruitment in England and Wales. *Journal of Education Policy*, 18(3), pp. 253-265.

Carvalho, J., Francisco, R. & Relvas, A. P. (2015) Family functioning and information and communication technologies: How do they relate? A literature review. *Computers in Human Behavior*, 45, pp. 99-108.

Castells, M. (2007) Communication, Power and Counter-power in the Network Society. *International Journal of Communication*, 1, pp. 238-266.

Chadwick, A. E. (2018). *Population/Sample in: The SAGE Encyclopedia of Communication Research*. Thousand Oaks, CA: SAGE Publications

Chang, F.-C. et al. (2018) Computer/Mobile Device Screen Time of Children and Their Eye Care Behavior: The Roles of Risk Perception and Parenting. *Cyber Psychology, Behavior and Social Networking*, 21(3), pp. 179-186.

Charness, N. & Boot, W. R. (2016) Chapter 20: Technology, Gaming, and Social Networking. In: K. W. Schaie & S. L. Willis, eds. *Handbook of the Psychology of Aging (Eighth Edition)*. Academic Press, pp. 389-407.

Chien, S.-P., Wu, . H.-K. & Hsu, Y.-S. (2014) An investigation of teachers' beliefs and their use of technology-based assessments. *Computers in Human Behavior*, 31, pp. 198-210.

Cho, K.-S. & Lee, J.-M. (2017) Influence of smartphone addiction proneness of young children on problematic behaviors and emotional intelligence: Mediating self-assessment effects of parents using smartphones. *Computers in Human Behavior*, 66, pp. 303-311.

Chou, C., Condrón, L. & Belland, J. C. (2005) A Review of Rsearch on Internet Addiction. *Educational Psychology Review*, 17(4), pp. 363-388.

Clark, L. (2009) Digital Media and the Generation Gap. *Information, Communication & Society*, 12(3), pp. 388-407.



Cloonan, A., Hutchinson, K. & Paatsch, L. (2014) Innovating from the inside: Teacher influence and the 'promisingness' of digital learning environments. *E-Learning and Digital Media*, 11(6), pp. 582-592.

Conderman, G., van Laarhoven, T., Johnson, J. & Liberty, L. (2021) Wearable Technologies for Anxious Adolescents. *Journal of Educational Strategies, Issues and Ideas*, 94(1), pp. 1-7.

Collins, (2024). Definition of enabling technology [online]  
Available at:  
<https://www.collinsdictionary.com/dictionary/english/enabling-technology>  
[Accessed April 2024].

Corkin, M. T. et al. (2022) Are distinct modes of using digital technologies evident by age eight? Implications for digital divides. *Computers & Education*, 191, pp. 1-15.

Correa, T., Straubhaar, J., Chen, W. & Spence, J. (2015) Brokering new technologies: The role of children in their parents' usage of the internet. *New Media & Society*, 17(4), p. 483-500.

Cotte, J. & Wood, S. L. (2004) Families and Innovative Consumer Behavior: A Triadic Analysis of Sibling and Parental Influence. *Article Navigation*, 31(1), p. 78-86.

Cotten, S. & Jelenewicz, S. (2006) A Disappearing Digital Divide Among College Students? Peeling Away the Layers of the Digital Divide. *Social Science Computer Review*, 24(4), pp. 497-506.

Coughlan, S. (2019) *Smartphone 'addiction': Young people 'panicky' when denied mobiles*. [Online]  
Available at: <https://www.bbc.co.uk/news/education-50593971>  
[Accessed 2023].

Crawford, R. (2000). Information technology in secondary schools and its impact on training information technology teachers. *Journal of Information Technology for Teacher Education*, 9(2), pp. 183-198

Creswell, J., & Plano Clark, V. (2007). *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage, p. 23

Cruz-Cárdenas, J., Zabelina, E., Guadalupe-Lanas, J., Palacio-Fierro, A., Ramos-Galarza, C. (2021). COVID-19, consumer behavior, technology, and society: A literature review and bibliometric analysis. *Technological Forecasting and Social Change*, 173.

Cukurova, M., Luckin, R. & Clark-Wilson, A. (2018) Creating the golden triangle of evidence-informed education technology with EDUCATE. *British Journal of Educational Technology*, 50(2), pp. 490-504.

Dahl, S., Eagle, L. & Baez, C. (2009) Analyzing advergames: active diversions or actually deception: An exploratory study of online advergames content. *Young Consumers*, 10(1), pp. 46-59.

Dale, A., Arber, S. and Proctor, M. (1988) *Doing Secondary Analysis*. Unwin Hyman: London. Found in: Payne, G., & Payne, J. (2004). *Key concepts in social research*. SAGE Publications.

Damodaran, L. & Olphert, W., 2006. *Informing Digital Futures: Strategies for Citizen Engagement*. Dordrecht: Springer.

Davies, H. C. & Eynon, R. (2018) Is digital upskilling the next generation our 'pipeline to prosperity'?. *New Media & Society*, 20(11), pp. 3961-3979.

Davies, R. (2017) *Is our smartphone addiction damaging our children?*. [Online] Available at: <https://www.theguardian.com/commentisfree/2017/may/31/smartphone-addiction-children-research-technoference-child-behaviour>

Davis, F. (1989) Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), pp. 319-340.

Deakin, H. & Wakefield, K. (2014). Skype interviewing: reflections of two PhD researchers. *Qualitative Research*, 14(5), pp. 603–616.

DeCuir-Gunby, J. T., & Bindra, V. G. (2022). How does teacher bias influence students?: An introduction to the special issue on teachers' implicit attitudes, instructional practices, and student outcomes. *Learning and Instruction*, 78, 1–3.

De Grove, F., Bourgonjon, J., & Van Looy, J. (2012). Digital games in the classroom? A contextual approach to teachers' adoption intention of digital games in formal education. *Computers in Human Behavior*, 28, 2023–2033.

De Smet, M., Van Keer, H., De Wever, B. & Valcke, M. (2010) Cross-age peer tutors in asynchronous discussion groups: Exploring the impact of three types of tutor training on patterns in tutor support and on tutor characteristics. *Computers & Education*, 54(4), pp. 1167-1181.

Department of Communities and Local Government (2015). *The English Indices of Deprivation 2015*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/465791/English Indices of Deprivation 2015 - Statistical Release.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/465791/English_Indices_of_Deprivation_2015_-_Statistical_Release.pdf) [Accessed 31 May 2019]

Department for Education (2019c) *Disadvantaged families to benefit from free early learning apps*. [Online] Available at: [https://www.gov.uk/government/news/disadvantaged-families-to-benefit-from-free-early-learning-apps#\\_blank](https://www.gov.uk/government/news/disadvantaged-families-to-benefit-from-free-early-learning-apps#_blank) [Accessed 05 2019].

Department for Education (2020). *Guidance for schools, childcare providers, colleges and local authorities in England on maintaining educational provision*. [Online] Available at: <https://www.gov.uk/government/publications/coronavirus-covid-19-maintaining-educational-provision/guidance-for-schools-colleges-and-local-authorities-on-maintaining-educational-provision> [Accessed 01 April 2020].

Department for Education (2024) *Mobile phones in schools*. [Online] Available at: [https://assets.publishing.service.gov.uk/media/65cf5f2a4239310011b7b916/Mobile\\_phones\\_in\\_schools\\_guidance.pdf](https://assets.publishing.service.gov.uk/media/65cf5f2a4239310011b7b916/Mobile_phones_in_schools_guidance.pdf) [Accessed 2024].

Department for Environment Food and Rural Affairs. (2023). Statistical digest of rural England: 5-Connectivity and Accessibility. [Online] Available at: [https://assets.publishing.service.gov.uk/media/64e265733fde6100134a54e5/15\\_08\\_2023\\_-\\_5\\_-\\_Connectivity\\_and\\_Accessibility\\_to\\_load.pdf](https://assets.publishing.service.gov.uk/media/64e265733fde6100134a54e5/15_08_2023_-_5_-_Connectivity_and_Accessibility_to_load.pdf) [Accessed 2023]

Debeer, D. et al. (2021) The effect of adaptivity in digital learning technologies. Modelling learning efficiency using data from an educational game. *British Journal of Educational Technology*, 52(5), pp. 1881-1897.

Department for Digital, Culture, Media & Sport (DCMS) (2018) *Data Protection Act 2018: Factsheet Overview*. Department for Digital, Culture, Media & Sport .

Department for digital, culture, media & sport (2020) *Government response to the Digital, Culture, Media & Sport Select Committee Report on Immersive and Addictive Technologies*. [Online] Available at: <https://www.gov.uk/government/publications/government-response-to-the-digital-culture-media-sport-select-committee-report-on-immersive-and-addictive-technologies/government-response-to-the-digital-culture-media-sport-select-committee-report-on-immersive-a> [Accessed 2023].

DfDCMS (2020) *5G Supply Chain Diversification Strategy*, s.l.: Department for Digital, Culture, Media & Sport.

DfE (2016) *Progress 8: How Progress 8 and Attainment 8 measures are calculated*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/561021/Progress\\_8\\_and\\_Attainment\\_8\\_how\\_measures\\_are\\_calculated.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/561021/Progress_8_and_Attainment_8_how_measures_are_calculated.pdf) [Accessed August 2019].

DfE (2017) *Implementing the English Baccalaureate: Government consultation response*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/630713/Implementing\\_the\\_English\\_Baccalaureate\\_-\\_Government\\_consultation\\_response.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/630713/Implementing_the_English_Baccalaureate_-_Government_consultation_response.pdf) [Accessed August 2019].

DfE (2019a) *A guide to new mainstream free school revenue funding 2019 to 2020- May 2019*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/801456/Mainstream\\_school\\_revenue\\_funding.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/801456/Mainstream_school_revenue_funding.pdf) [Accessed August 2019].

DfE, (2019b) *Realising the potential of technology in education: A summary report*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/929036/Realising\\_the\\_potential\\_of\\_technology\\_in\\_education\\_summary\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/929036/Realising_the_potential_of_technology_in_education_summary_report.pdf) [Accessed October 2021].

DfE (2019c) *EdTech Strategy marks 'new era' for schools*. [Online] Available at: <https://www.gov.uk/government/news/edtech-strategy-marks-new-era-for-schools> [Accessed April 2022].

DfE (2019d) *English Baccalaureate: eligible qualifications.* [Online]  
Available at: <https://www.gov.uk/government/publications/english-baccalaureate-eligible-qualifications>  
[Accessed August 2019].

DfE (2019e) *Essential digital skills framework.* [Online]  
Available at: <https://www.gov.uk/government/publications/essential-digital-skills-framework/essential-digital-skills-framework>  
[Accessed 2023].

DfE (2019f) *Mainstream and 16 to 19 free school financial template.* [Online]  
Available at: <https://www.gov.uk/government/publications/mainstream-and-16-to-19-free-school-financial-template>  
[Accessed August 2019].

DfE (2020) *Secondary Accountability Measures: Guide for maintained secondary schools, academies and free schools.* Department for Education.

DfE (2021a) *About us.* [Online]  
Available at: <https://www.gov.uk/government/organisations/department-for-education/about>  
[Accessed October 2021].

DfE (2021b) *Relationships Education, Relationships and Sex Education (RSE) and Health Education.* [Online]  
Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1090195/Relationships Education RSE and Health Education.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1090195/Relationships_Education_RSE_and_Health_Education.pdf)  
[Accessed Nov 2022].

DfE (2021c). *Education Technology (EdTech) Survey 2020-21.* [Online]  
Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/996470/Education Technology EdTech Survey 2020-21 1 .pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/996470/Education_Technology_EdTech_Survey_2020-21_1_.pdf)  
[Accessed October 2021].

DfE (2022a) *Press Release: All schools to have high speed internet by 2025.* [Online]  
Available at: <https://www.gov.uk/government/news/all-schools-to-have-high-speed-internet-by-2025>  
[Accessed April 2022].

DfE (2022b) *School and college performance measures.* [Online]  
Available at: <https://www.gov.uk/government/collections/school-and-college-performance-measures#changes-to-school-accountability-measures-2020-to-2022>  
[Accessed Nov 2022].

Dijk, J. A. v. (2005) *The Deepening Divide Inequality in the Information Society.* London: Sage Publications.

Dijk, J. A. v. (2006) Digital Divide Research, Achievements and Shortcomings. *Poetics*, 34, pp. 221-235.

DiMaggio, P., Hargittai, E. & Celeste, C. (2004) *From unequal access to differentiated use: a literature review and agenda for research on digital inequality.* New York: Russell Sage Foundation.

Dolbec, P.Y., Fischer, E., Canniford, R. (2021) Something old, something new: Enabled theory building in qualitative marketing research. *Marketing theory*, 21(4), pp. 443-461.

Domingo, M. G. & Garganté, A. B. (2016) Exploring the use of educational technology in primary education: Teachers' perception of mobile technology learning impacts and applications' use in the classroom. *Computers in Human Behavior*, 56, pp. 21-28.

Donohoe, C., Topping, K. & Hannah, E. (2012) The impact of an online intervention (Brainology) on the mindset and resiliency of secondary school pupils: A preliminary mixed methods study. *Educational Psychology*, 32, p. 641–655.

Duarte, B. J. (2021) Situating subjectivities in the macrosocial policy context: critical/queer multifocal policy research. *Journal of Education Policy*, 36(5), pp. 691-707 .

Dweck, C. (2000) *Self-theories: Their role in motivation, personality and development*. Found in Seaton (2018). Philadelphia: Taylor & Francis.

Dweck, C. S. (2006) *Mindset: The new psychology of success*. New York: Random House.

Ernest, W. Brewer, N. Salkind, J. Rasmussen, K. (2011) Secondary Data Analysis in Encyclopedia of Measurement and Statistics. (pp. 870-876). Thousands Oaks: Sage.

Edgerton, J. D. & Roberts, L. W. (2014) Cultural capital or habitus? Bourdieu and beyond in the explanation of enduring educational inequality. *Theory and Research in Education*, 12(2), pp. 193-220.

Elhai, J. D., Levine, J. C., Dvorak, R. D. & Hall, B. J. (2016) Fear of missing out, need for touch, anxiety and depression are related to problematic smartphone use. *Computers in Human Behavior*, 63, pp. 509-516.

Epp, A. M. & Price, L. L. (2008) Family Identity: A Framework of Identity Interplay in Consumption Practices. *Journal of Consumer Research*, 35(1), pp. 50-70.

European Commission (2018) *Data Protection*. [Online] Available at: [https://ec.europa.eu/info/law/law-topic/data-protection\\_en](https://ec.europa.eu/info/law/law-topic/data-protection_en) [Accessed 05 June 2018].

European Commission (2023) *DigComp Framework*. [Online] Available at: [https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework\\_en#:~:text=The%20DigComp%20framework%20identifies%20the,the%20source%20and%20its%20content](https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en#:~:text=The%20DigComp%20framework%20identifies%20the,the%20source%20and%20its%20content) [Accessed 2023].

Exley, S. (2016) 'Critical friends': exploring arm's length actor relationships to local government in education. *Journal of Education Policy*, 31(6), pp. 742-756.

Eynon, R. & Helsper, E. (2010) Adults Learning Online: Digital Choice and/or Digital Exclusion?. *New Media & Society*, 13(4), pp. 534-551.

Facebook, (2022). *Groups*. [Online] Available at: <https://www.facebook.com/help/1629740080681586> [Accessed May 2022].

- Farkas, G. (2003). Cognitive skills and non-cognitive traits and behaviors in stratification processes. *Annual Review of Sociology*, 29, p. 541–562
- Farzin, M. & Fattahi, M. (2023) Investigating the adoption of mobile banking and mobile payment services in developing countries. In: *Reference Module in Social Sciences*. Elsevier.
- Federal Trade Commission (2018) *Children's Online Privacy Protection Rule ("COPPA")*. [Online] Available at: <https://www.ftc.gov/enforcement/rules/rulemaking-regulatory-reform-proceedings/childrens-online-privacy-protection-rule> [Accessed 05 June 2018].
- Fleming, A. (2015) *Screen time v play time: what tech leaders won't let their own kids do*. [Online] Available at: <https://www.theguardian.com/technology/2015/may/23/screen-time-v-play-time-what-tech-leaders-wont-let-their-own-kids-do> [Accessed 2022].
- Fletcher, A. C. & Blair, . B. L. (2016) Implications of the family expert role for parental rules regarding adolescent use of social technologies. *New Media & Society*, 18(2), pp. 239-256.
- Flewitt, R., Messer, D. & Kucirkova, N. (2015) Learning is patient process- New directions for early literacy in a digital age: The iPad. *Journal of Early Childhood Literacy*, 15(3), pp. 289–310.
- Flewitt, R., Kucirkova, N. & Messer, D. (2014). Touching the virtual, touching the real: iPads and enabling literacy for students experiencing disability. *Australian Journal of Language and Literacy*, 37(2), pp. 107-116
- Flick, U. (2014). *The SAGE Handbook of Qualitative Data Analysis*. London: SAGE Publications.
- Flurry, L. A. (2007) Children's influence in family decision-making: Examining the impact of the changing American family. *Journal of Business Research*, 60(4), pp. 322-330.
- Foxman , E. R., Tansuhaj , P. S. & Ekstrom, K. M. (1989) Adolescents' Influence in Family Purchase Decisions: A Socialization Perspective. *Journal of Business Research*, 18, pp. 159-172.
- Fraser, D. M. (2018) An exploration of the application and implementation of growth mindset principles within a primary school. *British Journal of Educational Psychology*, Volume 88, pp. 645–658.
- Fütterer, T. et al. (2023) Will, skills, or conscientiousness: What predicts teachers' intentions to participate in technology-related professional development?. *Computers & Education*, Volume 198, pp. 1-17.
- Gale, T. & Molla, T. (2015) Social justice intents in policy: an analysis of capability for and through education. *Journal of Education Policy*, 30(6), pp. 810-830.
- Geržičáková, M., Dedkova, L. & Mýlek, V. (2023) What do parents know about children's risky online experiences? The role of parental mediation strategies. *Computers in Human Behavior*, 141, pp. 1-9.
- Gewirtz, S., 2001. Cloning the Blairs: New Labour's programme for the re-socialization of working-class parents. *Journal of Education Policy*, 16(4), pp. 365-378.



Gibbs, L. et al. (2007) What have sampling and data collection got to do with good qualitative research?. *Australian and New Zealand Journal of Public Health*, 31(6), pp. 540-544.

Gibson, J. E. (2012) Interviews and Focus Groups With Children: Methods That Match Children's Developing Competencies. *Journal of Family Theory & Review*, 4(2), pp. 148-159.

Gil-Flores, J., Rodríguez-Santero, J. & Torres-Gordillo, J.-J. (2017) Factors that explain the use of ICT in secondary-education classrooms: The role of teacher characteristics and school infrastructure. *Computers in Human Behavior*, Volume 68, pp. 441-449.

Given, L. M. (2008). *The SAGE encyclopedia of qualitative research methods*. California: SAGE Publications.

Gómez, D. C. (2020) The third digital divide and Bourdieu: Bidirectional conversion of economic, cultural, and social capital to (and from) digital capital among young people in Madrid. *New Media & Society*, 23(9), pp. 2534–2553.

Goodrich, K. & Mangleburg, T. F. (2010). Adolescent perceptions of parent and peer influences on teen purchase: An application of social power theory. *Journal of Business Research*, 63(12), pp. 1328-1335.

Goodwin, I. & Spittle, S. (2002). The European Union and the information society: Discourse, power and policy. *New Media & Society*, 4(2), pp. 225-249.

Gov.uk (2014) *Government Digital Inclusion Strategy*. [Online] Available at: <https://www.gov.uk/government/publications/government-digital-inclusion-strategy/government-digital-inclusion-strategy> [Accessed 2023].

Gov.uk (2019a) *Retaining Ofsted's current grading system in education*. [Online] Available at: <https://www.gov.uk/government/publications/retaining-ofsteds-current-grading-system-in-education> [Accessed August 2019].

GOV.UK (2019b) *School Performance Tables*. [Online] Available at: <https://www.compare-school-performance.service.gov.uk/> [Accessed 05 2019].

Gov.uk (2019c) *The national curriculum*. [Online] Available at: <https://www.gov.uk/national-curriculum> [Accessed July 2019].

Gov.uk (2019d) *Types of school*. [Online] Available at: <https://www.gov.uk/types-of-school> [Accessed June 2019].

Gov.uk (2022) *Service Standard*. [Online] Available at: <https://www.gov.uk/service-manual/service-standard/point-3-join-up-across-channels> [Accessed April 2022].

GSS (2010) *Statistical measures of disability: Classification of disability in terms of the Equality Act 2010*. [Online]

Available at: <https://gss.civilservice.gov.uk/policy-store/statistical-measures-of-disability/#questions> [Accessed 0 May 2019].

Greenhow, C., Staudt Willet, K. B. & Galvin, S. (2021). Inquiring tweets want to know: #Edchat supports for #RemoteTeaching during COVID-19. *British Journal of Education Technology*, 52(4), pp. 1434-1454

Grogan, S. et al. (2013). Dress Fit and Body Image: A Thematic Analysis of Women's Accounts During and After Trying on Clothes. *Body Image*, 10, pp. 380-388

Gueron-Sela, N. et al. (2023) Screen media exposure and behavioral adjustment in early childhood during and after COVID-19 home lockdown periods. *Computers in Human Behavior*, 140, pp. 1-11.

Guggemos, J. & Seufert, S. (2021) Teaching with and teaching about technology – Evidence for professional development of in-service teachers. *Computers in Human Behavior*, 115, pp. 1-11.

Gui, M. & Argentin, G. (2011) Digital skills of internet natives: Different forms of digital literacy in a random sample of Northern Italian high school students. *New Media & Society*, 13(6), pp. 963-980.

Haddon, L. & Vincent, J. (2015 ) *UK Children's experience of smartphones and tablets: Perspectives from children, parents and teachers*. London: London School of Economics.

Hadlington, L., White, H. & Curtis, S. (2019). "I cannot live without my [tablet]": Children's experiences of using tablet technology within the home. *Computers in Human Behavior*, 94, pp. 19-24

Hammer, M., Scheiter, K. & Stürmer, K. (2021) New technology, new role of parents: How parents' beliefs and behavior affect students' digital media self-efficacy. *Computers in Human Behavior*, 116, pp. 1-9.

Hammond, S. P., Polizzi, G., Duddy, C., Bennett-Grant, Y., & Bartholomew, K. J. (2024). Children's, parents' and educators' understandings and experiences of digital resilience: A systematic review and meta-ethnography. *New Media & Society*, 0(0).

Hao, Y. & Lee, K. S. (2015) Teachers' concern about integrating Web 2.0 technologies and its relationship with teacher characteristics. *Computers in Human Behavior*, 48, pp. 1-8.

Hao, Y. & Lee, K. S. (2016) Teaching in flipped classrooms: Exploring pre-service teachers' concerns. *Computers in Human Behavior*, 57, pp. 250-260.

Harari, Y. N. (2014) *Sapiens: A Brief History of Humankind*. London: Harper.

Hardy, I. (2018) Governing teacher learning: understanding teachers' compliance with and critique of standardization. *Journal of Education Policy*, 33(1), pp. 1-22.

Hargittai, E. & Hinnant, A. (2008) Digital Inequality Differences in Young Adults' Use of the Internet. *Communication Research*, 35(5), pp. 602-621.

Hargittai, E. (2002) Second-Level Digital Divide: Differences in People's Online Skills. *First Monday*, 7(4), pp. 1-14.

Hargittai, E. (2010) Digital Na(t)ives? Variation in Internet Skills and Uses among Members of the "Net Generation". *Sociological Inquiry*, 80(1), pp. 92-113.

- Hargittai, E. & Hinnant, A. (2008) Digital inequality: differences in young adults' use of the internet. *Communication Research*, 35(5), pp. 602-621.
- Hargittai, E. & Kim, S. J. (2010) The Prevalence of Smartphone Use Among a Wired Group of Young Adults. *Institute for Policy Research*.
- Harrison, C., Tomás, C. & Crook, C. (2014). An e-maturity analysis explains intention-behavior disjunctions in technology adoption in UK schools. *Computers in Human Behavior*, 34, pp. 345-351
- Hartanto, A. & Yang, H. (2016) Is the smartphone a smart choice? The effect of smartphone separation on executive functions. *Computers in Human Behaviour*, 64, pp. 329-336.
- Hasebrink, U. et al. (2011) *Patterns of risk and safety online: in-depth analyses from the EU Kids Online survey of 9- to 16-year-olds and their parents in 25 European countries*. London: EU Kids Online network.
- Hase, S. (2014) *Skills for the learner and learning leader in the 21st century*. in Elizabeth Solberg, Laura EM Traavik and Sut I Wong (2020) *Digital Mindsets: Recognizing and Leveraging Individual Beliefs for Digital Transformation*. California Management Review, 62(4), pp. 105-124.
- Hatlevik, I. K. & Hatlevik, O. E. (2018) Students' evaluation of digital information: The role teachers play and factors that influence variability in teacher behaviour. *Computers in Human Behavior*, 83, pp. 56-63.
- Hattie, J. (2012) *Visible learning for teachers: Maximizing impact on learning*. Found in Seaton (2018). New York: Taylor and Francis.
- Hayden, T. & Webster, T. (2015) *The Mobile Commerce Revolution: Business Success in a Wireless World*. Indiana: Pearson Education.
- Haydn, T. & Barton, R. (2008) 'First do no harm': Factors influencing teachers' ability and willingness to use ICT in their subject teaching. *Computers & Education*, 51(1), pp. 439-447.
- Hayes, M. (2005) Learning in school, home and community: ICT for early and elementary education, Gail Marshall, Yaacov Katz. Kluwer Academic Publishers, London (2003), p. 182,. *Computers & Education*, 45(1), pp. 164-165.
- Heary, C. & Hennessy, E. H. (2012) Focus Groups Versus Individual Interviews with Children: A Comparison of Data. *The Irish Journal of Psychology*, 27(1-2), pp. 58-68.
- Helsper, E. J. et al. (2013) *Country classification: opportunities, risks, Country classification: opportunities, risks, harm and parental mediation*, London: EU Kids Online, The London School of Economics and Political Science.
- Helsper, E. & Reisdorf, B. (2017) The emergence of a "digital underclass" in Great Britain and Sweden: Changing reasons for digital exclusion. *New Media & Society*, 19(8), pp. 1253-1270.
- Hermans, R., Tondeur, J., van Braak, J. & Valcke, M. (2008) The impact of primary school teachers' educational beliefs on the classroom use of computers. *Computers & Education*, 51(4), pp. 1499-1509.

Hern, A. (2021) *Smartphone is now 'the place where we live', anthropologists say*. [Online] Available at: <https://www.theguardian.com/technology/2021/may/10/smartphone-is-now-the-place-where-we-live-anthropologists-say> [Accessed 2023].

HM Government (2017). *Internet Safety Strategy - Green paper*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/650949/Internet\\_Safety\\_Strategy\\_green\\_paper.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/650949/Internet_Safety_Strategy_green_paper.pdf) [Accessed 04 June 2018].

Hobbs, R. & Tuzel, S. (2015) Teacher motivations for digital and media literacy: An examination of Turkish educators. *British Journal of Educational Technology*, 48(1), pp. 7-22.

Hoffman, D. L. & Novak, T. P. (2018) Consumer and Object Experience in the Internet of Things: An Assemblage Theory Approach. *Journal of Consumer Research*, 44(6), pp. 1178-1204.

Holloway, D., Green, . L. & Livingstone, S. (2013) *Zero to Eight: Young children and their internet use*. The London School of Economics and Political Science. [Online] Available at: [http://eprints.lse.ac.uk/52630/1/Zero\\_to\\_eight.pdf](http://eprints.lse.ac.uk/52630/1/Zero_to_eight.pdf) [Accessed 08 April 2018].

Hollis, C., Livingstone, S. & Sonuga-Barke, E. (2020). Editorial: The role of digital technology in children and young people's mental health - a triple-edged sword?. *Journal of Child Psychology and Psychiatry*, 61(8), pp. 837-841.

Holmgren, H. G., Stockdale, L., Gale, M. & Coyne, S. M. (2022) Parent and child problematic media use: The role of maternal postpartum depression and dysfunctional parent-child interactions in young children. *Computers in Human Behavior*, 133(3), pp. 1-7.

Hong, J.-C., Juan, H.-C. & Hung, W.-C. (2022) The role of family intimacy in playing collaborative e-sports with a Switch device to predict the experience of flow and anxiety during COVID-19 lockdown. *Computers in Human Behavior*, 132, pp. 1-10.

Hota, M. & McGuiggan, R. (2005) The Relative Influence of Consumer Socialization Agents on Children and Adolescents - Examining the Past and Modeling the Future. *European Advances in Consumer Research*, 7, pp. 119-124.

Houses for Sale & Rent (2019) *House prices in Whiston, Prescot, Merseyside L35 3JJ, UK*. [Online] Available at: <https://housesforsaletorent.co.uk/houses/england/knowsley/prescot/whiston-south/l35-3jj.html> [Accessed 26 June 2019].

Howell, K. E. (2013). *An introduction to the philosophy of methodology*. London: SAGE Publications

Humphreys, L., Von Pape, T. & Karnowski, V. (2013) Evolving Mobile Media Use: Uses and Conceptualizations of the Mobile Internet. *Journal of Computer-Mediated Communication*, 18, pp. 491-507.

Husemann, K. C. & Eckhardt, G. M. (2019) Consumer Deceleration. *Journal of Consumer Research*, 45, pp. 1142-1163.

- Hutchinson, K., Paatsch, L. & Cloonan, A. (2020) Reshaping home-school connections in the digital age: Challenges for teachers and parents. *E-Learning and Digital Media*, 17(2), pp. 167-182.
- Ifenthaler, D. & Schweinbenz, V. (2013) The acceptance of Tablet-PCs in classroom instruction: The teachers' perspectives. *Computers in Human Behavior*, 29(3), pp. 525-534.
- Ives, L. (2018) *Screens and teens: survival tips for parents on the technology battlefield*. [Online] Available at: <https://www.telegraph.co.uk/women/family/screens-teens-survival-tips-parents-technology-battlefield/> [Accessed 19 July 2018].
- Jang, S. & Cai, L. A. (2002) Travel motivations and destination choice: A study of British outbound market. *Journal of Travel & Tourism Marketing*, 13(3), pp. 111-133.
- Jeffery, C. P. (2021) Parenting in the digital age: Between socio-biological and socio-technological development. *New Media & Society*, 23(5), pp. 1045-1062.
- Jensen Schau, H. & Gilly, M. (2003) We Are What We Post? Self-Presentation in Personal Web Space. *Journal of Consumer Research*, 30(3), pp. 385-404.
- John, D. R. (1999) Consumer Socialization of Children: A Retrospective Look at Twenty-Five Years of Research. *Journal of Consumer Research*, 26(3), pp. 183-213.
- Johnson, G. & Puplampu, K. (2008). Internet use during childhood and the ecological techno-subsystem. *Canadian Journal of Learning and Technology*, 34(1), pp. 19-28
- Joy, A. (2001) Gift Giving in Hong Kong and the Continuum of Social Ties. *Journal of Consumer Research*, 28(2), pp. 239-256.
- Kadijevich, D. & Haapasalo, L. (2008) Factors that influence student teacher's interest to achieve educational technology standards. *Computers & Education*, 50(1), pp. 262-270.
- Kajamaa, A., Kumpulainen, K. & Olkinuora, H.-R. (2019) Teacher interventions in students' collaborative work in a technology-rich educational makerspace. *British Journal of Educational Technology*, 51(2), pp. 371-386.
- Kalman, J. & Guerrero, E. (2013) A Social Practice Approach to Understanding Teachers' Learning to Use Technology and Digital Literacies in the Classroom. *E-Learning and Digital Media*, 10(3), pp. 260-275.
- Kalmus, V., Realo, A. & Siibak, A. (2011). Motives for Internet use and Their Relationships with Personality Traits and Socio-demographic Factors. *TRAMES*, 15(65), pp. 385-403.
- Katz, V. & Gonzalez, C. (2016). Community Variations in Low-Income Latino Families' Technology Adoption and Integration. *American Behavioral Scientist*, 60(1), pp. 59-80
- Keen, C. & France, A. (2022) Capital gains in a digital society: Exploring how familial habitus shapes digital dispositions and outcomes in three families from Aotearoa, New Zealand. *New media & Society*, 00(0), pp. 1-18.

- Kemp, P. E., Berry, M. G. & Wong, B. (2018) *The Roehampton Annual Computing Education Report*, Roehampton: Roehampton University.
- Kerrane, B., Bettany, S. & Kerrane, K. (2015) Siblings as socialization agents: Exploring the role of 'sibship' in the consumer socialization of children. *European Journal of Marketing*, 49(5/6), pp. 713-735.
- Kerrane, B. & Hogg, M. (2013) Shared or non-shared? Children's different consumer socialisation experiences within the family environment. *European Journal of Marketing*, 47(3/4), pp. 506-524..
- Kerrane, B., Hogg, M. K. & Bettany, S. M. (2012) Children's influence strategies in practice: Exploring the co-constructed nature of the child influence process in family consumption. *Journal of Marketing Management*, 28(7-8), pp. 809-835.
- Kildare, C. A. & Middlemiss, W. (2017) Impact of parents mobile device use on parent-child interaction: A literature review. *Computers in Human Behavior*, Volume 75, pp. 579-593.
- Kim, M. & Kim, J. (2001) *Digital divide: Conceptual discussions and prospect*. International Conference: The Human Society and the Internet Internet-Related Socio-Economic Issues, Springer: Berlin.
- Kim, T. & Park, S. (2014) A study on the effects of elementary school students' use of smartphones upon reading and self-regulated reading. *Journal of The Korean Association of Information Education*, 18(1), pp. 433-442.
- Kirschner, P. A. & De Bruyckere, P. (2017) The myths of the digital native and the multitasker. *Teaching and Teacher Education*, 67, pp. 135-142.
- Knapp, , M. L. & Daly, J. A. (2002) *Handbook of Interpersonal Communication*. Third Edition ed. California: SAGE Publications.
- Knowsley Council (2018) *Kirby Profile*. [Online] Available at: [http://knowsleyknowledge.org.uk/wp-content/uploads/2018/07/Kirkby-Profile\\_010518.pdf](http://knowsleyknowledge.org.uk/wp-content/uploads/2018/07/Kirkby-Profile_010518.pdf) [Accessed June 2019].
- Knowsley Intelligence Hub (2014) *Wards and Partnership area's*. [Online] Available at: <http://knowsleyknowledge.org.uk/maps/> [Accessed April 2019].
- Kolb, A. & Kolb, D. (2017) Experiential Learning Theory as a Guide for Experiential Educators in Higher Education: ELTHE. *A Journal for Engaged Educators*, 1(1), p. 7-44.
- Kordrostami, . M., Vijayalakshmi, A. & Laczniak, R. N. (2018). Children's media socialisation: parental concerns and mediation in Iran. *Journal of Marketing Management*, 34(9-10), pp. 819-840.
- Kozinets, R., Hemetsberger, A. & Jensen Schau, H. (2008) This Wisdom of Consumer Crowds: Collective Innovation in the Age of Networked Marketing. *Journal of Macromarketing*, 28(4), pp. 339-354.
- Kozinets, R., Patterson, A. & Ashman, R. (2017) Networks of Desire: How Technology Increases Our Passion to Consume. *Journal of Consumer Research*, 43(5), pp. 659-682.

- Kozinets, R. Consuming Technocultures: An Extended JCR Curation. (2019). *Journal of Consumer Research*, 46 (3), pp. 620–627
- Kozinets, R. V. (2008) Technology/Ideology: How Ideological Fields Influence Consumers' Technology Narratives. *Journal of Consumer Research*, 34(6), pp. 865-881 .
- Krcmar, M. & Cingel, D. P. (2014) Parent–Child Joint Reading in Traditional and Electronic Formats. *Media Psychology*, 17(3), pp. 262-28.
- Kucirkova, N. & Flewitt, R. (2022) Understanding parents' conflicting beliefs about children's digital book reading. *Journal of Early Childhood Literacy*, 22(2), pp. 157-181.
- Kushlev, K. & Dunn, E. (2019) Smartphones distract parents from cultivating feelings of connection when spending time with their children. *Journal of Social and Personal Relationships*, 36(6), pp. 1619-1639.
- Lackman, C. & Lanasa, J. M. (1993) Family DecisionMaking Theory: An Overview and Assessment. *Psychology*, 10(2), pp. 81–93.
- Lee, C. K. & Beatty, S. E. (2002) Family structure and influence in family decision making. *Journal of Consumer Marketing*, 19(1), pp. 24-41.
- Leijse, M. M., Koning, I. M. & van den Eijnden, R. J. (2023) The influence of parents and peers on adolescents' problematic social media use revealed. *Computers in Human Behavior*, 143, pp. 1-8.
- Levin, B. (2004) Media–government relations in education. *Journal of Education Policy*, 19(3), pp. 271-283.
- Levin, B. (2010) Governments and education reform: some lessons from the last 50 years. *Journal of Education Policy*, 25(6), pp. 739-747.
- Levine, L., Waite, B., Bowman, L., Kachinsky, K. (2019). Mobile media use by infants and toddlers. *Computers in Human Behavior*. 94, pp. 92-99.
- Lewis, P. (2017) 'Our minds can be hijacked': the tech insiders who fear a smartphone dystopia. [Online]  
Available at: <https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia>
- Liang, Q., de la Torre, J. & Law, N. (2021) Do background characteristics matter in Children's mastery of digital literacy? A cognitive diagnosis model analysis. *Computers in Human Behavior*, 122, pp. 1-13.
- Liu, P. J., Dallas, S. K. & Fitzsimons, G. J. (2019) A Framework for Understanding Consumer Choices for Others. *Journal of Consumer Research*, 46(3), p. 407–434.
- Livingstone, S. & Bober, M. (2016) Taking up Online Opportunities? Children's Uses of the Internet for Education, Communication and Participation. *E-Learning and Digital Media*, 1(3), pp. 395-419.
- Livingstone, S., Haddon, L. & Görzig, A. (2012) *Children, risk and safety on the internet: Research and policy challenges in comparative perspective*. London: Bristol University Press.



- Livingstone, S., Haddon, L., Görzig, A. & Ólafsson, K. (2011) *Risks and safety on the internet: the perspective of European children: full findings and policy implications from the EU Kids Online survey of 9-16 year olds and their parents in 25 countries*, London: EU Kids Online Network.
- Livingstone, S. et al. (2014) *Net Children Go Mobile: The UK Report*, London: London School of Economics and Political Science.
- Livingstone, S. & Helsper, E. (2007) Graduations in digital inclusion: Children, young people and the digital divide. *New Media & Society*, 9(4), pp. 671-696.
- Livingstone, S. & Helsper, E. (2008) Parental Mediation of Children's Internet Use. *Journal of Broadcasting & Electronic Media*, 52(4), pp. 581-599.
- Livingstone, S. & Helsper, E. (2010) Balancing opportunities and risks in teenagers' use of the internet: the role of online skills and internet self-efficacy. *New Media & Society*, 12(2), pp. 309-329.
- Livingstone, S. et al. (2015) *How parents of young children manage digital devices at home: The role of income, education and parental style*. EU Kids Online, LSE: London.
- Livingstone, S., Mascheroni, G. & Staksrud, E. (2018) European research on children's internet use: Assessing the past and anticipating the future. *New Media & Society*, 8(3), pp. 1103-1122.
- Livingstone, S., Mascheroni, G. & Stoilova, M. (2023) The outcomes of gaining digital skills for young people's lives and wellbeing: A systematic evidence review. *New Media & Society*, 25(5), pp. 1176-1202.
- Livingstone, S., Ólafsson, K. & Pothong, K. (2023) Digital play on children's terms: A child rights approach to designing digital experiences. *New Media & Society*, 0(0), pp. 1-21.
- Livingstone, S. & O'Neill, B. (2014) *Children's Rights Online: Challenges, Dilemmas and Emerging Directions*. In: van der Hof, Simone, van den Berg, Bibi and Schermer, Bart (eds) *Minding Minors Wandering the Web: Regulating Online Child Safety*. Information technology and law series (24). Springer with T. M. C. Asser Press, The Hague, The Netherlands, pp. 19-38
- Livingstone, S. & Pothong, K. (2022) *What do children think of EdTech or know of its data sharing? Read our survey findings*. [Online] Available at: <https://digitalfuturescommission.org.uk/blog/what-do-children-think-of-edtech-or-know-of-its-data-sharing-read-our-survey-findings/> [Accessed November 2022].
- Livingstone, S. & Third, A. (2017) Children and young people's rights in the digital age: An emerging agenda. *New Media & Society*, 19(5), pp. 657-670.
- Livingstone, S., Winther Kardefelt, D. & Saeed, M. (2019). *Global Kids Online Comparative Report*, <https://www.unicef-irc.org/publications/pdf/GKO%20LAYOUT%20MAIN%20REPORT.pdf>: Unicef Innocenti Research Report.
- Löblich, M. & Wendelin, M. (2012) ICT policy activism on a national level: Ideas, resources and strategies of German civil society in governance processes. *New Media & Society*, 14(6), pp. 899-915.
- Lo Iacono, V., Symonds, P. & Brown, D. H. (2016). Skype as a Tool for Qualitative Research Interviews. *Sociological Research Online*, 21(2).

- Loogma, K., Kruusvall, J. & Ümarik, M. (2012). E-learning as innovation: Exploring innovativeness of the VET teachers' community in Estonia. *Computers & Education*, 58(Found in Hutchison et al (2020)), pp. 808–817
- Lowrey, T. M., Cele, C. O. & Julie, A. R. (2004) Social Influences on Dyadic Giving over Time: A Taxonomy from the Giver's Perspective. *Journal of Consumer Research*, 30(4), pp. 547–58.
- Luckin, R. & Cukurova, M. (2019) Designing educational technologies in the age of AI: A learning sciences-driven approach. *British Journal of Educational Technology*, 50(6), pp. 2824-2838.
- Lutz, C. (2019) Digital inequalities in the age of artificial intelligence and big data. *Human Behaviour and Emerging technology*, 1, pp. 141-148.
- Lynch, J., Auld, G., O'Mara, J. & Cloonan, A. (2023) Teachers' everyday work-for-change: implementing curriculum policy in 'disadvantaged' schools. *Journal of Education Policy*.
- Madigan S, McArthur BA, Anhorn C, Eirich R, Christakis DA. (2020). Associations Between Screen Use and Child Language Skills: A Systematic Review and Meta-analysis. *JAMA Pediatrics*. 174(7), pp. 665–675.
- Margetts, F., Whitty, S. J. & van der Hoorn, B. (2023) A leap of faith: overcoming doubt to do good when policy is absurd. *Journal of Education Policy*.
- Mascheroni, G., Livingstone, S., Dreier, M. & Chaudron, S. (2016) Learning versus play or learning through play? How parents' imaginaries, discourses and practices around ICTs shape children's (digital) literacy practices. *Media education*, 7(2), pp. 261-280.
- Mascheroni, G. & Ólafsson, K. (2016) The mobile Internet: Access, use, opportunities and divides among European children. *New Media & Society*, 18(8), pp. 1657-1679.
- Mascheroni, G. & Vincent, J. (2016) Perceptual contact as a communicative affordance; Opportunities, constraints and emotions. *Mobile, Media & Communications*, 4(3), pp. 310-326.
- Matthes, J., Thomas, M. F., Stevic, A. & Schmuck, D. (2021) Fighting over smartphones? Parents' excessive smartphone use, lack of control over children's use, and conflict. *Computers in Human Behavior*, 116, pp. 1-8.
- McDaniel, B. T., Galovan, A. M., Cravens, J. D. & Drouin, M. (2018) "Technofence" and implications for mothers' and fathers' couple and coparenting relationship quality. *Computers in Human Behavior*, 80, pp. 303-313.
- McNaughton, S., Rosedale, N., Jesson, R., Hoda, R., Teng, L. (2018) How digital environments in schools might be used to boost social skills: Developing a conditional augmentation hypothesis. *Computers & Education*, 126, pp. 1-13.
- Meelissen, M. R. & Drent, M. (2008) Gender differences in computer attitudes: Does the school matter?. *Computers in Human Behavior*, 24(3), pp. 969-985.
- Melumad, S. & Tuan Pham, M. (2020) The Smartphone as a Pacifying Technology. *Journal of Consumer Research*, 47, pp. 237-255.

Mertala, P. (2019a) Teachers' beliefs about technology integration in early childhood education: A meta-ethnographical synthesis of qualitative research. *Computers in Human Behavior*, 101, pp. 334-349.

Mertala, P. (2019b) Young children's perceptions of ubiquitous computing and the Internet of Things. *British Journal of Educational Technology*, 51(1), pp. 84-102.

Meyer, M. et al. (2021) How educational are "educational" apps for young children? App store content analysis using the Four Pillars of Learning framework. *Journal of Children and Media*, 15(4), pp. 526-548.

Mick, D. G. & Fournier, S. (1998) Paradoxes of Technology: Consumer Cognizance, Emotions and Coping Strategies. *Journal of Consumer Research*, 25, pp. 123-143.

Million, A. (2021) 'No one listens to us ... ' COVID-19 and its socio-spatial impact on children and young people in Germany. *Children's Geographies*, pp. 1-9.

Milmo, D. (2024) The Guardian. Banning phones in England's schools will not address online safety, say campaigners. [Online]  
[Accessed 2024].

Ministry of Housing, Communities & Local Government (2015). *English Indices of Deprivation 2015 - Summaries at Local Authority Level: a data cube slice*. [Online] Available at: [http://opendatacommunities.org/slice?dataset=http%3A%2F%2Fopendatacommunities.org%2Fdata%2Fsocietal-wellbeing%2Fimd%2Findicesbyla&http%3A%2F%2Fopendatacommunities.org%2Fdef%2Fontology%2Fcommunities%2Fsocietal\\_wellbeing%2Fimd%2Findices=http%3A%2F%2Fopendat](http://opendatacommunities.org/slice?dataset=http%3A%2F%2Fopendatacommunities.org%2Fdata%2Fsocietal-wellbeing%2Fimd%2Findicesbyla&http%3A%2F%2Fopendatacommunities.org%2Fdef%2Fontology%2Fcommunities%2Fsocietal_wellbeing%2Fimd%2Findices=http%3A%2F%2Fopendat)  
[Accessed 20 June 2019]

Miranda, H. P. & Russell, M. (2011) Understanding factors associated with teacher-directed student use of technology in elementary classrooms: A structural equation modeling approach. *British Journal of Educational Technology*, 43(4), pp. 652-666.

Moore, E. S., Wilkie, W. L. & Desro, D. M., 2018. All in the Family? Parental Roles in the Epidemic of Childhood Obesity. *Journal of Consumer Research*, 43(5), pp. 824-859

Moreno-Ruiz, D., Martínez-Ferrer, B. & García-Bacete, F. (2019) Parenting styles, cyberaggression, and cybervictimization among adolescents. *Computers in Human Behavior*, 93, pp. 252-259.

Morgan, D. L. (2008). *Sample Size in: The SAGE Encyclopedia of Qualitative Research Methods*. Thousand Oaks, CA: SAGE Publications.

Moschis, G. P. (1985) The Role of Family Communication in Consumer Socialization of Children and Adolescents. *Journal of Consumer Research*, 11(4), pp. 898-913.

Moschis, G. P. & Moore, R. L. (1979) Decision Making Among the Young: A Socialization Perspective. *Journal of Consumer Research*, 6(2), pp. 101-112.

Mossberger, K., Tolbert, C. & Stansbury, M. (2003) *Virtual Inequality: Beyond the Digital Divide*. Washington: Georgetown University Press.

- Mumtaz, S. (2001) Children's enjoyment and perception of computer use in the home and the school. *Computers & Education*, 36(4), pp. 347-362.
- Munn, P. (1998) Parental influence on school policy: some evidence from research. *Journal of Education Policy*, 13(3), pp. 379-394 .
- Napoli, P. & Obar, J. A. (2014) The Emerging Mobile Internet Underclass: A Critique of Mobile Internet Access. *The Information Society*, 30(5), pp. 323-334.
- Navaridas-Nalda, F., Clavel-San Emeterio, M., Fernández-Ortiz, R., Arias-Oliva, M., (2020). The strategic influence of school principal leadership in the digital transformation of schools. *Computers in Human Behavior*, 112.
- Neal, G. (2007) Learning with Information and Communication Technology. *Australian Journal of Middle Schooling*, 7 (Found in Cloonan, 2014), pp. 5-11.
- Nelissen, S., Kuczynski, L., Coenen, L. & Van den, J. (2019) Bidirectional Socialization: An Actor-Partner Interdependence Model of Internet Self-Efficacy and digital Media Influence Between Parents and Children. *Communication Research*, 46(8), p. 1145–1170.
- Nelson, M., Voithofer, R., Cheng, S-L. (2019). Mediating factors that influence the technology integration practices of teacher educators. *Computers & Education*. 128, pp. 330-344
- Nguyen, M. H., Büchi, M. & Geber, S. (2022) Everyday disconnection experiences: Exploring people's understanding of digital well-being and management of digital media use. *New Media & Society*, 0(0).
- NHS digital health services (2023) *What we mean by digital inclusion*. [Online] Available at: <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/digital-inclusion/what-digital-inclusion-is> [Accessed 2023].
- Nie, J., Wang, P., Lei, L. (2020). Why can't we be separated from our smartphones? The vital roles of smartphone activity in smartphone separation anxiety. *Computers in Human Behavior*, 109.
- Nunes, C., Oliveira, T., Castelli, M. & Cruz-Jesus, F. (2023) Determinants of academic achievement: How parents and teachers influence high school students' performance. *Heliyon*, 9(2), pp. 1-16.
- Ofcom (2020). *Connected Nations 2020: UK Report*.
- Ofcom (2021) *Digital divide narrowed by pandemic, but around 1.5m homes remain offline*. [Online] Available at: <https://www.ofcom.org.uk/news-centre/2021/digital-divide-narrowed-but-around-1.5m-homes-offline>
- OfCom (2022a) *Children and parents: media use and attitudes report 2022*. [Online] Available at: [https://www.ofcom.org.uk/data/assets/pdf\\_file/0024/234609/childrens-media-use-and-attitudes-report-2022.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0024/234609/childrens-media-use-and-attitudes-report-2022.pdf) [Accessed Nov 2022].
- Ofcom (2022b) *Online Nation 2022 Report*. [Online] Available at: [https://www.ofcom.org.uk/data/assets/pdf\\_file/0023/238361/online-nation-2022](https://www.ofcom.org.uk/data/assets/pdf_file/0023/238361/online-nation-2022)

[report.pdf](#)  
[Accessed 2023].

Ólafsson, K. & Mascheroni, G. (2015) The mobile Internet: Access, use, opportunities and divides among European children. *New media & Society*, 18(8), pp. 1657-1679.

Olesen, J., in Nelissen et al (2019) *Childhood, media and viewer positions*.

Olsson, T. (2006) Appropriating civic information and communication technology: a critical study of Swedish ICT policy visions. *New Media & Society*, 8(4), pp. 611-627.

ONS (2012) *2011 Census: Key Statistics for England and Wales, March 2011: 21 Qualifications*. [Online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/2011censuskeystatisticsforenglandandwales/2012-12-11#qualifications> [Accessed June 2019].

ONS (2014) *Dependent children usually resident in England and Wales with a parental second address, 2011*. [Online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/articles/dependentchildrenusuallyresidentinenglandandwaleswithaparentalsecondaddress2011/2014-06-18> [Accessed June 2019].

ONS (2018) *Earnings and hours worked, place of residence by local authority: ASHE Table 8*. [Online] Available at: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/placeofresidencebylocalauthorityashtable8> [Accessed April 2019].

ONS (2019) *Exploring the UK's digital divide*. [Online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/articles/exploringtheuksdigitaldivide/2019-03-04> [Accessed 05 2019].

ONS (2020) *Coronavirus and the social impacts on Great Britain data*. [Online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/datasets/coronavirusandthesocialimpactsongreatbritaindata> [Accessed 1 April 2020].

ONS-Table MYE2 (2017) *Population estimates for the UK, England and Wales, Scotland and Northern Ireland: mid-2017*. [Online] Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2017> [Accessed 05 2019].

Otnes, C., Lowrey, T. M. & Young, C. K. (1993) Gift Selection for Easy and Difficult Recipients: A Social Roles Interpretation. *Journal of Consumer Research*, 20(2), pp. 229-44.

- Ozga, J. (2009) Governing education through data in England: from regulation to self-evaluation. *Journal of Education Policy*, 24(2), pp. 149-162.
- Özgür, H. (2020) Relationships between teachers' technostress, technological pedagogical content knowledge (TPACK), school support and demographic variables: A structural equation modeling. *Computers in Human Behavior*, 112, pp. 1-9.
- Park, Y. J. (2015) My whole world is in my palm! The second level digital divide of teenagers' mobile use and skill. *New media & Society*, 17(6), pp. 977-995.
- Parnell, W. A. & Bartlett, J. (2012) iDocument: How Smartphones and Tablets are Changing Documentation in Preschool and Primary Classrooms. *Technology and Young Children*, 67(3), pp. 50-59.
- Pearce, K. E. & Rice, R. E. (2013) Digital Divides From Access to Activities: Comparing Mobile and Personal Computer Internet Users. *Journal of Communication*, 63, pp. 721-744.
- Perrotta, C. (2012) Do school-level factors influence the educational benefits of digital technology? A critical analysis of teachers' perceptions. *British Journal of Educational Technology*, 44(2), pp. 314-327.
- Perrault, E. K. (2018). *Planning of Research Project in The sage encyclopedia of communication research methods*. Thousand Oaks, California: SAGE Publications
- Perryman, J., Ball, S. J., Braun, A. & Maguire, M. (2017) Translating policy: governmentality and the reflective teacher. *Journal of Education Policy*, 32(6), pp. 745-756.
- Perryman, J., Maguire, M., Braun, A. & Ball, S. (2018). Surveillance, Governmentality and moving the goalposts: The influence of Ofsted on the work of schools in a post-panoptic era. *British Journal of Educational Studies*, 66(2), pp. 145-163
- Phillips, D. J. (2004) Privacy policy and PETs: The influence of policy regimes on the development and social implications of privacy enhancing technologies. *New Media & Society*, 6(6), pp. 691-706..
- Player-Koro, C., Rensfeldt, A. B. & Selwyn, N. (2018) Selling tech to teachers: education trade shows as policy events. *Journal of Education Policy*, 33(5), pp. 682-703.
- Plowright, D. (2011). *Using Mixed Methods: Frameworks for an Integrated Methodology*. London: SAGE.
- Povah, C. & Vaukins, S. (2017). *Generation Z is starting university – but is higher education ready?*. [Online]  
Available at: <https://www.theguardian.com/higher-education-network/2017/jul/10/generation-z-starting-university-higher-education-ready>  
[Accessed 23 June 2018]
- PRC (2018). *Pew Research Center: Internet & Technology-Internet/broadband fact sheet*. [Online]  
Available at: <https://www.pewinternet.org/fact-sheet/internet-broadband/>  
[Accessed 30 May 2019]
- Prensky, M. (2001) Digital Natives, Digital Immigrants Part 1. *On the Horizon*, 9(5), pp. 1-6.  
<https://doi.org/10.1108/10748120110424816>

- Prestridge, S. (2012) The beliefs behind the teacher that influences their ICT practices. *Computers & Education*, 58(1), pp. 449-458.
- Preradovic, N. M. & Lesin, G. (2016). Investigating Parents' Attitudes towards Digital Technology Use in Early Childhood: A Case Study from Croatia. *Informatics in Education*, 15(1), pp. 127-146
- Public Health England (2020). *Guidance for employers and businesses on coronavirus (COVID-19)*. [Online]  
Available at: <https://www.gov.uk/government/publications/guidance-to-employers-and-businesses-about-covid-19/guidance-for-employers-and-businesses-on-coronavirus-covid-19>  
[Accessed 01 April 2020].
- Przybylski, A. K., Marayama, K., DeHaan, C. R. & Gladwell, V. (2013) Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29, pp. 1841–1848.
- Pynoo, B., Devolder, P., Tondeur, J., van Braak, J., Duyck, W., Duyck, P. (2011). Predicting secondary school teachers' acceptance and use of a digital learning environment: A cross-sectional study. *Computers in Human Behavior*. 27 (1), pp. 568-575.
- Radesky, J., Schumacher, J. & Zuckerman, B. (2015) Mobile and Interactive Media Use by Young Children: The Good, the Bad, the Unknown. *Pediatrics*, 135(1), pp. 1-4.
- Ragnedda , M. (2018) Conceptualizing digital capital. *Telematics and Informatics* , 35(8), pp. 2366–2375.
- Ragnedda, M., Addeo, F., & Laura Ruiu, M. (2024). How offline backgrounds interact with digital capital. *New Media & Society*, 26(4), pp. 2023-2045
- Ranson, S. (1987) Education for citizenship: a model for the future government of education. *Journal of Education Policy*, 2(3), pp. 205-222.
- Reid, K. (2009). The causes of non-attendance: an empirical study. *Educational Review*, 60(4), pp. 345-357
- Richardson, M., Weaver, C. & Zorn, T. E. (2005). 'Getting on': older New Zealanders' perceptions of computing. *New Media & Society*, 7(2), pp. 219-245
- Richmond, T. (2019). *Requires Improvement: A new role for Ofsted and school inspections*.
- Rubach, C. & Lazarides, R. (2021) Addressing 21st-century digital skills in schools – Development and validation of an instrument to measure teachers' basic ICT competence beliefs. *Computers in Human Behavior*, 118, pp. 1-17.
- Runge, I. et al. (2023) Teacher-reported instructional quality in the context of technology-enhanced teaching: The role of teachers' digital competence-related beliefs in empowering learners. *Computers & Education*, 198, pp. 1-13.
- Ruth, J. A., Otnes, C. C. & Brunel, F. B. (1999) Gift Receipt and the Reformulation of Interpersonal Relationships. *Journal of Consumer Research*, 25(4), pp. 385-402.



- Ruthven, K., Hennessy, S. & Deaney, R. (2005) Incorporating Internet resources into classroom practice: pedagogical perspectives and strategies of secondary-school subject teachers. *Computers & Education*, 44(1), pp. 1-34.
- Sailer, M. et al. (2021) Technology-related teaching skills and attitudes: Validation of a scenario-based self-assessment instrument for teachers. *Computers in Human Behavior*, 115, pp. 1-12.
- Saunders, M., Lewis, P. & Thornhill, A. (2009) *Research Methods for Business Students*. Fifth Edition. Harlow: Pearson Education.
- Saunders, M., Lewis, P. & Thornhill, A. (2015). *Research Methods for Business Students*. Seventh Edition. Essex: Pearson Education.
- Saunders, M., Lewis, P. & Thornhill, A. (2023) *Research Methods for Business Students*. Ninth Edition. Harlow: Pearson Education.
- Scherer, R., Siddiq, F., Howard, S. K. & Tondeur, J. (2023) The more experienced, the better prepared? New evidence on the relation between teachers' experience and their readiness for online teaching and learning. *Computers in Human Behavior*, 139.
- Schriever, V. (2021) Early childhood teachers' management of their changing roles regarding digital technologies in kindergarten: A grounded theory study. *Australasian Journal of Early Childhood*, 46(1), pp. 1-18.
- Schwartz, B. (1967) The Social Psychology of the Gift. *The Social Psychology of the Gift*, 73(1), pp. 1-111.
- Sciacca, B., Laffan, D. A., O'Higgins Norman, J. & Milosevic, T. (2022) Parental mediation in pandemic: Predictors and relationship with children's digital skills and time spent online in Ireland. *Computers in Human Behavior*, 127, pp. 1-12.
- Seal, R. (2022) *Is your smartphone ruining your memory? A special report on the rise of 'digital amnesia'*. [Online]  
Available at: <https://www.theguardian.com/global/2022/jul/03/is-your-smartphone-ruining-your-memory-the-rise-of-digital-amnesia>  
[Accessed 2023].
- Seaton, F. S. (2018) Empowering teachers to implement a growth mindset. *Educational Psychology in Practice*, 34(1), pp. 41-57.
- Sela, Y. et al. (2020) Family environment and problematic internet use among adolescents: The mediating roles of depression and Fear of Missing Out. *Computers in Human Behavior*, 106, pp. 1-10.
- Selwyn, N. (2004) Reconsidering Political and Popular Understandings of the Digital Divide. *New Media & Society*, 6(3), pp. New Media & Society.
- Selwyn, N. (2012) *Web 2.0 and the School of the Future, Today, in Inspired by Technology, Driven by Pedagogy: a systemic approach to technology-based school innovations*. Paris: Organisation for Economic Co-operation and Development (OECD) found in Cloonan et al (2014).

- Sergis, S., Sampson, D. G. & Giannakos, M. N. (2018). Supporting school leadership decision making with holistic school analytics: Bridging the qualitative-quantitative divide using fuzzy-set qualitative comparative analysis. *Computers in Human Behavior*, Volume 89, pp. 355-366
- Shamir-Inbal, T. & Blau, I. (2016) Developing Digital Wisdom by Students and Teachers: The Impact of Integrating Tablet Computers on Learning and Pedagogy in an Elementary School. *Journal of Educational Computing Research*, 54(7), pp. 967-996.
- Shapiro, J. (2018) *The New Childhood: Raising Kids to Thrive in a Connected World*. London: Yellow Kite.
- Sharma, A., Singh, A. & Panackal, N. (2016) Role of Children in Purchase of Technical Products. *Journal of Arts, Science & Commerce*, pp. 120-127.
- Sherry, J. F. (1983) Gift Giving in Anthropological Perspective. *Journal of Consumer Research*, 10(2), pp. 157-68.
- Sheth, J. (2020). Impact of Covid-19 on consumer behavior: Will the old habits return or die?. *Journal of Business Research*, 117(Part of special issue: COVID-19 Impact on Business and Research), pp. 280-283.
- Shin, W. (2015) Parental socialization of children's Internet use: A qualitative approach. *New Media & Society*, 17(5), pp. 649-665.
- Shin, W. & Lwin, M. (2016) How does "talking about the Internet with others" affect teenagers' experience of online risks? The role of active mediation by parents, peers, and school teachers. *New Media & Society*, 19(7), pp. 1109-1126.
- Silber-Varod, V., Eshet-Alkalai, Y. & Geri, N. (2019) Tracing research trends of 21st-century learning skills. *British Journal of Educational Technology*, 50(6), pp. 3099-3118.
- Siljebo, J. (2024). Made in Sweden? Configured digitalized school leadership practice. *Journal of Education Policy*, 39(1), pp. 149-165
- Singh, P., Sahadev, S., Oates, C. J. & Alevizou, P. (2020) Pro-environmental behavior in families: A reverse socialization perspective. *Journal of Business Research*, Volume 115, pp. 110-121.
- Sjöblom, B., Franzén, A. & Aronsson, K. (2018) Contested connectedness in child custody narratives: Mobile phones and children's rights and responsibilities. *New Media & Society*, 20(10), pp. 3818-3835.
- Solberg, E., Traavik, L. E. & Wong, S. I. (2020) Digital Mindsets: Recognizing and Leveraging Individual Beliefs for Digital Transformation. *California Management Review*, 62(4), pp. 105-124.
- Spante, M., Hashem, S. S., Lundin, M. & Algiers, A. (2018) Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education*, 5(1), pp. 1-21.
- Sprenger, D. A. & Schwaninger, A. (2023) Video demonstrations can predict the intention to use digital learning technologies. *British Journal of Educational Technology*, 54(4), pp. 857-877.
- Statista (2022). *Most popular social networks worldwide as of January 2022, ranked by number of monthly active users.* [Online]

Available at: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>  
[Accessed May 2022].

Stewart, K. & Williams, M. (2005). Researching online populations: the use of online focus groups for social research. *Qualitative Research*, 5(4), pp. 395-416

Straub, E. T. (2009). Understanding Technology Adoption: Theory and Future Directions for Informal Learning. *Review of Educational Research*, 79(2), pp. 625-649.

Stošić, L. & Stošić, I. (2015) Perceptions of teachers regarding the implementation of the internet in education. *Computers in Human Behavior*, 53, pp. 462-468.

Tahir , R. & Arif , F. (2015). *Mobile Technology in Children Education: Analyzing Parents' Attitude Towards Mobile Technology for Children*. London, Science and Information Conference 2015.

Tapscott, D. (1998) *Growing Up Digital. The Rise of the Net Generation*. London and New York: McGraw Hill

Tang, P. & Ang, P. (2002) The Diffusion of Information Technology in Singapore Schools: a Process Framework. *New Media & Society*, 4(4), pp. 457-478.

Tatnall, A. & Davey, B. (2014). *Reflections on the History of Computers in Education*. Berlin: Springer.

Teo, T. (2011) Factors influencing teachers' intention to use technology: Model development and test. *Computers & Education*, 57(4), pp. 2432-2440.

The British Academy (2022). *New report proposes six policy lessons to address digital inequality*. [Online]  
Available at: <https://www.thebritishacademy.ac.uk/news/new-report-proposes-six-policy-lessons-to-address-digital-inequality/>  
[Accessed 08 Feb 2023]

The Guardian (2020a) *Blackout Tuesday: black squares dominate social media and spark debate*. [Online]  
Available at: <https://www.theguardian.com/us-news/2020/jun/02/blackout-tuesday-dominates-social-media-millions-show-solidarity-george-floyd>  
[Accessed 2023].

The Guardian (2020b) *Nine ways to boost your broadband speed during lockdown*. [Online]  
Available at: <https://www.theguardian.com/money/2020/apr/11/boost-broadband-speed-during-lockdown-wifi-internet>  
[Accessed 2023].

The Guardian (2022) *44% of teachers in England plan to quit within five years*. [Online]  
Available at: <https://www.theguardian.com/education/2022/apr/11/teachers-england-plan-to-quit-workloads-stress-trust>  
[Accessed April 2022].

Thomas, C. L. et al. (2022) Adolescents' problematic internet use in secondary school students in Lagos, Nigeria: A preliminary examination of individual and family-based predictors and consequences. *Computers in Human Behavior*, 132, pp. 1-9.

Thompson, N. (1991) Computers, curriculum and the learning environment. *Computers & Education*, 16(1), pp. 1-5.

Tondeur, J., Howard, S. K. & Yang, J. (2021) One-size does not fit all: Towards an adaptive model to develop preservice teachers' digital competencies. *Computers in Human Behavior*, 116, pp. 1-9.

Turkle, S. (2011) *Alone Together*. Third Edition ed. New York: Hachette Book Group.

Turkle, S. (1995) *Life on the Screen*. Simon and Schuster. New York: Paperbacks.

Turvey, K. (2006) Towards deeper learning through creativity within online communities in primary education. *Computers & Education*, 46(3), pp. 309-321.

UK Council for Internet Safety (2020) *Education for a Connected World*. [Online] Available at: <https://www.gov.uk/government/publications/education-for-a-connected-world> [Accessed 2022].

UK Legislation (2008) *Education and Skills Act 2008*. [Online] Available at: <https://www.legislation.gov.uk/ukpga/2008/25/contents> [Accessed April 2022].

UK Parliament (2022a) *Schools Bill*. [Online] Available at: <https://bills.parliament.uk/bills/3156> [Accessed October 2022].

UK Parliament (2022b) Online Safety Bill. pp. 1-225.

UKCCIS (2020) *Education for a Connected World- Framework*. [Online] Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/896323/UKCIS\\_Education\\_for\\_a\\_Connected\\_World\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896323/UKCIS_Education_for_a_Connected_World_.pdf) [Accessed November 2022].

Urquhart, C. (2019). Grounded theory's best kept secret: the ability to build theory. In *The SAGE Handbook of Current Developments in Grounded Theory* (pp. 89-106). SAGE Publications Ltd.

Valcke, M., Bontea, S., Wevera, B. & Rotsa, I. (2010) Internet parenting styles and the impact on internet use of primary school children. *Computers & Education*, 55(2), pp. 454-464.

Van Dam, K., Oreg, S. & Schyns, B. (2008) Daily work contexts and resistance to organisational change: The role of leader - member exchange, development climate, and change process characteristics. *Applied Psychology: An International Review*, 57(in Fraser (2017)), pp. 313-334.

van der Schuur, W. A., Baumgartner, S. E., Sumter, S. R. & Valkenburg, P. M. (2015) The consequences of media multitasking for youth: A review. *Computers in Human Behaviour*, 53, pp. 204-215.

van Deursen, A. J. & Helsper, E. J. (2015) The third-level digital divide: Who benefits the most from being online?. *Communication and Information Technologies*, 10, pp. 29-53.

- van Deursen, A. J. & van Dijk, J. A. (2019) The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media & Society*, 21(2), pp. 354-375.
- van Deursen, A. & van Dijk, J. (2014) The digital divide shifts to differences in usage. *New Media & Society*, 16(3), pp. 507-526.
- van Deursen, A., van Dijk, J. & Peters, O. (2011) Rethinking Internet Skills: The contribution of gender, age, education, Internet experience and hours online to medium and content-related Internet skills. *Poetics*, 39, pp. 125-144.
- van Dijk, J. (2005) *The Deepening Divide: Inequality in the Information Society*. London: SAGE.
- van Dijk, J. A. (2006) Digital Divide Research, Achievements and Shortcomings. *Poetics*, 34(4-5), pp. 221-235.
- Ventouris, A., Panourgia, C. & Hodge, S. (2021) Teachers' perceptions of the impact of technology on children and young people's emotions and behaviours. *International Journal of Educational Research Open*, 2, pp. 1-10.
- Villar, A. (2008) *Encyclopedia of Survey Research Methods*. Thousand Oaks, CA: Sage Publications
- Vincent, J. (2015) *Mobile Opportunities: Exploring positive mobile media opportunities for European children*. [Online] Available at: [http://eprints.lse.ac.uk/61015/1/lse.ac.uk\\_storage\\_LIBRARY\\_Secondary\\_libfile\\_shared\\_repository\\_Content\\_POLIS\\_Vincent\\_Mobile-Opportunities\\_2015.pdf](http://eprints.lse.ac.uk/61015/1/lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_POLIS_Vincent_Mobile-Opportunities_2015.pdf) [Accessed 2023].
- Wald, R., Piotrowski, J. T., Araujo, T. & van Oosten, J. M. (2023) Virtual assistants in the family home. Understanding parents' motivations to use virtual assistants with their Child(dren). *Computers in Human Behavior*, 139, pp. 1-12.
- Wallendorf, M. & Arnould, E. J. (1988) "My Favorite Things": A Cross-Cultural Inquiry into Object Attachment, Possessiveness, and Social Linkage. *Journal of Consumer Research*, 14(4), p. 531-547.
- Wang, B., Taylor, L. & Sun, Q. (2018) Families that play together stay together: Investigating family bonding through video games. *New Media & Society*, 20(11), p. 4074-4094.
- Wang, J., Tigelaar, D. E., Luo, J. & Admiraal, W. (2022) Teacher beliefs, classroom process quality, and student engagement in the smart classroom learning environment: A multilevel analysis. *Computers & Education*, 183, pp. 1-16.
- Wang, X. & Xing, W. (2018) Exploring the Influence of Parental Involvement and Socioeconomic Status on Teen Digital Citizenship. *Educational Technology & Society*, 21(1), pp. 186-199.
- Ward, S. (1974) Consumer Socialization. *Journal of Consumer Research*, 1(2), pp. 1-14.
- Ward, S. & Wackman, D. (1974) Consumer Socialization: Initial Study Results.. *Advances in Consumer Research*, 1, pp. 120-125.

- Wartella, E. & Jennings, . N. (2001) New Members of the Family: The Digital Revolution in the Home. *Journal of Family Communication*, 1(1), pp. 59-69.
- Wasserman, I. & Richard-Abbott, M. (2005) Gender and the Internet: causes of variation in access, level and scope of use. *Social Science Quarterly*, 86(1), pp. 252-270.
- Waters, J. (2021) *Constant craving: how digital media turned us all into dopamine addicts*. [Online] Available at: <https://www.theguardian.com/global/2021/aug/22/how-digital-media-turned-us-all-into-dopamine-addicts-and-what-we-can-do-to-break-the-cycle>
- Watson C & Michael MK (2016) Translations of policy and shifting demands of teacher professionalism: from CPD to professional learning. *Journal of Education Policy*, 31 (3), pp. 259-274.
- Weil, M. M. & Rosen, L. D. (1995) The Psychological Impact of Technology From a Global Perspective: A Study of Technological Sophistication and Technophobia in University Students From Twenty-Three Countries. *Computers in Human Behavior*, 11(1), pp. 95-133.
- Weil, M. M., Rosen, L. D. & Wugalter, S. E. (1990) The Etiology of Computerphobia. *Computers in Human Behavior*, 6, pp. 361-379.
- Weinstein, E. (2018) The social media see-saw: Positive and negative influences on adolescents' affective well-being. *New media & Society*, 20(10), pp. 3597–3623.
- Westminster Education Forum policy conference (2020) *The future for education technology in England - EdTech strategy implementation supporting teachers, and learning from the experience of the COVID-19 crisis*. Online, Westminster Education Forum policy conference .
- Westminster Education Forum policy conference (2021) *The future for edtech in England - standards, quality and accessibility, the experience of lockdown, and next steps for the Edtech Strategy*.
- Williams, M. (2000) Interpretivism and Generalisation. *Sociology*, 34(2), pp. 209-224
- Wright, A. (2012) Fantasies of empowerment: mapping neoliberal discourse in the coalition government's schools policy. *Journal of Education Policy*, 27(3), pp. 279-294.
- Xianhan, H., Chun, L., Mingyao, S. & Caixia, S. (2022) Associations of different types of informal teacher learning with teachers' technology integration intention. *Computers & Education*, 190, pp. 1-13.
- Xiao, Z. (2020) Mobile phones as life and thought companions. *Research Papers in Education*, 35(5), pp. 511-528.
- Zhang, M. (2003) Links Between School Absenteeism and Child Poverty. *Pastoral Care in Education*, 21(1), pp. 10-17.
- Zhao, X. & Healy, S. (2022) *Parents and screen time: are you a 'contract maker' or an 'access denier' with your child?*. [Online] Available at: <https://theconversation.com/parents-and-screen-time-are-you-a-contract-maker-or-an-access-denier-with-your-child-188977> [Accessed 28 November 2022].

Zillien, N. & Hargittai, E. (2009). Digital Distinction: status-specific internet uses. *Social Sciences Quarterly*, 90(2), pp. 274-291.



# APPENDICES

## Appendix 1- Research ethics training

### Reeves-Morris, Sophie

**From:** LJMU Research Ethics Committee <noreply@quizresults.net>  
**Sent:** 18 October 2018 18:27  
**To:** Reeves-Morris, Sophie  
**Subject:** Certificate of completion - LJMU Research Ethics Training

This is an automatically generated email to certify completion of the LJMU Research Ethics Training. You are receiving this because the LJMU REC has specified your email address for sending the certificate of completion.

Name Reeves-Morris, Sophie  
LJMU Email address s.a.reevesmorris@2017.ljmu.ac.uk  
ID number 623371

Date/Time **18 October 2018 18:25**  
Answered: 3 / 3  
Your Score **3 / 3 (100%)**  
Passing Score **3 (100%)**  
Time Spent: **36 sec**  
Result **Passed**

#### Question 1 Correct

Points: 1/1 | Attempts: 1/3

#### Research Ethics Committees:

Select one or more correct answers from the choices below

Your Answer	Correct Answer
<input checked="" type="checkbox"/> Protect the safety, dignity and rights of participants in research	Protect the safety, dignity and rights of participants in research
<input checked="" type="checkbox"/> Provide assurances of good quality research being conducted within an evidence base and for the benefit of society	Provide assurances of good quality research being conducted within an evidence base and for the benefit of society
<input checked="" type="checkbox"/> Protect all stakeholders	Protect all stakeholders

**Feedback:** That's right! You answered correctly.

**DBS Fee Charged**

**Certificate Number** 001640763965

**Date of Issue:** 10 DECEMBER 2018

**Applicant Personal Details**

Surname: REEVES-MORRIS  
Forename(s): SOPHIE ALEXANDRA  
Other Names: NONE DECLARED  
Date of Birth: 20 DECEMBER 1993  
Place of Birth: HAMMERSMITH  
Gender: FEMALE

**Employment Details**

Position applied for:  
STUDENT ADVOCATE CHILD WORKFORCE  
Name of Employer:  
JOHN MOORES UNIVERSITY

**Countersignatory Details**

Registered Person/Body:  
LIVERPOOL JOHN MOORES UNIVERSITY  
Countersignatory:  
ANNE PARRY

**Police Records of Convictions, Cautions, Reprimands and Warnings**

NONE RECORDED

**Information from the list held under Section 142 of the Education Act 2002**

NONE RECORDED

**DBS Children's Barred List information**

NONE RECORDED

**DBS Adults' Barred List information**

NOT REQUESTED

**Other relevant information disclosed at the Chief Police Officer(s) discretion**

NONE RECORDED

**Enhanced Certificate**

This document is an Enhanced Criminal Record Certificate within the meaning of sections 113B and 116 of the Police Act 1997.

THIS CERTIFICATE IS NOT EVIDENCE OF IDENTITY

Continued on page 2



# Emergency First Aid

This is to certify that

**Sophie Reeves-Morris**

---

Has successfully completed an Emergency First Aid at Work course

Date: **18<sup>th</sup> March 2019**

Signed: **Lisa McCleary**

This certificate is valid for three years from the date of issue

**Issued by LJMU Health and Safety Unit**







## LIVERPOOL JOHN MOORES UNIVERSITY GATEKEEPER INFORMATION SHEET

### **Title of Project**

Figuring the child as digital native: Digital class in the net generation

### **Name of Researcher and School/Faculty**

Sophie Reeves-Morris

Liverpool John Moores University-Liverpool Business School-PhD award

### **What is the reason for this letter?**

The reason for this letter is to seek your permission to hand out questionnaires to parents or carers who's children attend the school

To hold group discussions for children/pupils aged between 8-13 (These discussions will be separated by year group). We understand not all schools will have every age group.

To hold group discussions with teachers who work at the school.

As a token of gratitude the school will be entered into a £500 random draw for an Amazon, Love2Shop or One4All voucher (your choice of these vouchers) and offered a digital literacy workshop which can be tailored to certain subjects, or given generally to children and/or parents at the school. We are also offering the individual teachers who participate into a draw for a £100.00 Amazon, Love2Shop or One4All voucher (their choice of these vouchers) and we will contact them through the school.

### **What is the purpose of the study/rationale for the project?**

The purpose of this study is to find out the parental/carer and teacher opinions toward young children using technology such as smartphones and tablets. As well as finding out how children aged 8-13 use smartphones and tablets with their friends, family and school. This information will help the researcher understand how young children use the technology, and what the guardian and teacher views are on this.

### **What we are asking you to do?**

I am asking for your help to facilitate the completion of some questionnaires by contacting parents and carers of children at the school to ask whether they could complete either an online (through URL link) or paper copy version of the questionnaire.

- An information sheet about the questionnaire will be included. Carers completing a paper copy of the questionnaire will be advised on what date to return the questionnaires to the school and some envelopes to put these in so the researcher can be there to collect them.

I am hoping to hold group discussions with the teachers at the school around their thoughts and opinions of young children using technology.

- For this we would ask that you distribute an information sheet about the group discussion to all teachers, any who would like to participate will be advised to bring their consent forms on the day. The focus groups for the teachers will have up to 8 group members and last no longer than 30 minutes. This will be at a time and date that suits the teaching staff.

For the completion of the group discussion for children I ask that you contact the parents of children aged between 8-13 and give them electronic or paper copies of a letter explaining the purpose of the study to the parents, a carer information sheet and a carer consent form as well as a participant information sheet for the children.

- You will not need to collect these forms, I will do this on the day of the discussion. We ask that you make the carers of the children aware that the consent form will need to be signed before the focus group can take place.

I am also asking for your help to explain the study to the children and make sure they understand their rights to withdraw from the group discussion at any point. Given the nature of the group discussion we cannot withdraw any information they provide prior to their request to withdraw and we would like your support in explaining that to the children.

I am then asking for you to allow us to conduct the group discussions on the school premises. There would be groups of up to 5 children ranging from ages 8-13, ideally the same age groups will go together in one focus group, and we will separate the groups between males and females. These will last for a maximum of 30 minutes.

### **Why do we need access to your facilities/staff/students?**

The reason for needing access to the students is to gain an understanding toward their smartphone and tablet use and activities through small discussion groups in order to reach the objectives of this research.

The objectives are to find out what children aged 8-13 use smartphones and tablets for in the context of their friends, family and school. To find out what are a teachers and parent or carers opinions toward young children using smartphones and tablets

### **If you are willing to assist in the study what happens next?**

As a token of gratitude the school will be entered to a random draw to receive a £500 an Amazon, Love2Shop or One4All voucher (the prize will be your choice of these vouchers) and offered a digital literacy workshop which can be tailored to certain subjects, or given generally to children and/or parents at the school.

I will first discuss and take advice from you in how everything can be organised in a way that suits your preferences and timescales.

From there I will give you the letter, information sheet and consent forms for the focus groups for teachers and ask this is disseminated to all teachers.

I will then provide a paper copy and a URL link of a questionnaire which I would like your help in disseminating to parents or carers who have children at the school.

I ask that you help me identify the parents of children that are aged between 8-13 and I will provide paper or electronic copies of a letter explaining the purpose of the group discussion to the parents, a carer information sheet, a carer consent form and a participant information sheet for the children which we would like you to disseminate to the parent or guardians of children aged 8-13. You will not need to collect these forms, we will ask that these are collected on the day of the group discussion for the children.

Following this we are asking you to allow us to conduct the focus groups on the school premises, the date and time will be down to the preference of the school.

I am also asking for your support in explaining the purpose of the study to the children and making sure they fully understand their rights to withdraw. Also, that any information they provide before they withdraw will be known to the researcher and 4 other class mates.

### **How we will use the Information?**

The focus groups will be recorded using an audio device, the information recorded will then be transferred over to a secure LJMU m:drive and deleted from the recording device. The information from the focus groups will be listened to by the research team only and used to determine how children aged 8-13 use smartphones and tablets with their friends, family and how it is used with their school. The same process will be followed for the teacher focus groups to understand their opinions on smartphone and tablet use for young children.

**Will the name of my organisation taking part in the study be kept confidential?**

Yes

**What will taking part involve? What should I do now?**

- Please ask any questions you may have concerning this study
- Sign and return the **Gatekeeper Consent Form** provided
- Please disseminate the letter, information sheet and consent forms to all teaching staff in the school
- Please disseminate either a URL link or hard copy of the questionnaires to parents/carers with children at the school
- Contact the parents of children aged between 8-13 and give them a paper or electronic copy of the letter, carer information sheet, carer consent form and participant information sheet for the group discussion with the children
- Please explain to the parents that the consent form needs to be signed before the group discussion with the children takes place
- Allow Sophie to conduct focus groups with 5 children in each group aged 8, 9, 10 and 11, 12 and 13 on the school premises. Each focus group will last up to a maximum of 30 minutes.
- Help and support Sophie in explaining the research to the children
- The research team will provide all resources needed i.e paper copies or electronic copies of any forms if needed

**Should you have any comments or questions regarding this research, you may contact the researchers**

Sophie Reeves-Morris: Doctoral student of The Liverpool John Moore's University Business School

[S.A.ReevesMorris@2017.ljmu.ac.uk](mailto:S.A.ReevesMorris@2017.ljmu.ac.uk)

0743244849

**This study has received ethical approval from LJMU's Research Ethics Committee reference number: 19/LBS/022**

**Contact Details of Researcher**

Sophie Reeves-Morris

[S.A.ReevesMorris@2017.ljmu.ac.uk](mailto:S.A.ReevesMorris@2017.ljmu.ac.uk)

0743244849

**Contact Details of Academic Supervisor**

**Professor David Bryde**-Liverpool Business School

[D.J.Bryde@ljmu.ac.uk](mailto:D.J.Bryde@ljmu.ac.uk)

Professor Shona Bettany- Huddersfield Business School

[S.Bettany@hud.ac.uk](mailto:S.Bettany@hud.ac.uk)

Dr Angela Daly- Liverpool School of Education

[A.Daly@ljmu.ac.uk](mailto:A.Daly@ljmu.ac.uk)

Dr Tashkin Vasfi- Liverpool Business School

[T.Vasfi@ljmu.ac.uk](mailto:T.Vasfi@ljmu.ac.uk)

If you have any concerns regarding your involvement in this research, please discuss these with the researcher in the first instance. If you wish to make a complaint, please contact [researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk) and your communication will be re-directed to an independent person as appropriate.

## LIVERPOOL JOHN MOORES UNIVERSITY

### Participant information sheet for parents/guardians' video or telephone interview

LJMU's Research Ethics Committee Approval Reference: 19/LBS/022

**YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET**

<b>STUDY INFORMATION</b>			
Title of study:	School/Faculty:	Name, Contact Details and status of the Principal researcher:	Name and Contact Details of the researchers:
<ul style="list-style-type: none"> <li>How has the lockdown period impacted family's technology use?</li> <li>How has the lockdown period impacted a teachers' technology use?</li> </ul>	<p style="text-align: center;">Liverpool John Moore's University Business School</p>	<p style="text-align: center;"><b>Sophie Reeves-Morris</b> Student of The Liverpool John Moore's University Business School  <u><a href="mailto:S.A.ReevesMorris@2017.ljmu.ac.uk">S.A.ReevesMorris@2017.ljmu.ac.uk</a></u>  07432448449</p>	<p style="text-align: center;"><b>Professor David Bryde</b> Liverpool Business School <u><a href="mailto:D.J.Bryde@ljmu.ac.uk">D.J.Bryde@ljmu.ac.uk</a></u></p> <p style="text-align: center;"><b>Professor Shona Bettany</b> Huddersfield Business School <u><a href="mailto:S.Bettany@hud.ac.uk">S.Bettany@hud.ac.uk</a></u></p> <p style="text-align: center;"><b>Dr Angela Daly</b> Liverpool School of Education <u><a href="mailto:A.Daly@ljmu.ac.uk">A.Daly@ljmu.ac.uk</a></u></p> <p style="text-align: center;"><b>Dr Tashkin Vasfi</b> Liverpool Business School <u><a href="mailto:T.Vasfi@ljmu.ac.uk">T.Vasfi@ljmu.ac.uk</a></u></p>
<p><b>You are being invited to take part in a research study.</b></p> <p><b>It is important that you understand why the research is being done and what it involves. Please take your time to read the following information. Please ask if there is anything that is not clear or if you would like more information, and please take time to decide if you would like to take part or not.</b></p> <p><b>Thank you in advance for taking the time to consider your participation.</b></p>			

#### **What is the purpose of the study?**

The purpose of the video or telephone interview is to find out about family's technology use during the lockdown period and what this may mean for the future.

#### **This study hopes to answer the following questions...**

- How was technology used during lockdown by families?
- Will any changes be made toward how the family uses technology after the lockdown?

#### **Why have I been invited to participate?**



You have been invited because you are aged 18+ and are a parent or guardian, if you are not age 18+ and are not a parent or guardian then you do not fit the criteria to take part in a video or telephone interview.

### **Do I have to take part?**

No. It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to give your consent either via email or verbally before the interview. You can withdraw at any time by informing the researcher (Sophie) without giving a reason and without it affecting your rights or any future treatment/service you receive.

### **What will happen to me if I take part?**

- I will talk you through the research process so you can decide whether you would like to take part in a video or telephone interview
- I will ask that you either email me or state at the start of the video or telephone interview that you consent to take part (the recording of your consent will be kept separate to the interview)
- The interview will be for a maximum of 30 minutes
- I will be asking questions about how your family used technology during the pandemic
- This would take place through your preferred method of video-call or a telephone interview. You will only be asked to do this once.

### **Will I be recorded and how will the recorded media be used?**

The recordings of the video or telephone interview will be audio only. We may be able to tell your gender from the sound of your voice. These recordings will only be used to evaluate the interview. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings. This will be audio recorded on a password protected audio recording device and as soon as possible the recording will be transferred to secure storage and deleted from the recording device.

### **What are the possible disadvantages or benefits of taking part?**

There is unlikely to be any disadvantages of you taking part, although if you feel uncomfortable at any point, please let me know and I will do what I can to make sure this is resolved, or if you would like to stop you are free to do so at any time. There will be no direct benefits to you taking part although you may enjoy having the discussion. For those with an interest in the subject you may benefit from a publication of the research which will highlight how families used technology during the lockdown period, and how this may have an impact on the future.

### **What will happen to the data provided and how will my taking part in this project be kept confidential?**

The information you provide as part of the study is the **research study data**. Any research study data from which you can be identified such as the audio recordings is known as **personal data**.

Personal data does not include data that cannot be identified to an individual (e.g. data collected anonymously or where identifiers have been removed). Your personal data will be collected anonymously and the only person that will have access to this data will be the researcher and project team.

Personal data collected from you will be recorded using a code. There will be no link to the code and your identity (who you are).

We will not tell anyone that you have taken part in the interview. We will not name you in any of our reports or publications.

You will not be identifiable in any future reports or publications.

The audio recordings will be listened to by the researcher and the project team only, it will be password protected and immediately saved to an LJMU M:drive.

Anonymised data might be used for additional or subsequent research studies and we might share anonymised data with other investigators (e.g. in online databases). All personal information that could identify you will be removed or changed before information is shared with other researchers or results that are made public.

### **Limits to confidentiality**

The Investigator will keep confidential anything they learn or observe related to illegal activity unless related to the abuse of children or vulnerable adults, money laundering or acts of terrorism.

In certain exceptional circumstances where you or others may be at significant risk of harm, the investigator may need to report this to an appropriate authority. This would usually be discussed with you first. Examples of those exceptional circumstances when confidential information may have to be disclosed are:

- The investigator believes you are at serious risk of harm, either from yourself or others
- The investigator suspects a child may be at risk of harm
- You pose a serious risk of harm to, or threaten or abuse others
- As a statutory requirement e.g. reporting certain infectious diseases
- Under a court order requiring the University to divulge information
- We are passed information relating to an act of terrorism

### **What will happen to the results of the research project?**

The results of this research topic will help to complete a thesis to satisfy a PhD award programme at Liverpool John Moores University, which may later be published in a journal article.

### **Who is organising and conducting the study?**

This study is organised by Liverpool John Moores University and will be carried out by student Sophie Reeves-Morris as well as supervisors Shona Bettany, Dave Bryde, Angie Daly and Taskin Vasfi.

### **Who has reviewed this study?**

This study has been reviewed by, and received ethics clearance through, the Liverpool John Moores University Research Ethics Committee (Reference number:19/LBS/022).

### **What if something goes wrong?**

If you have a concern about any aspect of this study, please contact the relevant investigator who will do their best to answer your query. The researcher should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you wish to make a complaint, please contact the chair of the Liverpool John Moores University Research Ethics Committee ([researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk)) and your communication will be re-directed to an independent person as appropriate.

### **Data Protection Notice**

The data controller for this study will be Liverpool John Moores University (LJMU). The LJMU Data Protection Office provides oversight of LJMU activities involving the processing of personal data, and can be contacted at [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk). This means that we are responsible for looking after your information and using it properly. [LJMU's Data Protection Officer can also be contacted at secretariat@ljmu.ac.uk](#). The University will process your personal data for the purpose of research. Research is a task that we perform in the public interest.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

You can find out more about how we use your information by contacting [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk).

If you are concerned about how your personal data is being processed, please contact LJMU in the first instance at [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk). [If you remain unsatisfied](#), you may wish to contact the Information Commissioner's Office (ICO). Contact

details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/individuals-rights/>

**Contact for further information**

**School/Faculty:**

Liverpool John Moores University Business School

**Name and Contact Details and status of the Principal Investigator:**

Sophie Reeves-Morris: A PhD student of The Liverpool John Moore's University Business School

[S.A.ReevesMorris@2017.ljmu.ac.uk](mailto:S.A.ReevesMorris@2017.ljmu.ac.uk)

**Name and Contact Details of the Investigators:**

Professor David Bryde-Liverpool Business School

[D.J.Bryde@ljmu.ac.uk](mailto:D.J.Bryde@ljmu.ac.uk)

Professor Shona Bettany- Huddersfield Business School

[S.Bettany@hud.ac.uk](mailto:S.Bettany@hud.ac.uk)

Dr Angela Daly- Liverpool School of Education

[A.Daly@ljmu.ac.uk](mailto:A.Daly@ljmu.ac.uk)

Dr Tashkin Vasfi- Liverpool Business School

[T.Vasfi@ljmu.ac.uk](mailto:T.Vasfi@ljmu.ac.uk)

**Thank you for reading this information sheet and for considering to take part in this study.**

*Note: A copy of the participant information sheet should be retained by the participant with a copy of the signed consent form.*

## LIVERPOOL JOHN MOORES UNIVERSITY

### Participant Information Sheet for Teacher video or telephone interview

LJMU's Research Ethics Committee Approval Reference: 19/LBS/022

**YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET**

<b>STUDY INFORMATION</b>			
Title of study:	School/Faculty:	Name, Contact Details and status of the Principal researcher:	Name and Contact Details of the researchers:
<ul style="list-style-type: none"> <li>How has the lockdown period impacted family's technology use?</li> <li>How has the lockdown period impacted a teachers' technology use?</li> </ul>	<p>Liverpool John Moore's University Business School</p>	<p style="text-align: center;"><b>Sophie Reeves-Morris</b></p> <p style="text-align: center;">Student of The Liverpool John Moore's University Business School</p> <p style="text-align: center;"><u><a href="mailto:S.A.ReevesMorris@2017.ljmu.ac.uk">S.A.ReevesMorris@2017.ljmu.ac.uk</a></u></p> <p style="text-align: center;">07432448449</p>	<p><b>Professor David Bryde</b> Liverpool Business School <u><a href="mailto:D.J.Bryde@ljmu.ac.uk">D.J.Bryde@ljmu.ac.uk</a></u></p> <p><b>Professor Shona Bettany</b> Huddersfield Business School <u><a href="mailto:S.Bettany@hud.ac.uk">S.Bettany@hud.ac.uk</a></u></p> <p><b>Dr Angela Daly</b> Liverpool School of Education <u><a href="mailto:A.Daly@ljmu.ac.uk">A.Daly@ljmu.ac.uk</a></u></p> <p><b>Dr Tashkin Vasfi</b> Liverpool Business School <u><a href="mailto:T.Vasfi@ljmu.ac.uk">T.Vasfi@ljmu.ac.uk</a></u></p>
<p><b>You are being invited to take part in a research study.</b></p> <p><b>It is important that you understand why the research is being done and what it involves. Please take your time to read the following information. Please ask if there is anything that is not clear or if you would like more information, and please take time to decide if you would like to take part or not.</b></p> <p><b>Thank you in advance for taking the time to consider your participation.</b></p>			

#### What is the purpose of the study?

The purpose of the video or telephone interview is to find out a teacher's perspective on how technology was used during the lockdown period, and what this could mean for the future.

#### This study hopes to answer the following questions...

- How was technology used by teachers during the pandemic?
- Will any changes be made toward how teachers use technology after the lockdown period?

#### Why have I been invited to participate?

You have been invited because you are aged 18+ and are a teacher, if you are not age 18+ and are not a teacher within an educational setting then you do not fit the criteria to take part in a video or telephone interview.

### **Do I have to take part?**

No. It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to give your consent via email or verbally before the interview. You can withdraw at any time by informing the researcher (Sophie) without giving a reason and without it affecting your rights/any future treatment/service you receive.

### **What will happen to me if I take part?**

- I will talk you through the research process so you can decide whether you would like to take part in a video or telephone interview
- I will ask that you either email me or state at the start of the video or telephone interview that you consent to take part (the recording of your consent will be kept separate to the interview)
- The interview will be for a maximum of 30 minutes
- I will be asking questions about the impact of technology use for you as a teacher and your pupils during and post lockdown
- This would take place through your preferred method of video-call or a telephone interview. You will only be asked to do this once.

### **Will I be recorded and how will the recorded media be used?**

The recordings of the video or telephone interview will be audio only. We may be able to tell your gender from the sound of your voice. These recordings will only be used to evaluate the interview. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings. This will be audio recorded on a password protected audio recording device and as soon as possible the recording will be transferred to secure storage and deleted from the recording device.

### **What are the possible disadvantages or benefits of taking part?**

There is unlikely to be any disadvantages of you taking part, although if you feel uncomfortable at any point, please let me know and I will do what I can to make sure this is resolved, or if you would like to stop you are free to do so at any time. There will be no direct benefits to you taking part although you may enjoy having the discussion. For those with an interest in the subject you may benefit from a publication of the research.

### **What will happen to the data provided and how will my taking part in this project be kept confidential?**

The information you provide as part of the study is the **research study data**. Any research study data from which you can be identified such as the audio recordings is known as **personal data**.

Personal data does not include data that cannot be identified to an individual (e.g. data collected anonymously or where identifiers have been removed). Your personal data will be collected anonymously and the only person that will have access to this data will be the researcher and project team.

Personal data collected from you will be recorded using a code. There will be no link to the code and your identity (who you are).

We will not tell anyone that you have taken part in the interview. We will not name you in any of our reports or publications.

You will not be identifiable in any future reports or publications.

The audio recordings will be listened to by the researcher and the project team only, it will be password protected and immediately saved to an LJMU M:drive.

Anonymised data might be used for additional or subsequent research studies and we might share anonymised data with other investigators (e.g. in online databases). All personal information that could identify you will be removed or changed before information is shared with other researchers or results that are made public.

### **Limits to confidentiality**

The Investigator will keep confidential anything they learn or observe related to illegal activity unless related to the abuse of children or vulnerable adults, money laundering or acts of terrorism.

In certain exceptional circumstances where you or others may be at significant risk of harm, the investigator may need to report this to an appropriate authority. This would usually be discussed with you first. Examples of those exceptional circumstances when confidential information may have to be disclosed are:

- The investigator believes you are at serious risk of harm, either from yourself or others
- The investigator suspects a child may be at risk of harm
- You pose a serious risk of harm to, or threaten or abuse others
- As a statutory requirement e.g. reporting certain infectious diseases
- Under a court order requiring the University to divulge information
- We are passed information relating to an act of terrorism

### **What will happen to the results of the research project?**

The results of this research topic will help to complete a thesis to satisfy a PhD award programme at Liverpool John Moores University, which may later be published in a journal article.

### **Who is organising and conducting the study?**

This study is organised by Liverpool John Moores University and will be carried out by student Sophie Reeves-Morris as well as supervisors Shona Bettany, Dave Bryde, Angie Daly and Taskin Vasfi.

### **Who has reviewed this study?**

This study has been reviewed by, and received ethics clearance through, the Liverpool John Moores University Research Ethics Committee (Reference number:19/LBS/022).

### **What if something goes wrong?**

If you have a concern about any aspect of this study, please contact the relevant investigator who will do their best to answer your query. The researcher should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you wish to make a complaint, please contact the chair of the Liverpool John Moores University Research Ethics Committee ([researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk)) and your communication will be re-directed to an independent person as appropriate.

### **Data Protection Notice**

The data controller for this study will be Liverpool John Moores University (LJMU). The LJMU Data Protection Office provides oversight of LJMU activities involving the processing of personal data, and can be contacted at [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk). This means that we are responsible for looking after your information and using it properly. [LJMU's Data Protection Officer can also be contacted at secretariat@ljmu.ac.uk](#). The University will process your personal data for the purpose of research. Research is a task that we perform in the public interest.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

You can find out more about how we use your information by contacting [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk).

If you are concerned about how your personal data is being processed, please contact LJMU in the first instance at [secretariat@ljmu.ac.uk](mailto:secretariat@ljmu.ac.uk). [If you remain unsatisfied](#), you may wish to contact the Information Commissioner's Office (ICO). Contact

details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/data-protection-reform/overview-of-the-gdpr/individuals-rights/>

**Contact for further information**

**School/Faculty:**

Liverpool John Moores University Business School

**Name and Contact Details and status of the Principal Investigator:**

Sophie Reeves-Morris: A PhD student of The Liverpool John Moore's University Business School

[S.A.ReevesMorris@2017.ljmu.ac.uk](mailto:S.A.ReevesMorris@2017.ljmu.ac.uk)

**Name and Contact Details of the Investigators:**

Professor David Bryde-Liverpool Business School

[D.J.Bryde@ljmu.ac.uk](mailto:D.J.Bryde@ljmu.ac.uk)

Professor Shona Bettany- Huddersfield Business School

[S.Bettany@hud.ac.uk](mailto:S.Bettany@hud.ac.uk)

Dr Angela Daly- Liverpool School of Education

[A.Daly@ljmu.ac.uk](mailto:A.Daly@ljmu.ac.uk)

Dr Tashkin Vasfi- Liverpool Business School

[T.Vasfi@ljmu.ac.uk](mailto:T.Vasfi@ljmu.ac.uk)

**Thank you for reading this information sheet and for considering for your child to take part in this study.**

*Note: A copy of the participant information sheet should be retained by the participant with a copy of the signed consent form.*





# PARTICIPANT INFORMATION SHEET FOR UNDER 11 YEARS



**Title of Project:** How do people use smartphones and tablets with their friends, family and in school?

**Name of Researcher:** Sophie Reeves-Morris

**Name of Research Supervisor:** Shona Bettany, Dave Bryde, Angie Daly and Tashkin Vasfi

## 1. What is Research?

Research is a careful experiment to find out the answers to an important question.



## 2. Why are we doing this project?

We are trying to find out how people use smartphones and tablets with their friends, family and school.

## 3. Why me?

You have been chosen because you we are hoping to speak to people aged 8-13, so we would like to speak to someone your age. You will not be the only one, you will be in a group chat with up to 4 other people the same age as you.

## 4. Do I have to take part?

No, you don't have to take part. It is up to you. No one will treat you differently in the future whatever you choose to do. During the group chat you can stop whenever you want, and you don't have to tell me why.

If you do want to take part, we will ask you to write your name on some forms, we will ask your mum and dad or guardian to do the same.

## 5. What will happen?

You'll come and join a group chat at your school with up to 4 other people your age that also go to your school.

In the group chat Sophie will ask you some questions about how you use smartphones and tablets.

If you do not have a smartphone, then we would like to have a chat with you about whether you use computers, or maybe someone else's smartphone or tablet.

You will only be asked to do this once, and it will not be for any longer than 30 minutes.

## 6. What else might happen?

We will be recording the group chat using an audio device (this means it doesn't have a camera and can only record voices). No one else outside of the project team will hear this recording.

## 7. What if something goes wrong?

If you are not comfortable at any point the researchers might have a quick chat with you to make sure everything is okay. If you do feel uncomfortable at any point, just let Sophie or one of the researchers know and we will stop the chat.

Your class mates will all be in the chat with you, so we will ask that you and your class mates do not tell anyone what was said.

## 8. What if I don't want to do the research anymore?

You can leave any time you like without having to give a reason, just let someone know and you will be able to leave 😊

## 9. What If I want to complain about the study?

If you want to complain, your mum, dad, or carer can talk to David Bryde, his email is: [D.J.Bryde@ljmu.ac.uk](mailto:D.J.Bryde@ljmu.ac.uk)



If you want some help about using a smartphone or tablet or you have had a bad experience online you can speak to your teachers, parent or guardian, or even go online to look for some help. If you go to [www.childline.org.uk](http://www.childline.org.uk) and click on 'get involved' there is a page for help. You can even find child line on YouTube, Instagram and Facebook.

## 10. What happens to what the researcher finds out?

When we collect your information we will make sure it is stored in a safe place and only the people doing the research study can look at it. We will use the information to find out a little more about how people your age use smartphones and tablets.

We might write in some academic journals or on websites that academics read, but they won't be able to tell you have taken part. We will lock anything with your name on it away, and you will be given a number so nobody knows you took part.

#### 11. Did anyone check this study is OK to do?

This study has been checked by several people, and a meeting of people in Liverpool said we were okay to do the study.



#### 12. How can I find out more about this study?

Your mum, dad, or carer may be able to answer your questions. You can also speak to Sophie or one of the researchers before the group chat to find out some more information.



After the focus group your mum, dad, carer or teachers will know how to get in touch with the researcher who will be able to help.

**Thank you for reading all this information – please ask any questions if you need to.**

**If you have any questions please contact:** Sophie Reeves-Morris at Liverpool John Moores University. Email: [S.A.ReevesMorris@2017.ljmu.ac.uk](mailto:S.A.ReevesMorris@2017.ljmu.ac.uk)



## LIVERPOOL JOHN MOORES UNIVERSITY GATEKEEPER CONSENT FORM

**Title of project**

Figuring the child as digital native: Digital class in the net generation

**Name of Researcher and School/Faculty**

Sophie Reeves-Morris

Liverpool John Moores University-Liverpool Business School-PhD award

**Please tick to confirm your understanding of the study and that you are happy for your organisation to take part and your facilities to be used to host parts of the project. The key responsibilities are as follows:**

- Contact teaching staff with information about the group discussion
- Contact parents/carers of the school by providing them with the information sheet and questionnaire available online or by paper copy
- Contact the parents of children aged between 8-13 and give them a paper copy of the letter, carer information sheet, carer consent form and participant information sheet for the children
- Please explain to the parents that the consent form needs to be signed before the focus group takes place
- Allow the researchers to conduct group discussions with a maximum of 5 children in each group aged 8-13 on the school premises. Each focus group will last up to a maximum of 30 minutes.
- Help and support the researchers in explaining the research to the children
- Allow the researcher to conduct a group discussion on school premises with teachers who show an interest in taking part. There will be a maximum of 8 in a group, lasting no more than 30 minutes.

The purpose of this study is to find out what children aged 8-13 use smartphones and tablets for in the context of their friends, family and school. Also to find out what are parent/guardian and teacher opinions toward young children using smartphones and tablets.

1. I confirm that I have read and understand the information provided for the above study.  I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that participation of our organisation and students/members in the voluntary and that they are free to withdraw at any time, without giving a reason and not affect legal rights.  research is that this will
3. I understand that any personal information collected during the study will be  anonymised and remain confidential.
4. I agree for our organisation and students/members to take part in the above study.
5. I agree to conform to the data protection act

6. I agree I am happy for the research team to use the consent form provided for the children's' focus group

Name of Gatekeeper:

Date:

Signature:

Name of Researcher:

Date:

Signature:

Name of Person taking consent:

Date:

Signature:

(if different from researcher)

**Please keep or save a copy of the information sheet for your records if you so wish**



# LIVERPOOL JOHN MOORES UNIVERSITY CONSENT FORM

**Title of Project**

Figuring the child as digital native: Digital class in the net generation

**Name of Researcher and School/Faculty**

Sophie Reeves-Morris

Liverpool John Moores University-Liverpool Business School-PhD award

**Please tick to confirm your understanding of the study and that you are happy for your child to take part in the project.**

The purpose of this study is to find out what children aged 8-13 use smartphones for in the context of their friends, family and school as well as what the risks and/or benefits there are for children using technology.

- |  |                          |                               |
|--|--------------------------|-------------------------------|
| 1. I confirm that I have read and understand the information provided for the above study. opportunity to consider the information, ask questions and have had these answered        | <input type="checkbox"/> | I have had the satisfactorily |
| 2. I understand that my child’s participation is voluntary and that I am free to withdraw time, without giving a reason and that this will not affect me or my child’s legal rights. | <input type="checkbox"/> | them at any                   |
| 3. I understand that any personal information collected during the study will be anonymised confidential   | <input type="checkbox"/> | and remain                    |
| 4. I agree for my child to take part in the above study which includes a focus group   | <input type="checkbox"/> |                               |
| 5. I understand that the focus group will be audio recorded and I am happy to proceed  | <input type="checkbox"/> |                               |
| 6. I understand that parts of the conversation may be used verbatim in future publications presentations but that such quotes will be anonymised.                                    | <input type="checkbox"/> | or                            |

Name of Participant’s parent or guardian

Date

Signature

Name of Researcher

Date

Signature

Name of Person taking consent

Date

Signature

Note: When completed- 1 copy for participant and 1 copy for researcher



# LIVERPOOL JOHN MOORES UNIVERSITY

**Title of Project**

Digital technology use during the pandemic

**Name of Researcher and School/Faculty**

Sophie Reeves-Morris

Liverpool John Moores University-Liverpool Business School-PhD award

**Please tick to confirm your understanding of the study and that you are happy to take part.**

The purpose of the video or telephone interview is to find how the family used technology during and after the lockdown period

- 1. I confirm that I have read and understand the information provided for the above study.  I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily
- 2. I understand that my participation is voluntary and that I am free to withdraw at any  time, without giving a reason and that this will not affect my legal rights.
- 3. I understand that any personal information collected during the study will be  anonymised and remain confidential
- 4. I agree to take part in the above study which includes a video or telephone interview
- 5. I understand that the interview will be audio recorded and I am happy to proceed
- 6. I understand that parts of our conversation may be used verbatim in future publications  presentations but that such quotes will be anonymised.  or

Name of Participant

Date

Signature/e-signature



Name of Researcher	Date	Signature/e-signature
<b>Sophie Reeves-Morris</b>	<b>07.05.2021</b>	<b>S. Reeves-Morris</b>

Name of Person taking consent <i>(if different from researcher)</i>	Date	Signature/e-signature
--	------	-----------------------

*Note: When completed 1 copy for participant and 1 copy for researcher*



# LIVERPOOL JOHN MOORES UNIVERSITY

**Title of Project**

Digital technology use during the pandemic

**Name of Researcher and School/Faculty**

Sophie Reeves-Morris

Liverpool John Moores University-Liverpool Business School-PhD award

**Please tick to confirm your understanding of the study and that you are happy to take part.**

The purpose of the video or telephone interview is to find out a teacher’s perspective on the impact of technology during and post lockdown

- 7. I confirm that I have read and understand the information provided for the above study.  I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily
- 8. I understand that my participation is voluntary and that I am free to withdraw at any  time, without giving a reason and that this will not affect my legal rights.
- 9. I understand that any personal information collected during the study will be  anonymised and remain confidential
- 10. I agree to take part in the above study which includes a video or telephone interview
- 11. I understand that the interview will be audio recorded and I am happy to proceed
- 12. I understand that parts of our conversation may be used verbatim in future publications  presentations but that such quotes will be anonymised. or

Name of Participant

Date

Signature/e-signature

Name of Researcher	Date	Signature/e-signature
<b>Sophie Reeves-Morris</b>	<b>08.05.2021</b>	<b>S.Reeves-Morris</b>
Name of Person taking consent <i>(if different from researcher)</i>	Date	Signature/e-signature

*Note: When completed 1 copy for participant and 1 copy for researcher*



LIVERPOOL JOHN MOORES UNIVERSITY

ASSENT FORM FOR CHILDREN

(to be completed by the child and their parent/guardian)

Title of Project

Figuring the child as digital native: Digital class in the net generation

Name of Researcher and School/Faculty

Sophie Reeves-Morris
Liverpool John Moores University-Liverpool Business School-PhD award

Child (or if unable, parent/guardian on their behalf) / young person to circle all they agree with:

- Have you read (or had read to you) information about this project? Yes/No
Has somebody else explained this project to you? Yes/No
Do you understand what this project is about? Yes/No
Have you asked all the questions you want? Yes/No
Have you had your questions answered in a way you understand? Yes/No
Do you understand it's OK to stop taking part at any time? Yes/No
Are you happy to take part? Yes/No

If any answers are 'no' or you don't want to take part, don't sign your name!

If you do want to take part, you can write your name below

Your name

Date

Your parent or guardian must write their name here if they are happy for you to do the project.

Print Name

Sign

Date

The researcher who explained this project to you needs to sign too.

Print Name

Sign

Date

**Reeves-Morris, Sophie**

---

**From:** Research Ethics Proportionate Review  
**Sent:** 09 September 2019 16:12  
**To:** Research Ethics Proportionate Review; Reeves-Morris, Sophie; Bettany, Shona; Daly, Angela  
**Subject:** Approved with Provisos - Reeves-Morris  
**Attachments:** 11a. Reeves-Morris resub 10\_9.pdf; Collated Ethics application- deferred comments actioned SRM.pdf

Dear Sophie

With reference to your application for Ethical Approval

**Sophie Reeves-Morris, PGR - Figuring the child as digital native: Digital class in the net generation**

**UREC decision: Approved**  
**UREC reference: 19/LBS/022**

The University Research Ethics Committee (UREC) has considered the above application. I am pleased to inform you that ethical approval has been granted subject to the provisos listed below. Once the final version of the ethics application with the provisos addressed has been emailed to [researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk), the study can commence.

(Please note, UREC will not check that the provisos have been applied in the final version of the ethics application and will not email any further approval notifications to the applicant once the final version of the ethics application has been forwarded to UREC. If the applicant does not want to apply the provisos as stated below, the applicant must notify UREC and resubmit the ethics application for further review)

**Reeves-Morris, Sophie**

---

**Subject:** FW: Amendment: Favourable Ethical Opinion & Approval. UREC Ref: 19/LBS/022

---

**From:** Full Review UREC

**Sent:** Friday, July 24, 2020 11:09 AM

**To:** Full Review UREC; Reeves-Morris, Sophie

**Cc:** ResearchGovernance

**Subject:** Amendment: Favourable Ethical Opinion & Approval. UREC Ref: 19/LBS/022

Dear Sophie

**Study amendment: Sophie Reeves-Morris**

**Figuring the child as digital native: Digital class in the net generation UREC reference: 19/LBS/022**

Research Ethics and Governance

**UREC opinion: Favourable ethical opinion**

**Research Governance Assessment: Approved – the amended study may commence**

On behalf of the University Research Ethics Committee I am pleased to confirm a favourable ethical opinion of the amendment on the basis described in the Study Amendment Form, supporting documents and any clarifications received, subject to the conditions specified below.

Conditions of the favourable opinion

Prior to the start of the study.

- Covid-19. Studies that involve face-to-face activity – you must ensure participant facing documents explain the potential risks of participating in the study which are associated with Covid-19, how the risks will be mitigated and managed.

After ethical review.

- You must ensure the information included in the participant facing documents are always current and informed by ongoing risk assessments and any changes to current practices.
- Where any substantive amendments are proposed to the protocol or study procedures further ethical opinion must be sought (<https://www.ljmu.ac.uk/ris/research-ethics-and-governance/research-ethics/university-research-ethics-committee-urec/amendments>)



**Reeves-Morris, Sophie**

---

**Subject:** FW: Amendment: Favourable Ethical Opinion & Approval. UREC Ref: 19/LBS/022

---

**From:** Full Review UREC

**Sent:** Friday, July 24, 2020 11:09 AM

**To:** Full Review UREC; Reeves-Morris, Sophie

**Cc:** ResearchGovernance

**Subject:** Amendment: Favourable Ethical Opinion & Approval. UREC Ref: 19/LBS/022

Dear Sophie

**Study amendment: Sophie Reeves-Morris**

**Figuring the child as digital native: Digital class in the net generation UREC reference: 19/LBS/022**

**Research Ethics and Governance**

**UREC opinion: Favourable ethical opinion**

**Research Governance Assessment: Approved – the amended study may commence**

On behalf of the University Research Ethics Committee I am pleased to confirm a favourable ethical opinion of the amendment on the basis described in the Study Amendment Form, supporting documents and any clarifications received, subject to the conditions specified below.

**Conditions of the favourable opinion**

Prior to the start of the study.

- Covid-19. Studies that involve face-to-face activity – you must ensure participant facing documents explain the potential risks of participating in the study which are associated with Covid-19, how the risks will be mitigated and managed.

After ethical review.

- You must ensure the information included in the participant facing documents are always current and informed by ongoing risk assessments and any changes to current practices.
- Where any substantive amendments are proposed to the protocol or study procedures further ethical opinion must be sought (<https://www.ljmu.ac.uk/ris/research-ethics-and-governance/research-ethics/university-research-ethics-committee-urec/amendments>)

## Amendments | Liverpool John Moores University

[www.ljmu.ac.uk](http://www.ljmu.ac.uk)

Following approval of a research project by LJMU research ethics committee (REC) it is the responsibility of the principal investigator to inform the REC of any major changes made to the project (amendments) following approval.

- Any adverse reactions/events which take place during the course of the project are reported to the Committee immediately by emailing [FullReviewUREC@ljmu.ac.uk](mailto:FullReviewUREC@ljmu.ac.uk)
- Any unforeseen ethical issues arising during the course of the project will be reported to the Committee immediately emailing [FullReviewUREC@ljmu.ac.uk](mailto:FullReviewUREC@ljmu.ac.uk)

### Research Governance Approval.

This email also constitutes LJMU Research Governance Approval of the amended study, on the basis described in the Study Amendment Form, supporting documents and any clarifications received, subject to the conditions specified below.

#### Conditions of Approval

- Compliance with [LJMU Health and Safety Codes of practice and risk assessment policy and procedures](#) and [LJMU Code of Practice for Research](#)
- Ensure the study is [covered by UMAL](#)
- Covid-19. Compliance with LJMU's travel restrictions
- Covid-19. Studies that involve any face-to-face research activity have the appropriate risk assessment in place – the risk assessment is signed by the school Director or nominated other, revised, resigned and reissued when required and sent to the Safety, Health and Environment Department by email to [SHE@ljmu.ac.uk](mailto:SHE@ljmu.ac.uk)
- Covid-19. Studies that involve any face-to-face research activity meet Covid-19 practices which are current at the time the research activity takes place.
- Where relevant, appropriate gatekeeper / management permission is obtained at the study site concerned and any other approvals that are required are obtained.
- The LJMU logo is used for all documentation relating to participant recruitment and participation e.g. poster, information sheets, consent forms, questionnaires.
- The study consent forms, study data/information, all documents related to the study etc. will be accessible on request to a student's supervisory team and/or to responsible members of Liverpool John Moores University for monitoring, auditing and data authenticity purposes.

Appendix 8- Child focus group template

<p>Hello, my name is Sophie and I've come to speak to you today about social media, how you use technology with your friends, at home and school- hopefully you won't find it too boring!</p> <ul style="list-style-type: none"> <li>• Are you okay with what I'm going to be talking to you about?</li> <li>• If you want to stop talking or you don't want to answer a question, that's okay. You can not answer, or if you like, let me know and I'll stop the chat. If you do want to leave at any point, you can do that as well, you don't need to ask me.</li> <li>• I am recording this from this ugly little device that has no camera and can only record sound so I can listen back to our chat but I won't be able to see you.</li> <li>• Do you want to ask any questions before we start?</li> <li>• Do you want or need anything before we start?</li> <li>• Is everyone happy to have this chat?</li> <li>• Okay, lets get started.</li> </ul>	
QUESTION	PROMPT
SOCIAL MEDIA	
What social media channels have you heard of?	Show social media wheel with different platform logos.
Which ones do you actually use?	Ask who they follow
Why those ones?	
Which ones do you think you spend the most time on?	
Why?	Just look at what other people are doing or do they speak to people through SM?
What is it you do on there?	
Do you have more than one social media account per platform?	On Instagram my sister has like 3 different accounts for different things!
Who do you follow?	Friends family, brands, celebrities, influencer, random pages that post their interests- gaming, art, fashion, nature?
Would you follow someone you didn't know?	
Who follows you?	Friends, family, people they don't know...
Would you let someone follow you who you didn't know?	
What kind of things do you see other people post on social media?	Celebrities, your friends, fan pages etc..
What sort of things do you post on social media?	Shoutouts? Ask if they would just post a shoutout to anyone, if they say they do Do you use other apps to create content like video editing, music, photo editing software etc.?
What would make you unfollow someone?	
Do you follow celebrities or fan pages?	
Who are your favourite celebrities to follow?	
Who are you favourite streamers/youtubers?	
Why are they good to follow?	
Who would you say doesn't have a very good social media account?	

Why? Is there a way people can make it seem like they have more followers than they do?	
What do you do to make sure you are safe online?	
Do your parents mind that you use social media?	If they say yes, ask what kind of rules do they have around SM?
Why do you think that?	
<b>TECHNOLOGY</b>	
How do you get on these platforms? (What devices do they use)	
What other technology do you use?	Tablets, laptops, computers, Xbox/PlayStation?
How old were you when you got your own smartphone? Tablet? Laptop/computer? Gaming?	How old when they were allowed to share/use?
Do you think having a smartphone is a good thing?	
Why?	
What do you think the bad things are about having a smartphone? Why?	
How often do you use your smartphone?	
When do you think you use it the most?	
What do you do on a smartphone generally? Do you prefer using tablets for some things? Are there things you prefer to do on a tablet/laptop/computer or smartphone? Why/why not? Computer/laptops? Gaming?	Smartphone activities, what apps do they use, speak to their friends, speak to family?  Social media, to help with homework, school, apps to help with certain subjects, listening to music. Using google to search for information, calls and texts
What device do you think you use the most? Which one do you use the least?	
Why?	
Where do you use them?  Smartphone Tablet Laptop/computer	At home, school, out with friends
Do you ever leave the house without your smartphone? Why not?	
Do you think you are better at using smartphones than your parents?	

Why do you think that? What about your teachers? Why?	
Do you think you are better than your parents at using tablets? Computers? Gaming? What about your teachers? tablets? Computers? Gaming?	
What do you like about using smartphones, generally?	
Do you think it's important you know how to use a smartphone? Why/why not? Do you think your parents think the same? Would agree? Why/why not	Do you think you're learning any skills when you use them?
At what age do you think children should be taught how to use a smartphone? Do you think your parents think the same? Would agree? Why/why not	
What about when you are older? Do you think you would use them for anything different than you do now?	
<b>USING ET WITH FRIENDS</b>	
What about when you are with your friends, do you use technology when you are together? What do you usually do on them while you are together?	
Would you talk to your friends about the videos you watch, things you see on SM, what celebrities have posted?	What sort of things? Do you tag each other in posts to look at?
How do you feel when you are with someone and they are sat on their phone? When is it okay to be on your phone when you are with someone? When is it not?	
How long would you not reply to a message until you thought it was rude? What if you read it but are too busy to think about a reply?	
<b>FAMILY</b>	

<p>How old were you when you first used or were shown something on a smartphone?</p> <p>Tablet?</p> <p>Computer?</p> <p>Gaming?</p>	
<p>Who first showed you how to use them? Showed you something on them?</p> <p>Smartphone</p> <p>Tablet</p> <p>Laptop/computer?</p>	
<p>Who taught you how to use a Smartphone?</p> <p>Tablet?</p> <p>Laptop/computer?</p> <p>Gaming?</p>	
<p>Do any of you share a smartphone with your parent/carers/brothers or sisters?</p> <p>What about...</p> <p>Tablet?</p> <p>Laptop/computer?</p> <p>Games console?</p> <p>Are they older or younger than you?</p>	
<p>Why were you given your own one? Or allowed to share do you think?</p> <p>(reason from parent)</p> <p>OR</p> <p>Did you have to convince your parents to let you have a smartphone? How did you do that?</p> <p>Did they buy you one, or was this given to you/an old one of theirs?</p>	
<p>Do you use a smartphone with your parents or family at all?</p> <p>Do you show them things like videos etc that you think are cool?</p> <p>What about your brothers and sisters?</p>	
<p>When you call/text/instant message, who is it usually too?</p> <p>Do you message your family as well?</p> <p>How often do you and your family text while you are at school?</p>	

What about when you are out with friends?	
Do you ever argue with your parents or carers about you using smartphones or tablets?  What is it usually about?  Why do you think they say this?  Do you ever argue with your brothers and sisters about using smartphones or tablets?  What is it usually about?  Why do you think they say this?	
<b>SCHOOL</b>	
What apps and things do you use that aren't social media?	
Do you ever use smartphones to help with your homework?  What about tablets? Laptops/computers?	
Do you know of any apps that you can use to help with your homework or certain subjects?	
What are the school rules about using smartphones?  Why do you think they are like that?  Do you think these are good rules to have?  Do you always follow them? (why/why not?)	
Do you think the teachers know you don't follow them/what would happen if you didn't follow the rules?	
Do your teachers ever speak to you about using smartphones? Tablets? Social media? Laptop/computer? Gaming?	
When do they speak to you about this?	
What things would you like to learn about smartphones and social media?	
Are you taught anything like this at the moment?	
Do you think you already know everything you need to about using smartphones and tablets?	
Do you think you could use smartphones or tablets in lessons to help you learn?  Why/why not? How?	
Would you like it if you had lessons about smartphones and tablets and how to use them more safely?	



Appendix 9- Teacher focus group template

TEACHERS PERSONAL CONSUMPTION	
QUESTION	PROMPT
What technology do you own?	Computer, laptop, music player, Alexa, smartphone, tablet ect.
How did you decide to buy *each device*?	Computer, laptop, music player, Alexa, smartphone, tablet ect.
What do you use smartphones for?  Is there anything you'd be more likely or less likely to do on a tablet than a smartphone?  Do you use computers or laptops for anything different?  Do you prefer using tablets, laptops, computers for some things and your smartphone for others?	(Social media, internet, work, communicating with others, reading the news, reading e books, purchasing products, selling things, Air bnb, Uber ect?, looking up info for health, jobs, banking, listening to music, playing games)
What apps do you use on your smartphone?	Banking, social media, health, news, satnav/maps, photo's- Use smartphone activities table or app list
How do you decide when you need to update your smartphone?	
What about- Tablet?  Laptop/computer?	If it breaks, or if performance is getting slower and you decide to update?
Overall, what do you like about using ET?  What are the positive ways that ET has impacted your life (generally)? Why, why not? How?	Maybe ask how is this different from other devices like tablets? Laptops/computers?
In what way do you think ET has had negative impacts on your life? How? Why?	Maybe ask how is this different from other devices like tablets? Laptops/computers?
Do you think you are better skilled at using ET in comparison to the children you teach?  Why/why not?	Would they feel confident in educating the harmful and beneficial outcomes of ETuse based from their own consumption experiences
Is this the same for other devices? Tablets? Laptops? Computers?	

## CHILDREN USING SMARTPHONES

What is the schools policy around technology use?	Is this different during the day/after school/on break times?
What do you think of this?	Is it effective?
Do you talk to the children about their use of technology? If so, what is this usually about?	If SM isn't mentioned, ask about it. If it is mentioned, asked about what devices they use to access SM, is it just smartphones?
What about social media? (how do they access SM?)	
Is this during timetabled lessons, or would you sometimes need to mention this day-to-day?	
From what you know/see, what do you think the children in the school use their smartphones or tablets for? (generally)	
In your opinion, what do you see as the positives about children in this school using ET?  Specifically, what are some of the most positive ways you've heard/seen the children in the school use ET?	
Do you think them using a tablet is more, less or positive in a different way? Why?	
What about a computer/laptop? Why?	
In your opinion, what are your concerns about how the children in this school use smartphones?  What has been the most concerning type of things you've heard from the children themselves?  Do you have the same, less concerns, or different concerns about them using tablets?  Computers/laptops?	Why/why not
How did you manage/or respond when finding out about the positive and negative ways they use them? (if at all)	Did they promote the positives, or just educate the negatives?
Generally speaking, do you think it is important children know how to use ET?  Why/why not?	What are their concerns, or what do they think is important
Do you think this is different depending on the age groups?	
Do you think children should know how ET can be used in both a positive and negative way?  Who do you think should be responsible for this?  Why?  Do you think the parents/schools/teachers have the skills needed to do this?  Why/why not?	

<p>Do you think parents/schools are doing enough to support this?</p> <p>Why/why not?</p>	
<b>FAMILIAL SETTINGS</b>	
<p>How do you think technology is used with the families of the children in this school?</p> <p>Do you think it is a good or a bad thing? Why?</p>	<p>Children being able to contact parents and vice versa for example</p>
<p>Do you think the children's families could or should do more to help their children use of technology? Social media? Tablets? Laptops/computers?</p>	
<p>What more do you think the parents of the children in the school could do?</p> <p>How do you think they could do this?</p> <p>Do you think they all have the skills to do this?</p>	
<p>Have you ever held technology/digital literacy sessions at the school?</p> <p>What sort of time were they scheduled for?</p> <p>What was the turn out like?</p> <p>Why do you think this?</p>	
<b>GENERAL EFFECT ON SOCIETY</b>	
<p>How do you think technology like smartphones and tablets have affected society, generally? Why, why not?</p>	
<p>How do you think childhood now is different compared to yours in terms of the tech available today?</p> <p>Why?</p> <p>Do you see this as good, bad or just different?</p> <p>Do you think if tech was as widely used then, you would have done the same?</p>	
<b>USE OF TECHNOLOGY IN EDUCATION</b>	
<p>Do you think technology like smartphones or tablets could be used in the classroom? (if directed toward a suitable activity?)</p>	

Why/why not? Would your answers be different depending on the ages of the children (not for the whole school)?	
Would you as a teacher benefit from being able to use smartphones and tablets as part of the school day? Why/why not?	Studies showing it might be more efficient to make notes, record activities, mark work etc.. Whole debate over policy vs practise.
How do you think technology has impacted your teaching (if at all)?	Difficulties in class, children using smartphones
Are you aware of how smartphones and social media has changed or will be changing policies/practices in education at all? What do you think of this?	
Is there anything else you think is important to say about children's use of technology?	

### Appendix 10- Teacher interview template

<p>Thank you very much for taking the time to speak to me today, I really cannot reiterate enough how helpful this is.</p> <p style="text-align: center;"><b>A few things I have to say before we start:</b></p> <ul style="list-style-type: none"> <li>• I will be asking you 3 questions throughout this interview, I may ask a couple more around the same question just to make sure I have full understanding of your response and will not interpret this wrong.</li> <li>• It will be stopped at 30 mins (say time).</li> <li>• You can leave at any time without giving a reason and without this effecting you or your future rights.</li> <li>• I am recording this interview from this little device (show on camera that has no camera and can only record audio sound).</li> </ul> <p style="text-align: center;"><b>So, if you're happy to get started? I will ask the first question.</b></p>	
<b>QUESTION</b>	<b>POTENTIAL PROMPT</b>
<b>CHANGE</b>	
<p>Can you describe how your technology use as a teacher changed during lockdown?</p> <p>OR</p> <p>Can you describe how you used technology as a teacher during lockdown?</p>	<p>What did you do that was new or different? Did you buy more devices? How did the use of new devices go for you and your class? What was this like for you personally? (as a teacher) What was it like for the children you teach? Was equality in terms of equal access to technology and children having the skills to use technology something you noticed?</p>
<b>CARRIED INTO THE FUTURE</b>	
<p>Is there anything that you did differently during lockdown (for example using educational apps or Zoom calls) that you would like to be made permanent?</p>	<p>Has this been made permanent? Why? Why not? Do you miss any aspects of teaching during lockdown? Do you think the children you teach would say the same?</p>
<b>NOT SUITABLE FOR THE FUTURE</b>	

What is it you are most happy to see the back of since you no longer have to teach virtually and would not want to experience again?	Why? Why not? What were the most frustrating or inconvenient ways you had to use technology during lockdown? Do you think the children you teach would say the same?
That's everything, thank you very much for your time today and your help by completing the survey previously. Make sure to keep a copy of the information sheet and consent form. If you have any questions to ask me, please feel free to pop me an email at any time.	

Appendix 11- Parent/guardian interview template

Thank you very much for taking the time to speak to me today, I really cannot reiterate enough how helpful this is. f A few things I have to say before we start:	
<ul style="list-style-type: none"> <li>• I will be asking you 3 questions throughout this interview, I may ask a couple more around the same question just to make sure I have full understanding of your response and will not interpret this wrong.</li> <li>• It will be stopped at 30 mins (say time).</li> <li>• You can leave at any time without giving a reason and without this effecting you or your future rights.</li> <li>• I am recording this interview from this little device (show on camera) that has no camera and can only record audio sound.</li> </ul>	
So, if you're happy to get started? I will ask the first question.	
<b>QUESTION</b>	<b>POTENTIAL PROMPT</b>
<b>CHANGE</b>	
Can you describe how your technology use as a family changed during lockdown?  OR Can you describe how you used technology as a family during lockdown?	What did you do that was new or different as a family? Did you buy more devices? Or share devices you hadn't previously? If you or your children used new devices, how did this go? What was this like for you personally? What was it like for your children? Did you notice any differences between how your children adapted to any changes with technology use?
<b>CARRIED INTO THE FUTURE</b>	
Is there anything that you did differently during lockdown that you would like to be made permanent?	Has this been made permanent? Why? Why not? Do you miss any aspects of family technology use during lockdown? What do you think your children wanted to see continued the most?
<b>NOT SUITABLE FOR THE FUTURE</b>	
What is it you are most happy to see the back of since we are no longer in lockdown?	Why? Why not? What were the most frustrating or inconvenient ways you had to use technology as a family during lockdown? What do you think your children were happy to see the back of?
That's everything, thank you very much for your time today and your help by completing the survey previously. Make sure to keep a copy of the information sheet and consent form. If you have any questions to ask me, please feel free to pop me an email at any time.	

