

**An Exploration of Information Poverty:
The Early Manifestation of Information Poverty in Children
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Date: 09.05.21

Dedication

I dedicate this thesis to Sarah Ann Green who strongly believed in the benefits of education and in educational equality for all. Sarah was a huge supporter of mine throughout my life especially as I completed my doctorate on a part-time basis while also raising two babies. Thank you for everything Aunt Sarah – I would never have made it without you.

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Abstract

Information poverty is when individuals/demographic groups are unwilling or unable to access or share information. Information poverty has been recognised as a critical issue and a global challenge but is an understudied research area and children an understudied group. This study sought better understanding of information poverty and explored early manifestations of information poverty in children.

As no empirical child information poverty studies existed, this study was exploratory. A literature review was undertaken alongside (in central Scotland) fieldwork with 156 children (6-8) and interviews with 17 parents and 17 teachers.

Research questions were: What is information poverty and why does it occur? Do children experience information poverty and if so, why?

After reviewing relevant literature, the researcher defined information poverty (as above) and determined that adolescent and adult information poverty can occur due to a lack of access to information, attitudes, behaviour and cultural context.

This study's empirical component evidenced children (6-8) experiencing information poverty - having unmet information needs; requiring adult support to obtain information and keeping information secret. Contributory factors to child information poverty were also evidenced: lacking skills, motivation and perseverance to obtain/share information; lacking source access; parents restricting information access; parents/teachers encouraging secrecy. Also evidenced was that not all children experienced information poverty and different factors contributed. Empirical findings supported Childers and Post's (1975) barriers to information needs, searches, acceptance and use and Chatman's (1996) information poverty theories.

By evidencing that children (6-8) can experience information poverty this study makes an original contribution to understandings of information poverty, as existing empirical studies have only evidenced adolescents and adults living in impoverished information worlds. This is also the first empirical study to identify contributory factors to child information poverty

and to determine that some of the same factors can contribute to child, adolescent and adult information poverty.

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Chapter 1: Research study: Introduction

This research study was funded by the Economic and Social Research Council (ESRC). This study sought to better understand information poverty and explored early manifestations of information poverty in children. This study investigated two research questions. 1: What is information poverty and why does it occur? 2: Do children experience information poverty and if so, why?

Research methods utilised in this study included a literature review and fieldwork with 156 children aged between six and eight. 17 parents and 17 teachers were also interviewed. Fieldwork and interviews were undertaken in central Scotland.

1.1: Value of research study

Information poverty was selected as a research topic because information poverty is recognised as a critical issue and global challenge. That is, information poverty has been described in the literature as a “critical issues for societies” (Marcella and Chowdhury, 2018, p.1). Information poverty has also been described as one of the biggest challenges facing the world (Britz, 2004, p.192). Moreover, the literature also highlighted that information poverty affects the lives of billions of people on a daily basis (Britz, 2004, p.192).

Information poverty was also deemed a topic worth researching due the consequences of information poverty identified in the literature. That is, the literature reported that information poverty can cast “a corrosive pall on people’s access to opportunities (Marcella and Chowdhury, 2018, p.1). The literature also highlighted that information poverty can “limit many types of opportunity, from access to job skills, financing, creative and social networks, and the ability to develop the skills necessary for global citizenship” (Zurutuza, 2018). The literature also outlined that information poverty can deprive individuals of information which could benefit them (Feather, 2013, p.133). Information poverty is also said to impact on abilities to extend social networks, gain employment, maintain health and improve educationally thus creating a cycle of alienation, continued marginalisation and disenfranchisement, restricting the capacity of individuals to fully participate in society and make informed decisions (Kennan et al, 2011, p.193).

Investigating contributory factors to information poverty was also considered a valuable research area because the literature identified a need for research which determines the causes of information poverty (Britz, 2007, p.8, 215). For example, Diener (1987, p.73) emphasised that information poverty cannot be resolved without a fuller understanding of the concept. Cochrane and Atherton (1980, p.290) argued that it will only be possible to resolve information poverty if the reasons for it are ascertained. Cochrane and Atherton (1980, p.290) also emphasised that there is a need to be able to delineate different types of information poverty in terms of magnitude, incidence and location. The need for solutions to information poverty was also emphasised in the literature. Britz and Blignaut (2001, p.66, 68) argued that immediate solutions to information poverty must be found, and Britz (2004, p.192, 197) stated that as information poverty affects the vast majority of people, and has considerable social, political, cultural and economic implications, solutions must be found.

Information poverty pertaining to children specifically was also deemed a research topic worthy of investigating because, to date, there are no published empirical child information poverty research studies. Moreover, UNICEF (2017, p.60) highlighted a need for research which investigates child information poverty, stating that data pertaining to child information poverty is “scarce” and identifying a need for research which explores “who and where are the children most deprived of information? What are the underlying causes and barriers to access? Why are some of those with access not using it?” Furthermore, Zurutuza (2018), when discussing child information poverty, also argued that “new sources of data” regarding young people’s information access are required.

Research which investigates child information poverty was also considered important, as a need for research into child information behaviour was also identified in the literature. That is, the literature identified a need for research which investigates early information behaviour (Lu, 2009; Shenton, 2007; Gross, 2006; Todd, 2003; Cooper, 2002; Walter, 1994). For example, Spink (2010, p.xii, 79) argued that “so little,” is known about information behaviour, “where it comes from and how it develops over a lifetime.” Moreover, Spink and Heinström (2011, p.253) outlined that there are “limited studies” exploring child information behaviour and Spink (2010, p.xii, 79) stated that there is a need to investigate child information behaviour so that this behaviour can be better understood. Furthermore,

Byrnes and Bernacki (2013, p.23) highlighted that there are a lack of studies which explain or predict the impact that a child's age can have on information behaviour. Literature also identified a dearth of research which explores child information behaviour pertaining to children's everyday lives (Todd, 2003), children's personal and social contexts (Lu, 2009) and children younger than aged eight (Cooper, 2002). A need for research which explores children's information seeking behaviour was also identified in the literature. For example, Barriage (2016, p.1) discussed information seeking and stated that due to the "many ways in which children are developmentally different from adolescents and adults, it is important to understand the information practices of children as a group distinct from these older populations." Furthermore, Gross (2006, p.xi), highlighted a lack of understanding regarding children's information seeking processes. Literature also reported that little is known about children's information needs (Shenton, 2007; Walter, 1994), with Walter (1994, p.127) recommending that more research is undertaken, and that children's information needs at age six would be worth investigation.

Findings from this research study could also be of value beyond the field of information science. That is, consider The United Nations 2030 Agenda for Sustainable Development. The United Nations Agenda is a framework of 17 Sustainable Development Goals that seek to make the "world better" and to ensure that no-one is "left behind" (IFLA, 2020). One of the targets within The United Nations Agenda, Sustainable Development Goal 16, is to "Ensure public access to information" (IFLA, 2020). In addition, The International Federation of Library Associations and Institution's (IFLA) (2020) "consistent position is that access to information is essential" for The United Nations Sustainable Development Goals to be achieved. Therefore, as IFLA and The United Nations have indicated the significance of information access and that access to information is of global importance, this suggests that the findings from this research study could be of value outwith the field of information science. Moreover, there are also a wealth of other disciplines, outwith the field of information science, that could utilise the findings from this research study. For example, health practitioners and researchers could benefit from knowing more about what factors can impede health information from being accessed or shared by certain demographic groups. Furthermore, such knowledge could ultimately have global implications, as consider in a worldwide health pandemic for example, advancing knowledge regarding what barriers can prevent some individuals or demographic groups from accessing or

sharing health information could have significant ramifications. Education is another discipline in which the findings from this research study could be of value. That is, findings from this research study could assist education researchers and practitioners who seek to ensure that information is made as accessible as possible to as many children as possible.

1.2: Summary: Research study: Introduction

In summary, information poverty is recognised as a critical issue and global challenge with significant consequences. However, information poverty is an understudied research area and children an understudied group within information poverty research. This research study sought to contribute to recognised research gaps, to advance understanding of information poverty in general and to provide new knowledge pertaining to an understudied group (children). Research findings may also have value outwith the field of information science.

Chapter 2: Review of relevant literature

This study sought to better understand information poverty and explored early manifestations of information poverty in children. This chapter outlines how pertinent literature for use in this research study was obtained and reviewed. This chapter then discusses the findings obtained from literature reviewed.

After reviewing relevant literature, the researcher deemed that the concepts key to this research study were information, information need, information seeking, information behaviour and equitable information access.

The models deemed key to this research study were Childers and Post's (1975) theories regarding barriers to information needs, searches, acceptance and use and Chatman's (1996) information poverty theories.

The researcher found no theory pertaining to child information poverty specifically and no published empirical child information poverty research studies.

Based on the review of relevant literature, the researcher defined information poverty as when individuals or demographic groups are unable or unwilling to access or share information.

After reviewing relevant literature, the researcher also determined that adolescent and adult information poverty can occur due to a lack of access to information. Moreover, the literature suggested that lacking access to information can be due to others inhibiting access actively or inadvertently; impairments including hearing, eyesight or physical; financial costs; geographical location and a lack of skills, specifically information technology, literacy, communication and information literacy skills. Attitudes and behaviours were also identified as contributory to adolescent and adult information poverty. The literature also indicated that attitudes and behaviours can contribute to information poverty due to: a lack of motivation to seek or share information, a lack of perseverance to continue efforts once initiated and self-protective behaviours being employed. Cultural contexts were also identified as factors that can contribute to adolescent and adult information poverty due to isolation from the wider information community or cultural norms hampering information

accessed or shared.

2.1: Obtaining literature

The researcher obtained relevant literature by undertaking a systematic literature review. The systematic literature review was undertaken in the Library and Information Science Abstracts (LISA) database which (at time of review) included abstracts and indexes from over 440 periodicals from more than 68 countries (Library and Information Science Abstracts, 2014).

The researcher undertook an advanced search for literature which discussed the term “information poverty” in the abstract. The term information poverty was enclosed within quotation marks so that literature returned contained the term information poverty specifically as opposed to the terms, information or poverty only or both these terms independently of each other. Ultimately, the researcher sought material that discussed information poverty as an established concept. The researcher also thought that literature that discussed information poverty in the abstract would be most useful to this research study. If this search had not returned enough relevant literature the researcher would have expanded their search parameters and sought material that discussed information poverty specifically anywhere in the document.

The systematic literature review was undertaken on January 22nd, 2014 and sought any literature published before that date. The search returned 41 results. The abstracts of these results were subsequently reviewed. Two results were only available in German so were not pursued further. Two results referred to the same piece of literature which had been republished in a special edition. This left 38 results to be investigated more thoroughly. Of these results, one item subsequently proved to be unobtainable, and, after closer examination, 17 pieces of literature were found not to be relevant to this research study. This was primarily because only a passing mention was made to information poverty and these mentions were not relevant to this research study. This left the researcher with 20 relevant items of literature from their systematic literature review.

As well as undertaking a systematic literature review the researcher also sought literature in other ways to ensure that they obtained other pertinent material not available in the

LISA database. The researcher also sought relevant literature via Google Scholar, by pursuing relevant references in literature and by obtaining recommendations of pertinent material from colleagues. The researcher also sought literature via the search functions on Wiley Online Library and ScienceDirect. Wiley Online Library was chosen as a source for literature because it contained the Journal of the Association for Information Science and Technology, and ScienceDirect was chosen because it contained the Library and Information Science Research journal. The researcher thought that these journals could contain material to assist in answering the research questions of this study. The researcher also used ScienceDirect's Recommended Articles function to seek pertinent material. This function recommended other potentially relevant articles based on literature being examined. The Citing Articles function was also utilised. This function produced a list of literature that cited the material being read. The Related Book Content option was also used to seek relevant literature. This option listed book material that might be relevant based on content being read. Wiley Online Library functions were also used to seek relevant literature. Functions utilised included the Cited By function. This function produced a list of literature which cited the literature being read. Wiley Online Library's More Content written by author(s) function was also utilised. This function returned a list of other literature written by the author. The researcher also set up an alert for "information poverty" on Google Scholar. Information poverty was again placed within quotation marks so that the literature returned contained the term information poverty specifically. The researcher also set up email alerts for any newly published literature that contained the term "information poverty" on Wiley Online Library and ScienceDirect. The researcher monitored these email alerts and continued to seek literature via these methods and any material published after the systematic literature review took place in 2014 considered relevant to this research study was included within this thesis

2.2: Reviewing literature

The researcher then examined literature obtained paying particular attention to what concepts and models were key to this research study, how information poverty was defined in the literature, whether child information poverty was discussed and if any factors deemed to be contributory to information poverty were identified.

After identifying the definitions of information poverty available in the literature, the

researcher then considered the differences and similarities between these definitions. The researcher then prepared their own definition of information poverty after examination of the definitions that had been provided by others.

The researcher also noted what factors were identified in the literature as contributory to information poverty. The researcher found that some authors used the term information poverty specifically when discussing contributory factors. However, in other cases the researcher determined that the factors being discussed were contributory to information poverty although other terms were used such as barriers to information access. The researcher then grouped similar contributory factors discussed by more than one author using the same or slightly different terms. For example, the researcher found that in the literature several authors identified that a lack of literacy skills can contribute to information poverty. For example, Childers and Post (1975, p.32) identified “very low” reading abilities to be contributory to information poverty. Cochrane and Atherton (1980, p.287) discussed a lack of “literacy” skills being a contributory factor. Britz (2007, p.64) stated that whether individuals are “literate” and Haider and Bawden (2007, p.543) said that “illiteracy” can contribute to information poverty. The researcher therefore concluded that a lack of literacy skills can contribute to information poverty. The literature also suggested that lacking in other skills can contribute to information poverty. For example, Childers and Post (1975, p.32) reported that a lack of “Communication” skills can contribute to information poverty. Sligo and Jameson (2000, p.866) argued that “communication problems” can be a barrier to information access and sharing. Britz (2004, p.197) outlined that inability to “communicate” can be a reason for information poverty and Feather (2013, p.133) stated that information poverty can occur due to an inability to “communicate effectively.” Thus, the researcher concluded that a lack of communication skills can also contribute to information poverty and that it was appropriate to group these slightly differing descriptions under a heading Lack of Communication Skills. Moreover, as lacking in literacy and communication skills were identified by the researcher as contributory factors to information poverty, the researcher thought that a further grouping could take place. Therefore, the researcher noted that a lack of skills can contribute to information poverty, literacy and communication skills specifically.

2.3: Key concepts

After reviewing relevant literature the researcher deemed that the concepts relevant to this research study were information, information need, information seeking, information behaviour and equitable information access.

2.3.1: Information

Despite the literature stating that “‘Information’ is everywhere” and that “Everything we see, feel, and hear contains information” (Fairweather et al, 2000, p.10), the researcher found a lack of consensus in the literature as to how the term information was defined. For example, Childers and Post (1975, p.20) described information as a term that “defies definition.” Fox (1983, p.3) emphasised that while information is omnipresent no one can define exactly what it is. Buckland (1991, p.351) stated that the term information is “ambiguous and used in different ways.” Harris and Dewdney (1994, p.29) identified a “lack of consensus on a definition of information” and Wilson (2006, p.659) suggested that information is a “troublesome concept.” Moreover, Shenton and Hayter (2006, p.565) argued that “even among information scientists there is little consensus” as to what is meant by the term. Ultimately, Case (2012, p.68) stated that there is “no single, widely accepted definition” of the term information.

Although the researcher found a lack of consensus in the literature as to how the term information was defined, example definitions of the term were available. For example, Budd (1987, p.42) defined information as “whatever an individual finds informing.” Case (2012, p.4) stated that information is any “difference you perceive, in your environment or within yourself.” Feather (2013, p.112) outlined that information has been defined as “a subset of knowledge acquired, deliberately or accidentally, by study or experience.” Fairweather et al (2000, p.10), meanwhile, defined information as “a mass of data” which is only “transformed into information through the meaning we impose on it.” Chatman (1999, p.209) however argued that “information has little to do with data” as information “means nothing at all if it is not part of a system of related ideas, expectations, standards, and values.” In addition, Dervin (1976, p.328) emphasised that information “has meaning only in the context of what a person already knows” or “understands.” Furthermore, Britz (2004, p.196) stated that the same information can mean different things to different people, with Britz (2004, p.196) and Britz and Blignaut (2001, p.65) stating that this is

because individuals interpret information differently based on their unique background, experience and knowledge base. Harris and Dewdney (1994, p.14) made a similar statement but also stated that time can also impact how individuals interpret information. That is, the authors stated that “the same “information” may mean different things to different people at different times.” Moreover, Sligo and Jameson (2000, p.860) also emphasised that the value of information can differ depending on an individual.

Despite varying definitions of the term information existing, Shenton and Hayter (2006, p.566) observed that there are “broad strands” of meaning of the term and that these broad strands united the varying definitions. In addition, although not discussing the term information specifically, Cooper (2004, p.300) argued that while individuals might have their own interpretations of certain terms, collective understanding can exist. Cooper (2004, p.300) used the term school as an example, arguing that while individuals may interpret the term school differently there is a general understanding of what a school is. In addition, Case (2012, p.69), indicated that the term information is so widely understood that it does not require an absolute definition and that an absolute definition is not required to investigate the concept. Case (2012, p.69) observed that treating the concept of information as such is common practice in information behaviour research.

The literature did advise however that it can be necessary to consider research participant interpretations of and attitudes towards the term information. That is, Warner et al (1973, p.54), who investigated the information needs of Baltimore residents (1,000 interviews), found that research participants had difficulties understanding what information was. Furthermore, Shenton and Hayter (2006, p.571) reported that children do not “look for ‘information,’ they look for ‘stuff.’” Moreover, Pitts (1994, p.75), who researched American high school students search and use of information (26 students - observations and interviews) found that students regarded the term information as a “school word.” During their research, Pitts (1994, p.75) subsequently substituted the term information and instead used “facts and ideas” and “things you need to know” as Pitts (1994, p.75) “did not want responses from students limited only to information related to school.” Moreover, the literature also suggested that interpretations and attitudes towards the term information can differ amongst research participants. For example, Beverley, Bath and Barber (2011, p.270), who explored the health and social care information needs of visually

impaired people in England (28 interviews with 31 visually impaired people), found that research participants had different interpretations of the term information. It was also demonstrated in the literature that the term information can have negative associations for some. For example, Hayter (2005), who researched the information behaviour of people living on a 'disadvantaged'¹ estate in Northeast England (interviews with 21 estate residents and 13 key workers employed on the Estate) noted that some research participants had negative associations with the term information. That is, for some research participants information was a "big word," a "word to fear," "intimidating," a "barrier, past which many could not go" and "scary" (Hayter, 2005, p.115). Moreover, Fairthorne (1965, p.10) stated that information is a term to "avoid" and that is better to use a more specific term. However Shenton and Hayter (2006, p.573) advised using care to ensure that there is no loss of meaning if substituting the term information.

2.3.2: Information need

The literature highlighted that at some point every person has a need for information an information need. That is, that every person can face circumstances whereby their knowledge is "insufficient" to solve a problem or to satisfy a query that they have and therefore information is needed (Harris and Dewdney, 1994, p.2, 7).

The literature also outlined however that information needs are difficult to define. Krikelas (1983, p.7) highlighted that no single definition of information needs exists. Forsythe et al (1992, p.182) identified that there is "no explicit consensus" as to what is meant by the term information need. Harter (1992, p.606) stated that "representing an information need - a cognitive state, a set of assumptions - in words would be extraordinarily difficult if not impossible." The literature also indicated that there can be difficulties in defining information needs due to their nature with Case (2012, p.89) describing information needs as "multidimensional."

Despite the complexity in defining information needs, definitions of the term were available. Dervin suggested that information needs are "a gap that can be filled" by

¹ Situated within the 10% most deprived wards in the United Kingdom according to Government Indices of Multiple Deprivation (Hayter, 2005, p.56).

“information” (Case, 2012, p.85). Harter (1992, p.606) stated that information needs can be described as “the current cognitive state of an information seeker.” Forsythe et al (1992, p.185) defined information needs as “conscious expressions (verbal or nonverbal) of a desire for more information.” Information needs were also described as “Precursors to information-seeking behaviour” (Belkin and Vickery, 1985, p.6).

The literature also indicated that information needs are not necessarily uniform. For example, Harris and Dewdney (1994, p.63, 123, 146) who researched the information needs of wives who had been assaulted (interviews with 542 women) in Ontario found that the women did not have a “single set” of information needs. That is, the women’s needs were “grounded in myriad unique circumstances.” Moreover, the literature also outlined that individual information needs can change (Case, 2007, p.89). For example, Harter (1992, p.606) stated that information needs are “dynamic,” that is, are not “static.” The literature also outlined that information needs can change as information is acquired. In fact, Harter (1992, p.610) argued that an individual’s information needs are merely a reflection of their “current psychological state” adapting and reconfiguring accordingly. It was also outlined in the literature that even the decision as to whether an information need has been met, or not, is subjective as, as more information is usually available, it is up to an individual to deem when they have sufficient information and an acceptable solution to meet their information needs (Case, 2012, p.39). The literature also highlighted that individuals can be: “unaware” of their information needs (Case, 2012, p.79; Green, 1990, p.67; Dervin, 1973, p.23); unable to communicate their information needs (Dervin, 1973, p.23) and wrong about what their information needs actually are (Case, 2012, p.79). The literature also reported that individuals do not always act to satisfy their information needs (Krikelas, 1983, p.8). With Harris and Dewdney (1994, p.123) identifying questions individuals may consider prior to determining whether or not to seek information to satisfy their information needs (what type of response might I get? Will my circumstances be changed for the better as a result? Will my information be kept confidential?)

That it can be difficult to research information needs was also an issue identified in the literature. That is, Childers and Post (1975, p.15, 16) argued that information needs are “virtually impossible” to study “directly.” While Case (2012, p.85) described the process of an individual recognising their information needs as a “phenomenon that remains beyond

our observation.” It was also outlined that information needs can be difficult to research because they tend to exist inside an individual’s head (Case, 2012, p.87; Krikelas, 1983, p.8).

2.3.3: Information seeking

The fundamental nature of information seeking was highlighted in the literature by a number of commentators. For example, Donohew, Tipton and Haney (1978, p.31) argued that information seeking must be one of the most “fundamental methods” for an individual to cope with their environment. Kuhlthau (2004, p.13) said that information seeking is a “primary activity of life.” Furthermore, Case (2012, p.3, 19) described information seeking as “common and essential human behaviors” basic to human existence and argued that information seeking is something a person does “every day” of their life.

Definitions of information seeking were also available in the literature. For example, Krikelas (1983, p.6) defined information seeking as any activity undertaken to satisfy a perceived need and emphasised that information seeking begins with a recognition that one’s own knowledge cannot satisfy an issue or problem. Moreover, Case (2012, p.5) described information seeking as a “conscious effort to acquire information in response to a need or gap in your knowledge.”

The literature also outlined that information seeking behaviour can vary from person to person. For example, Beverley, Bath and Barber (2011, p.271), when exploring the information needs of visually impaired people, concluded that visually impaired people are a “heterogeneous group” with differing information preferences. Literature also reported that information seeking behaviour can be “active or passive, directed or undirected” (Courtright, 2007, p.274). The literature also acknowledged that information seeking behaviour can be impacted by “personal psychological factors, interpersonal relationships, formal organisational relationships and more general environmental factors” (Wilson, undated). That is, how, when, where and why each person seeks information (or not) is specific to an individual and changes depending on a range of factors.

The difficulty of researching information seeking behaviour was also discussed in the literature. For example, Harris and Dewdney (1994, p.22) emphasised that it is important, but also difficult, to study authentic information seeking behaviour as opposed to studying

information seeking behaviour in research environments. Moreover, Case (2012, p.5) highlighted that information seeking behaviour “often escapes observation” and that it can be problematic to draw conclusions about information seeking behaviour as such behaviour can “vary so much across people, situations, and objects of interest” and “often take place inside a person’s head.”

2.3.4: Information behaviour

Information behaviour was also discussed in the literature. Information behaviour was defined as “all purposive and non-purposive information-related behavior” (Cole, 2013, p.1). Furthermore, Bates defined information behaviour as “an umbrella term for every human interaction with information” (Greifeneder, 2014, p.1). Information behaviour was also defined as behaviour that includes information seeking as well as “unintentional or passive” information behaviours such as “encountering information” and “actively avoiding information” (Case, 2007, p.5). In addition, Spink (2011, p.246, 2010, p.xi, xii, 79), outlined that information behaviour is a “universal human behaviour” and a “crucial everyday human activity” that occurs every day of an individual’s life but not necessarily consciously.

The literature did also highlight however, that the term information behaviour can be “misleading,” as this term infers that the behaviour is of information rather than the “behaviour of people” (Greifeneder, 2014, p.1). It was therefore argued in the literature that it would be more accurate to use the term “human information behaviour” than the term information behaviour and some researchers now use this term instead (Greifeneder, 2014, p.1).

It was also outlined in the literature that there is a lack of understanding of information behaviour. Saracevic highlighted that information behaviour is “complex” and “not fully understood” (Spink, 2010, p.viii) and Spink (2010, p.xii) stated that there is “limited understanding” of information behaviour.

Literature also advised that, while it is not known how information behaviour “develops during our lifetime,” information behaviour “develops during childhood with the development of other cognitive abilities and is not explicitly taught to children” (Spink, 2010, p.xii, 41). Moreover, Spink and Heinstrom (2011, p.245, 246, 253, 254; 2010, p.40,

41, 55) and Spink and Cole (2001, p.57) stated that information behaviour emerges instinctively in “early childhood” at some point between the ages of three and five years old. Spink (2011, p.253) discussed studies that evidenced information behaviour in children aged from four, in terms of “web searching” and “library information categorisation,” but that there has been “no evidence” of information behaviour in children aged three. Spink (2011, p.253) also outlined that children’s “information behaviour abilities are not well understood with limited studies exploring these issues.”

Spink and Heinström (2011, p.245, 246, 253, 254; 2010, p.40, 41, 55) also stated that information behaviour is shaped by environmental factors, cultural dimensions, “social learning” and “internal development.” In addition, Burnett and Jaeger (2015, p.171, 172, 174) highlighted that “information behaviour” can be influenced by “family” and the “small worlds in which the individual lives” and that individuals’ information behaviours can “mirror the norms, attitudes, values and concerns of the communities of which they are a part” and whether individuals “articulate” or “acknowledge” their information needs can be “a function of the information world in which they live.” Burnett and Jaeger (2015, p.170, 176) also advised that influences on information worlds can be “inherently neutral” but can also seek to “homogenize perspectives,” “enforce a minority perception” and can be “benign” or “exploitative.”

In terms of influences on child information behaviour, Spink and Heinström (2011, p.254) argued that “Cultural and social contexts” can “shape which information behaviour a child adapts.” Furthermore, Hayes, O’Toole and Halpenny (2017, p.iv, 1, 104) drew on the work of Urie Bronfenbrenner and stated that “Children grow and develop in the midst of society” and children have “diverse needs and belong to different cultures and social groups” drawing on “what they see around them” to “access essential information about what and who is important.” The authors also stated that “the people, places, objects and ideas” children “encounter form the basis of their leaning and development” and the “role of early childhood experiences” is “well established and understood” (Hayes, O’Toole and Halpenny, 2017, p.iv, 1, 104).

2.3.5: Information access

Information access was another concept discussed in the literature considered relevant to

this research study. That is, Harris and Dewdney (1994, p.9) argued that “it is not enough that information exists; people must have the means to gain access to that information.” Britz and Blignaut (2001, p.67) argued that everyone has a “fundamental right” to access information. Warner (1973, p. 10) described individuals without access to information as “powerless.” Yu (2006 p.233; 2011, p.667) argued that information is “increasingly critical” to “individual welfare” and that “inadequate access to information is undoubtedly a critical form of exclusion.” Moreover, Britz (2007, p.91, 172) described access to information as a “basic human right” and argued that lacking access to information can leave individuals dependent on others, leading to imbalanced power relationships and exploitation which can consequently impact on dignity and self-respect.

In terms of children’s access to information, The United Nations Convention on the Rights of the Child (a catalogue of human rights related to children (Koren, 1997, p.58)) states that children have a right to information (UNICEF, 2020). Article 13 states that “Every child” has the right to “access all kinds of information as long as it is within the law” and Article 17 states that “Every child has the right to reliable information from a variety of sources” (UNICEF, 2020). The literature also described children’s right to information as “important” and outlined that “the right to inform oneself from generally available sources and to educate oneself as a human being, should be acknowledged for the sake of children” (Koren, 1997, p.57, 58). Furthermore, Koren (1997, p.57) outlined that the “way in which a child learns to walk and to talk, and how he plays and communicates with others” is due to the information that they access. Koren (1997, p.58) also discussed how information “plays an important role” for children “in the development of his identity and personality; and, in his social participation.” In addition, Sturges (2009) argued that “children have a right to serious answers to their questions” and that their “need for information” is so “essential” that to ignore this need can “hinder and even damage the basic processes of its development.” Sturges (2009) also warns that not providing information can leave children “vulnerable” as children can be “in ignorance of dangers and possible responses to danger.”

The literature also discussed information access with regards to equity of access. That is, Feather (2013, p.xviii) argued that while “more information” has been made “more available to more people than at any other time in human history” not everyone has access to that information and that inequality of access exists. In addition, Britz and Blignaut

(2001, p.67) described information inequalities as a “form of social injustice.” Information inequalities have also led to some being described as the “information rich” or the “information haves” and others the information “poor” or information “have-nots” (Lievrouw and Farb, 2003, p.506). Goulding (2001, p.109) described the information rich as those with “easy access to an abundance of information” and the information poor as “those who do not know how or where to find” information or are unaware of “the value of information and how it [information] can help them.” Technological advances have been said to have exacerbated information inequalities and have been deemed the “digital divide” (Norris, 2001). Lievrouw and Farb (2003, p.504) state that information inequities have “important social consequences” and Berman and Phillips (2001, p.180) argue that equitable information access is essential for society to be “fair and inclusive.” Berman and Phillips (2001, p.180) also warned of the dangers of “social exclusion” which can arise from “inequitable” access to information. In addition, Lloyd et al (2013, p.123, 125) argued that lacking access to information can prohibit “full participation in education, work and every-day life” and that the “ability to access [...] information is critical to social inclusion.” Feather (2013, p.113) meanwhile emphasised that individuals that lack access to certain information can be disadvantaged because of what they do not know. Moreover, Lingel and Boyd, (2013, p.986) found in their empirical research study, which investigated information poverty in the context of extreme body modification (18 interviews with individuals from the extreme body modification community² from the United States, Canada and the United Kingdom, also observation and participation), that being unable to access extreme body modification information had “dangerous consequences” for some.

Literature also outlined that children can have differing access to information. For example, UNICEF (2018) outlined that “Inequitable distribution of information sources and content leads to a generation of children who are not able to access the ideal mix of information necessary for them to be successful in life.”

The literature also indicated that although information can be “available” that does not mean that information will necessarily be accessed (Britz, 2007, p.209; Britz, 2004, p.201;

² Geographically dispersed group with shared interest in body modification (Lingel and Boyd, 2013, p.982).

Aguolu, 1997, p.26). That is, there can be barriers that inhibit information from being accessed.

2.4: Key models

After a review of relevant literature, the models deemed key to this research study were Childers and Post's (1975) theories regarding barriers to information needs, searches, acceptance and use and Chatman's (1996) information poverty theories.

2.4.1: Childers and Post

The work of Childers and Post (1975) was considered pertinent to this study. Childers and Post (1975, p.7) sought to review and summarise existing literature pertaining to the information needs of "disadvantaged" adults. The authors defined being disadvantaged as to lack "something that the society considers important" and identified the disadvantaged as the: poor, undereducated, unemployed or employed at low levels, elderly, imprisoned, deaf, blind, and racially or ethnically oppressed (Childers and Post, 1975, p.10, 11). "Economic level" was identified as the "single demographic variable" which was "the most powerful descriptor" of the disadvantaged (Childers and Post, 1975, p.9).

Barriers to information needs, searches, acceptance and use identified by Childers and Post (1975, p.32) were: "very low" reading abilities; a lack of communication skills, hearing and eyesight impairments and English as a second language.

Childers and Post (1975, p.32) also stated that individuals "being locked" into their own information "subculture" or "information ghetto" were a barrier to information needs, searches, acceptance and use, as this removed individuals "from the flow of popular information that exists in society at large" and left individuals "deficient" in information prevalent in wider society. The authors stated that such subcultures can contain an "inordinate amount of unawareness and misinformation (myth, rumour, folk lore)" and there can be a "social embargo" against information generated from outwith the subculture (Childers and Post, 1975, p.32, 33). The authors also outlined that the information accessed from outwith these subcultures can be "irrelevant" or "wrongly interpreted" (Childers and Post, 1975, p.32).

Other barriers to information needs, searches, acceptance and use identified by Childers and Post (1975, p.34) related to “attitudes and philosophies” or “predisposition.” That is, the authors reported that barriers to information needs, searches, acceptance and use can be the “despairing” and “fatalistic” attitudes of those who are “resigned to those conditions of life, those who are convinced that no acts of his own will alter them” and those who are unwilling to “delay gratification or plan for even the short-term future” instead only responding to information needs which are “crisis or near-crisis” (Childers and Post, 1975, p.37). Moreover, the authors argued that if information is sought, searches are not “very active” (Childers and Post, 1975, p.38, 42).

2.4.2: Chatman

The researcher also considered the theories of Chatman (1996) to be relevant to this research study. Chatman (1996) has been “extensively cited” in Library and Information Science literature (Hersberger, 2009, p.77) and has been described as a “pioneer” in the field of information poverty (Bronstein, 2014, p.62).

Chatman (1996, p.197) defined an “impoverished information world” as a world “in which a person is unwilling or unable to solve a critical worry or concern” and a world in which information needs are “not being met.”

Chatman (1996, p. 193) identified “four critical concepts that serve as the basis for defining an impoverished life-world” - “risk-taking, secrecy, deception and situation relevance.” Chatman (1996, p.194) emphasised that central to these concepts was the “difference between insiders and outsiders” between which “informational barriers” can exist. Chatman (1996, p.194, 197) said that insiders share “a common cultural, social, religious etc., perspective” which “provide expected norms of behaviour and ways to approach the world” and “define those things that are important to pay attention to and those things that are not,” that is, “aid and define things that are legitimate to seek and appropriate to share.” Insiders are considered to act appropriately, and outsiders are not because outsiders deviate from “the collective standards” (Chatman, 1996, p.194). Chatman (1996, p.195) also said that insiders can doubt that outsiders can understand their “social and information worlds.” Chatman (1996, p.194, 195) believed that insider membership can contribute to information poverty because although information needs can exist, insiders

can refuse to access what they consider to be outsider information and can in fact “shield themselves from needed resource,” as information can be considered “suspect if it originates from outside the group.” Chatman’s (1996, p.199, 205) theories also highlighted a reliance on self and that an individual can consider themselves to be an insider and “everyone else” to be an outsider, even “family, neighbours or friends.”

Of the four concepts that “serve as the basis for defining an impoverished life-world,” (“risk-taking, secrecy, deception and situation relevance”) (Chatman, 1996, p.193). In terms of secrecy, Chatman (1996, p.195, 199) stated that information about “personal experiences” is considered to be “secret information” and that information can be kept secret in “a deliberate attempt not to inform others about one’s true state of affairs,” to protect from “unwanted intrusion” from any source, to keep aspects of life “private” and to maintain an “element of control.” Chatman, (1996, p.195, 199) said that even “critical” information can be kept secret that is not “asked for or shared.” Chatman, (1996, p.195, 199) also noted that “information of the most needed type” might not be shared, even when sharing this information could result in much needed “assistance.” Deception was described by Chatman (1996, p.196) to be when “false” or “misleading” information is shared in “a deliberate attempt” to distort or mask reality despite the fact that such deception can mean a person is less likely to obtain useful information. Deception was said to involve attempting to appear better off or coping more successfully (or at least as well as) peers than the reality (Chatman, 1996, p.204, 205). Chatman (1996, p.196) described risk-taking as a “principle component” which impacted on information seeking and sharing, and risk-taking referred to the risks that an individual might associate with sharing or seeking information. That is, Chatman (1996, p.196) outlined that “the purpose of secrecy and deception is to protect someone at risk or someone who perceives that revealing information about oneself is potentially dangerous.” The ultimate aim of secrecy and deception was said to be self-protection.” Chatman (1996, p.197) argued that “it is reasonable to assume” that a person “in true information need” but who would not share that need “primarily due to self-protecting behaviors,” that that person “lives in an impoverished life-world.” That is, a person can experience an information need but will not seek that information because they employ self-protective behaviours, so others do not become aware of the need (Chatman, 1996, p.197).

Chatman (1996, p.197) devised six propositional statements to act as a “theoretical framework” for defining “an impoverished information world” and to use as “a guide” when exploring information poverty:

Proposition 1: People who are defined as information poor perceive themselves to be devoid of any sources that might help them.

Proposition 2: Information poverty is partially associated with class distinction. That is, the condition of information poverty is influenced by outsiders who withhold privileged access to information.

Proposition 3: Information poverty is determined by self-protective behaviours which are used in response to social norms.

Proposition 4: Both secrecy and deception are self-protecting mechanisms due to a sense of mistrust regarding the interest or ability of others to provide useful information.

Proposition 5: A decision to risk exposure about our true problems is often not taken due to a perception that negative consequences outweigh benefits.

Proposition 6: New knowledge will be selectively introduced into the information world of poor people. A condition that influences this process is the relevance of that information in response to everyday problems and concerns.

2.5: What is information poverty?

The review of literature indicated that no succinct definition of information poverty existed (Yu, 2006, p.230). Moreover, the literature also demonstrated that there were differing interpretations of the term information poverty (Cochrane and Atherton, 1980, p.285, 290). Wilson (1983, p.151) described information poverty as a “soft concept.” Britz and Blignaut (2001, p.63, 68) argued that the term is “ambiguous” and that there is “little agreement” as to what information poverty actually is. Yu (2011*, p.15) stated “we can hardly claim that we know what information poverty” is. While MacDonald, Bath and Booth (2011, p.244) highlighted that the term “lacks a firm definition.” In addition, Drabinski and Rabina (2015, p.44) outlined that “many definitions of information poverty abide” and Pollak (2016,

p.1229) stated that “our conceptualization of information poverty itself, are not completely understood.”

Despite there being no succinct definition of information poverty, definitions of the term were available in the literature. However, no authors discussed children specifically when defining information poverty. For example, Case (2012, p.386), defined information poverty as a “state thought to exist in a person, or among members of a demographic group, when they are not only devoid of useful information but tend to lack the necessary skills to information themselves.” Chatman (1996, p.197) defined information poverty in terms of self-protective behaviours arguing that a person who is “unwilling or unable to solve a critical worry or concern,” because they experience an information need but are unwilling to share that need with others, “primarily due to self-protecting behaviors,” can be said to live in an “impoverished life-world.” Furthermore, Diener (1987), Sligo and Jameson (2000), Britz (2007) and Marcella and Chowdhury (2018), all defined information poverty in terms of lacking access to information. Diener (1987, p.69) stated that information poverty is “how much of society’s knowledge is inaccessible to an individual,” Sligo and Jameson (2000, p.585) argued that information poverty is when individuals “lack access to knowledge,” knowledge “that would benefit them” and Britz (2007, p.1) outlined that information poverty “relates to an individual’s or communities inability not only to access essential information but also to benefit from it.” In addition, Marcella and Chowdhury (2018, p.2) defined information poverty as being “denied access to information necessary for survival, self-sufficiency, sustainability or development.”

The researcher therefore noted that, in the literature, information poverty was discussed in relation to individuals and demographic groups (Britz, 2007; Case, 2007), in terms of a lack of access to information (Marcella and Chowdhury, 2018; Sligo and Jameson 2000; Britz, 2007; Diener, 1987) and also with regard to information not being shared (Chatman, 1996). The researcher also identified that literature outlined that not accessing or sharing information can occur due to unwillingness but also due to inability (Chatman, 1996). As a result, the researcher defined information poverty to be when individuals or demographic groups are unwilling or unable to access or share information.

2.5.1: Further insights into information poverty

The literature also indicated that there may be a correlation between information poverty and economic poverty (Britz, 2007; Lievrouw and Farb, 2003; Childers and Post, 1975) with Cakwell (2001, p.56) arguing that the two go “hand-in-hand” and Britz and Blignaut (2001, p.63) stating that poverty is “accentuated and reinforced” by information poverty. In addition, Haider and Bawden (2006, p.377) said that information poverty can be seen as “a direct result of material poverty.” Moreover, Feather (2013, p. xviii, 132, 133) considered that information poverty “takes place in the cycle of deprivation with other, more tangible, manifestations of poverty” and stated that “there is a growing gap between the rich and the poor in access to information.” Feather (2013, p. xviii, 132, 133) also stated that “it is impossible to avoid the conclusion that there is a link between a lack of information” and a lack of “economic benefit.” However, the literature also highlighted that not everyone that experiences information poverty experiences economic poverty (Haider and Bawden, 2007; Yu, 2006; Chatman, 1996; Sweetland, 1993; Diener 1987).

After reviewing relevant literature, the researcher also obtained other insights into information poverty. For example, the researcher noted that information poverty can be relative and can exist to varying degrees (Britz, 2007, p.83); that there are “a variety of different types” of information poverty (Cochrane and Atherton, 1980, p.291) and that why and how individuals experience information poverty can differ (Lingel and Boyd, 2013; Cochrane and Atherton, 1980). Britz and Blignaut (2001, p.64, 65) also outlined that a person can be information rich in one environment but information poor in another, that is, that information poverty can manifest only within “specific situations and contexts.” An example of individuals being information rich in one environment but information poor in another was provided by Lingel and Boyd (2013), when they explored the information practices of individuals within the extreme body modification community. During their empirical research study, Lingel and Boyd (2013, p.990) found that there were members of the extreme body modification community who were well educated, from privileged social classes and technologically literate and for these members information poverty functioned in “highly localized ways” due to the stigma and marginalisation of extreme body modification. Ultimately, the authors found that some community members experienced information poverty regarding their extreme body modification information needs but were information rich in other aspects of their lives. A similar finding was reported by Bronstein

(2014) who investigated information poverty within obsessive compulsive disorder online support groups (two groups, content analysis of 202 message postings over a three-month period). In this study, Bronstein (2014, p.69) found “information literate individuals who had access to the Internet and had the information skills required to finding and using social media applications.” However, these individuals were “devoid of information” regarding their obsessive-compulsive disorder information needs and lived in an “impoverished information world” pertaining to these information needs only (Bronstein, 2014, p.69). That is, Bronstein (2014, p.69) reported that these individuals “reflected conditions of information poverty in reference to highly specific information needs.”

Further insights were also obtained by the researcher after the review of literature. This included the insight that information poverty can be “immediate to long-term” and “trivial to life-threatening” (Diener, 1987, p.69). That information poverty can be “externally imposed” or “self-imposed” (Diener, 1987, p.69). That those experiencing information poverty may be unaware but might be aware but unconcerned (Sweetland, 1993). That is, Wilson (1983, p.151) emphasised that information poverty can be a “self-selected condition freely entered into and willingly endured” and Sweetland (1993) described self-imposed information deprivation as information poverty “on an active level.”

2.6: Why does information poverty occur?

When examining literature, the researcher noted what factors were identified as contributory to information poverty. The researcher found that no author discussed contributory factors to child information poverty specifically, however, factors that can contribute to adolescent and adult information poverty were identified. After reviewing relevant literature, the researcher determined that adolescent and adult information poverty can occur due to: a lack of access to information, attitudes, behaviours and cultural context.

2.6.1: Lack of access to information

A number of authors suggested that information poverty can occur due to a lack of access to information (Kennan et al 2011; Bryne 2006; Britz, 2004; Britz and Blignaut, 2001; Sligo and Jameson, 2000; Diener, 1987; Cochrane and Atherton, 1980) and that this lack of access to information can be due to access being inhibited by others actively or

inadvertently (Marcella and Chowdhury, 2018; Feather, 2013; Lingel and Boyd, 2013; Yu 2011; Yu, 2006; Britz, 2004; Hersberger, 2003; Britz and Blignaut, 2001; Goulding, 2001; Chatman, 1996; Sweetland, 1993; Diener, 1987). For example, Agada (1999) who researched the information use environment of African-American gatekeepers in Wisconsin (20 interviews) had research participants who said that when they sought information from certain agencies, staff actively inhibited access to that information, that is, staff threw up “bureaucratic bottlenecks to deny” information access and, as a result, the information was “inaccessible” (Agada, 1999, p.79, 80). Access to information being actively inhibited by others was also discussed by Lingel and Boyd (2013) when they researched information practices within the extreme body modification community. Lingel and Boyd (2013, p.987) found that conscious efforts were made by some community members to restrict access to extreme body modification information from those they considered to be “outsiders.” That is, there was a desire to “keep outsiders out” (Lingel and Boyd, 2013, p.987). One research participant stated that the community can be “guarded with their “secrets”” (Lingel and Boyd, 2013, p.987). Lingel and Boyd (2013, p.986) also found that there were parents who inhibited their teenager’s information access, controlling their internet access and preventing them from accessing information online. In addition, Hamer (2003, p.85), who researched the information-seeking of young gay males around coming-out (8 interviews with late teens and early 20s) in New Jersey, also discussed a research participant whose parent blocked them from accessing “gay information” on the internet. Drabinski and Rabina (2015) who researched reference services to incarcerated people (content analysis of 112 letters of reference questions directed to the New York Public Library’s Correctional Services Program) also reported access to information being inhibited by others and this causing information poverty. That is, the authors found that incarcerated people “face significant information poverty” because they lack “access to information resources” and due to “policies that prohibit Internet access, as well as limits on the kinds of reading materials deemed acceptable” (Drabinski and Rabina, 2015, p.42). Moreover, Pitts (1994) who researched American high school students search and use of information reported that a barrier to information access was access being inhibited by others but, in Pitt’s (1994) research, inadvertently. That is, Pitts (1994) found that library staff “consistently” but unintentionally acted as barriers to student information access. Pitts (1994) discussed one occasions when library staff had tried to assist students to access information required, and indeed thought that they had provided access to that information, but the students’

information needs were not satisfied (Pitts, 1994, p.369, 379).

The literature also suggested that impairments can make information inaccessible (Haider and Bawden, 2007; Thompson, 2007). Impairments identified as contributory to information poverty were hearing (Childers and Post, 1975), eyesight (Childers and Post, 1975) and physical (Marcella and Chowdhury, 2018; Cochrane and Atherton, 1980). For example, when Beverley, Bath and Barber (2011, p.265) explored the information needs of visually impaired people. Participants said that their visual impairments impeded what information could be accessed. That is, research participants discussed instances when printed medical appointment information was sent to them, but their visual impairment meant that this information was inaccessible to them. Participants also reported that their visual impairments meant the information on their medication labels was inaccessible. Ultimately, Beverley, Bath and Barber (2011, p.267) concluded that there is a “wealth of information” which is not always “accessible” to visually impaired people.

The literature also indicated that information can be inaccessible due to inability to afford financial costs (Marcella and Chowdhury, 2018; Bronstein, 2014; Yu 2011; Haider and Bawden, 2007; Thompson, 2007; Britz, 2004; Britz and Blignaut, 2001; Lawal, 1995; Pitts, 1994; Cochrane and Atherton, 1980). For example, Bronstein (2014), when researching information poverty within obsessive compulsive disorder online support groups, found that there were individuals that knew where the information they required was available but that this information was inaccessible to them due to the costs involved in accessing this information. That is, there was “inaccessibility of relevant information sources due to economic reasons” (Bronstein, 2014, p.70). Kennan et al (2011) who researched the information experiences of Australian refugees (15 semi-structured in-depth interviews) also found financial costs inhibiting information access. That is, the authors noted refugees that were unable to access internet information due to the “expense of acquiring and maintaining a computer and Internet connection” (Kennan et al, 2011, p.206). Moreover, Hayter (2005), when researching the information worlds of residents on the disadvantaged estate in Northeast England, also noted financial costs impacting on information access. That is, cost “was a barrier to access information” (Hayter, 2005, p.194). Hayter (2005, p.147) found that bus fares from the estate to the local town were “more than some could afford” and that these fares “prevented people from accessing information.” Furthermore,

internet and telephone costs were also financial barriers to information access. Hayter (2005, p.161, 169, 194) reported that few estate residents had home telephone or internet access as phone calls were too “expensive” and although internet access was available in the community centre, for many the costs were too high.

Geographical location was also identified as a factor that can make information inaccessible (Lingel and Boyd, 2013; Thompson, 2007; Britz and Blignaut, 2001; Cochrane and Atherton, 1980). For example, Lingel and Boyd (2013, p.986) reported that in the extreme body modification community “face-to-face encounters and deep community engagement” were important ways to obtain extreme body modification information and that those whose geographical location meant such encounters and engagement was not possible lacked access to this information.

Lack of skills was also highlighted in the literature as a contributory factor to information poverty (Case, 2012; Britz, 2004). That is, the literature identified that information poverty can occur due to a lack of: literacy skills (Marcella and Chowdhury, 2018; Haider and Bawden 2007; Britz, 2004; Britz and Blignaut 2001; Sligo and Jameson, 2000;), communication skills (Feather, 2013; Hayter, 2005; Childers and Post 1975), information technology skills (MacDonald, Bath and Booth, 2011; Haider and Bawden 2007; Sweetland, 1993) and information literacy skills (Marcella and Chowdhury, 2018; Kennan et al 2011; MacDonald, Bath and Booth, 2011; Haider and Bawden 2007; Britz, 2004; Britz and Blignaut 2001; Goulding 2001; Sweetland, 1993). For example, Sligo and Jameson (2000) researched barriers to cervical screening amongst New Zealand, Pacific women (20 in-depth and semi-structured interviews) and found that information access was impeded due to a lack of literacy skills. That is, the authors stated that a “lot of the ladies they are more or less illiterate, they cannot read” so cannot access information (Sligo and Jameson, 2000, p.865). In addition, Buchanan and Tuckerman (2016 p.538, 543), who investigated the information behaviours of disadvantaged and disengaged adolescents (16-19) in Scotland (36 observations and 15 interviews with adolescents, focus groups with four adolescents and interviews with six support workers), noted that the adolescents had “Significant literacy issues (encompassing reading, computer, and information)” struggling “to understand words in books” and experiencing “difficulties with online searches and webpages.” Furthermore, Kennan et al (2011) when researching the information experiences of

Australian refugees, found that a lack of literacy and communication skills inhibited refugee information access. The authors reported refugees that lacked access to information because of “barriers created by language and literacy difficulties” (Kennan et al, 2011, p.197). Moreover, lack of information technology skills was a barrier to information access reported by Hayter (2005, p.138, 161, 162) when discussing estate residents who described the internet as a “source of valuable information” but some residents lacked the skills to access this information. Black (2014) who investigated the information seeking experiences of post-secondary distance/online students (17 participants interviews, observations, field notes and participant reflexive journals) in British Columbia also found a lack of information technology skills hampering information access. The majority of Black’s (2014, p.207) research participants stated that they lacked knowledge regarding technology and just “over two thirds of the participants experienced technical barriers that specifically hindered information seeking.” Moreover, Pitts (1994), when researching American high school students search and use of information, identified individuals lacking access to information due to a lack of information literacy skills. Pitts (1994, p.348, 368, 377, 379) discussed students who were unable to access information in libraries because of their “inadequate” understanding of libraries. Pitts (1994, p.348, 368, 377, 379) discussed an incident when the information a student needed “was almost literally at his fingertips” but because they did not understand how the library was organised the student was unable to access this information. Furthermore, Kennan et al (2011), when researching the information experiences of Australian refugees, also noted a lack of information literacy skills impacting on information access. The authors concluded that there is a “strong relationship” between information literacy and information poverty (Kennan et al, 2011, p.208).

2.6.2: Attitudes and behaviours

The researcher also noted that attitudes and behaviours were identified in the literature as factors that can contribute to information poverty (Yu, 2011; Britz,2004; Britz and Blignaut, 2001; Cochrane and Atherton, 1980). That is, the literature indicated that information poverty can occur due to a lack of motivation to seek or share information or due to a lack of perseverance to continue efforts once initiated (Childers and Post, 1975). For example, when researching university janitors in the United States (52 participants, ethnography/ participant observation and interviews), Chatman (1991) noted that research participants lacked the motivation to obtain information. Chatman (1991, p.445, 447) outlined that

research participants undertook “limited” searches for information or even “no information seeking” at all as they believed that efforts were “not worth it.” Furthermore, Hayter (2005), when researching the information worlds of residents on the disadvantaged estate, determined that there were estate residents who lacked motivation and perseverance which was a barrier to their obtaining information. That is, Hayter (2005, p.124, 139, 191, 192) reported that the residents “want everything on their doorstep and they aren’t prepared to go out to search for what they want or need; this includes information.” Hayter (2005, p.124, 139, 191, 192) also stated that when seeking information estate residents “lacked the energy to do anymore” and “gave up.” Black (2014, p.215) who researched the information seeking experiences of distance/online students also noted that research participants were not “motivated” to seek information and not “persistent when searching challenges were encountered.” Black (2014, p.207, 208) reported that when some research participants faced barriers when information seeking, they variously commented “I couldn’t figure how to log on, so I didn’t bother” and “it takes way too long,” “so I don’t bother” and “I get distracted.” Moreover, Buchanan and Tuckerman (2016), who investigated the information behaviours of disadvantaged and disengaged adolescents, evidenced adolescents not persevering to obtain information. The authors reported the existence of “passive non-motivated information behaviours” and support workers stated that the adolescents “want everything now” but lack the attention span to obtain information and “often don’t have the patience to sit down and read and assimilate” information (Buchanan and Tuckerman, 2016, p.539, 540, 543).

The literature also outlined that information poverty can occur because self-protective behaviours are employed (Bronstein, 2014; Hasler, Ruthven and Buchanan, 2013; Lingel and Boyd, 2013; Sligo and Jameson, 2000; Chatman, 1996). For example, Chatman (1996), when researching the information worlds of ageing women and janitors, noted information poverty occurring due to individuals keeping information secret. Chatman (1996, p.198, 199, 205) said that “information of the most critical kind was not being asked for or shared,” participants kept their “problems to oneself,” their “concerns private” and were “secretive” due to “fear.” Hamer (2003), when researching the information-seeking of young gay males, also highlighted research participants employing self-protective behaviours. Hamer (2003, p.80, 81) noted that some young gay males experienced information poverty because they “did not pursue information needs” because they were

“too scared.” That is, these males had a “fear of being caught” and had “concerns” around seeking information “that would label me as gay” and these fears acted as “barriers to finding information.” Hamer (2003, p.81) stated that “almost all the participants expressed that they experienced fear at some point during information seeking” and as a result did not “pursue information needs.” In addition, Hayter (2005), in their research which investigated the information behaviour of people living on a ‘disadvantaged’ estate, reported that there were estate residents who did not disclose or access information as they feared that this information would not be kept secret. That there were estate residents were “too proud, embarrassed or ashamed” to reveal their “problems” or information needs even to family and friends (Hayter, 2005, p.99, 182, 184). A Community Development Worker highlighted the impact of keeping such information secret, that is, because people had kept information a “secret,” because they didn’t “want it to be out,” because they didn’t want “people to know about it,” they were in “really bad situations,” in a “complete mess” (Hayter, 2005, p.101). Moreover, Bronstein (2014), when researching information poverty within the obsessive compulsive disorder online support groups, also discussed individuals who experienced information poverty because they employed self-protective behaviours. Bronstein (2014, p.70, 71) outlined that there were those who hid symptoms relating to their mental health “because of the stigma attached to mental illness.” These individuals did not seek or share information regarding their mental health as they wanted to “give an appearance of normalcy” and were “embarrassed and ashamed” (Bronstein, 2014, p.70, 71).

2.6.3: Cultural context

The researcher also found in the literature that information poverty can occur due to cultural norms hampering what information is accessed or shared. That is, that information poverty can occur due to individuals abiding by social norms as to what information is appropriate to seek or share (Marcella and Chowdhury, 2018; Hasler, Ruthven and Buchanan, 2013; Lingel and Boyd, 2013; Thompson, 2007; Yu, 2006; Sligo and Jameson, 2000). For example, Sligo and Jameson (2000), in their research which explored barriers amongst New Zealand Pacific women to cervical screening, found that cultural norms acted as a barrier to information access and sharing. That is, the authors found that cervical screening was a “sensitive” topic for the community and that these sensitivities created “significant and enduring barriers” to the seeking and sharing of information on the topic

(Sligo and Jameson, 2000, p.865). Research participants discussed cervical screening and stated that “in our culture . . . upbringing, you don’t really ask about things like that” and “It is not easily spoken of, it is somewhat taboo, and in the Fijian community that you do not speak or readily discuss” (Sligo and Jameson, 2000, p.863). Hayter (2005), in their research which explored the information behaviour of people living on the disadvantaged estate, also noted cultural norms acting as a barrier to information access. Hayter (2005, p.112) stated that although information was “available” some residents did not access that information because of “cultural mores.” In addition, Hasler, Ruthven and Buchanan (2013), who explored the use of online news and discussion groups by people in situations of information poverty (content analysis of 200 posts across internet groups), also highlighted social norms impacting on information access. That is, the authors found that certain topics such as unwanted pregnancies were “socially unacceptable to admit to,” to “voice concerns” about or to “seek information” on, as to do so would involve seeking information to satisfy information needs “that go against others’ expectations of how things should be” (Hasler, Ruthven and Buchanan, 2013, p.7, 8, 10).

The literature also suggested that cultural contexts can contribute to information poverty due to isolation from the wider information community and that this isolation can be self-selected or imposed (Hasler, Ruthven and Buchanan, 2013; Yu, 2011; Yu, 2006; Jaeger and Thompson, 2004; Sweetland, 1993). For example, Sligo and Jameson (2000, p.863), when researching barriers to cervical screening information, stated that because the topic of cervical screening was “taboo” for New Zealand pacific women, the “inability to discuss something of such personal significance constitutes a dramatic form of social isolation.” Moreover, Hayter (2005, p.97, 100, 101, 112), when researching the information behaviour of people living on the disadvantaged estate, observed that estate residents lived insular lives and were cut off from the outside world and that on the estate misinformation was considered fact and rumour and gossip were rife. Hayter (2005, p.1, 2. 151) stated that this isolation from the wider information community had “huge implications” for information behaviour as external and formal information sources were seldom used. That is, estate residents generally used “local social networks” such as family and friends to satisfy their information needs but the information obtained from these sources could be “unreliable and erroneous.”

2.7: Summary: Review of relevant literature

This chapter outlined how the researcher obtained relevant literature during this research study.

Literature was primarily obtained via a systematic literature review (undertaken in the LISA database in January 2014) which sought material to date that contained the term information poverty specifically. Literature was also obtained in other ways including by utilising functions on Wiley Online Library and ScienceDirect and setting up and monitoring email alerts which notified the researcher of any newly published relevant material. Any relevant material published after the systematic literature review was undertaken in January 2014 was included in this thesis if deemed relevant.

After reviewing relevant literature, the researcher deemed that the concepts key to this research study were information, information need, information seeking, information behaviour and equitable information access.

The models deemed relevant to this research study were Childers and Post's (1975) theories regarding barriers to information needs, searches, acceptance and use and Chatman's (1996) information poverty theories.

The researcher found no theories pertaining to child information poverty specifically in the literature. There were also no published empirical child information poverty studies.

After reviewing relevant literature, the researcher determined what definitions of information poverty were available and considered the differences and similarities between these definitions. The researcher then determined how they would define information poverty. The researcher also noted what factors were identified as contributory to information poverty in the literature. In some cases, the authors used the term information poverty specifically when discussing contributory factors. In other cases, the researcher determined that the factors being discussed were contributory to information poverty although other terms were used. Similar contributory factors discussed by more than one author using the same or slightly different terms were then grouped by the researcher.

Based on their findings after reviewing literature, the researcher defined information poverty as when individuals or demographic groups are unable or unwilling to access or share information.

The researcher also found, from their review of literature, that adolescent and adult information poverty can occur due to a lack of access to information and that this can occur due to: others inhibiting access actively or inadvertently, impairments including hearing, eyesight or physical; financial costs; geographical location and a lack of skills, specifically information technology, literacy, communication and information literacy skills. The researcher also identified that attitudes and behaviours can contribute to adolescent and adult information poverty due to: a lack of motivation to seek or share information, a lack of perseverance to continue efforts once initiated and self-protective behaviours being employed. The literature also indicated that cultural contexts can contribute to adolescent and adult information poverty due to: isolation from the wider information community or cultural norms hampering what information is accessed or shared.

Chapter 3: Methodological approach to research study

This study sought to better understand information poverty and explored early manifestations of information poverty in children. This chapter outlines the methodological approach of this research study, discusses how the researcher chose research methods and how the researcher anticipated analysing research data.

3.1: Research philosophy

As the researcher found no literature pertaining to child information poverty when reviewing relevant literature, this was an exploratory research study. That is, there was no literature to advise the researcher when information poverty first occurs or manifests, whether children experience information poverty and if children do experience information poverty what the reasons for this are. Therefore, via this research study, the researcher sought to obtain data to contribute to better understandings of child information poverty.

The researcher anticipated that this research study would be deductive but would also incorporate inductive aspects. The researcher anticipated that this study would be partly deductive because the researcher had engaged with relevant literature and would be informed (but not limited) by this literature. For example, the researcher had examined the work of Childers and Post (1975) regarding barriers to information needs, searches, acceptance and use and Chatman's (1996) theories regarding information poverty. The researcher had also thematically grouped the contributory factors to adolescent and adult information poverty identified in the literature. However, the researcher also anticipated that this study would also incorporate inductive aspects because there was no child information poverty literature available. This meant that there were no child information poverty theories for the researcher to consider when undertaking their research study and, via this study, the researcher sought to generate data to contribute to the development of child information poverty theories.

3.2: Research methods

When considering the most effective way to obtain empirical data, the researcher considered the aims of this research study and what data was needed to answer the research questions of this study. This study sought to better understand information poverty, exploring early manifestations of information poverty in children and the research

questions of this study were: What is information poverty and why does it occur, and Do children experience information poverty and if so, why?

The researcher decided to triangulate research methods and research participants, believing that this would result in deeper understanding of information poverty. That is, the literature advised that collecting data from multiple perspectives using different methods can strengthen research findings and increase the credibility of research (Given, 2008). The researcher thought that triangulation would be particularly appropriate for this research study, as the researcher considered including the voices of children to be integral to this study but, as there was no child information poverty data available, the researcher wanted to triangulate data obtained from child research participants with data obtained from adults. The researcher was aware that such triangulation would mean collecting and analysing data would take longer. However, the researcher considered that the benefits of triangulation would outweigh this limitation and that triangulation would be feasible in the time available.

The researcher thought that reliable and relevant data to answer this study's research questions could be obtained via qualitative research methods and decided that interviews with adults and fieldwork with children, would be appropriate qualitative research methods for this study.

Research methods were chosen based on the researcher's skills and abilities but also because methods were deemed to be appropriate for research participants, suited to the time available and culturally and situationally appropriate (Given, 2008). The researcher also thought that these research methods would satisfy ethical requirements and any "external constraints" which might impact on fieldwork (Mukherji and Albon, 2015, p.237).

The researcher also chose interviews with adults as a research method because they noted from the literature that interviews were a research method used in other relevant research studies. For example, adult interviews were used by Walter (1994), to investigate the information needs of 10 year old children; by Hersberger (1998) to investigate the information poverty of homeless people; by Sligo and Jameson (2000) to research barriers to cervical screen information amongst New Zealand Pacific women and by Lingel and Boyd

(2013) when researching information poverty within the extreme body modification community.

The researcher also considered whether other research methods should be used in this research study, including participant observation, questionnaires, diaries and journals. However, the researcher rejected these research methods considering these less suitable ways to effectively answer this study's research questions. That is, the researcher believed that these methods would not gain data as efficiently, that information obtained would not be as detailed or reliable, or that these methods were inappropriate for research participants. For example, participant observation was deemed to be unsuitable to investigate child information poverty, as the researcher anticipated investigating child information poverty whilst considering Chatman's (1996) theories regarding information poverty and secrecy. Chatman (1996, p.193, 195, 199) argued that "secrecy" can serve "as the basis for defining an impoverished life-world" and the researcher thought that it might be difficult to observe whether child research participants were keeping information secret if children were doing this effectively. Moreover, questionnaires, diaries and journals were also rejected as research methods for this study because the researcher thought that completing these would require certain levels of writing literacies that child research participants may not have developed as yet. Furthermore, literature also advised which research methods were appropriate for child research participants. For example, McKechnie (2000, p.61), advised that "questionnaires are not suitable for use with young children whose oral and written language skills are not well developed."

The researcher also considered whether interviews with adults or fieldwork with child research participants should occur first. The researcher was aware that in some previous studies, researchers had interviewed participants first, as doing so can provide background knowledge and make subsequent fieldwork more effective (Given, 2008). For example, Kennan et al (2011, p.195), when researching the information experiences of Australian refugees, interviewed participants first, then subsequently ran focus groups to explore the "themes and perspectives" that emerged during interviews. Whereas McKechnie (2000, p.62), when exploring the public library use of thirty three year old girls, undertook fieldwork with children first and then follow up interviews to "verify" and check the typicality of what was found from child research participants. In this research study the

researcher decided to intersperse adult interviews with fieldwork with child research participants. That is, the researcher planned to undertake interviews with adults and fieldwork with children concurrently. The researcher believed that by undertaking the research in this way, they would benefit from the knowledge they gained from initial interviewees and child research participants but would also be able to seek clarification of initial data obtained from adults with children (or vice versa).

3.2.1: Fieldwork with children

The researcher considered it integral to consult children directly during their child information poverty investigations believing that adults are not always best placed to represent children's views and experiences. That is, that adults do not always understand children's views and experiences correctly or report these accurately (Mukherji and Albon, 2010, p.48; Shenton 2010, p.61). The researcher also sought to add to the body of research that recognises children as "experts on their own lives" (Mukherji and Albon, 2015, p.59, 61, 158). In addition, after noting that literature advised that, in some instances, research is carried out "on children rather than with children" (Mukherji and Albon, 2015, p.59, 61, 158), this research study aimed to work with children to answer research questions not merely have child research subjects (Farrell et al, 2002).

An initial consideration for the researcher was what age of children should participate in this research study. That is, at what age is it possible to obtain meaningful data from children and when do children become "competent informants on their own lives" (Farrell et al, 2002, p.5). The researcher also had to consider at what age children are used to being listened to as, if children are not used to being listened to, their inexperience might act as a barrier to participation and impact on research results (Mukherji and Albon, 2010, p.122). To determine what age of children should participate in this research study, the researcher consulted relevant literature. As no child information poverty studies existed, the researcher gained insights from relevant literature pertaining to children from outwith the field of information poverty. For example, the researcher consulted child information behaviour and child development literature and the work of Spink and Heinstrom (2011) was found to be relevant. Spink and Heinstrom (2011, p.253) argued that information behaviour emerges somewhere between three and five years old and has been noted in children from age four. That is, Spink and Heinstrom (2011, p.253) outlined that at age four

there is “evidence of information behaviour in the form of Web searching and information organising through library information categorisation. Spink and Heinstrom (2011, p.253) also stated that there is “evidence of change between a three-year-old child who is personally centred and fairly concrete in thinking, with limited information behaviour, to a four- or five-year-old child who is more abstract in thinking and being shaped by social interaction.” The researcher also considered the work of Piaget who has been described as one of the “most influential scholars in early childhood cognitive development” (Spink and Heinstrom, 2011 p.247). Piaget believed that from age six, children “become capable of mental operations,” as their thinking “becomes more organized and flexible” and they are able to think “about alternative approaches and strategies for solving problems” (Lightfoot, Cole and Cole, 2009, p.397). The researcher therefore decided in this research study to work with children aged between six and eight as, at this age, children are slightly older than when information behaviour is thought to first emerge and children should also be at an appropriate developmental stage to participate in such research.

The researcher decided to run pilots with child research participants, believing that running pilots would assist the researcher to determine whether children aged between six and eight were at an appropriate age to participate in this research study. That is, if, during the pilots, information poverty was not detected in children aged between six and eight, the researcher would then change the research parameters and work with child research participants older than aged eight.

Research methods therefore had to be appropriate for children aged between six and eight. The researcher deemed that asking child research participants to complete tasks, and then participate in group discussions, would be appropriate research methods as, the literature advised, by age six, children are familiar with taking part in shared discussions with their peers (Mukherji and Albon, 2015, p.158). The researcher also chose group discussions as an appropriate research method because literature advised that being in the company of other children can help children to articulate their thoughts (Roberts-Holmes, 2011). The researcher also decided that investigating child information poverty by asking children to complete tasks and to then participate in group discussions, would allow the researcher to gain an understanding of children’s shared views on the research topic and enable the researcher to work with a greater number of child research participants than if individual

interviews were undertaken for example.

Interviews were also not selected as a research method for child research participants as literature advised that children may be “intimidated” in one-to-one interviews with a researcher, especially if “not familiar with that researcher” (Roberts-Holmes, 2011, p.152). The literature also advised that it can be difficult to undertake individual interviews with children, as children can find it hard to answer direct questions about themselves whereas in group discussions, conversations can flow more effortlessly (Roberts-Holmes, 2011).

The researcher planned that fieldwork with child research participants would be relatively “structured” and that the researcher would play an “active role” to ensure that group discussions stay focussed on the research topic (Given, 2008, p.352). The researcher also recognised that children would need to feel “comfortable” with the researcher and be willing to be involved in research process (Given, 2008, p.353). The researcher was aware that as children would be “allowing” the researcher “to enter their world” that the researcher should be respectful of that (Farrell et al, 2002, p.5). The researcher considered the work of McKechnie (2000, p.64) who recommended that, for children to feel comfortable during the research process, researchers should explain their research to children using simple concrete terms, introduce recording equipment before starting fieldwork and offer children choices where possible. The researcher also recognised that parents and other adults have responsibility for children and that the “developmental inability” of some children to understand the research process, meant that gaining access to child research participants was likely to be via “adult caretakers,” and that it would be necessary to gain the trust of these caretakers and work around the needs of the children and these carers (Carey, McKechnie and McKenzie 2001, p.327).

Another practical consideration for the researcher was how to ensure that all child research participants had a voice during group discussions. That is, how to ensure that some children did not dominate group discussions, literature advised that, even in small groups, this can be an issue. For example, Rutter, Ford and Clough (2014), interviewed two small groups of children (8-9), one group of four children and one group of six, when undertaking research in the UK which explored how children reformulate search queries. The authors noted that it was difficult to ensure that each child got a chance to speak during interviews

without other child research participants talking over them (Rutter, Ford and Clough, 2014).

The researcher also considered relevant literature to determine what data they should obtain from child research participants. That is, what data would assist the researcher to answer the research questions of this study. For example, the researcher reflected on the empirical research, undertaken by Rutter, Ford and Clough (2014), which investigated how children reformulate search queries. In Rutter, Ford and Clough's (2014, p.424) study, the authors asked child research participants "what they found easy and what they found hard" about completing a search task. The researcher thought that asking a similar question to children during this research study, as to what they find hard about obtaining information, might assist the researcher in identifying barriers to children's information access and thus, causes of child information poverty. The researcher also considered the information poverty theories of Chatman (1996) when considering what data should be obtained from child research participants. That is, Chatman (1996) deemed that an impoverished information world is one in which individuals' keep information secret for self-protective reasons. The researcher therefore thought that it might be worthwhile, in this research study, to determine if child research participants had ever kept information secret. As if, as Chatman (1996, p.193) stated, "secrecy" can serve "as the basis for defining an impoverished life-world," the researcher thought that it would be valuable to investigate whether children keep information secret and therefore, live in impoverished information worlds.

As well as examining literature when considering research design, the researcher also obtained advice from teachers with experience of teaching children aged between six and eight. The researcher asked teachers how to obtain data most effectively from children of this age. For example, one teacher advised the researcher not to give children of this age "too many options, when asking questions or allocating tasks, because a lot of children can't hold that much information at that age." This teacher also advised that children aged between six and eight can respond better to information provided in picture format as opposed to written information. The researcher therefore incorporated the advice that they obtained from teachers into their research design.

The researcher planned to recruit child research participants by contacting schools local to

the researcher in the first instance for reasons of practicality.

To obtain data from child research participants, the researcher planned to visit children in their class groups in their classrooms. The researcher would introduce themselves, explain the research study as fully as possible (in language that the children understood) and outline to the children what participating in the research study would involve. The researcher believed that providing as much detail as possible to child research participants was important. The researcher wanted the children to know who they would be working with, what they would be doing and when and where the research would take place. The researcher also wanted child research participants to feel comfortable with the research process and the researcher.

The researcher planned to introduce their research study to children via a puppet called Jack who wanted to find out information about dinosaurs. The researcher would ask child research participants what Jack could do to find answers to his questions. The researcher would then ask child research participants what happens when they want to find something out? Where do they go? Who do they ask? What do they do? Does anything stop them from finding out what they want to know?

The researcher created five tasks for child research participants to undertake. The researcher believed that these tasks were an appropriate way to determine whether the children had ever experienced information poverty and, if so, why this was the case. The researcher also believed that these tasks would be appropriate to the needs of child research participants. At every point in the research process, the researcher planned to use language that child research participants could understand. The researcher would also check with child research participants regularly that they understood the questions being asked and instructions given.

The tasks that child research participants would be asked to undertake were as follows. Child research participants would be given pictures of four information sources. These pictures would represent adults, a young person or child, the internet and books. For the first task, child research participants would be asked to place a cross or a tick on the picture(s) of the sources, depending on whether they had ever obtained information from

each of the sources or not. For the second task, children would be asked to put a number one on the picture(s) of the source(s) that they used most often to obtain information from. The children would be able to put a number one on more than one source picture if they use more than one information source most often. Children would also be asked if there are any sources, apart from those pictured, that they use to obtain information from most often. In the third task child research participants would be asked to put a smiley face sticker on a picture(s) of source(s) that they can easily obtain information from and a sad face sticker on the picture(s) of source(s) that they find hard to obtain information from. In the fourth task children would be asked whether they think that they generally get their information needs met or not, and to stand up if their needs do get met or sit down if their needs are not generally met. In addition, those children who indicate that they do generally get their information needs met would then be asked to move to another area of the classroom. Those children would then be asked to stay standing if they generally satisfy their information needs independently and to sit down if they generally need assistance to satisfy their information needs. The researcher also planned that, after each of these tasks, a group discussion would take place to allow children the opportunity to provide more details regarding answers given. For the fifth, and final, task children would be asked to cover their papers (so that no one else could see what they write) and to tick their paper if they had ever kept information secret, not asked a question or shared information (perhaps because they had been too shy or embarrassed) and to cross their paper if this had not occurred. Children would then be asked to place their paper in a pirate treasure chest. Children would be given the option to add an explanatory sentence as to why they had not asked a question or tried to find something out. The researcher would tell child research participants that a pirate's treasure chest was being used for this task as the information they were sharing is as valuable as a pirate's treasure and because the researcher would respect the anonymity of their data in the same way that a pirate keeps the location of their treasure a secret.

The researcher designed their research in this manner to, as far as possible, allow all children in a class to participate in this research study, no matter their skills or developmental level. For example, in Task Four, children would be asked to stand up or to sit down to indicate whether their answer is yes or no to this question. This means that children who are not verbally confident sharing information with the researcher or who do

not have the skills to write answers could still participate in the research study.

When deciding how to work with child research participants, the researcher also sought to balance ethical behaviour alongside obtaining valuable original data from children. For example, the researcher recognised that there can be a “power imbalance between adults and children” (Farrell et al, 2002, p.7). The researcher also had to consider what benefits being involved in this research study could offer child research participants. The researcher deemed that potential benefits for child research participants were developing confidence and skills in citizenship and the opportunity to speak, listen and learn about the environment and their place in it (Mukherji and Albon, 2015, p.62). The researcher was particularly mindful of behaving ethically when designing the task where they sought to establish whether children had ever kept information secret, not asked a question or had ever censored information shared. The researcher had deemed it appropriate to investigate whether this had ever occurred and while they recognised the value of determining what specific information children had kept secret or questions they had not asked, the researcher thought it inappropriate to pursue detailed information from children on this topic, in a group situation, in a school setting. That is, in schools, adults can be regarded by children as authority figures and children might feel pressured to provide the researcher with more detail than they wished to. Therefore, the researcher chose to establish whether children had ever kept information secret and to provide children with the opportunity to offer more detail if they wished to but decided not to seek further specifics on information kept secret by children during group discussions.

3.2.2: Interviews with parents and teachers

The researcher also thought that investigating adults’ views on child information poverty was important as there was no existing data to compare research findings obtained from child research participants against. The researcher had also noted, when reviewing literature, that Walter (1994) had interviewed adults when investigating child information behaviour. That is, Walter (1994) investigated the information needs of 10 year old children in California by interviewing adult professionals who worked with the children in a variety of capacities. Walter (1994, p.127) decided to consult adults rather than children believing that adults were the “most appropriate sources of data about children’s information needs.”

For this research study, the researcher thought there would be value in consulting adults knowledgeable about children aged between six and eight. The researcher chose to engage in purposive sampling by occupation to seek adult interviewees as the literature advised that “one well-placed” informant can “advance the research far better than any randomly chosen” larger sample (Given, 2008, p.697). The researcher selected primary teachers as appropriate adults to interview believing that primary teachers could provide useful insights into the research topic. As well as interviewing primary teachers, the researcher also thought it would be useful to interview parents as, if both parents and teachers were interviewed as part of investigations into child information poverty, this would assist the researcher to answer the research questions of this study and allow the researcher to gain insights into child information poverty in home and in school information environments.

As the researcher had decided to work with child research participants aged between six and eight, the researcher therefore sought to interview primary three class teachers as in primary three in Scotland, children are generally aged between age six and eight. The researcher also sought to interview parents of children aged between six and eight. The researcher planned to undertake pilot interviews and the results of these pilot interviews would determine whether the researcher continued to interview parents and teachers of children aged between six and eight. That is, if no child information poverty was identified after interviewing the parents and teachers of children aged between six and eight, the researcher would then interview parents and teachers of older children.

The researcher had deemed interviews to be the best method of obtaining data from parents and teachers as the literature advised that interviews are an “effective” way to learn in participants’ own words their “perceptions of and experiences with” a topic (Given, 2008, p.432). While interviews can range from unstructured to highly structured, the literature advised that structured interviews and too much closed questioning can prevent interviewees from elaborating when they answer questions and in structured interviews information obtained can be “limited in nature” (Mukherji and Albon, 2015, p.153). The researcher therefore, chose to undertake semi-structured interviews with parents and teachers. Semi-structured interviews would involve the researcher asking participants the same open questions. The researcher believed that semi-structured interviews would offer

“some degree of standardisation” but would also allow participants to respond more freely to questions asked. Undertaking semi-structured interviews would also allow the interviewer flexibility if they wanted to pursue additional details depending on initial responses to questions (Mukherji and Albon, 2015, p.154). The researcher also decided to undertake in-person interviews believing that in-person interviews would allow the researcher to “develop rapport with participants” and observe “nonverbal clues” including interviewee context or whether the interviewee nodded or shook their head during an interview (Given, 2008, p.432).

Based on recommendations available in the literature, the researcher planned to begin each interview with a “briefing” to explain their research study (Given, 2008, p.470). The researcher anticipated that starting with a briefing would inform interviewees and put them at ease. The researcher also planned to keep interview questions “brief, simple and open,” and to end interviews with a “debriefing” to allow interviewees to add additional comments and ask any questions (Given, 2008, p.470).

The researcher developed their interview questions after considering how best to generate data to answer this study’s research questions. Literature was also examined for insights into effective interview questions. For example, the researcher considered the interview questions from Walter’s (1994) research investigating the information needs of 10 year old children in California. In their study, Walter (1994, p.119) asked interviewees “What could be done to improve the quality and quantity of information that California children receive? What are the barriers to kids getting the information that they need? How could these obstacles best be overcome?” To obtain data to answer the research questions of this study, while also adhering to advice in the literature, including Given’s (2008, p.470) recommendation that interview questions should be “brief, simple and open,” in this study Walter’s (1994) question was adapted. That is, the researcher planned to ask interviewees: Can you think any difficulties or challenges that children aged between six and eight might face when trying to find things out? Moreover, so that initial interview questions could be kept succinct and understandable, the researcher prepared follow up questions to ask participants depending on initial answers given to questions asked. For example, after asking interviewees about the difficulties or challenges that children might face in obtaining information, the researcher prepared several follow up questions. These questions

included: What are the difficulties or challenges? Can you think of examples? How do you know that these difficulties or challenges are faced? Why do you think these difficulties or challenges exist? How do children deal with these difficulties and challenges? Why do you think children deal with difficulties or challenges in this way? How do you think these difficulties or challenges can be overcome?

Outlined below are the interview questions that the researcher planned to ask each parent and teacher interviewed:

Question 1. When your child/children aged between six and eight want(s) to find something out what do they typically do?

Follow up questions (asked depending on initial answers given):

What sources do they use? Why do they use these sources? Can you think of any examples? How do you know there are preferred sources? What signs are there?

Question 2. Are there any sources that your child/children aged between six and eight would not use if they want to find something out?

Follow up questions:

What sources? Why wouldn't they use these sources? Can you think of any examples? How do you know there are sources that would not be used? What signs are there? Are there any sources you would not want used?

Question 3. Do you think your child/children aged between six and eight is/are generally successful if they want to find something out?

Follow up questions:

What about independently? Can they go on the internet themselves? Get access? Type in a question? Find a result and obtain information? With books can they work content and index pages and find information required? Can they find a book in a library using the Dewey Decimal System?

Question 4. Can you think any difficulties/challenges your child/children aged between six and eight face when trying to find things out? Any reasons that they might be unable to find something out?

Follow up questions:

What difficulties/challenges are there? Can you think of any examples?

What difficulty/challenge to obtaining information are most significant?

How do you know that difficulties/challenges are faced? What signs/visual

indicators are there? How does your child/children aged between six and

eight behave? Why do you think these difficulties/challenges exist? (If too

hard, why too hard?) How are these difficulties/challenges dealt with?

Why do you think these difficulties/challenges are dealt with in this way?

How could these difficulties/challenges be overcome? If too hard - what would make it easy?

- Question 5. Do you think there are occasions when your child/children aged between six and eight has/have kept information secret? That is, been unwilling to share certain information or wanted to know something but would not ask a particular question or look for certain information, have they hidden their need? For example, they might have sensitive questions about their bodies or want to know about how to stop wetting the bed but be too embarrassed to ask?

Follow up questions:

Can you think of any examples to illustrate this? Why do you think this is

the case? How do you know that they are unwilling to share certain

information or wouldn't ask a question?

- Question 6. Can you think of one thing that could improve your child/children aged between six and eight access to or use of information?

Follow up questions:

Why would this improve their access to or use of information? Can you think of an example to illustrate this?

The researcher was aware that data saturation can occur when undertaking interviews. That is, that there would be a point that "no new or relevant data" emerged (Bryman, 2008, p.416). The literature advised that data saturation can occur after 12 interviews (Bryman, 2008, p.462). Therefore, the researcher was aware that when they thought that they were no longer obtaining insightful or original data, this could be appropriate point to stop

seeking additional interviewees.

The researcher intended to contact schools local to them to recruit teachers to interview until data saturation was reached. Schools contacted would be local mainly for pragmatic reasons for ease of access. If this strategy did not prove effective, the researcher planned to use a snowballing technique whereby they would ask initial interviewees to provide contact details for other potential participants that met the “eligibility criteria” of this research study (Given, 2008, p.815). To recruit parents, the researcher planned to seek participants via local Twitter and Facebook groups.

The researcher also considered ESRC (2015) guidance concerning ethical researcher behaviour when determining how interviews should be undertaken. Ethical considerations for the researcher regarding parent and teacher interviews were around issues of consent. The researcher looked for participant consent to be freely offered, fully informed and continuous and for participants to know that they could withdraw their consent at any time. The researcher also wanted interviewees to know that the researcher would respect the confidentiality of data provided and the anonymity of their responses.

3.3: Data Analysis

The researcher anticipated that data analysis would be dynamic. The researcher planned to begin analysing research data as soon as the first fieldwork with child research participants or interviews with parents and teachers had been undertaken. This meant that if any changes to research design were required, changes could be implemented in a timely manner before any subsequent data was gathered. For example, after the first interview the researcher would review the effectiveness of the interview process, review what data they obtained and consider whether any interview questions should be refined (Given, 2008).

The researcher also planned to write memos during and after data collection. These memos would be used to note “personal, conceptual and theoretical ideas or reflections,” any “questions raised” or any literature that could be of assistance to interpret research results (Given, 2008, p.186).

3.3.1: Thematic Analysis

The researcher planned to use thematic analysis to analyse research data. Thematic analysis is a way to identify, analyse and report patterns or themes within a data set (Braun and Clarke, 2008, p.79, 97). Thematic analysis was selected for data analysis because it was reported to be a “flexible approach that can be used across a range of epistemologies and research questions” (Braun and Clarke, 2008, p.79, 97).

Thematic analysis involves searching across a data set (this can be a number of interviews or focus groups for example) to find “repeated patterns of meaning” or themes (Braun and Clarke, 2008, p.86). Identifying patterns or themes can be “a question of prevalence,” prevalence “within each data item” or prevalence “across the entire data set” (Braun and Clarke, 2008, p.82). Researcher judgment is required to identify patterns or themes in the data (Braun and Clarke, 2008, p.82).

While “the exact form and product of thematic analysis” can vary, the researcher anticipated that, in this research study, thematic analysis would incorporate both inductive and deductive aspects (Braun and Clarke, 2008, p.86). Inductive aspects because the researcher did not plan to code their research data according to a specified and fixed “coding frame” created in advance (Braun and Clarke, 2008, p.83). However, the researcher was aware that they would be unlikely to “free” themselves of their “theoretical and epistemological commitments” and would not be coding their data “in an epistemological vacuum” (Braun and Clarke, 2008, p.84). Moreover, as the researcher planned to consider the research questions of this study when analysing research data, data analysis would also have deductive elements (Braun and Clarke, 2008, p.84). Data analysis would also be partly deductive because the researcher had engaged with relevant literature prior to beginning data analysis and would be analysing data in the context of literature reviewed (Braun and Clarke, 2008, p.86). For example, the researcher planned to consider Chatman’s (1996) theories regarding information poverty and secrecy when analysing research data. That is, Chatman (1996, p.195, 199) argued that keeping information secret can serve “as the basis for defining an impoverished life-world.” During this research study, the researcher planned to code their data by establishing whether the children investigated in this research study supported Chatman’s (1996) theories regarding information poverty and secrecy or not. The researcher also planned to consider the

theories of Childers and Post (1975) regarding barriers to information needs, searches, acceptance and use and the thematic grouping of the contributory factors to adolescent and adult information poverty identified when reviewing literature when analysing research data.

3.3.2: Coding data and identifying themes

Coding research data would involve the researcher seeking “patterns of meaning and issues of potential interest in the data” and noting “potential coding schemes” (Braun and Clarke, 2008, p.86).

The researcher anticipated that they would code their research data manually using Excel but was open to using software programmes to code if this was deemed necessary.

The researcher planned to listen to transcripts in their entirety and transcribe research data personally. Although transcribing data can be a lengthy process, the researcher believed that personally transcribing their research data would be useful as Braun and Clarke (2008, p.88) advised that transcribing can inform the “early stage of analysis” and can allow the researcher to develop a “thorough understanding” of their data. Moreover, the researcher believed that personally transcribing their data would allow the researcher to immerse themselves in their data and ensure that they were “familiar with the depth and breadth” of data (Braun and Clarke, 2008, p.87).

The researcher anticipated that they would then start coding. The researcher believed that the initial coding would serve as a “foundation” for subsequent data analysis (Corbin and Strauss, 2008, p.163). The researcher thought that their initial coding would be “open and free, much like brainstorming” and that they would be open to all possible meanings of the data and potential relationships (Corbin and Strauss, 2008, p.52). The researcher was aware that commonality or not within data would not necessarily be evident immediately but that with “time and immersion in the data” they might identify items of note. However, while the researcher planned for initial coding to be open and free, the researcher was aware that they would approach coding “with some prior knowledge of the data, and possibly some initial analytic interests or thoughts” (Braun and Clarke, 2008, p.87). The researcher would also be coding considering the research questions of this

study, with an awareness of literature reviewed and with of their thematic grouping of the contributory factors to adolescent and adult information poverty.

The researcher planned to repeatedly examine their research data to consider meanings and to determine if any patterns could be identified and coded. The researcher was aware that repeated examination of data can be “time-consuming” but that this can also be the “bedrock” of data analysis (Braun and Clarke, 2008, p.87). The researcher planned that they would work “systematically through the entire data set, giving full and equal attention to each data item” (Braun and Clarke, 2008, p.89).

After initial codes were identified, the researcher planned to examine these codes for commonality and differences. The researcher anticipated that these provisional codes would then either be expanded or revised, or that new codes would be added (Corbin and Strauss, 2008; Given, 2008). The researcher also anticipated that both basic and higher-level codes would be identified at this stage with basic-level codes relating to and providing detail for higher-level codes (Corbin and Strauss, 2008).

After the researcher deemed that the data had been coded appropriately, the researcher then planned to organise their codes into initial themes, collating “all the relevant coded data extracts” to these themes (Braun and Clarke, 2008, p.89). The researcher was aware that data could be coded under as many themes as deemed relevant to (Braun and Clarke, 2008, p.89).

Initial themes identified would then be refined. For example, it might be possible to combine or separate themes (Braun and Clarke, 2008, p.91). The researcher was also aware that data coded to a theme should “cohere together meaningfully” and that there “should be clear and identifiable distinctions between themes” (Braun and Clarke, 2008, p.91).

The researcher was mindful that as coding data and identifying themes could continue “ad infinitum,” that the process should end when they believed that their refinements were no longer making useful additions to analysis (Braun and Clarke, 2008, p.92).

At this stage the researcher anticipated being able to “clearly define” the themes of their research study, know how their themes fitted together and have an awareness of the overall story that their themes told about data obtained (Braun and Clarke, 2008, p.92). Moreover, at this stage, the researcher also anticipated being able to determine if and how their themes answered the research questions of this study (Braun and Clarke, 2008, p.92). The researcher also intended to be able to “describe the scope and content of each theme in a couple of sentences” and if they could not “further refinement” may be required (Braun and Clarke, 2008, p.92).

After the researcher deemed that the coding of their data and identifying of themes was complete, the researcher would then consider whether the themes identified confirmed existing theories or supported the findings of existing empirical research studies, or whether new findings had been discovered.

3.4: Summary: Methodological approach to research study

Due to no child information poverty literature existing, the researcher anticipated that this research study would be exploratory as the researcher sought data to better understand child information poverty. The researcher anticipated that this research study would be deductive but would also incorporate inductive aspects. Research would be partly deductive because the researcher had already engaged with relevant literature and had thematically grouped contributory factors to adolescent and adult information poverty. However, this study would also incorporate inductive aspects because no literature pertaining to child information poverty specifically existed which meant that there were no child information poverty theories or empirical research studies for the researcher to consider when approaching this research study.

The researcher considered it integral to consult children directly as part of their investigations into child information poverty. The researcher decided to work with children aged between six and eight, as this age is slightly older than when the literature advised that information behaviour first emerges and literature also advised that at this age, children should be at an appropriate developmental stage to participate in such research.

To obtain relevant data from children, the researcher planned to visit schools, starting with

schools local to the researcher, and undertake fieldwork with children. Child research participants would be asked to complete five tasks and to then participate in group discussions. The researcher believed that this was an appropriate way to answer the research questions of this study.

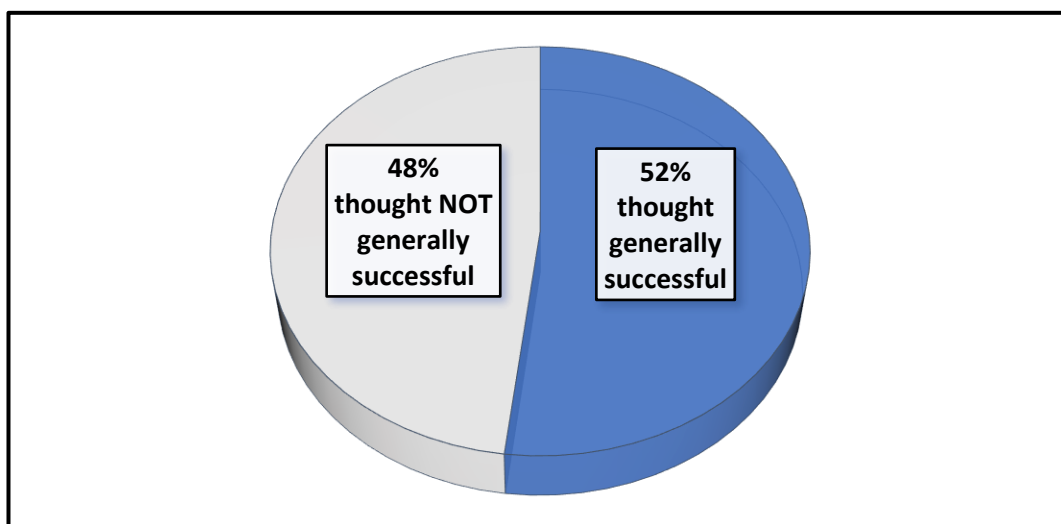
The researcher also intended to investigate adults' perceptions and experiences of child information poverty. The researcher deemed interviews to be the best method to obtain data from adults and chose to interview parents and teachers of children aged between six and eight.

The researcher anticipated that data analysis would be dynamic. The researcher planned to use thematic analysis to analyse research data and anticipated that thematic analysis would incorporate both inductive and deductive aspects. The researcher planned to code their data and then organise these codes into themes. The researcher intended to consider the thematic groupings of the contributory factors to information poverty developed after reviewing relevant literature when coding, and to consider whether data obtained, supported the theories of Childers and Post (1975) and Chatman (1996). After the researcher deemed that the coding of data and identifying of themes was complete, the researcher would consider whether themes identified confirmed existing theories or supported the findings of existing empirical research studies, or whether during this research study new findings had been discovered.

Chapter 4: Findings from fieldwork with children

The researcher undertook fieldwork with 156 children between September 2016 and May 2017. Child research participants were from seven primary three classes in five schools. 85 children were female, and 71 were male. Four children were aged six, 104 children were aged seven and 48 children were aged 8. The average age of child research participants was aged seven. 94 children were of white ethnicity, 34 children were of Chinese ethnicity, 13 children were of Asian ethnicity, 10 children were of Russian/Saudi Arabian/Iraq/Kuwait ethnicity, three children were of black ethnicity, one child was of Syrian ethnicity and one child was of mixed ethnicity. When fieldwork took place all schools attended by child research participants were located in Quintile 1, the 20% most deprived data zones in Scotland³.

4.1: Children's success in obtaining information



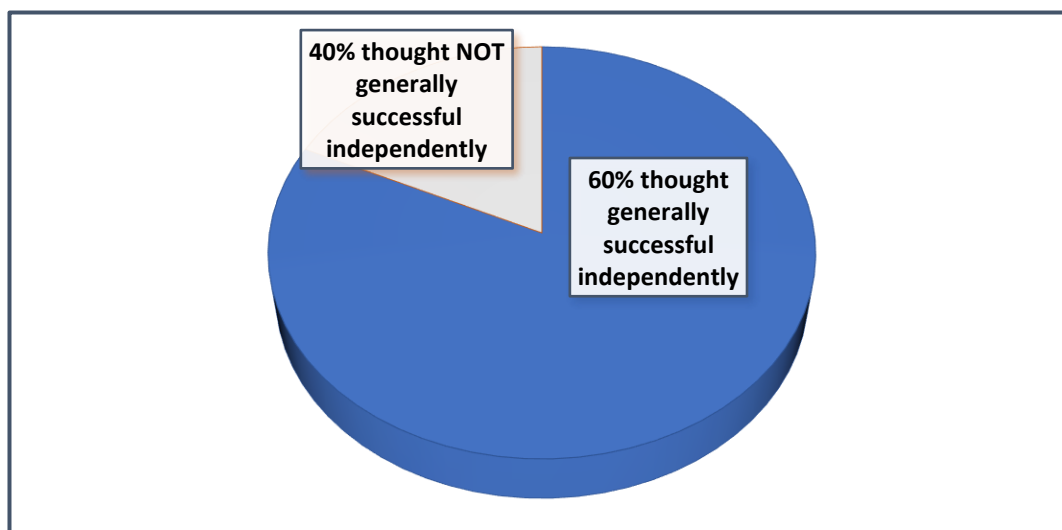
Child research participants were asked (in language that they understood) if they thought that they are generally successful when seeking information. 81 of the 156 child research participants (52%) thought that they are generally successful in obtaining information. However, 75 of the 156 child research participants (48%) thought that they are not

³ Based on The Scottish Index of Multiple Deprivation which groups all Scottish addresses into data zones and then into five bands (quintiles), each quintile containing 20% of the data zones (Scottish Government, 2019).

generally successful in obtaining information required.⁴

There was some variance in the proportion of children in each class that thought that they are generally successful in obtaining information. The only notable differing variable between children was their ethnic group. In Scotland, according to the last Government census, white ethnic group make up 98% of the total population (National Records of Scotland, 2018). In the class in which the highest proportion of children (20 children (83%)) thought that they are generally successful in obtaining information, all children were from white ethnic group. Moreover, there were two other classes in which high proportions of children (14 children (78%) and 12 children (75%)), thought that they are generally successful in obtaining information. These classes also had high proportions of children (16 children (89%) and 15 children (94%)) from white ethnic group. In contrast, in the class in which the lowest proportion of children (6 children (21%)) indicated that they are generally successful in obtaining information, 23 children (79%) were from minority ethnic groups and 6 children (21%) were from the white ethnic group groups.

4.2: Children's success in obtaining information independently



Child research participants who indicated that they are generally successful in obtaining

⁴ The reasons child research participants were unsuccessful in obtaining information are discussed are in Section 4.4.

information were asked if they generally satisfy their information needs independently. Of the 81 child research participants who thought that they are generally successful in obtaining information, 49 of these children (60%) thought that they are generally successful in obtaining information independently and 32 of these children (40%) thought that they are not generally successful in independently obtaining information.

The child research participants that indicated that they are not generally successful in independently obtaining information, primarily said that this is because they require adult support to obtain information successfully. For example, one child said that they can only successfully find information on the internet if an adult assists them to “spell the word” and another child said that to successfully obtain internet information, they need an adult to put “up a web site.”

4.3: Children’s use of sources

Child research participants were given pictures of four information sources (representing adults, a young person/child, the internet and books) and asked which source(s) they use to obtain information from, which source(s) they use most often to obtain information from, which source(s) they consider easy to obtain information from and which source(s) they consider hard to obtain information from.

4.3.1: Internet

Source: INTERNET	% of child participants
Used most often to obtain information from	62%
Easy to obtain information from	45%
Hard to obtain information from	6%
Sometimes easy/sometimes hard to obtain information from	38%
Not used as source	7%

97 of the 156 child research participants (62%) said that they use the internet most often to obtain information and the majority of children indicated that this is because the internet provides them with information required. For example, one child said that they use the internet most often to obtain information because “you can type in anything and it can show up all the information about it.” Another child said that the internet “always gives me the answer.” An additional child said that the internet “It's good, it knows everything.”

Other child research participants mentioned Google specifically, when they discussed using the internet most often to obtain information, indicating that they use Google most often because Google provides information required. For example, one child said, "Google mostly knows everything." Another child stated that "Google might know like stuff that adults won't know so you just research it." An additional child said that Google "knows more." Child research participants also indicated that they use the internet most often to obtain information because they believe internet information is correct. For example, one child said that "the internet is always true." Another child stated that "the internet is usually always right." The speed at which information can be obtained on the internet was another reason some child research participants provided as to why they use the internet most often to obtain information. For example, one child said, "it's quicker from going down the stairs I can just turn on my iPad and go on Google." Another child said, "I wouldn't go for an adult for my first one because, like if you asked an adult, they would need to think back in time and that will take quite long but if you go on the internet you can just type it in and it will come up." As well as being quicker, less effort being required was also why some child research participants said that they use the internet most often to obtain information. For example, one child said that they use the internet most often to obtain information because "I don't need to type loads and it's faster." Another child also discussed speed being a factor, "Because it's a lot quicker than, see because my mum is always painting the house and my dad is always at work so it's even quicker to just look it up." Another child provided a similar explanation "whenever my mum is busy with my little brother I can just go and get my lap top and type it up because it doesn't take that much time to put it on." Other children also said that they use the internet most often to obtain information because the internet is available when adults are busy. "If your mum and dad were busy or they were away somewhere and you were at the park, you can ask Siri."

70 of the 156 child research participants (45%) said that the internet is easy to obtain information from, 10 of the 156 child research participants (6%) found the internet hard to obtain information from and 59 of the 156 child research participants (38%) sometimes found the internet easy but also sometimes hard to obtain information from. Some child research participants that found the internet easy to obtain information from indicated that they find the internet an accessible information source. For example, one child explained that they found the internet easy to obtain information from because "you can just use your

phone or your iPad.” Another child said that although adults can be busy the internet is not, “Your mum might be cooking dinner and your dad might be at work so you can just type it up on Google.” An additional child also said that for them the internet is accessible when their parents are busy, “If like your mum and dad is busy, you can get anything what has internet on it and type it in.” Moreover, some children who considered the internet easy to obtain information from said that they are able to obtain information required on the internet. For example, one child said that the internet “always gives you the information.” Furthermore, some children considered the internet easy to obtain information from due to the speed at which internet information can be obtained. For example, one child said, “My internet it can be very fast.” However, not all child research participants found internet information accessible. For example, one child found the internet hard to get information from because “my sister always uses the computer to watch tv and do her homework.” Another child said that for them internet information is hard to obtain “because I couldn't never get a chance on it.” Some child research participants also said that they found the internet hard to obtain information from because they do not get the information required on the internet. For example, one child said that “Sometimes Google” won't give “the correct answer.” Another child said that on the internet “You don't always get the answer you want.” In addition, some children also found the internet hard to obtain information from because internet information was slow to obtain. For example, one child said that when seeking internet information, “it takes me for ages to find out.”

11 of the 156 child research participants (7%) said that they do not use the internet to obtain information, mainly because the internet does not provide information required. For example, one child research participant said that they do not seek information on the internet because their “thing wouldn't be on it.” Another child said that they do not seek information on the internet because the “people that writes it all doon might not know.” Children also said that they do not use the internet to obtain information because they prefer not to. For example, one child said, “digital stuff does have all the answers but I think it is better if you use your own mind.” Moreover, another child said that they do not use the internet to obtain information because they had been told that internet information is not to be trusted, that is, their brother told them that “Google lies.”

Differences also became apparent as to whether child research participants trusted internet

information. That is, some children trusted the internet, Google specifically. For example, one child said, “I trust Google” and another child said, “you really can trust Google a lot.” However, other children indicated that they do not trust all information available on Google. For example, one child said:

sometimes Google is like isn't the best, because sometimes people can like type in stuff that isn't true, cause anybody can type on something on the computer and it could be something that's not, that's not true. Like for example if I said can pigs can fly and it came up pigs can fly, and that wasn't true, it might give you the wrong answer.

4.3.2: Adults

Source: ADULTS	% of child participants
Used most often to obtain information from	24%
Easy to obtain information from	24%
Hard to obtain information from	8%
Sometimes easy/sometimes hard to obtain information from	47%
Not used as source	15%

38 of the 156 child research participants (24%) said that they use adults most often to obtain information. The majority of children said that this is because adults provide information required. For example, one child said of adults “They are helpful, and they help you with words and stuff.” Other children mentioned their dads specifically as the adults that they use most often to obtain information from. For example, one child said that they obtain information from their dad most often because he “is smart at stuff.” Another child said that their dad “probably knows every question.” An additional child said that they most often obtain information from their dad as he “knows everything better than me.” Children also indicated that they use adults most often to obtain information because other information sources require more effort. For example, one child said that they ask adults questions most often because they “don't always want to go and turn on the computer and find all the stuff.” Another child commented that they “can't really be bothered to type it all in, so I just go downstairs to ask my mum.” Children also said that they use adults most often to obtain information because they lack the skills to obtain information from other sources. For example, one child indicated that they seek information from their mum most

often because they “don't know how to get on to Google.” Another child said that they use adults most often to obtain information because adults can provide information when other sources are unavailable. This child said, “Every time, when I am looking up about animals my tablet always runs out charge so then I ask my mum and dad what it is.”

38 of the 156 child research participants (24%) said that they found it easy to obtain information from adults. 12 of the 156 child research participants (8%) said that they found obtaining information from adults hard. 74 of the 156 child research participants (47%) said that they sometimes found adults easy but also sometimes hard to obtain information from. Some children who reported that they find adults easy to obtain information from said that adults assist them to obtain information required. For example, one child said that when they need information they go to their mum “because she is a good teacher.” Another child said that if they “get stuck sometimes on schoolwork, my gran always helps me.” A further child said that “all of my adults always help me” if information is required. Moreover, an additional child said that they find it easy to obtain information from adults because adults “are responsible and they help you with anything if you are stuck.” In contrast, some children who found it hard to obtain information from adults indicated that this is because the adults that they have access to are not always willing or able to assist in obtaining information. For example, one child said that they find it hard to obtain information from adults because “mums always too busy cooking.” Another child said that their dad is “always” too busy “looking at new cars” to assist with information seeking. A further child said that adults can be hard to obtain information from because they “can be hangover by drinking too much” and an additional child said that when they ask their parents questions their parents “just say go away.” Child research participants who said that they sometimes find adults easy but also sometimes hard to obtain information from highlighted that successfully obtaining information from adults can depend on which adults are available when information is required. For example, one child said, “I stuck both because my mum is Chinese, and she does not know but I can still ask my teacher or someone else.” Another child said “Sometimes when both your parents are at work, both my parents are at work just now, I have to go my Grans and she hardly knows any questions.”

24 of the 156 child research participants (15%) said that they do not obtain information from adults. The majority of children said that this is because adults are unable to provide

information required. For example, one child said that they do not obtain information from adults, because their “mum doesn't really know the English” and another child said that this occurs because adults do not “have the knowledge enough to talk to you.” Child research participants also said that they do not obtain information from adults because they have other ways to obtain information. For example, one child said, “I usually don't ask grown-ups because I have my own phone and that, that I can look at.” Another child said that instead of asking adults for information they use their iPhone and “type stuff up on it.” Furthermore, one child said that they do not obtain information from adults because, they prefer to obtain information independently, they “want to figure out things myself.” Another child indicated that they do not obtain information from adults because they lack the motivation to do so. “When I am up in my room and I see something on YouTube and I don't know what it is like, I can't be bothered going down the stairs and asking my mum.” An additional child indicated that they do not obtain information from adults because the adults that they have access to can be unwilling to assist. This child said (of adults) “Sometimes they ignore you.”

4.3.3: Books

Source: BOOKS	% of child participants
Used most often to obtain information from	13%
Easy to obtain information from	19%
Hard to obtain information from	12%
Sometimes easy/sometimes hard to obtain information from	32%
Not used as source	30%

21 of the 156 child research participants (13%) said that they use books most often to obtain information. Some child research participants indicated that they use books most often because they enjoy reading. For example, one child said that they use books most often to obtain information because they “love to read books.” Some child research participants also indicated that they use books most often to obtain information because books are informative. For example, one child said that “books tell you a lot of things” and another child said that “books help you learn a lot and they teach you a lot of stuff.”

29 of the 156 child research participants (19%) said that they found books easy to obtain information from. 18 of the 156 child research participants (12%) said that they found

books hard to obtain information from. 50 of the 156 child research participants (32%) said that they sometimes found books easy but also sometimes hard to obtain information from. Children who found books easy to obtain information from indicated that this is because books are a source that they like to use and that they can obtain information from. For example, one child said, "Usually books to me are very interesting and a good place to get information from." Another child said of books, "They are easy to learn from." A further child said that they "love reading books and when you look for stuff it tells you more information." Some children, who found books easy to obtain information from, also indicated that they find books accessible. For example, one child said of books "you can find them in loads of places." Another child indicated that for them books are accessible because family members "always give me books." In contrast, some children, who found books hard to obtain information from, said that they do not get the information that they require from books. For example, one child said of books, "sometimes you can't get the answer." In addition, some children indicated that they do not find books accessible. For example, one child said that they can't always get the book that they want, "If like you go to the library to like find the right book and then the other person has like got it before you."

47 of the 156 child research participants (30%) said that they do not use books to obtain information. Some children said that this is because they do not like books or reading. For example, one child said, "I just don't like reading books." Another child said, "I am not the biggest fan of reading." The effort required to obtain information from books also deterred some child research participants from using books as an information source. For example, one child said of books "there is too much words, boring." Another child said books are "too hard to read." A further child said that in books, "There is so much pages then you have to keep doing that with your finger and it hurts." Some child research participants also said that they do not use books to obtain information because books might provide incorrect information. For example, one child indicated that they do not use books to obtain information because "Books aren't always right." Another child said of books, "Sometimes they lie," and an additional child commented that "books might not know the answer, the author just guessed it." Some child research participants also indicated that they do not use books to obtain information because the books that they own do not contain information required. For example, one child said, "most of the books that I buy are not really like the questions that I ask so I don't know the answer." Other children said that

they do not use books to obtain information because they do not know which books contain the information required. For example, one child said that they don't use books to obtain information because "there are millions and millions and you don't know what one to start with."

4.3.4: Children and young people

Source: CHILDREN AND YOUNG PEOPLE	% of child participants
Used most often to obtain information from	6%
Easy to obtain information from	10%
Hard to obtain information from	15%
Sometimes easy/sometimes hard to obtain information from	19%
Not used as source	46%

10 of the 156 child research participants (6%) said that they use children and young people most often to obtain information, with children primarily indicating that this is because children and young people provide information required. For example, one child discussed obtaining information from their big cousin who "knows a lot, and so when I go ask him a question, he is so quick at telling me the answer." Another child gave a similar explanation as to why they use their classmate most often to obtain information, because "he knows a lot." Another child said that they used their brother most often to obtain information because he is "really smart at stuff so I can ask him stuff that I don't know."

15 of the 156 child research participants (10%) said that they found children and young people easy to obtain information from. 23 of the 156 child research participants (15%) said that they found children and young people hard to obtain information from. 29 of the 156 child research participants (19%) said that they sometimes found children and young people easy but also sometimes hard to obtain information from. Child research participants who found children and young people easy to obtain information from said that this is because children and young people "always like give you the answer," while other child research participants discussed specific children and young people who assist them to obtain information. For example, one child discussed their brother who "will always answer my questions." However, other children who found children and young people hard to obtain information from indicated that children and young people do not provide information to them. For example, one child said, "See when I ask my wee cousin who is smarter than me,

he always goes like this figure it yourself.” In addition, children that sometimes found children and young people easy but also sometimes hard to obtain information from indicated that it can depend on which children and young people are available when information is required. For example, one child indicated that whether it is easy or hard to obtain information from children and young people can depend on whether their classmate is off school. Another child that sometimes found children and young people easy, but also sometimes hard, to obtain information from indicated that it can depend on the child. This child said, “sometimes children are really clever and really smart but sometimes they might be wrong.”

72 of the 156 child research participants (46%) said that they do not use children and young people as an information source, with the majority of child research participants indicating that this is because children and young people might not provide information required. For example, one child said that they do not seek information from children and young people as “If they are weerer than you, they might not know the answer.” Another child commented that children and young people “might not like know the answer because they might not be smart enough to know it.” A further child said that a “person younger than you, maybe they know less than you and I know more than them.” Some child research participants also said that they do not use children and young people to obtain information because they use other sources. For example, one child commented, “I feel like I ask enough questions from the grown-ups and the internet.” Another child research participant said, “it's mostly adults that know like a lot about other things” and an additional child noted that they “just don't ask anybody but my mum or the internet.” Some child research participants also said that they do not obtain information from children and young people because they do not have children and young people to ask. For example, one child said that they do not seek information from children and young people because they “don't have any sisters” and “my friends might not know.” Child research participants also indicated that they do not obtain information from children and young people because other children and young people can be unwilling to provide information. For example, one child said that if other children and young people “don't like the same things as you they might not want to answer.” Another child indicated that they do not seek information from children and young people because “They have pals and they would want to go and play and carry on with them.” Another reason some child research participants indicated that they do not use

children and young people as an information source, is because they think that children and young people might provide incorrect information. For example, one child said that other children and young people “might tell you the wrong answer,” while another child outlined that they had tested their theory that their brother is not a reliable information source. This child had pretended not to know something “I once done it with my brother and I trust him because he is my brother and he lied because I was just pretending I didn't know that.”

4.4: Barriers to children obtaining information

The researcher identified barriers to child research participants obtaining information, after considering child research participants responses as to why they cannot successfully obtain information, why they cannot successfully obtain information independently, why they do not use particular information sources and why they find certain information sources hard to obtain information from. Due to research design, it was only possible for the researcher to determine how many times a barrier was mentioned by child research participants. That is, the researcher did not know how many individual child research participants discussed each barrier.

4.4.1: Children lack access to information sources

Barrier	Times children discussed
LACK ACCESS TO INFORMATION SOURCES	143
Source lacked access to: Adults	61
Source lacked access to: Children and young people	52
Source lacked access to: Computers and the internet	17
Source lacked access to: Books	13

The main barrier to obtaining information that the researcher identified from child research participants was that children lack access to information sources. Child research participants indicated that they lack access to information sources 143 times during fieldwork.

Child research participants indicated that they lack access to adults as an information source 61 times during fieldwork. Child research participants mainly indicated that this is because their parents do not provide information sought. For example, one child said that they cannot obtain information from their mum because she “doesn’t know they kind of

questions I ask and all that, she says 'I don't know.'" An additional child said that their parents "don't always know the answers." A further child said that "when grown-ups tell you the answer, they don't really get it right." Child research participants also indicated that adults can be unwilling to provide information required. For example, one child said that they cannot obtain information from their mum because she "is always into her phone when I try and ask her something." Another child said that their parents do not provide information when "they are in a mood," they will not "answer you back." An additional child stated that their parents are unwilling to answer their questions because they are "not interested." Child research participants also highlighted that they can be unable to obtain information from their teachers. For example, one child said that their teacher does not always answer their questions, that their teacher can be "super busy and say 'go and sit down on your seat'" when a question is asked. Another child research participant concurred stating that there are occasions that their teacher "don't listen to you."

Child research participants also discussed lacking access to other children and young people as a source of information 52 times. For example, one child said that they cannot ask their little brother for information as "he wouldn't know." Another child said that the children and young people that they have access to do not "know all the things." An additional child indicated that they cannot obtain information from children and young people because "they know less than you." Some children also indicated that the children and young people that they have access to can be unwilling to provide information sought. For example, one child said that they cannot obtain information from children and young people as "they just want to play, instead of listening to you." The data also indicated that children can lack access to children and young people to obtain information from. For example, one child cannot use children or young people as an information source because they do not "have a brother or a sister" or "that many friends to ask."

Children indicated that they lack access to computers and the internet as an information source 17 times during fieldwork, primarily because of technological issues. For example, child research participants variously said that they cannot obtain information from computers and the internet as their computer or internet "doesn't work," "have enough battery," are "broken," "isn't working," can "freeze" or have a "virus." Child research participants also said that they can lack access to computers or the internet because these

are used by other family members. For example, one child said that they cannot obtain internet information because someone else “always uses the computer” and another child said that they can “never get a chance” on the internet at home.

Children indicated that they lack access to books as an information source 13 times during fieldwork. Primarily child research participants indicated that this is because books are unavailable. For example, one child said that they have gone to the library to get a book but that the book is not there as “the other person has like got it before you.” Another child said that sometimes they go the library but “somebody else has a book” so “you can't pick that book and that's what usually happens.” Children also said that they have been unable to obtain information from books as books have been damaged. For example, one child indicated that a barrier to their obtaining information from books has been because “somebody has ripped the page out and you can't get the answer.” Another child commented that they have been unable to obtain information from books because “the books pages come out” which they then “drop” and “lose.”

4.4.2: Children lack the skills to obtain information

Barrier	Times children discussed
LACK SKILLS TO OBTAIN INFORMATION	25
Skills lacked: Information literacy	20
Skills lacked: Reading	4
Skills lacked: Spelling	1

Lacking the skills to obtain information was a barrier to obtaining information that the researcher identified child research participants discussing 25 times. Information literacy skills were the skills that child research participants most frequently lacked. Child research participants indicated 20 times that they lacked the information literacy skills to obtain information. For example, one child said that they cannot obtain information from books because they “don't know what one to start with” and another child said that they are unable to obtain information from books because they choose the “wrong book,” thus cannot “find” information required.

Child research participants discussed reading skills as a skill to obtain information which they lacked four times. For example, one child said that books were “too hard to read” and

that they cannot obtain information from books as the words are “too tricky.”

Spelling skills were mentioned by child research participants once as a skill to obtain information that they lacked. This child indicated that they are unable to obtain internet information because they “spell it [search terms] wrong.”

4.4.3: Children lack the motivation and perseverance to obtain information

Barrier	Times children discussed
LACK MOTIVATION/PERSEVERANCE TO OBTAIN INFORMATION	14

Children indicated 14 times that lacking the motivation or perseverance to obtain information can be a barrier to their obtaining information. For example, one child said that they cannot obtain information from books because “Reading takes forever” and they “can't be bothered looking through.” Another child said they had previously decided not to seek information because they thought “what's the point.” An additional child said that if they are “searching and searching” for information and “don't find it,” they “just give up.”

4.4.4: Children perceive dangers in obtaining internet information

Barrier	Times children discussed
DANGERS OBTAINING INTERNET INFORMATION	3

The researcher identified three occasions that child research participants discussed perceived dangers in obtaining internet information being a barrier to obtaining information. For example, one child indicated that they do not seek internet information because “bad people might come” and “pass me your name and address and all that.”

4.4.5: Parents restrict information access

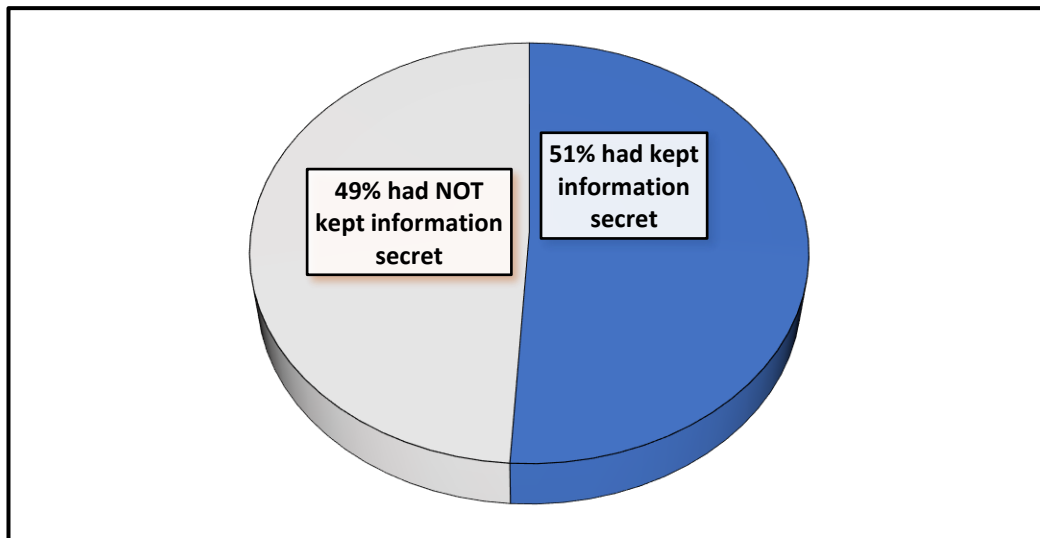
Barrier	Times children discussed
PARENTS RESTRICT INFORMATION ACCESS	2

Two mentions were made by child research participants of their parents restricting their information access being a barrier to their obtaining information. For example, one child

said that they have tried “to go on to Google” but their parents “stop” them.

4.5: Children, information and secrecy

Child research participants were asked if they had ever kept information secret, had ever been unwilling to share certain information or had ever not asked questions. Answers were obtained from 138 of the 156 child research participants.



67 of the 138 children (49%) said that they had not kept information secret, concealed information needs, or censored information shared. While 71 of the 138 children (51%) said that they had kept information secret, concealed information needs, or censored information shared. Few child research participants offered an explanation as to they had kept information secret. Of those children that did, five children indicated that they had kept information secret because they had felt shy. For example, one child indicated that they had kept information secret “because I was very shie.” Another child said it was because “I get a bit shy.” Moreover, two children indicated that they have kept information secret because they were scared. For example, one child said that they had kept information secret because “it kind of scary.” Another child said that they had kept information secret because “sometimes I’m a bit scared.” Furthermore, two children indicated that they had kept information secret because they thought that they might sound silly and one child said that this occurred because they were with someone that they did not know.

4.6: Summary: Findings from fieldwork with children

Fieldwork was undertaken with 156 children between September 2016 and May 2017. Just over half of child research participants indicated that they are generally successful in obtaining information. Moreover, the data suggested that there may be link between a child's ethnic group and whether they obtain information successfully. Of the children who said that they do generally successfully obtain information, the majority of these children thought that they generally successfully independently obtain information.

The internet is the information source that child research participants said that they use most often to obtain information with adults, books and children and young people also used as information sources too. However, not all child research participants obtain information from these sources.

The data also indicated that child research participants tend to use certain information sources most often because these sources provide information required. The data also indicated that there were differences in whether child research participants found information sources easy or hard to obtain information from.

The main barrier to child research participants obtaining information identified during fieldwork was that children lack access to information sources, this was to adults, children and young people as sources of information in particular but also to computers/the internet and books. Other barriers to children obtaining information identified during this research study were children lacking the skills to obtain information, specifically information literacy, reading and spelling skills, and children lacking the motivation and perseverance to obtain information. Additional barriers identified were potential dangers in obtaining internet information and parents restricting information access.

In terms of children keeping information secret, concealing information needs or censoring information shared, just over half of child research participants indicated that they had done this. The majority of children who provided an explanation as to why this had occurred indicated that it was because they had felt shy.

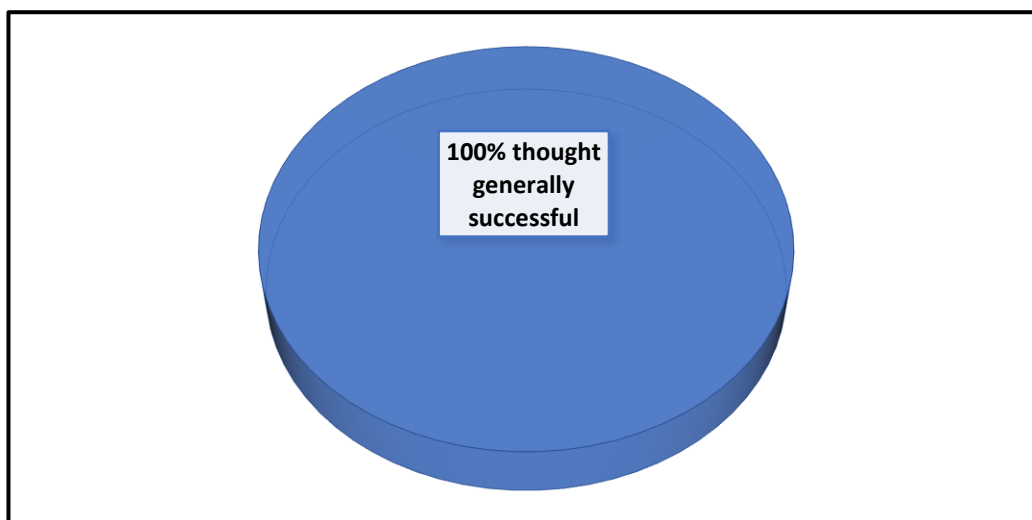
Chapter 5: Findings from interviews with parents

17 parents were interviewed between May 2016 and May 2017. Parents interviewed were aged between 31 and 50. 14 parents were female, and three parents were male. 16 parents were of white ethnicity and one parent was of black ethnicity. 15 parents had a university qualification, one parent had a college qualification and one parent had attended university but had not gained a qualification. The parents interviewed were not the parents of the child research participants.

Three parents lived in Quintile 1 (the 20% most deprived data zones in Scotland according to The Scottish Index of Multiple Deprivation (Scottish Government, 2019)), three parents lived in Quintile 2, two parents lived in Quintile 3, six parents lived in Quintile 4, and three parents lived in Quintile 5 (least deprived data zones (Scottish Government, 2019)).

The parents interviewed discussed their 17 children aged between six and eight. Nine children discussed were female and eight children were male. 12 children were aged seven and five children were aged eight. 16 children were of white ethnicity and one child was of black ethnicity.

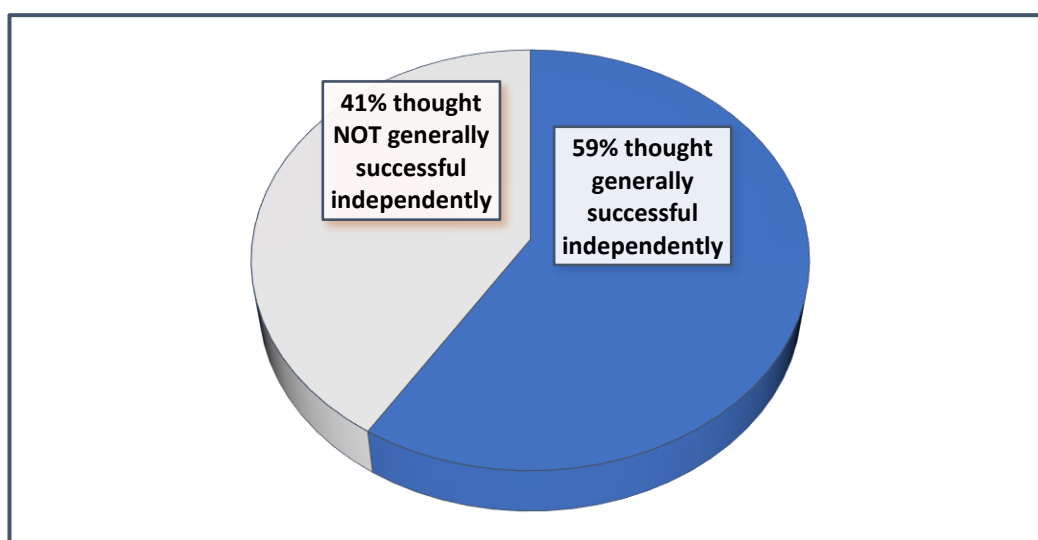
5.1: Children's success in obtaining information



Parents were asked if they thought that their children are generally successful when they seek information. 17 of 17 parents interviewed (100%) thought that their children are

generally successful information seekers. For example, one parent said that their child will “definitely find out” and another parent discussed their child’s success in finding out what they want to know and stated that their child has “the type of personality who won’t stop until he has found it out.”

5.2: Children’s success in obtaining information independently



Parents were asked whether they thought their children can successfully obtain information required independently. 10 of 17 parents interviewed (59%) thought that their children can successfully obtain information independently. For example, one parent discussed their child’s information seeking and said that their child “would get on fine independently” and would “keep trying until they found something.” Moreover, another parent stated that their child’s success in obtaining information independently had begun as their child progressed through their third year at primary school. This parent discussed their child’s success in obtaining information, stating “as the year is going on yeah, I would say at the start of this year, when she was just still in primary two I would say no.”

However, 7 of 17 parents interviewed (41%) thought that their children are not generally successful in obtaining information independently. These parents primarily attributed this lack of success to adult assistance being required to obtain information or because adults, for protective reasons, restrict the information that their children can access. For example, one parent said that their child needs “support” to find “the right bit of

information.” Another parent said that for their child to obtain information successfully, their parent must “guide” them. An additional parent said that their child “would need direction” to obtain information successfully and a further parent stated that their child cannot obtain information independently because they have “probably never been given the opportunity.”

5.3: Children’s use of sources

Parents were asked about the sources that their children use and do not use to obtain information. 8 of 17 parents interviewed (47%) said that there are no sources that their child would not use to obtain information. For example, one parent commented “I think at this age they like almost everything across the board [...] I don't think they really are bored by too much, I don't think there is any source that would put her off.”

5.3.1: Adults

Source: ADULTS	% of parents interviewed
Parents used as information source	100%
Parents first point of contact when information sought	53%
Other adults in family used as information source	12%
Teachers used as information source	6%

17 of 17 parents interviewed (100%) said that their children obtain information from their parents. For example, one parent commented that their child "would ask one of his parents" if they required information. Another parent said that they would always ensure that their child found out what they wanted to know and that for their child “there will always be someone there to answer his questions,” that their child is “not at risk of not being able to find it out” because they “would always make sure that he would.”

9 of 17 parents interviewed (53%) said that as parents they are the first point of contact when their child seeks information. For example, one parent said that their child "always would ask us first before she would go and look anywhere else." Another parent commented that their child "normally comes to us first with any questions." An additional parent stated that “if there was something he was unsure about he would ask us first.”

Parents also indicated that the information that their children seek from them is wide ranging. For example, one parent said that their child asks, “a million questions a day like ‘why is water wet?’ and ‘do race cars have headlights?’ and ‘who would win in a fight between a velociraptor and Optimus Prime?’” Another parent said that their child “asks you so many questions like ‘why? How old am I? When am I going to grow up and have such and such career? [...] When can I go for a sleepover?’ Things from the school, ‘the girls said this, can I say that?’”

2 of 17 parents interviewed (12%) identified adults in the family (other than parents) as adults that their children obtain information from. One parent provided the following example, "If he wants to know about a particular topic he would maybe say ‘we’ll phone Granny to ask that because she knows about x, y or z, or Uncle whoever because they know about that sort of thing.’”

1 of 17 parents interviewed (6%) mentioned teachers as adults that their child obtains information from. This parent said that their child “knows how to ask his teacher questions.”

The data also indicated that teachers can impart information to children that their parents did not want their child to know. For example, one parent discussed a teacher who had provided their child with information that the parent had considered inappropriate, “what a vulva is,” this parent said, “there is no need for that, boys’ bits and girls’ bits is enough at that age.”

5.3.2: Internet

Source: INTERNET	% of parents interviewed
Used as information source	100%
Used most often to obtain information from	29%
Source used first to seek information	18%

17 of 17 parents interviewed (100%) said that their children use the internet to obtain information and Google and You Tube were identified as the two main internet sources used. For example, one parent said that the internet is their child’s “preferred way of

finding information out." Another parent stated that their child "will always Google for any information" and an additional parent commented that if their child "is searching for anything, he just goes to You Tube."

5 of 17 parents interviewed (29%) said that the internet is the source that their children use most often to obtain information. For example, one parent said, "Primarily when we look for things we go through Google." Moreover, 3 of 17 parents interviewed (18%) said that when their children seek information, they search the internet first. For example, one parent commented that their child "would go to Google first."

Some parents said that their children use the internet, Google specifically, to obtain information because that is how their parents obtain information. For example, one parent said, "I think because we Google as well, they just, that's how they think of finding out information." Another parent commented "I guess just because that's what she has always seen, we Google everything, it's you know, anytime we have a question to ask we Google it, so it's what she has seen us do to get our answers." Another parent provided a similar explanation:

He knows that I am practically glued to my phone and he sees, it's modelling behaviour as well, he will see my husband and I going you know 'can you find the postcode for where we are supposed to be?' or 'do you know when that's opening till?' and [...] he is used to seeing us with the always on technology.

Some parents indicated that they act as intermediaries to enable their children to access internet information. For example, one parent said that if their child seeks internet information "We would look it up on Google or whatever for her." Another parent commented that if their child requires internet information, they "would look online with either me or my husband." The data also indicated that some children need parental permission to access internet information. For example, one parent said that their child would need to ask a parent to "access the internet" and another parent stated that to access the internet at home their child has to "go through me, ask me."

Parents said that their children use the internet as an information source for enjoyment or

to complete homework tasks. For example, one parent said that their child uses the internet to “look up anything that he is interested in, it's been Pokémon cards [...], if there is something that he wants for his birthday he'll have a look on the computer and decide what he wants.” Parents also gave examples of their children using the internet to complete homework. For example, one parent said that their child has had “to do research tasks which involve like some scanning on the internet [...] that's all information reliant [...] it can be on the Vikings, the Romans, Rabbe Burns anything like that.” In addition, another parent said that for homework their child has been “told to speak to your mum and dad, log on to a certain website and look up information.” Recently, their child had “to go on to You Tube and look up Twist and Shout by the Beatles and she was to learn all the words for it.”

5.3.3: Books

Source: BOOKS	% of parents interviewed
Used as information source	82%
NOT tended to be used as information source	29%

14 of 17 parents interviewed (82%) said that their children use books to obtain information. For example, one parent commented "he gets a lot of information from his books." Another parent said, “We do have a few reference books in the house, dictionary, thesaurus, atlas, some quick view sort of wildlife books [...] so we have things like that that we would use.” An additional parent stated, “we just go to the library to get some books out [...] she gets a lot of her information from that.”

Some parents indicated that they facilitate their child’s access to books. For example, one parent said that they “always make a point of buying” their child “new books at Christmas” and “if one of them asked for a book” they “would get them it” because books are “an education thing” and “important.” Another parent said that their child has “loads and loads of books of his own” and “always gets books for birthdays and Christmas.”

Parents also provided examples of information that their children have sought from books. One parent stated that their child has looked “for a definition of a word, it was like the children's dictionary.” Another parent said that when their child had to complete homework “about the Virgin Mary, the first thing we did was we went through her books

like her children's bible, missal, stuff like that, and tried to find a picture.”

However, not all parents interviewed said that their children use books to obtain information. 5 of 17 parents interviewed (29%) said that books are not a source that their children tend to use to obtain information. This was said to be due to the time it takes to obtain information from books, the effort required, because children prefer to use other sources and because the books containing information required are unlikely to be available. For example, one parent said that their child tends not to use books to obtain information because they prefer to “just get answers instantly on Google.” Another parent stated that their child does not tend to use books to obtain information as “she'd much rather go on to Google and watch something, like it's so easy.” An additional parent said that their child tends not to use books to obtain information because they would “just not find themselves with the books like there” as parents are “not going to have a book on every single random question that kids will ask at some point.”

5.3.4: Children and young people

Source: CHILDREN AND YOUNG PEOPLE	% of parents interviewed
Used as information source	47%

8 of 17 parents interviewed (47%) said that their children use children and young people, such as friends and siblings, to obtain information. For example, one parent said that their child “learns a lot of stuff from his friends” and “knows how to get answers from his friends.” Another parent said that if their child “didn't find out what he wanted, he would seek support for getting it from like his big brothers or his sister.”

Some parents also said that other children and young people can impart information to their children that the parents had not wanted their child to know. For example, one parent said:

some of her class were talking about dying and that caused us a bit of a heartache for a while because we had to talk about what happens after and it frightened her, she didn't want to die, so we had to have all the discussion, when people die, why people die and what might happen afterwards. So that was probably something I

wouldn't have broached with her at that age [...] that was stuff that came up from class [...] just chat in the playground.

5.3.5: Libraries

Source: LIBRARIES	% of parents interviewed
Used as information source	41%
NOT used as information source	29%

7 of 17 parents interviewed (41%) said that their children use libraries to obtain information. For example, one parent said, "if she hasn't got a book in the house about it, we would probably go to the library and get it." Another parent stated "we still use the library and see if there is anything there that gives us the information we are looking for."

Parents gave examples of information that their children have sought from libraries and this was mainly to complete homework. For example, one parent said, "if it's a longer project like the Romans [...] then we go to the library pretty much every week so we did get stuff out on the Romans and things." Another parent discussed a project that their child was completing for school which required "propaganda pictures for women joining the Land Army for World War I" so they made "a point of going to the library."

In contrast, 5 of 17 parents interviewed (29%) identified libraries as a source that their children do not use to obtain information. For example, one parent said that their child does not use libraries to obtain information due to the effort required, the lack of immediacy in obtaining information and because of how their child perceives libraries. This parent said "If I said let's go to the library to go and look that up, that would just be, just like too much like hard work" as "the immediacy of the internet" makes libraries "laborious from his perspective" and "neither of my kids have their own iPad or anything like that but they talk about other people having that and other people having access so I think it's quite a high status attached to it and going through an encyclopaedia in the library has got low status attached to it." Another parent said that the effort involved in obtaining information from libraries and the speed at which information can be obtained is why their child does not use libraries to obtain information:

I think the computer is the easiest mechanism for getting information and he knows that and if he is told 'oh we can go and get a book to look at something from the library,' that's not fast enough, he expects information quickly [...] effort as well of leaving the house and going round to the library, you need to get ready, you need to walk, there is exercise involved.

This parent also said that their child would not use libraries to obtain information due to how accessible they consider their local library to be:

The local library is now shut most afternoons, its opening hours are a lot less and they don't really fit with a working week or someone that is out working, its opening hours aren't good so that makes it really awkward for returning stuff and for taking stuff out [...] the hours have got less, and it makes it less accessible.

Other parents said that their children do not use libraries to obtain information because their parents do not take them to the library. For example, one parent said:

I cannot outrightly say he would know if he wants to find something he would get it from the library and that's because I have not done that. You know kids tend to do what their parents do so probably if I had taken him to the library, he might want to do that but we have not just because the computer is easily available so we don't go to the library.

Another parent also said that their child does not use libraries to obtain information, because they do not take their child to the library instead this parent buys their child the books that they require. This parent said, "Do you know that's probably our fault because we don't really use the library that much, we just buy books from Amazon." Another parent made a similar statement:

we've not really taken him to the library very often, [...] we are not really at the library to show him. I think it [libraries] probably is in the past now because you can get a lot of information online [...] I think he would enjoy going to the library rather than looking at it online [...] it's our fault, for time factor and things for quickness.

5.3.6: Museums

Source: MUSEUMS	% of parents interviewed
Used as information source	6%

1 of 17 parents interviewed (6%) identified museums as a source that their child obtains information from. This parent said, "we go to museums quite often to look things up there."

5.3.7: Television

Source: TELEVISION	% of parents interviewed
Used as information source	6%

1 of 17 parents interviewed (6%) identified television as a source that their child obtains information from. This parent discussed information sources that their child uses and said "obviously you have got information on TVs and what not."

5.3.8: Parental preferences

Data also indicated that parents had differing preferences regarding the sources that their children use to obtain information and that parents can encourage their children to use certain information sources. For example, some parents said that they encourage their children to use libraries to obtain information as opposed to the internet. One parent stated that "because the internet is so accessible, I would say that that's what she wants to use," therefore, this parent tries to teach their child that "there are other sources like the library that she could come to." Another parent also said that they promote libraries as an information source to their child, that they "make a point of going to the library," because they consider this to be "important" as "online is good but it's not the be all and end all." An additional parent also said that they encourage their child to use libraries to obtain information. This parent stated:

we could look up anything on the internet but if he's got a project, I would still make the effort to walk round and show him where the books are and help him learn how to look at different ones and decide what was the best. I think those are

all skills that are better than just sitting Googling things or looking up on Wikipedia so I would make a point of ensuring he has got that.

In contrast, other parents held differing views. For example, one parent said that they believed that their child “can find out just as much information that is in a book from You Tube [...] she is absorbing, she is ingesting information, it doesn't matter if it's [...] the screen,” this parent stated, “Who is to say that an iPad is not as good as a book.” Another parent indicated that they prefer the internet to libraries as a source of information. This parent said that the “library it's not seen as a source of information anymore, for me as well, because times have changed, now in work I'd use a computer rather than looking up a textbook.” This parent said that “you can glean a lot of information so much quicker and easier, and store it so you can retrieve it faster,” and “the speed at which you can do it, to me, it wins over going to a library just in terms of time.”

The data also indicated that parents can impart differing information to their children according to parental beliefs. For example, two interviewees gave opposing explanations to their children when their children questioned them about death. One parent said that a dead grandmother had gone to “heaven” while another parent described heaven as “nonsense” and instead taught their child “about decomposition.” Moreover, another parent highlighted that parents can impart differing information to their children regarding Santa Claus. This parent discussed other parents who had told their child that “Santa is not real” but other mums at school were aggrieved stating that “well wait a wee minute in our house he is.”

5.3.9: Teachers and schools can impact

Data also indicated that teachers and schools can impact on which information sources children aged between six and eight use to obtain information. That is, that teachers and schools can encourage children to use certain information sources. For example, one parent said that their child's ability to “log on the internet herself” is due to the “school learning how to do that.” This parent said that this “wouldn't have been something that I would have initiated” it was “very much encouraged through school.” Another parent said, that via school, their child had been encouraged to use the internet as an information source, that the “school encouraged that more than us. I was always a bit kind of wary of

IT, like you do kind of fear the internet and the kids and things, so you wouldn't really push the internet on." The data also identified that schools can also result in children having less access to certain information sources. For example, one parent complained about a recent policy change at their child's school that meant that their child had less access to books. That is, their child's school had recently stopped providing home reading books to children aged between six and eight, instead making the books available on the internet only. This parent said that this change had been implemented after "No consultation with parents" and this parent said that they, "hate" this change, they "want the physical book" and they:

limit her computer time as it is and then she is having to do her homework on a computer. I hate it [...] because we used to read her reading book eight times you know, eight times easy, because we would read it when she got it home, then I would read it with her in bed, then she would maybe read it again when I was downstairs before she went to sleep. Now we read it once online and that's it because it takes forever, and I am not letting her take a computer to her bed.

This parent emphasised that they think that their child's school providing reading books via the internet only is wrong. This parent said that they "absolutely firmly believe in the power of books" and having read to their child:

since before they came out of the womb, you know every night and like pointed to the words and I think that's why [participant names child] is [...] a really good reader [...] I definitely think it helps. That's why I am not happy about the book situation because I have drummed books into her from a young age. If she wants to succeed in life, she needs to read books.

5.4: Barriers to children obtaining information

Parents were asked about the difficulties and challenges that their children can face when seeking information.

5.4.1: Children lack the skills to obtain information

Barrier	% of parents interviewed
LACK SKILLS TO OBTAIN INFORMATION	88%
Skills lacked: Information literacy	53%

Skills lacked: Information literacy to find a book in a library	41%
Skills lacked: Spelling	35%
Skills lacked: Reading	12%

15 of 17 parents interviewed (88%) said that a barrier to their children obtaining information is their child lacking skills. Information literacy skills were the skills most frequently identified by parents as the skills that their children lack. 9 of 17 parents interviewed (53%) discussed their children lacking the information literacy skills to obtain information. For example, one parent said that if their child seeks internet information, they “find things that aren't appropriate to their level so they wouldn't understand it.” Another parent stated that their child doesn't have the ability to find “the right bit of information, sifting through that and knowing what's I suppose good sites to go, ones not to kind of go to, kind of thing.” 7 of 17 parents interviewed (41%) said that their children do not have the information literacy skills to locate a book in a library. For example, one parent discussed the Dewey Decimal system (via which the non-fiction books are organised in their local library) and said that their child "wouldn't understand that." Another parent said that their child would not be able to find a book in a library, stating “I don't think he would, not going into a library and saying that ‘right, this area would be for dinosaurs and what not.’” An additional parent also said that their child would be unable to find a book in a library because “we've not used the library for that.”

6 of 17 parents interviewed (35%) said that their children lacked the spelling skills to obtain information particularly the spelling skills to obtain internet information. For example, one parent said that their child “struggles with spelling and he would struggle with putting together text to Google.” Another parent said that their child's “spelling of some words,” the “quite tricky words,” means that their child cannot find information online. A further parent said that their child needs assistance with spelling and has to “ask, like, how do you spell this?” which “does stop them getting right through to the information that they are looking for.” Moreover, an additional parent discussed spelling being a barrier for their child and said that their child can be unable to spell words required to obtain internet information. This parent said that it “happens on a regular basis, that spelling isn't a strength that he has got, he knows the words, but he can be wildly wrong.”

2 of 17 parents interviewed (12%) identified reading skills as a skill to obtain information that their children lack. For example, one of the parents said that a barrier to their child obtaining information is their child not being a “confident” reader and the other parent said that a barrier for their child is being a “poor reader.”

Some parents said that their children’s lack of skills means that their children cannot obtain information without adult assistance. For example, one parent said, “If there wasn't an adult to ask” their child would not “find out the information that he wanted” as their child would “need somebody to tell him ‘you either go and look at a book or you look it up online.’” Another parent said that their child lacks the skills to obtain information in a library without adult assistance as “within the library she would need an adult there, so if she didn't have that, she wouldn't get to it.”

However, not all parents interviewed said that their children lack the skills to obtain information. For example, one parent said that their child could find a book in a library, that their child “could definitely do that.” Another parent was “100% sure [participant names child] will search that thing out if you give him the computer.” An additional parent also said that their child does have the skills to obtain internet information:

She seems to be able to find it [information] no problem [...] she doesn't have to spell of course because it auto corrects and it auto finds your words, but she can anyway, but she knows how to just type the start of the word and then click on it so she's not even fully putting the word in.

The data also indicated that not all children lack the spelling skills to obtain information. For example, one parent said their child is “good at spelling, he is like, he doesn't need any help at all.”

5.4.2: Parents restrict their children’s information access

Barrier	% of parents interviewed
PARENTAL RESTRICTIONS	71%

12 of 17 parents interviewed (71%) indicated that a barrier to their child obtaining information is parental restrictions. Parents primarily discussed inhibiting access to

internet information but also to information available from other sources too. For example, one parent said that “general search his biggest barrier is his mum, my restrictions, so he can't just find anything.” This parent believed that it was up to them to determine what information their child accessed. This parent stated “children, we still have to guide them” and “the use of information for him is what I define he has the need for.” An additional parent said that they are a barrier to their child obtaining internet information because they think that “there is going to be bad bogeymen” on the internet so will “go on the side of caution” which can “stop them from finding out what they want to know.” This parent explained that they have restrictions in place for their children because they “fear” their child accessing information that “they don't have the capability to understand” such as “war or even famine or things they might see on telly or adverts for water and things.” This parent does not want their child to “then think that could happen to me.” This parent believes that accessing such information could cause “unnecessary worry.” This parent also said that “you spend your whole life when you have babies trying to protect them so I don't see why you would just hand over like a huge internet.” This parent added that as their child is “still so young, you can't just give them free reign, like somebody comes into school with a word [...] and you don't know what it is but you don't want to ask cause you look silly. You go home and Google that and you could literally have a childhood issue.” Another parent also discussed being a barrier to their child obtaining internet information. This parent said, “I don't think much would hold them back if we hadn't switched off Google completely and had passwords and things in place, I don't think much would stop them to be honest.” This parent also said, “I think at this age you can sort of be the gatekeeper, I don't know what happens as they get a bit older.”

Some parents interviewed said that if their children are capable of accessing internet information and are permitted to do so at school, there are restrictions in place at home. For example, one parent said, “we don't let them on the internet on their own but easily they could do it.” Another parent discussed their child's access to the internet at home stating:

it's completely monitored by me. He would not have access. He doesn't have passwords [...] He would have to mediate it through me or his dad. He would never do it on his own. In school I think they are allowed to do it on their own,

whereas [...] in the house we would do it with him. He wouldn't be like kind of unsupervised on any sort of internet.

Another parent said that their child is only permitted to access the internet "when I watch her" and "I am always watching her." An additional parent tells their child that their parents can "see like everything that you type in, that key log is there to know sort of thing." This parent said that they tell their child this to "scare" their child. Moreover, a further parent stated that their child is only permitted to use You Tube "when we are in the same room as her, so we know what she is doing."

Parents also discussed restricting their children's access to information available from sources other than the internet too. For example, one parent said that they "usually just turn the radio off when the news comes on cause you don't know what is going to come up." Another parent said that they do not watch "Coronation Street, EastEnders and stuff" at home as "there is still content in there that I wouldn't want the kids to see." A further parent stated that they restrict their child from accessing certain information to "try and shield" their child:

Like I try not to watch too much of the news when she is here, because I don't think that's something she needs to be worrying her little head about, at her age, so if something comes on the news about murders you know, or child abuse, or things like that, I just switch it over and watch it at ten o'clock when she is in her bed.

Parents also discussed restricting their children's access to newspaper. For example, one parent said, "there are something you can't unsee, ISIS you can't unsee it, you can't unknow it, that's why I think you have to be a gatekeeper really." Another parent concurred stating "the pictures can be really graphic now in a newspaper, things that probably wouldn't have been published maybe ten or twenty years ago are now quite traumatising aren't they." This parent said that because of this they try "to be a bit careful" about letting their child have access to newspapers.

Some parents interviewed provided specific examples of information that they had restricted their children from accessing. For example, one parent said:

you just want them still to be children, so he asked me recently how long the Tooth Fairy had been around so I Googled it but obviously all the resources would have

spoiled his childhood so I would never ever let him read them [...] and Santa stuff and things like that. Yeah, traditions in different countries, that then would spoil things for him in his childhood, I'd be careful about stuff like that, and medical things I suppose, cause [participant names child] is a little thinker and he asks lots of questions so like a death in the family for a particular disease, I would still help him look things up, but I would check it before I let him read it.

This parent said that when their child seeks information, the parent tries to “find an explanation” that will not “upset him and doesn't give him too much information.” Another parent discussed restricting their child’s access to You Tube as they believe that their child “is too young” for “the language used” there. This parent said that there is language such as “bloody hell or something like that which we just think at seven years old she shouldn't be using that kind of language or being exposed to it.”

However, not all parents interviewed said that they restrict their children’s access to information. For example, one parent said that they do allow their child unsupervised internet access:

I am sure some people would criticise that yeah sure you are busy making dinner they could be looking up something thoroughly inappropriate I think that you can't be there all the time [...] like tonight he is off in bed watching some Dennis the Menace videos or whatever but I think you can't, you can't police their whole lives, you are not there in the playground when people are talking about things. [...] If you think that you can control everything they see and hear then you are kidding yourself on.

5.4.3: Children lack the motivation and perseverance to obtain information

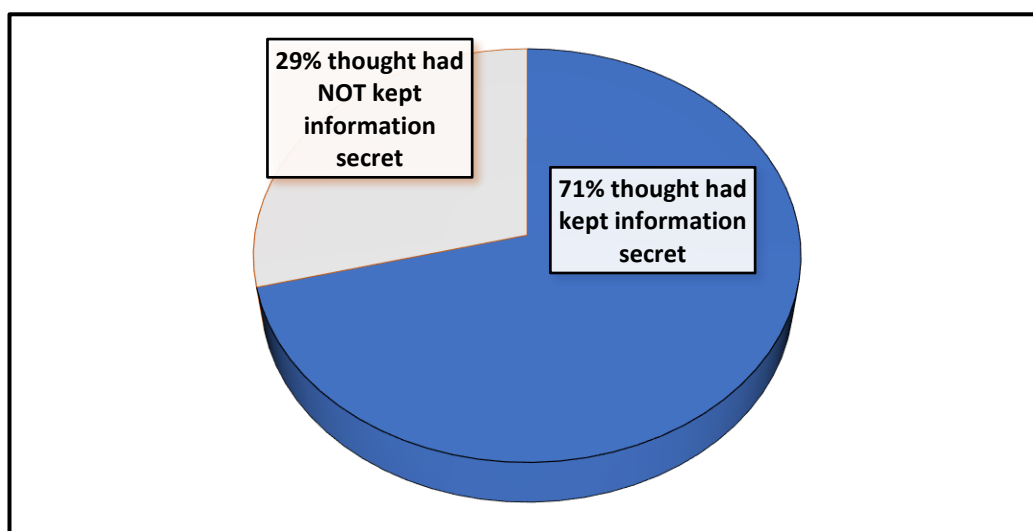
Barrier	% of parents interviewed
LACK MOTIVATION/PERSEVERANCE TO OBTAIN INFORMATION	47%

8 of 17 parents interviewed (47%) said that a barrier to their children obtaining information is their children lacking the motivation to seek information or the perseverance to continue efforts initiated. For example, one parent said that there are occasions that their child does

not seek information as they are "too lazy." An additional parent said that, when seeking information, their child "kind of wants things like that [snaps fingers] the instant thing" and does not have the "patience of actually sitting" to "take a wee bit longer, the answer is there, you just have to sit there and find it." Another parent said that if their child does not "find what they are looking for immediately they are much more likely to give up."

The data did indicate however, that not every child aged between six and eight lacks the motivation or perseverance to obtain information. For example, one parent said that their child does persevere when seeking information, that their child "expects to find out" and "never let's go."

5.5: Children, information and secrecy



Children, information and secrecy	% of parents interviewed
Parents encourage children to keep information secret	18%
Parents encourage children to ask questions/share information	18%

Parents were asked if they thought that there have ever been occasions when their children have kept information secret, that is, have been unwilling to share certain information or to ask particular questions. 12 of 17 parents interviewed (71%) said that their children have kept information secret, concealed their information needs or censored information

shared. For example, one parent who discussed their child concealing their information needs stated, "I think there would be some things he would be quite shy yeah and he wouldn't ask." An additional parent said that there are questions that their child "might be a bit embarrassed to ask" and that this embarrassment "would stop her asking." Moreover, parents also discussed their children keeping information secret. One parent stated that their child does "keep a lot" to themselves. Another parent said of their child "at this point they have got their own thoughts and they keep some things private." An additional parent said that there is information that their child tries to "hide" as they "get a wee bit embarrassed."

Parents gave examples of questions that their children might be unwilling to ask. For example, one parent said, "I think if he'd maybe heard something in the playground about sex, or at Christmas it always comes up what's a virgin in the playground, or something like that, yeah, he might be too embarrassed to ask." Parents also discussed information that their children have wanted to keep secret. For example, one parent discussed a task that their child had to complete for school, "a talk all about me," and "one of the things that he is worried about is giving too much away about himself." The child had asked "why are they making it about me?" "What if you give too much of yourself away?" Their child "doesn't want to share that." Another parent discussed information that their child had been unwilling to share. This child had been "embarrassed" to discuss "boyfriends" as they were worried that their parent would "flip out." This parent said that "there is things that as a father she is hiding from me now and not wanting to tell me" there is "a bit of embarrassment about that and holding back from me."

In contrast, 5 of 17 parents interviewed (29%) thought that there have not been occasions that their children have concealed their information needs or kept information secret. For example, one parent said, "Everything that goes on in his head comes out his mouth [...] I know he doesn't keep anything hidden." Another parent said that their child "hides nothing from me." An additional parent stated that their child has "no filter." This parent said that they "wish there was more of a filter, yeah, he will come down and announce all sorts of things about himself that none of us really want, to know to be entirely honest," like "what parts of him are doing and why." Moreover, a further parent said that their child "would just come out with anything." Another parent stated that their child is "not

embarrassed about asking about stuff,” that their child “will come to me with questions. She is not scared to ask anything, definitely not.” An additional parent said that they did not think that their child “would be bothered about asking if she had any questions.”

3 of 17 parents interviewed (18%) said that they encourage their children to censor the information that they share or the questions that they ask. For example, one parent said that they are “trying to make sure” their child “has a filter for other people” and that they are “very much, at the moment, actively teaching it's not appropriate to, you don't say that kind of thing in school you know, or that's a private thing, very much.” Another parent has taught their child to censor what questions they ask other people. This parent stated that there are certain questions that their child “would come and say it quietly to me” and “come and just whisper it” because “she knows that you could potentially offend another individual.” This is something that the parent has “taught over the years.” This parent gave an example, stating that their child (when younger) had asked “a woman who had a bad limp” “why do you walk funny?” The parent said that at this age their child “didn't understand that by asking a question you could be offending a person upsetting them.” The parent “had to explain to her” that “it's quite rude to ask.”

In contrast, 3 of 17 parents interviewed (18%) said that they make efforts to actively encourage their children to ask questions or to share information. For example, one parent said, “I am always saying ‘you know you can tell me anything.’” This parent wanted their child to know that “the doors open for her to come to me about things.”

The data suggested that a child’s age may impact on whether they keep information secret, concealing information needs or censoring information shared. That is, 100% of the parents of 8 year old children interviewed (5 participants), compared to 58% of the parents of 7 year old children interviewed (7 participants), said that there have been occasions that their children have concealed their information needs or censored information shared. Moreover, some parents specified that a change seemed to occur around age six or seven in terms of this. For example, one parent said, “When she has turned latest six into seven, she has got an awareness now of things, it's an embarrassment she has now about things, that wasn't there before.” Another parent also said that there had been a change in their child around this age. This parent said, “That's probably been the last year or so, since she

has maybe been six or thereabouts, very more kind of self-conscious about stuff like that and peoples' thoughts and feelings I would say."

5.6: Improving children's access to and use of information

Parents were asked if they could think of one thing that could improve their child's access to and use of information.

What could improve child's access to/use of information	% of parents interviewed
More freedom to access internet information	35%
More time	24%
Nothing	18%
Easy internet access	1%
Child being taught more skills/given more experience	1%
School/public library access via school	1%
Teachers identifying skills child lacks and communicating to parents	1%
Teachers pushing child if child excels in a skill	1%

5.6.1: More freedom to access internet information

6 of 17 parents interviewed (35%) said that their children's access to and use of information could be improved if their parents gave them more freedom to access internet information. However, none of these parents said that they were willing to allow their children greater internet freedoms, primarily, as they wished to protect their children. For example, one parent said that their child's access to internet information could be improved if they were given "a bit more freedom to do it herself really, I mean she comes and asks us something instead of us looking it up let her look it up." This parent said that they were not willing to give their child more freedom because they are "wary about what she is getting access to."

5.6.2: More time

4 of 17 parents interviewed (24%) said that having more time could improve their children's access to and use of information. For example, one parent said that if they had more time, they could teach their child skills to improve their access to and use of information, "taking the time, spending the time with him," to teach them, "if there is things that you would need to know or you would like to know, this is how you do it."

5.6.3: Nothing

3 of 17 parents interviewed said that they (18%) could not think of anything that could improve their children's access to and use of information. For example, one parent said "Not really, but again I think he is quite lucky in the fact that he has got an iPhone, he has got an iPad, he has got access to a PC that's never off, so for [participant names child] it's easy to get access. Like other people might not have the same IT equipment kicking around."

5.6.4: Additional suggestions

Parents interviewed also identified easy internet access (1 of 17 parents (6%)), teaching their child more skills and giving them more experience (1 of 17 parents (6%)), their child having access to school and public libraries via school (1 of 17 parents (6%)) and teachers identifying specific skills that their child lacks and communicating these to parents and pushing their child if they excel in certain skills (1 of 17 parents (6%)), as factors that could improve their child's access to and use of information.

5.7: Summary: Findings from interviews with parents

Interviews were undertaken with 17 parents, of children aged between six and eight, between May 2016 and May 2017. Parents unanimously thought that that their children were generally successful in obtaining information. However, fewer parents thought that their children are successfully able to obtain information independently, primarily because adult assistance is required to obtain information or because adults, for protective reasons, restrict what information their children can access. One parent thought that their child's success in independently obtaining information occurred as their child progressed through their third year of primary school.

In terms of children's use of sources, almost half of parents could not identify any sources that their children would not use to obtain information. Moreover, all parents said that their children use their parents and the internet as an information source. Some parents stated that their children use the internet, Google specifically, to obtain information because that is how their parents obtain information. Furthermore, some parents discussed acting as intermediaries to enable their child to access internet information or outlined that their children need permission to access the internet at home. Other adults in

the family, teachers, books, children and young people, specifically friends and siblings, libraries, museums and television were also identified as information sources used by children aged between six and eight. Though less parents said that their children used these information sources. Parents outlined that teachers and other children and young people can impart information that parents did not want their child to know. Some parents indicated that they had differing preferences regarding the information sources that their children use to obtain information and encourage their children to use certain sources accordingly. The data also indicated that teachers and schools can impact on which sources children aged between six and eight use to obtain information and one parent discussed how their child's school had restricted their child's access to books by replacing all school home reading books with books available on the internet only.

Books and libraries were information sources that some parents said that their children tend not use to obtain information. Books because of the time it can take to obtain information, the effort required, because children prefer to use other sources and because books containing the information required are not available. Parents discussed children who do not use libraries to obtain information due to the effort required, how long it takes to obtain information from a library, how accessible libraries are perceived to be, the status that libraries have, how libraries are regarded and also because parents do not take their children to the library, some parents buying their children books instead.

Parents identified a number of barriers that their children can face in obtaining information. The main barrier identified was children lacking the skills to obtain information, particularly information literacy, spelling and reading skills. Lacking these skills can mean children can be unable to obtain information without adult assistance. Another barrier to their children obtaining information, parents frequently discussed during interviews, was parents restricting their children's access to information which occurred as parents sought to protect their children. Parents primarily discussed restricting their children's access to internet information but also to information available via other sources too. Furthermore, while children can be capable of accessing internet information and permitted to do so at school, restrictions can be in place at home or children can be closely supervised when seeking internet information. A lack of motivation to seek information and a lack of perseverance to continue efforts once initiated were also identified as barriers

to children obtaining information. However, the data also indicated that not all children face the same barriers obtaining information.

The majority of parents said that there have been occasions that their children have concealed their information needs or kept information secret, censoring information shared. Some parents discussed encouraging their children to keep information secret, while other parents discussed actively encouraging their children to ask questions and share information. Findings also suggested that a child's age may impact on whether they conceal their information needs or censor information shared, and some parents specified that a change seems to occur around the age of six and seven in terms of this.

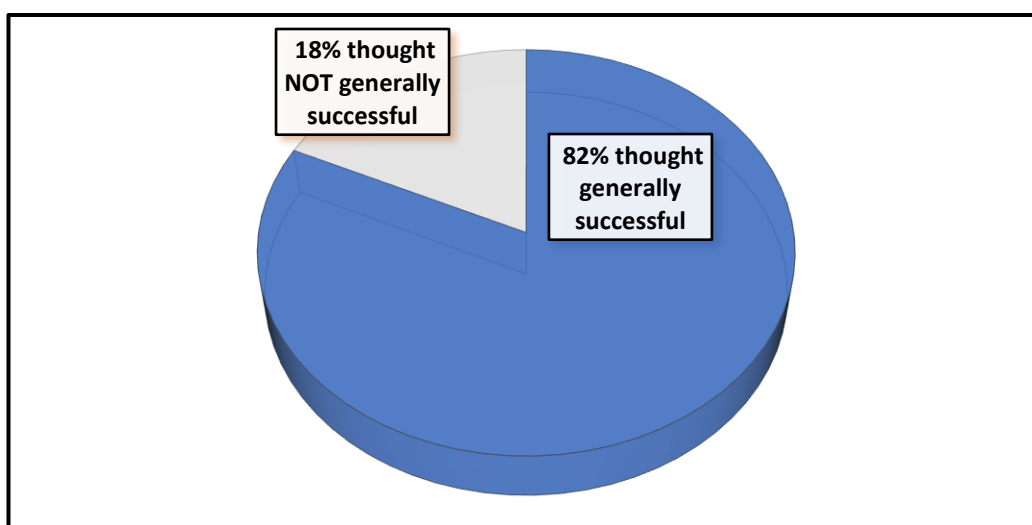
While some parents could not think of anything that could improve their children's access to or use of information, the main suggestion parents made as to how their children's access to and use of information could be improved, was if (as parents) they were less restrictive regarding their children's access to internet information. However, no parent that discussed this was willing to allow their children greater internet freedoms, primarily because they wished to protect their children. More time was another suggestion (more than one parent made) as to how their children's access to or use of information could be improved.

Chapter 6: Findings from interviews with teachers

The researcher interviewed 17 teachers between June 2016 and February 2017. All teachers interviewed were aged over 21 and female. 14 teachers were of white ethnicity, two teachers were of Asian ethnicity and one teacher was of mixed ethnicity. Collectively, teachers had 173 years' experience of teaching primary school children and 47 years' experience of teaching children aged between six and eight specifically. Teachers were not the teachers of child research participants.

Teachers taught in 12 schools. 11 schools were state schools, and one school was independent. Four schools were located in Quintile 1 (the 20% most deprived data zones in Scotland according to The Scottish Index of Multiple Deprivation (Scottish Government, 2019)), four schools were located in Quintile 2, five schools were located in Quintile 4 and four schools were located in Quintile 5 (least deprived data zones (Scottish Government, 2019)).

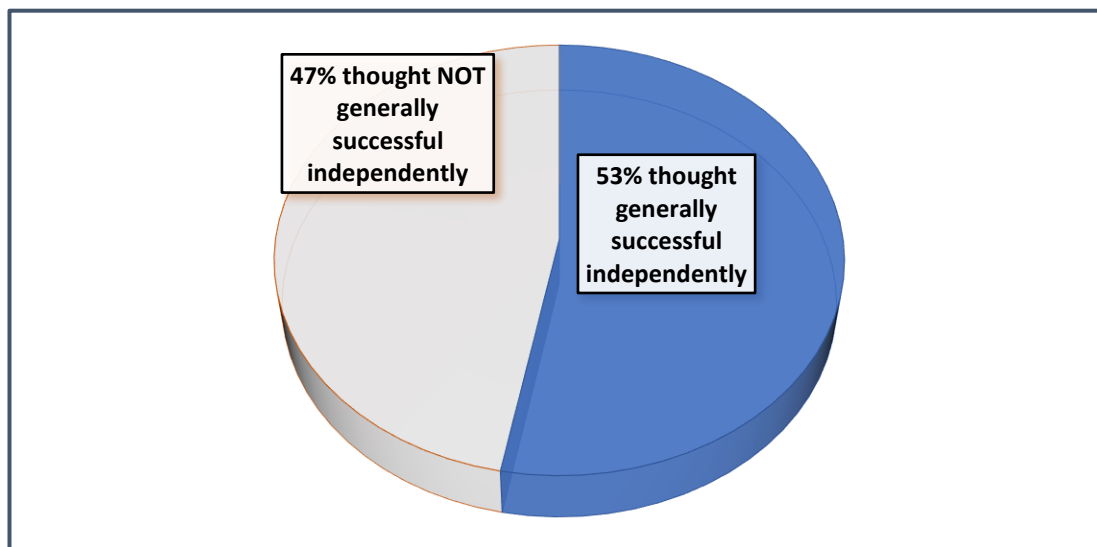
6.1: Children's success in obtaining information



Teachers were asked if they thought that children aged between six and eight are generally successful in obtaining information required. 14 of 17 teachers interviewed (82%) thought that children aged between six and eight are generally successful in obtaining information. For example, one teacher said, "I think they could if they really needed something find it out." Another teacher said "yes, generally, I think they would

find the information.” However, 3 of the 17 teachers interviewed (18%) thought that children aged between six and eight are not generally successful in obtaining information.

6.2: Children’s success in obtaining information independently



Success in obtaining information independently	% of teachers interviewed
Depends on child	53%
Depends on source	47%
Depends on stage in the school year	41%
Depends on what children have been taught	24%
Depends on topic	12%
Depends on source access	6%

Teachers were also asked if they thought that children aged between six and eight are generally successful in independently obtaining information. 9 of 17 teachers interviewed (53%) thought that children aged between six and eight are generally successful in independently obtaining information. For example, one teacher said that, if seeking information, their pupils “would be able to find the answer themselves” and another teacher said that their pupils can “find the answer.”

However, 8 of 17 teachers interviewed (47%) thought that some children aged between

six and eight are not generally successful in obtaining information independently, primarily because adult assistance is required. For example, one teacher said that they do not think that their pupils “could find something out independently and guarantee that they'd find the right answer.” Another teacher said that their pupils are “quite reliant on teacher support” and “struggle to work independently.” An additional teacher said that their pupils are not generally successful in obtaining information independently as they “need like instructions,” need to be “guided,” the teacher has to “direct them” so they can “find the information,” that is, they “probably wouldn't be able to do it [obtain information] without having help from an adult.”

9 of 17 teachers interviewed (53%) said that whether children aged between six and eight are generally successful in obtaining information independently can depend on the child. For example, one teacher said, “there are children who can absolutely go and do it first off but there are other children you would need to just prompt their learning, not do it for them but prompt their learning.” Another teacher discussed their pupil's success in obtaining information independently and said, “some it will take them a wee bit longer to find the information, I am thinking of the abilities in my class, there's a couple who would just get it within seconds and there is a couple you'd need to trawl through and maybe say ‘no look in this’ and point them in the right direction.” Furthermore, an additional teacher said that it was only their “highest achievers” who could “have a specific question and totally independently find the answer.”

8 of 17 teachers interviewed (47%) said that whether children aged between six and eight are generally successful in obtaining information independently depends on the source. For example, one teacher said:

If it's based on a book, I would say they would be able to find the answer themselves [...] online maybe not so much. I would say I would be more confident about them finding the answer in a book first, just because you know what it's like when you search online and it's like a wealth of information and then sometimes there can be different answers between different web sites.

7 of 17 teachers interviewed (41%) said that whether children aged between six and eight

are generally successful in obtaining information independently, can depend on what stage in the school year it is. For example, one teacher said that their pupils are generally successful “at this stage yes, but at the start of P3 probably not, just maturity level, ability level, the skills that they learn over the year.” Another teacher said, “you would definitely have a third at the beginning of the year that couldn't do that [obtain information] on their own and then maybe towards the end, most of them could.” This teacher said that this is the case because “towards the end of the school year” the children are “much more independent in their kind of reading skills, their writing skills have really improved.”

4 of 17 teachers interviewed (24%) said that whether children aged between six and eight are generally successful in obtaining information independently can depend on what children have been taught. For example, one teacher discussed their pupil's ability to obtain information from websites:

This class have been quite good at thinking no, that sites for adults so they know to type in for kids after it to get a more suitable site, I've taught them that and I would always teach a primary three class that [...], but I couldn't say that any seven year old could do it, depends what they have been taught.

2 of 17 teachers interviewed (12%) said that whether children aged between six and eight are generally successful in obtaining information independently can depend on the topic. For example, one teacher said that their pupil's success can depend on whether a topic interests them, “it depends if I set them something that they are desperately interested in, like design a mode of transport for Santa Claus, they will work out how to do that and they will go and look at things, if it's something a bit more traditional [...] mum might Google instead of them.”

1 of 17 teachers interviewed (6%) said that whether children aged between six and eight are generally successful in obtaining information independently can depend on what sources the children have access to. That is, the teacher said that their pupils are unable to obtain internet information independently because the school “has a lack of computers,” “no computer suite” and “only two PCs” in the classroom. This teacher said that their pupils who “have got computers at home,” they “would manage” to obtain internet

information. However, this teacher also outlined that they “don't have a computer in my house anymore [...] and I think a lot of the kids in my class are the same so they wouldn't be able to do that.”

6.3: Children’s use of sources

Teachers were asked about the sources that children aged between six and eight use and do not use to obtain information.

6.3.1: Adults

Source: ADULTS	% of teachers interviewed
Teachers used as information source	100%
Teachers first source used	47%
Adults in family used as information source	24%
Adults who visit the school used as information source	6%
Classroom Assistant	6%

17 of 17 teachers interviewed (100%) said that children aged between six and eight obtain information from their teachers. For example, one teacher commented “they are not backwards in coming forwards to ask, ‘I couldn't find it can you help me?’”

8 of 17 teachers interviewed (47%) said that teachers are the first source that children aged between six and eight use to obtain information. For example, one teacher said, “I suppose it probably happens every day, if they have to find the answer for something in class [...], they would ask the teacher first.” Another teacher also discussed being asked first for information “Most of the time it would initially come to me.” One teacher interviewed said that their pupils would seek information from them first, but that they would only answer their pupils’ questions if they were topic related. That is, this teacher said, “they would come to me first and then if it is something related to the topic then we would find that out together but if it’s not then we would quickly move on.”

4 of 17 teachers interviewed (24%) said that their pupils obtain information from the adults in their family. For example, one teacher said that their pupils obtain information from

their parents, “if they were at home, they would probably ask their parent.” Another teacher said that their pupils obtain information from other family members they will “ask mum, ask dad, ask gran.” This teacher said that their pupils “mostly they know that they can get their knowledge from the adults in their life.” One teacher indicated that while their pupils obtain information can from their parents, some parents provide their children with information that the teacher considers inappropriate. For example, this teacher discussed one parent who had taught their child terms that the teacher considered to be “racist” and “culturally offensive.”

1 of 17 teachers interviewed (6%) identified adults who visit the school as an information source used by children aged between six and eight. This teacher said “They do like seeking information from whatever source. Whether that’s an expert coming in to talk to them, a professional, they will gain a lot from that as well, they do love listening, hearing from other visitors in the classroom, that works really well with them.”

1 of 17 teachers interviewed (6%) said that children aged between six and eight obtain information from the Classroom Assistant, “there has been a couple of individuals that have needed [...] Classroom Assistant support, to kind of understand.”

6.3.2: Books

Source: BOOKS	% of teachers interviewed
Used as an information source	100%
Information source used first	12%
NOT used as information source	65%

17 of 17 teachers interviewed (100%) said that children aged between six and eight obtain information from books. For example, one teacher commented “Kids love facts. One of the wee boys had a ‘Thousand Interesting Facts’ book in today and they were all over it; read a few out and they just loved it.”

2 of 17 teachers interviewed (12%) said that books are a source that children aged between six and eight go to first to obtain information. One teacher said:

I would say if they have access to books they would probably go to that first because they are only 7 or 8 and we only go to ICT once a week - they are only beginning to learn searching and researching skills so they probably wouldn't know how to search for it themselves [...] I would say that they would look in books first because of the pictures and the information is a bit more easier to understand.

The other teacher said that their pupils would seek information from books first because their pupils like books and find books accessible:

I think they would like to research books, they quite like books [...] they do like their non-fiction so I would say like books would be the first port of call [...]. They would go to books first because that is what is in the classroom, and I think that is what they enjoy and relate to a bit more than maybe going on the computer because they are not able to go on the computer very easily, it's only at their allocated slots.

The data also indicated that for some children books are accessible at home. For example, one teacher said that their pupil's "parents will buy" the books that their children desire and discussed how during a class project their pupils brought in "an array" of relevant books from home. Another teacher discussed a pupil who "had every book under the sun," "all the latest editions of what was coming out for children" and an additional teacher said that at home some of their pupils have "books upon book upon books."

A common theme that emerged from the data was that some teachers try to impact on their pupils' attitudes towards books and try to actively facilitate their pupils' access to books. For example, one teacher said:

I do foster a love of books in here [...] we have nearly finished Matilda and there is such excitement they didn't even want to pack up because I am getting near the end [...] very few children are read to. If I can take time out of my day, be it ten minutes at the end of a day, to try and read them a novel [...] I think that's invaluable. They love it but some of them never ever get read to. They get put up in their rooms and a DVD on and that's it [...]. That double cupboard there is packed with my daughter's books, books I have collected over the years. They love them. They pore over them [...]. Some of them don't have very many books at all.

Another teacher said:

The children in here love a story so every single day I try to make time to read a story from start to finish. It's short, it's their choice and it's keeping them engaged with words, with print, with books. I would never pick up an iPad and say 'right, let's read something from the internet' and again that goes back to how I feel about books, so I am trying to pass on my love of books to the children, to let them see that the book on the shelf is equally as valid as the internet or electronic sources.

This teacher also said that although they "have such a busy day" they "make time for a story in the afternoon because a lot of the children they get to play with a tablet at night-time, but nobody actually sits and reads them a story." An additional teacher discussed how for their pupils, at home, books are not actively promoted books as an information source, "I think ICT they do at home and it's very encouraged, but I think books is sort of neglected. They have not had time for them to actually go and explore books and use them as a source of finding information." This teacher also said that they "take an active approach to incorporate that (using books as an information source) because I think ICT they enjoy it and they will always have that whereas I think books [...] is something that I need to kind of encourage a bit more." Another teacher outlined that they use their own money to buy their pupils books, "at Christmas and the summer I buy them a book." This teacher thinks that doing so is "important." An additional teacher outlined that it is often individual teachers who provide books for class libraries. This teacher stated that "being able to invest in reading for pleasure materials, it's not always possible to do that, quite often you will find that in a class library it's the staff that have provided the books. It's not the school funds per se that have afforded it."

11 of 17 teachers interviewed (65%) said that some of their pupils aged between six and eight do not use books as an information source. One teacher said that this is because "books are seen as hard work" whereas the internet is regarded as "more fun" and "more whizzy." Another teacher said that some of their pupils do not use books to obtain information because they consider books to be "boring:"

I had a story last week of Romulus and Remus [...] and I gave them, it was just half of an A4, it was big writing, a really basic version, and they had said to me 'can we just watch?' I said, 'read this just now and then I will show you a story on the

computer' and a lot of them were very much like, 'can we just watch the one on the computer? Skip the boring bit?'

An additional teacher said that some of their pupils do not use books, encyclopaedias specifically, to obtain information because they consider them unappealing. This teacher stated, "if I said, 'look there's a big set of encyclopaedias,' no way, they are not appealing to children, they are boring." Another teacher said that the time it takes to obtain information from books is why some children do not use book to obtain information:

There would be a reluctance if I was to say to the children 'and you are only going to use books,' and then tell them 'go and choose the appropriate book.' A lot of the children would struggle [...] Again, it's just this reluctance to, it's instant, everything's got to be instantaneous, it's got to be instant access, it's got to be instant answers.

An additional teacher indicated that some of their pupils do not use books to obtain information, in this case dictionaries, because there is "too much writing, it's too much effort." This teacher discussed pupils who had sought information on "famous landmarks." The teacher had asked them "do you know what a landmark is? Well, what could you do? How could you find out what a landmark is? Let's Google or look in a dictionary," "the dictionary is right there, have a look and find landmark" but the children wanted to "just Google it" as "it was so much easier." A further teacher also said that the "effort" involved in obtaining information from dictionaries can be a deterrent to their pupils, "that's a wee bit more effort to go and get the dictionary, [...] you would say to them 'right you find it, what does it start with? You make a wee start, and I will finish it off.' They would just hand over the word book. They want you to do it for them." A lack of perseverance is another reason why some teachers said that their pupils do not use books to obtain information. For example, one teacher said:

they are atrociously bad at looking up the dictionary. They can't be bothered trying, [...] ask them to look up ringing [...] and they are lost, they will be away at the front. 'Where is r in the dictionary?' and kids think 'okay it's quite near the end' and then kids will look through all the r words instead of thinking ri. Now we do dictionary skills like that all the time, but they are still really bad at looking it up. Lack of patience? They just think, 'I can't do this, you do it.'

Another teacher said that a lack of skills is the reason that some children aged between six and eight do not use books to obtain information. This teacher said, “Books would be low down because that then involves them having to use skills to decode words that they might not have the skills set to do yet.” An additional teacher indicated that some children aged between six and eight do not use books to obtain information because they do not have access to books at home. That is, the children “have no books whatsoever, not even a newspaper at home, not even a comic.”

The data also indicated that not all teachers make the same efforts to enable their pupils to have access to books. For example, one teacher said that they consider “access to books” to be “a big deal” and that when they “ask a class of children how many children have say ten or more books in the house, you'd be amazed by how many don't.” This teacher explained, to a colleague, that, as a result, they “always have a book on the go for a wee spare five minutes,” however, the colleague responded that they “don't have a spare five minutes” to dedicate to reading. The teacher who did ensure that their pupils had access to books via these five-minute windows stated:

it's important to build those five minutes into your day because reading with children is never time wasted. I think it's easy to think of that as a time filler whereas it should be something you are making time for, because it's important that they hear how reading should sound, because if you don't model it to them, if they are not having it modelled at home, they need to hear it from you and they need to hear what good expressions sound like and they need to hear what you do when you come to a full stop and they need to get excited by the story.

6.3.3: Internet

Source: INTERNET	% of teachers interviewed
Used as an information source	94%
NOT used as information source	6%

16 of 17 teachers interviewed (94%) said that children aged between six and eight use the internet as a source of information. For example, one teacher said that if their pupils seek information “it would be mostly from a web site or something.” Another teacher said that

when their pupils seek information, “they immediately say ‘let’s Google it.’” An additional teacher also discussed their pupils using the internet to obtain information:

the other day we were mentioning poppies. Don’t know why they came into conversation. Didn’t know what a poppy looked like. We got to ICT and a lot of them Google Imaged to look for a picture of a poppy. Anything that comes up, they use it all the time, or they’ll ask me to use it on the Smartboard so they can see a picture of whatever it is we are talking about. Anything, they use it like that, readily.

Another teacher also discussed their pupils using the internet to obtain information and said that their pupils “often ask me questions that I don’t know the answer to” and then ask, “can we Google it right now before we move on.” This teacher said that their pupils have used the internet to seek information on:

any questions that come up [...]. We were doing Scotland as a topic, and we were looking at Stirling Castle and we were going there as a trip, and we said ‘let’s try and find out some things’ and there was a couple of child friendly information sites, about Scotland or Stirling Castle, and I showed them how to search it and it meant they could read it themselves and pick out the key information and they loved that.

1 of 17 teachers interviewed (6%) said that their pupils do not use the internet as an information source:

They don’t really have access to the internet. We only get to go up to our ICT class once a week and there is not even enough computers for them all. It’s all shared, and you know they still have trouble logging on to the computer, so getting them to log on, find the application to get on the internet, it just takes too much time and then there is too much information there to get them to scan through, so they would never say ‘let’s go and look on the computer and look on the internet.’ I think it takes too long for them, they get frustrated. They want a quick fix, a quick answer.

6.3.4: Children and young people

Source: CHILDREN AND YOUNG PEOPLE	% of teachers interviewed
Used as an information source	47%

8 of 17 teachers interviewed (47%) said that children aged between six and eight use children and young people as an information source. For example, one teacher said “some of mines would ask the more able child in the class, there is two in particular, a boy and a girl, and that’s kind of their go to, they’ll ask them to help them. It usually is just the odd word that they are not sure of [...] if they can get that word then they can get the rest of it.” One teacher highlighted how regularly their pupils use children and young people as an information source, stating “I suppose it probably happens every day, if they have to find the answer for something in class,” “there is only one of me” but “29 of them.” This teacher also instructs their pupils to “ask three before me, so they have to ask three of their peers” before they are allowed to ask the teacher a question.

One example of how children obtain information from their peers was provided by a teacher who said that they are:

getting a wee Syrian girl next year who has just literally been in the school four months. By the time she comes back after the summer the English that she's learned might have gone again because they don't speak English at home, and I am thinking what can I give her. I know we have got some resources that have been sent to us but there is nobody here to interpret. We just have to get by [...] however the other children are the best resource [...] they take them under their wing. They teach them words, some you might rather they didn't know, and they come on with the other children.

6.3.5: Libraries

Source: LIBRARIES	% of teachers interviewed
Used as information source	47%
NOT used as information source	6%

8 of 17 teachers interviewed (47%) said that children aged between six and eight use libraries as an information source. For example, one teacher said, “we have a school library which we take the children to” and “if there was a couple of children that really wanted to find something out, I would let them go.” This teacher also said that the “non-fiction books in the school library go down a storm. They love pouring over them. They love the topics that we do at that age. I think they just love finding things out.”

One teacher interviewed outlined that children aged between six and eight are dependent on their parents to facilitate access to public libraries:

when we were doing the Egyptians I took my class down to the library and they put on this display and a quiz and all of that so that's good cause you are trying to encourage that all the time, to realise that there are places you can go and get a book for nothing [...] they cannae go to the public library on their own so again it's down to parental encouragement and support.

Another teacher discussed the efforts that some of their pupils' parents make to enable their children to access information available in public libraries:

this wee girl walked thirty minutes to the library once a week, to do a research question, because I give the kids a research question to be done on a Monday, answer to be in on a Friday, and she walked once a week with her dad [...] dad I then found out was paying 35 pence a copy to get a print out of any information she needed so that she could complete her homework [...] Hail, rain, or snow they walked [...] to get her access to the information that she needed.

However, 1 of 17 teachers interviewed (6%) said that some children aged between six and eight do not use libraries to obtain information and that this might be due to parental influence:

Very few of them go to the library anymore. Every year there is a big drive to get them into the libraries before the holidays, and every year children seem astounded that there is such a thing as the library, and they go away really enthusiastic and ‘we are going to go along to the bug club sessions and what not’

and they don't and I don't know that that's the children. I think that's maybe the parents. I think it's easier to take the kids other places or it's seen as easier because if you take them to Fun World, they'll run about I don't know. They don't tend to go to these places anymore. People tend to spend their money on different things other than buying books.

6.3.6: Magazines

Source: MAGAZINES	% of teachers interviewed
Used as information source	12%

2 of 17 teachers interviewed (12%) said that children aged between six and eight obtain information from magazines. For example, one teacher discussed their pupils and said, "I remember we were talking about how could we find out different research and they were listing things like internet, books, magazines."

6.3.7: Artefacts and museums

Source: ARTEFACTS AND MUSEUMS	% of teachers interviewed
Used as information source	12%

2 of 17 teachers interviewed (12%) identified artefacts and museums as sources that children aged between six and eight obtain information from. For example, one teacher said:

artefacts they love looking at artefacts, something unusual and usually whoever is bringing it in has a wee story to tell about it, and they love to touch it [...] a museum, we went to a museum and they just love it. Wee artefact sessions and role play. A wee bit of pretending they were Tutankhamen or whatever and their memory is amazing.

6.3.8: Newspapers

Source: Newspapers	% of teachers interviewed
Used as information source	6%

1 of 17 teachers interviewed (6%) said that newspapers are not an information source used by children aged between six and eight. This teacher said that their pupils would not use newspapers, to obtain information, because “newspaper are maybe a wee bit too grown up for them probably too much written.”

6.4: Barriers to children obtaining information

Teachers were asked about the difficulties and challenges that children aged between six and eight can face when seeking information.

6.4.1: Children lack the skills to obtain information

Barrier	% of teachers interviewed
LACK SKILLS TO OBTAIN INFORMATION	94%
Skills lacked: Reading	82%
Skills lacked: Information literacy	71%
Skills lacked: Communication	24%
Skills lacked: Spelling	18%

16 of 17 teachers interviewed (94%) said that a barrier to children aged between six and eight obtaining information is children’s lack of skills. Reading skills were identified most frequently as the skills that children aged between six and eight lack. 14 of 17 teachers interviewed (82%) stated that children aged between six and eight can lack the reading skills to obtain information. For example, one teacher said, “if they've got poor reading ability then that would affect their, you know, their chances of reading and understanding.” Another teacher explained why lacking reading skills can be a barrier to children aged between six and eight obtaining information, “it's quite laboured, it's a hard thing for them to do.” If children are “having to sound every single letter or every single diagraph, by the time you've got to the end of the sentence you've no idea what it meant.” An additional teacher discussed reading skills being a barrier to their pupils obtaining information, stating

that their pupils look at books but “if you ask them questions on it they have no idea what the book was about” as their lack of skills means they cannot get “past that point where it is difficult” as they have had to “decode every part of the word.” This teacher said that their pupils can lack the “fluency” required so information will “flood into your head.” A further teacher highlighted that a lack of reading skills is a barrier to their pupils obtaining information. This teacher said that they “have got a group of children that are still really struggling to read for information.” These children “couldn't read a reference book. They can't actually read a textbook for maths” and this is “a barrier to them finding out information because they just can't process what they are reading.”

12 of 17 teachers interviewed (71%) said that some of their pupils lack the information literacy skills to obtain information. For example, one teacher said that their pupils lack the “research skills” to obtain information, that is, the “knowing where to look or who to ask.” Another teacher said that their pupils cannot obtain information online as they do not know “what to type into like Google,” “key words,” “what words to search,” they lack knowledge of “different websites” and “just kind of type like in a big sentence.” That is, pupils do not know “where to start, what to type in and what to search.” Lacking the skills to find a book in a library was another information literacy skill that teachers said can be a barrier for children aged between six and eight to obtain information. One teacher said that their pupils are unable to find books in libraries because they do not “know the organisation and layout of a library.” Another teacher said that their pupils do not “have a clue” how libraries “worked.”

4 of 17 teachers interviewed (24%) said that children aged between six and eight can lack the communication skills to share information. For example, one teacher said that their pupils are unable to “really explain” their homework tasks to their parents. An additional teacher discussed a pupil who has a lisp and when this child reads “it sounds like she doesn't know what she is doing. She does but she can't communicate it because of this lisp.”

3 of 17 teachers interviewed (18%) outlined that spelling skills are a skill to obtain information that children aged between six and eight can lack. For example, one teacher said that a barrier to some of their pupils obtaining information is “their spelling,” that they

“need help with spelling.”

6.4.2: Children lack access to information sources

Barrier	% of teachers interviewed
Lack access to information sources	53%

9 of 17 teachers interviewed (53%) indicated that a barrier to children aged between six and eight obtaining information is lacking access to information sources. For example, some teachers indicated that their pupils don't have access to parents as a source of information. That is, some pupils' parents are unwilling or unable to provide their children with information. For example, one teacher discussed parents who were unable to assist their children to obtain information to complete their “Scottish homework,” “the wee girl who swallowed a midge.” The homework contained “all Scottish words” and the parents did not “understand” the homework. The parents had to ask the teacher “What is this midge?” The teacher said that the parents “had tried to look it up online, cause a lot of them are really keen for their children to do well, but they didn't understand what the homework was.” This teacher also said that for their “own children, I can help at home, with a task at home, whereas their parents don't have the language skills to help them.” An additional teacher outlined that some of their pupils' parents are unable to assist their children to obtain information. That some of their pupils are “better readers than their parents” and the children have to assist their parents to access information. For example, the children have to tell their parents what letters sent home from school say. Another teacher discussed some of their pupils' parents who have “huge issue with drugs” and lack “appropriate prioritisation,” these parents do not consider assisting their children to access information to be “important” as their “burning desire” is “to feed their habit.”

An additional teacher discussed some of their pupils whose parents are unable to assist them to develop the skills needed to obtain information from other sources. This teacher said, “I have better parental input in my school but there is one wee boy in particular who doesn't get that and he is miles behind the rest in terms of being able to read and write.” This teacher believed that this “shows the difference between having that parental input and not having it. The more input the better the children are at accessing information.” This teacher said that this pupil's parent had “admitted to me that she has got dyslexia and

she really struggles with the wee boy's homework." This parent tells their child not to do their homework "because she doesn't want to, because she finds it hard, and that's impacting on him." Another teacher discussed parents who do not support their children to develop the skills they need to access information. This teacher has pupils "who can't read in English" but their parents do not encourage them to complete their homework or to "improve this skill" instead the parent encourages their children to go to the "mosque every day after school." This teacher said that "if this was my child, the priority would not be attending the mosque."

The data also indicated that children aged between six and eight can also lack access to the internet. For example, one teacher said that their pupils are unable to obtain internet information as they "don't have a computer" at home and the school "has a lack of computers." An additional teacher said that their pupils are unable to obtain information on the internet because they "don't really have access to the internet."

Some teachers interviewed also discussed pupils that lack access to books as an information source. For example, one teacher said that some of their pupils do not use books to obtain information because they "have no books whatsoever, not even a newspaper at home, not even a comic."

6.4.3: Children lack the motivation and perseverance to obtain information

Barrier	% of teachers interviewed
Lack motivation/perseverance to obtain information	47%

8 of 17 teachers interviewed (47%) indicated that a barrier to their pupils obtaining information is a lack of motivation to seek information or a lack of perseverance to continue efforts initiated. For example, one teacher said that they have pupils who "can't be bothered" to obtain information. Another teacher discussed their pupils who lack the motivation to obtain information and said that this can be due to parental influence. This teacher outlined that they had asked a pupil:

what do you want to do with your life?' Hoping that he's going to tell me he wants to be a doctor or fly to the moon. He said 'I want to hang around the bottom of the

close and drink lager with the rest of the men, cause that's what you do' [...], I think the aspiration and the model that is set for children cannot help but affect them deeply [...] it didn't matter what we said, cause we were talking fairy tales, cause this stuff didn't happen, cause every man that he ever saw hung around the bottom of the close drinking lager [...] why would you try and find things out, cause it doesn't matter. It's irrelevant to his life.

Another teacher outlined that if their pupils struggle when seeking information, “most of them would give up.” An additional teacher said that their pupils lack “perseverance” and “resilience” when seeking information, that they “expect to find it [information] straight away” and think that “they have failed if they have not found something out the first time” and then they “just sit back.” A further teacher said that their pupils expect information to “jump out at them” and “become bored very quickly” if this is not the case. Another teacher said that their pupils can display “laziness” when seeking information, that they just want someone to “tell me the information.” Moreover, an additional teacher said that their pupils have a “need for instant satisfaction,” when seeking “an answer,” and few of them “come back to it” if they do not obtain an answer immediately.

6.4.4: Children’s additional support needs

Barrier	% of teachers interviewed
Additional support needs	24%

4 of 17 teachers interviewed (24%) said that having additional support needs can be a barrier to children aged between six and eight obtaining information. For example, one teacher said that dyslexia is a barrier to some of their pupils obtaining information, “it’s a struggle because, like, let’s say they typed in Google and it came up Goggle that’s fine [...] but you will get some dyslexic children put g a f e, what's that meant to say? [...] there is no way the computer can guess what that is, no way.” This teacher also said that they have “got a few children who are very dyslexic and their fine motor skills are so poor that no matter what they try and get down, not only is it [noise indicating makes no sense], they cannae read it.” This teacher also outlined that Asperger’s syndrome and autism can be barriers to their pupils obtaining information:

The Asperger and the autistic children, sometimes their concentration span [...] they either wander off or because they can't find the keys on the computer keyboard [...] they get really angry, very, very quickly [...], 'don't like change, have to go on that computer, I am not allowed on any other computer,' so again if I was to give them a book, 'I would like you to find this information,' they would be like screaming, 'I can't find it.'

Another teacher discussed one pupil with "autistic tendencies" and how these tendencies are a barrier to this pupil obtaining information. The teacher said that this pupil can be given tasks such as:

key comprehension, or reading for comprehension, and obviously we know all the answers are in there but if he can't find it that's it, a wobble, gone, and you can't bring him back. It's just his frustration takes over. I think obviously if they have got a diagnosis of some sort that obviously impacts.

This teacher also discussed other additional support needs being a barrier to children aged between six and eight obtaining information:

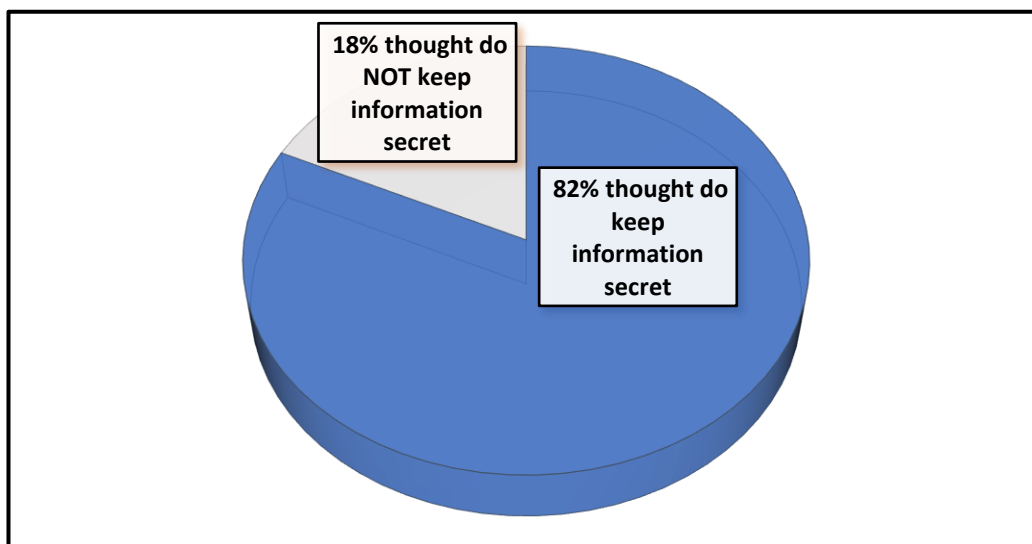
I find that primary three tends to be the year where if they have a diagnosis that's when it happens. It's primary three when it's more obvious [...] dyslexia usually is the big one, especially at primary three, or dyspraxia, dyscalculia, speech and language as well.

6.4.5: Internet restrictions at school

Barrier	% of teachers interviewed
Internet restrictions at school	6%

1 of 17 teachers interviewed (6%) said that a barrier to children aged between six and eight obtaining information online can be "firewalls" and the children not being "allowed on You Tube."

6.5: Children, information and secrecy



Children, information and secrecy	% of teachers interviewed
Can depend on the child	59%
Can depend on the topic	47%
Keeping information secret is done by older children	12%
Teachers discourage seeking/sharing information	24%
Teachers encourage seeking/sharing information	35%
Age 6-8 perhaps significant	18%

Teachers were asked if they thought that there have ever been occasions that children aged between six and eight have kept information secret, that is, children have been unwilling to share certain information or to ask particular questions. 14 of 17 teachers interviewed (82%) thought that some children aged between six and eight can keep information secret, concealing information needs or censoring information shared. For example, one teacher said that some of their pupils will not ask questions and that their “self-awareness” is “the biggest reason they would not ask something.” This teacher also said that some of their pupils will not answer questions in class as they are:

aware that ‘have I really got the right answer?’ and I don't want to make myself look silly, they find it embarrassing if they don't get the right answer and you've got some becoming so self-aware that they don't want to hog the limelight all the time when they do know the answers.

Another teacher discussed their pupils not sharing this information. This teacher stated, "You find children will actually hide their homework in their tray and not take it home or they'll hide it at home and not bring it to school or they'll hide it in their bag and kid on that they don't have it because they don't want to go through that embarrassment." The teacher said that this occurs:

if their parent hasn't had time to do it with them, they consider their parent sitting with them to be vital to them doing the work. You know I try and say to them, 'it's your homework, you know if your parents busy then you can do the work and then show it to them, if they are still busy, that's fine, just bring it back to me the way it is and that's okay.' But they consider the parent being beside them when they are doing their homework important so if their parent hasn't been available then they will hide the jotter rather than tell me that I didn't do my homework. I think the root of it is that they are concerned that they are going to get into trouble for it but whether that's to do with their parent or to do with them I am not sure.

Another teacher discussed some of their pupils who had been unwilling to share information because they didn't want to appear different to their friends, "A wee Turkish boy this year, Portuguese girl last year," "getting them to bring in things from home to share with the class and talk about you know the origins. They weren't very keen to do that." The children "didn't want to be seen to be different" they "just wanted to be like their peers." An additional teacher said that they had pupils "who absolutely would not have told you anything for fear of drawing you into family situations or making you aware of family situations." Another teacher discussed their pupils who had been unwilling to share information because their parents had told them not to. This teacher said that their pupils had been "influenced at home" and "told not" to share certain information with the teacher. An additional teacher outlined that there are topics such as being "pregnant" or "having babies" that their pupils have been told by their parents that they are "not allowed" to discuss. Some teachers also discussed pupils who had concealed information needs or kept certain information secret from peers. For example, one teacher said that they "have had situations where like individuals would just come to me, rather than like asking out like in front of the class," they "come up to me and tell me on my own." Another teacher also discussed pupils who do not want to share information in front of their peers. This teacher stated that "most of them would just tell me discretely and just to me, they

are obviously not going to turn around to the class.” An additional teacher commented that their pupils prefer to share “personal” information privately and are “more likely to come to you on a one to one, rather than ask for it to be discussed within the class.” This teacher provided an example of this, discussing “a wee boy with a bereavement issue and he has come to me one to one quite often and asked about what's happening and why it's happened, that kind of thing.”

10 of 17 teachers interviewed (59%) said that whether children aged between six and eight conceal information needs or keep information secret, censoring information shared, can depend on the child, that is, that some but not all children do this. For example, one teacher said, “it depends on personalities, you can have some very shy children,” and another teacher said, “I know there are some children they just wouldn't speak out even though something is bothering them.”

8 of 17 teachers interviewed (47%) said that whether children aged between six and eight conceal their information needs or keep information secret can depend on the topic. For example, one teacher said that their pupils, “love a chat, see if it's about a topic, they love getting their opinions heard but when it comes to talking about them, they are not as open about it.” Moreover, another teacher said that when sharing information, for their pupils, it “definitely depends on the topic,” “quite a lot of them will be quite open,” however, if the information relates to “home life,” they “don't want to share.”

The data also indicated that there have been occasions when teachers only realised that their pupils had kept information secret when the consequences of this could not be hidden. For example, one teacher discussed a pupil who “was too embarrassed to change in front of everybody else but she didn't want to say. As a result, she would keep her gym stuff on and because it was so hot, she developed thrush.” The child had been “too embarrassed to tell” the teacher. This teacher also discussed pupils who had been “really embarrassed to say, ‘right I need to go to the toilet because I need to do a poo,’ or something like that you know.” The teacher only realised that this when the children soiled themselves.

3 of 17 teachers interviewed (18%) said that their pupils do not conceal information needs

or keep information secret. For example, one teacher said that “quite scarily” their pupils “tell me most things, they'll tell me if mummy's uncle was over last night, and they didn't like it. They'll tell me that the polis were round and they took my mammy away in their handcuffs.” This teacher also said that:

When I was growing up and my mum and dad were talking about something, I'd either get sent out the room or you knew by the hushed voices, ‘oh I better not say this,’ whereas in the school, I can just picture some of the parents, ‘see them, I pure just battered the crap out of them, and I was like don't you fucking say that,’ so these children think that's normal, so they'll come in and say ‘my mums pure swearing at them and the police had tae come,’ and maybe they just don't have that barrier which they maybe should have because sometimes it's scary what they come away with. [...] A lot of them are single parents as well so they need someone to talk to and whether it's a kid ‘cos their ma best pal’ and I keep thinking no they are not your best pal, they are your child, but they confide in the child a lot, sometimes far too much. These kids are coming in with information that they shouldn't know. An example of this ‘has mummy had her baby yet?’ ‘No, she is going to get her cervix swept today.’ Oh my God! Too much information, there's just some things you don't talk about.

2 of 17 teachers interviewed (12%) said that concealing information needs or keeping information secret is something that older children do. For example, one teacher said that, between the ages of six and eight, children “are still quite open,” “they don't hold back.” This teacher thought that:

there isn't anything that they wouldn't say at this age, maybe further up the school it might be an issue that they would rather speak to someone one to one or ask a question anonymously, but in infants no, if they want to know something, they are quite vocal about it.

The other teacher concurred stating that, between age six and eight, children are “really really honest,” “brutally honest,” “probably too honest.” This teacher said that at this age, children “pretty much tell you everything” and that “Maybe as you get up the school,” they would keep information secret but not at age six to eight.

4 of 17 teachers interviewed (24%) said that they encourage their pupils to restrict the questions that they ask or the information that they share. For example, one teacher discussed how they try to discourage their pupils from asking questions:

there are some who will ask questions at the drop of a hat, when you are not half-way through your explanation, and you are kind of saying 'do you need to ask this right now? Maybe wait till I am finished' and then they don't come back, and you think well have I answered it or have I put them off.

Another teacher said that they try to get their pupils to ask them less questions and have been teaching their pupils "strategies that they can use before they ask me." An additional teacher outlined that they try to encourage their pupils not to share so much information with them:

we are trying to encourage them not to tell tales so much in P3, but they are still having little fall outs with each other in the playground, and there are some who you have to be quite careful of, because you are encouraging them not to come and tell you everything, and some who will take that a little too seriously and not tell you something that you maybe needed to know.

6 of 17 teachers interviewed (35%) discussed actively encouraging their pupils to ask them questions or to share information and discussed specific measures taken. For example, one teacher discussed trying to encourage their pupils to share information as their pupils "do hide things" which the teacher is "trying to change." An additional teacher outlined strategies that they use to encourage their pupils to share information with them:

our school do 'time to talk' cards. It's a card that if you need to talk to the teacher, you are not putting your hand up or if everyone is lining up and everyone is not saying 'oh what happened and what does he want?' He just puts that card beside his table, and they know at some point, you will make that chance to talk to them.

Another teacher had a similar technique, a “worry box in the class,” so “if anything is worrying them, they'll write, it's like a wee love heart shaped post-it note, and put it in, so that's a good way that they can communicate without having to actually say it in front of the class.”

3 of 17 teachers interviewed (18%) indicated that the period between age six to eight might be significant, in terms of whether children conceal their information needs or keep information secret. For example, one teacher said that in the latter stages of primary three, children stop seeking or sharing information as they become “a wee bit more self-conscious with things. At the start, right up until Christmas, they are a lot more relaxed” and then “their awareness, their self-awareness, their learning-awareness, to their image-awareness, all this now I think starts in primary three.”

6.6: Improving children’s access to and use of information

What could improve child's access to/use of information	% of teachers interviewed
Increased funding and changing where allocated	88%
More time	35%
Better links between teachers and parents	24%
Preventing technology failure	1%
Developing children's research skills	1%
Teaching children different ways to research	1%
Developing resources children confident using	1%

Teachers were asked if they could think of one thing that could improve children aged between six and eight access to and use of information.

6.6.1: Increase funding and change where funded is allocated

15 of 17 teachers interviewed (88%) said that increasing funding could improve their pupils’ access to and use of information. For example, one teacher said that more money would enable them to purchase more books as “the books we have got in class are pitiful.” This teacher also said that more money could be used to purchase “more resources” as it would

help them “to have some tablets in the class.” The teacher also discussed other ways that more money could improve their pupils’ access to and use of information:

I would love to visit the library more, again, that comes down to their money because they don’t have the people freed up to see school groups the way they did. A few years ago we would take them for three or four visits, that’s stopped, money [...] last time I asked ‘we really don't have the facilities and the people power to do that right now.’ That's what I was told. I do encourage the children I show them my library card [...]. You can only do so much, and it probably does boil down to money I'm afraid.

Changing where funding is allocated was also discussed by teachers as a way children’s access to and use of information could be improved. For example, one teacher said:

every school has been given money over the years so that they can upgrade their ICT equipment. Every single class now you go into has a smart board and a desktop. They also have access to iPads. They have access to laptops. Ten years ago, that wouldn't have been the case.

However, this teacher believes that the “investment that's been put into electronic materials” has been “to the detriment of books.” Another teacher also said that changing where funding is allocated could improve children’s access to and use of information. This teacher said, “Even here in a school that is affluent and well-resourced I think there has probably been a little bit of neglect in renewing and refreshing our books generally.” This teacher also outlined that they had:

bought some new books this week for my class to have, just I bought, and they absolutely love it [...] a new book is something they get so excited about. Our children do have their own books at home. They have got books already, but they still find it extremely exciting [...]. The funding of resources at a school like this shouldn't be an issue [...]. I think there's maybe not the sort of the maintenance of book stock that needs to be there [...]. You know for children it is important [...] we talk all the time about not judging a book by its cover, but we know that it does need to be engaging and exciting so something that has got its cover torn off and is missing ten pages does need to be replaced [...] I would say digital budgets have

perhaps replaced that when they shouldn't have replaced it. It should have been alongside or an additional.

Another teacher also said that budgets for electronic resources had been prioritised, and that a “bigger school budget” to buy more books could improve their pupil’s access to and use of information:

we do have an ICT suite, we have got iPads and we have got mini books as well, I think electronically it’s quite good for the children, but I would say just your basic paper-based resources are lacking. I don't feel there is enough money put into that as there was in the past [...] maybe people think that the electronic resources supersede it now or something, but I would say good old-fashioned books if we could get more of a budget for that.

6.6.2: More time

6 of 17 teachers interviewed (35%) said that more time could improve children aged between six and eight access to and use of information. For example, one teacher said that more time would enable them to “use” and to “appreciate” books and for the children “to be taught how to use and appreciate them.” This teacher said that more time “to factor that into the curriculum would be hugely beneficial.” Another teacher said that if they had more time, they could make more appropriate resources for pupils. That is, if they had more time, this teacher would make resources which:

help children to break down the information and to bullet point it and to maybe teach the skills of skimming, scanning and bullet pointing. Retelling information in their own words as well because I think that's where they do find it difficult. They can access it and they can read it, but they don't always understand it.

This teacher said that such resources do not exist as there is “Probably not the time” as teachers have to “make things up in your own time and you know not every teacher will have the time to do that as well as teach all the different curricular areas.”

6.6.3: Better links between teachers and parents

4 of 17 teachers interviewed (24%) said that better links between teachers and parents could improve their pupil’s access to and use of information. For example, one teacher said

“More home school link work to see what the parents actually know is needed, as a lot of parents can’t speak English. Both parents struggle with English. No adult can read or write at home.” Another teacher said that better links with parents so that teachers could raise awareness of the importance of reading could make a difference to children’s access to and use of information. This teacher said “It would be really good to get parents in and show them the difference that it [reading] makes because I think if parents really understood what a difference reading makes then maybe they might do it.”

6.6.4: Additional suggestions

Individual teachers also said that preventing technology failures (1 of 17 teachers interviewed (6%)), developing children’s research skills (1 of 17 teachers interviewed (6%)), teaching children different ways to research (1 of 17 teachers interviewed (6%)) and developing resources children feel confident using (1 of 17 teachers interviewed (6%)), could improve children age between six and eight, access to and use of information.

6.7: Summary: Findings from interviews with teachers

The majority of teachers interviewed thought that children aged between six and eight are generally successful in obtaining information. However, fewer teachers thought that children can successfully obtain information independently primarily because adult assistance is required. Moreover, some teachers outlined that children aged between six and eight success in obtaining information independently can depend on: the child, the source, the stage in the school year, what children have been taught, the topic and what sources children have access to.

In terms of children’s use of sources, teachers unanimously said that children aged between six and eight use their teachers and books to obtain information. The majority of teachers also said that the internet is an information source used by children of this age too. Adults in the family, adults who visit the school, Classroom Assistants, children, young people, libraries, magazines, artefacts and museums were also identified as sources of information used by children aged between six and eight but were said to be sources less frequently used. Moreover, a common theme that emerged from the data was that some teachers try to ensure that their pupils have positive attitudes towards books and can access books. Some teachers buy books for children and classrooms using their own money. Teacher

interviewed also outlined how parents can impact whether children aged between six and eight can access public libraries.

Books, the internet, libraries and newspapers were identified as information sources that some children aged between six and eight do not use to obtain information. Books because children consider books unappealing, hard work, to require too much effort to obtain information from, due to the speed at which information can be obtained, because children lack the skills and because children lack access to books at home. Some teachers said that the internet is not used by their pupils as a source of information because children lack access. Libraries were said to be an information source that children do not use due to parental influence. Newspapers were said to be an information source not used by children because they contain too much writing.

The barriers to children aged between six and eight obtaining information identified after interviewing teachers were that children lack: the skills to obtain information, specifically reading, information literacy, communication and spelling skills, access to information sources and the motivation and perseverance to obtain information. Another barrier to children aged between six and eight obtaining information identified was children having additional support needs and school restrictions regarding what internet sites can be accessed.

The majority of teachers thought that there are occasions that children aged between six and eight keep information secret, concealing information needs and censoring information shared but that this can depend on the child, their parents, the topic and whether their peers can hear. Some teachers only realised that children had kept information secret when the consequences of doing so could not be hidden. However, some teachers said that keeping information secret is something that older children do. Some teachers encourage their pupils to ask questions or to share information and attempt to create an environment where this can occur. In contrast, some teachers discussed encouraging their pupils to censor the information that they share or the questions that they ask. Moreover, some teachers thought that age six to eight is significant in terms of whether children conceal their information needs or keep information secret, as children become more self-conscious about questions that they will ask or the information that they are willing to

share at this age.

The main suggestion that teachers made as to how children aged between six and eight access to and use of information could be improved would be to increase funding and to change where funding is allocated to. Moreover, more time and better links between teachers and parents, were the other main suggestions teachers made as to how children aged between six and eight access to and use of information could be improved.

Chapter 7: Discussion: Findings from empirical component of study

This chapter discusses the key themes that emerged from the empirical component of this research study. The empirical component of this research study sought to answer Research question two: Do children experience information poverty and if so, why?

After undertaking fieldwork with child research participants and interviewing parents and teachers, the researcher obtained clear evidence that children aged between six and eight can live in impoverished information worlds. Children aged between six and eight can: have unmet information needs; require adult support to obtain information and keep information secret, concealing their information needs and censoring information shared.

The researcher also identified factors that can contribute to the information poverty of children aged between six and eight. The researcher found that children aged between six and eight can experience information poverty because: they lack the skills to obtain or share information, specifically information literacy, reading, spelling and communication skills; they lack the motivation and perseverance to obtain information; they lack access to information sources, namely to adults, children, young people, computers/the internet and books as sources of information; their parents restrict their information access; their parents and teachers encourage them to keep information secret, to conceal their information needs or to censor the information that they share.

Research findings did indicate however, that not all children aged between six and eight experience information poverty, nor do all children who experience information poverty, experience information poverty due to the same contributory factors.

The empirical findings of this research study support Childers and Post's (1975, p.32) theories regarding barriers to information needs, searches, acceptance and use and Chatman's (1996) information poverty theories. Research findings also support the findings from empirical research studies involving adolescents and adults who live in impoverished information worlds. Moreover, although there are no published empirical child information poverty studies, findings from this research study also support the findings from empirical research studies involving children from outwith the field of information poverty.

The findings from the empirical component of this research study advanced the researcher's understanding pertaining to Research question one: What is information poverty and why does it occur? That is, via empirical component of this research study, the researcher has established that children can experience information poverty, what factors can contribute to child information poverty and that some of the same factors can contribute to child, adolescent and adult information poverty.

7.1: Do children experience information poverty

The researcher found clear evidence that children aged between six and eight can experience information poverty. Children aged between six and eight can have unmet information needs, can require adult support to obtain information and can keep information secret, concealing their information needs and censoring information shared.

7.1.1: Children can have unmet information needs

The researcher determined during fieldwork with child research participants that some children aged between six and eight had unmet information needs. That is, almost half of child research participants indicated that they are not generally successful in obtaining information.⁵

The finding that some children have unmet information needs supports the information poverty theories of Chatman (1996). That is, Chatman (1996, p.197) stated that an "impoverished information world" is a world in which information needs are "not being met," and this research study identified that almost half of child research participants had unmet information needs.

This finding that some children have unmet information needs also supports the findings from the existing empirical research undertaken with adolescents by Buchanan and Tuckerman (2016). That is, Buchanan and Tuckerman (2016, p.541, 542), when they investigated the information behaviours of disadvantaged and disengaged adolescents in Scotland, noted that the adolescents experienced information poverty, having "several

⁵ The reasons that child research participants information needs were not met are discussed in Section 7.2.

notably unmet” information needs.

The data in this research study did indicate however, that not all children aged between six and eight have unmet information needs. That is, just over half of child research participants indicated that they are generally successful in obtaining information. In addition, all parents and almost all teachers interviewed thought that their children/ children aged between six and eight are generally successful information seekers.

Although there are no published empirical child information poverty studies, the finding that children can have unmet information needs also supports the findings from empirical research involving children from outwith the field of information poverty. For example, Creel (2014, p.277), who investigated whether 51 children (5-8) successfully used online public library catalogues in Texas, concluded that the children’s “success in finding information” was “very low.” Moreover, Foss et al (2012, p.565), who researched the home internet searching of 83 American children (7-11), noted that children aged 7 had a “low overall search success rate” when information seeking. Furthermore, Walter (1994, p.123, 124, 126), when interviewing the 25 adult professionals to explore the information needs of children (aged 10) in Southern California, concluded that “many information needs of children simply go unmet,” their questions “go unanswered,” they “never get the information at all” and “seem to be information poor.” In addition, Bilal (2000, p.656), who researched information seeking via a search engine of 22 children (11-12) in Tennessee, reported that child research participants did not obtain the “correct answer” to search tasks, and Shenton (2007, p.326, 327), who investigated causes of information-seeking failure amongst 188 children and young people (3-18) in England, identified that, with “alarming frequency,” children and young people “did not gain information to meet their needs.”

7.1.2: Children can need adult support to obtain information

The researcher also established from child research participants and from parents and teachers interviewed, that children aged between six and eight can be unable to obtain information independently and thus, can live in impoverished information worlds. That is, in this research study, the majority of child research participants thought that they are not generally successful in independently obtaining information. Primarily because they need

adult support to obtain information. For example, child research participants variously stated that they can only obtain internet information if an adult assists them to “spell the word” or puts “up a web site.” In addition, just under half of parents interviewed thought that their children are not generally successful in obtaining information independently. For example, parents variously explained that they have to assist their children so that their children can obtain information required, that they have to “guide” their children and provide their children with “direction” and “support” to obtain information successfully. One parent said that if “there wasn’t an adult to ask,” their child would not “find out the information that he wanted.” Furthermore, nearly half of teachers interviewed thought that children aged between six and eight are not generally successful in obtaining information independently, primarily because adult assistance is required. Teachers variously discussed pupils who “struggle to work independently” and who are “reliant on teacher support,” pupils who need to be “guided” to obtain information successfully and have their teachers “prompt” and “direct” them. One teacher stated that it is really only their “highest achievers” that “could have a specific question and totally independently find the answer.” As well as establishing that children aged between six and eight can be unable to obtain information without adult support, data from this research study also evidenced that some adults are unwilling or unable to support children to obtain information. For example, one child research participant said that, when they ask their parents a question, their parents tell them to “go away.” Another child said that their parents are “not interested” in answering their questions and an additional child said that their parents do “not have the knowledge” to provide them with the information that they seek. Child research participant also indicated that their teachers do not always satisfy their information needs. For example, one child stated that their teachers “don’t listen” to their questions and another child said that when they ask their teacher a question they are told to “sit down on your seat.” Parents interviewed also outlined that there can be occasions that (primarily for protective reasons) they do not assist their children to obtain information. Moreover, children can be unaware of this. For example, parents discussed censoring the information that they supply when their children ask about the Tooth Fairy or Santa Claus and outlined that they prevent their children from accessing information available on the radio, television or newspapers in case this information causes distress. Teachers also outlined that there are occasions that they do not satisfy their pupils’ information needs. For example, one teacher said that if a child asks them a question in

class, they will only provide an answer if the question is “related to the topic” being taught. Teachers also highlighted that some parents are unwilling or unable to assist their children to obtain information. For example, one teacher discussed parents who had been unable to assist their children to obtain the information that they had needed to complete homework. The parents “had tried to look it up online, cause a lot of them are really keen for their children to do well, but they didn't understand what the homework was.” An additional teacher outlined that some parents are unable to assist their children to obtain information as, by age six, the children are “better readers than their parents” and it is the children who have to assist their parents to access information, for example, telling their parents what letters sent home from school say.

The finding that children can be unable to obtain information independently and that some adults are unwilling or unable to assist children to obtain information required, supports Childers and Post's (1975, p.32) theories regarding barriers to information needs, searches, acceptance and use. That is, Childers and Post (1975, p.32) argued that a barrier to information needs, searches, acceptance and use can be individuals “being locked” into information subcultures or ghettos which can remove individuals “from the flow of popular information that exists in society at large” and can leave individuals “deficient” in information prevalent in wider society. The authors argued that such subcultures can contain an “inordinate amount of unawareness and misinformation (myth, rumour, folk lore)” (Childers and Post, 1975, p.32, 33). In this research study, the researcher established that parents and teachers restrict children from accessing information available in wider society, endeavour that children are unaware of certain information or purposively provide children with misinformation. For example, parents provide misinformation to their children regarding the Tooth Fairy or Santa Claus or ensure that their children do not access information on television, the radio or newspapers that might cause distress. Empirical research findings also support Chatman's (1996) information poverty theories. That is, Chatman (1996, p.197) devised six propositional statements to act as a “theoretical framework” for defining “an impoverished information world” and to use as “a guide” to explore information poverty. Part of Chatman's (1996, p.197) second propositional statement was that information poverty can occur because other people withhold access to information. That is, in Proposition two, Chatman (1996, p.197) stated that “the condition of information poverty is influenced by outsiders who withhold privileged access to

information.” As highlighted, in this research study, the researcher found that parents and teachers withhold information from children aged between six and eight. For example, one parent interviewed stated that their child’s “biggest barrier” to obtaining information “is his mum, my restrictions, so he can't just find anything.” An additional parent said that they are a barrier to their child obtaining internet information because they worry about “bad bogeymen” on the internet so withhold internet information from their child. That is, this parent stops their child “from finding out what they want to know” on the internet. Empirical research findings also support Chatman’s (1996, p.196) theories regarding information poverty and deception. Deception was one of four concepts that Chatman (1996, p.193) said served “as the basis for defining an impoverished life-world.” Chatman (1996, p.196) stated that deception occurs when “false” or “misleading” information is shared in “a deliberate attempt” to distort or mask reality, despite the fact that such deception can mean a person is less likely to obtain useful information. Chatman (1996, p.196) stated that the ultimate aim of deception was “self-protection.” As discussed, some parents share false or misleading information with their children deliberately to distort or mask reality because they want to protect their children. For example, information regarding the Tooth Fairy or Santa Claus. Thus, the researcher believes that empirical findings from this research study support Chatman’s (1996) theories regarding information poverty and deception due to protectiveness.

The finding from this research study that children can experience information poverty because they are unable to obtain information independently also support the findings from empirical research studies with adolescents. For example, when Buchanan and Tuckerman (2016, p.541, 542) investigated the information behaviours of disadvantaged and disengaged adolescents, the authors found that the adolescents were unable to obtain information independently and were dependent upon support workers to obtain information. Thus, the adolescents lived in impoverished information worlds.

Findings from this research study did indicate however, that not all children aged between six and eight require adult support to obtain information successfully. That is, research findings indicated that some children aged between six and eight can obtain information independently. In this research study, nearly a third of child research participants thought that they are generally successful in obtaining information independently. In addition, just

over half of parents and teachers interviewed thought that their children/children aged between six and eight can successfully independently obtain information. For example, one parent said that their child would "get on fine independently" if seeking information and would "keep trying until they found something" and one teacher stated that their pupils are able to "find the answer themselves."

Although there are no published empirical child information poverty studies, the finding from this research study that children can require adult support to obtain information but their parents and teachers can be unwilling or unable to provide information or can provide misinformation, supports existing literature from outwith the field of information poverty. For example, Gross (2006, p.xi) discussed children's information seeking and stated that children can have "dependence on adults for assistance." Bates (1996, p.8) stated that "the younger a child is the more the adults around that child decide what information gets to that child." Shenton (2010, p.61) concluded that children's information needs can "become altered when adults subject them to their interpretations." Furthermore, Meyers, Fisher and Marcoux (2009, p.326), who investigated the information worlds of 34 children (9-13) in Seattle, reported that "knowledge is sometimes held back" from children by adults. Moreover, Meyers, Fisher and Marcoux (2009, p.325, 329) also reported that teachers do not always satisfy their pupils' information needs. That is, the authors noted that children cannot always obtain information from their teachers as teachers don't always "have the answers" or "answer the questions right" and some children do not consider "school as a place where information flows easily" (Meyers, Fisher and Marcoux, 2009, p.325, 329). Findings from this research study also support Sturges (2009) who discussed children's information needs and stated that "systems of mass schooling" and are "not especially conducive to a child's freedom of inquiry."

7.1.3: Children can keep information secret

The researcher also determined from child research participants, and from parents and teachers interviewed, that children aged between six and eight can keep information secret, can conceal their information needs and censor the information that they share and thus, live in impoverished information worlds. That is, in this research study, just over half

of child research participants⁶ indicated that there have been occasions that they have kept information secret or not sought certain information. In addition, the majority of parents and teachers interviewed thought that there had been occasions that their child/children aged between six and eight have kept information secret or not sought certain information. For example, this research study found that there had been occasions that children aged between six and eight had kept information secret because they desired privacy. One child had not wanted to give a talk about themselves at school because they “worried” about “giving too much away.” Parents also variously outlined that there had been occasions that their children had wanted to keep information “private;” that there is information that their children do not “want to share;” that their children “keep a lot” of information to themselves and that there is information that their children are “hiding” and “not wanting to tell.” The data also indicated that there had been occasions that children aged between six and eight had kept information secret due to embarrassment. For example, parents variously said that there are questions that their children can be “a bit” embarrassed or “too embarrassed” to ask; that embarrassment does “stop” their children from asking questions and that there is information that their children will “hide” as they are “a wee bit embarrassed.” Teachers also variously discussed occasions that their pupils had not shared information because they were “too embarrassed,” because they found it “embarrassing” and because they “don't want to go through that embarrassment.” The data also highlighted that children aged between six and eight can keep information secret due to fear. For example, child research participants indicated that they had previously not sought or shared information because “it kind of scary” or because they were “a bit scared.” One parent interviewed also intimated that their child had feared sharing certain information in case an adult would “flip out.” Teachers also variously discussed pupils who had not answered questions because they feared they might “look silly;” pupils who had not shared information because they were concerned that they were “going to get into trouble” and pupils who “absolutely would not have told you anything for fear of drawing you into family situations.”

The finding that children aged between six and eight can keep information secret, can conceal their information needs or censor the information that they share, supports Chatman's (1996, p.197) theories pertaining to information poverty and secrecy. Secrecy

⁶ That provided a response to this question.

was another of the “four critical concepts” that Chatman (1996, p.193) said served as the “basis for defining an impoverished life-world.” Chatman (1996, p.197) argued that those who keep information secret, that is, do not seek or share information (mainly for self-protective reasons), live in impoverished information worlds. Chatman (1996, p.195, 199) stated that the purpose of such secrecy is “a deliberate attempt not to inform others about one’s true state of affairs,” to protect from “unwanted intrusion” from any source, to keep aspects of life “private” and to maintain an “element of control.” Chatman (1996, p.195, 199) outlined that information can be kept secret even when seeking or sharing that information may result in much needed “assistance.” Thus, this research study found that there had been occasions that just over half of child research participants⁷ had kept information secret, not seeking or sharing information. In addition, the majority of parents and teachers interviewed thought that there had been occasions that their child/children aged between six and eight had kept information secret, not seeking or sharing that information. Chatman (1996, p.195, 199) stated that secrecy can occur due to a desire to keep aspects of life private, and the researcher evidenced children keeping information secret due to a desire for privacy. For example, there were children in this research study who had not wanted to give a talk about themselves because they “worried” about “giving too much away,” had wanted to keep information “private,” had not wanted “to share” information, kept “a lot” of information to themselves and were known to be “hiding” information and “not wanting to tell.” Data from this research study also supports Chatman’s (1996, p.197) theories regarding information being kept secret for self-protective reasons. That is, this research study evidenced children aged between six and eight information keeping information secret for self-protective reasons due to fear. For example, children had previously not sought or shared information because “it kind of scary,” because they were “a bit scared” or in case an adult would “flip out.” Children had also not answered questions or shared information because they feared they might “look silly,” because they were “concerned that they were going to get into trouble” or “for fear of drawing you into family situations.”

The finding that children aged between six and eight can keep information secret, and thus, live in impoverished information worlds, also support the findings from empirical research studies which evidenced adolescent and adults keeping information secret and thus, living

⁷ That provided a response to this question.

in impoverished information worlds. For example, Bronstein (2014, p.70, 71), when researching information poverty within obsessive compulsive disorder online support groups, discussed individuals who employed self-protective behaviours to keep information secret and thus lived in impoverished information worlds. These individuals employed self-protective behaviours to hid symptoms relating to their mental health, that is, they kept information regarding their mental health secret “because of the stigma attached to mental illness.” Moreover, this research study found that one reason that children aged between six and eight keep information secret is for self-protective reasons due to fear. This finding supports the findings of empirical research undertaken by Hayter (2005) who, when researching the information worlds of residents on the disadvantaged estate in Northeast England, discussed estate residents who kept information secret due to fear. That is, Hayter (2005) discussed residents who worried about disclosing or accessing information as they feared that this information would not be kept secret. There were residents who were “too proud, embarrassed or ashamed” to reveal their “problems” or information needs even to family and friends (Hayter, 2005, p.99, 182, 184). Also, because the residents had kept this information a “secret,” because they didn’t want “people to know about it,” they were in “really bad situations” (Hayter, 2005, p.101). Furthermore, Hamer (2003, p.81), who researched the information-seeking of young gay males in New Jersey, noted that young gay males experienced information poverty, they did not “pursue information needs,” as they were “too scared” and had a “fear of being caught” seeking information “that would label me as gay.” In addition, when researching the information worlds of ageing women and janitors, Chatman (1996, p.198, 199, 204) discussed individuals who kept information secret and thus lived in impoverished information worlds. In that research study, Chatman (1996, p.198, 199, 204) outlined that “information of the most critical kind was not being asked for or shared,” individuals kept their “problems to oneself,” their “concerns private” and were “secretive,” due to “fear.”

Data from this research study did indicate however, that not every child aged between six and eight keeps information secret, that is, not every child conceals their information needs or censors the information that they share. That is, just under half of child research participants⁸, said that there had not been occasions that they have kept information secret. Furthermore, parents and teachers discussed children aged between six and eight

⁸ That answered this question.

who do not keep information secret or do not censor the questions that they ask. For example, some parents interviewed variously said that their children “come out with anything,” are not “embarrassed about asking about stuff,” are not “scared to ask anything” or “bothered about asking” questions. Moreover, one parent stated that their child does not keep any information secret, that their child has “no filter,” in fact the parent wishes that their child had “more of a filter” because they share “all sorts” of information “that none of us really want to know.” Some teachers also discussed children aged between six and eight who do not keep information secret and stated that whether children of this age keep information secret can depend on the child, their parents, the topic and whether their peers can hear. Teachers also variously discussed pupils who share “Too much information,” are “open” and “don't hold back,” pupils that there isn't “anything that they wouldn't say.” Teachers also outlined that some pupils can be “really really honest,” “brutally honest,” “probably too honest” and that there are pupils who are not aware that “there's just some things you don't talk about.”

Despite the fact that there are no published empirical child information poverty studies, the finding that children aged between six and eight can keep information secret, supports previous research involving children from outwith the field of information poverty. For example, Murphy, Roberts and Hoffman (2002), who interviewed 47 mothers with HIV and 41 children (7-14) in California, identified children that did not share information. Children who wanted to keep information private. That is, children involved in the research study considered information about their mother's HIV status to be “private” information and something “other people should not know” (Murphy, Roberts and Hoffman, 2002, p.197, 198). Moreover, Meyers, Fisher and Marcoux (2009, p.319, 320, 325, 327), when investigating the information worlds of children (9-13), also discussed children who kept information secret, children who sought to keep information private and did not ask certain questions. That is, the authors discussed children who were not “comfortable sharing information,” children that did not “talk about private stuff” and identified that there were questions that the children were too “proud,” “embarrassed,” “socially awkward” and “uncomfortable” to ask (Meyers, Fisher and Marcoux, 2009, p.319, 320, 325, 327). Furthermore, Daly and Leonard (2002), who investigated family life on a low income in Ireland (interviewing 28 young people (11-16), 49 parents and one other adult family member), discussed children that had kept information secret from their teachers, this was

the information that their families could not afford cooking lesson ingredients. The finding from this research study that children can keep information secret due to fear also supports the findings of empirical research studies involving children from outwith the field of information poverty. For example, Barnard and Barlow (2003, p.51, 52), who explored the issue of drug dependent parents, interviewing 62 parents and 36 children and young people (8-22) in Scotland, discussed children who had kept information about their parents' drug dependency a "secret" because they were "scared" or feared getting their parents "in trouble." In addition, Shenton (2007, p.342), when investigating the causes of information-seeking failure amongst children and young people (3-18), discussed children and young people that had a "reluctance to admit" their information needs because they "feared a hostile reaction from others."

7.2: Why do children experience information poverty?

After undertaking fieldwork with child research participants and interviewing parents and teachers, the researcher identified factors that can contribute to the information poverty of children aged between six and eight.

The researcher identified that children aged between six and eight can experience information poverty because: they lack the skills to obtain and share information, specifically information literacy, reading, spelling and communication skills; they lack the motivation and perseverance to obtain information; they lack access to information sources, namely to adults, children, young people, computers/the internet and books as sources of information; their parents restrict their information access and because their parents and teachers encourage them to keep information secret, to conceal their information needs or to censor the information that they share.

7.2.1: Children lack skills

Child research participants and the majority of parents and teachers interviewed indicated that lacking the skills to obtain information can be a contributory factor to child information poverty. That is, the researcher determined that children aged between six and eight can lack the information literacy, reading, spelling and communication skills to obtain and share information. Information literacy skills were discussed most frequently by child research participants as the skills to obtain information that they lacked. Moreover, over half of

parents and teachers interviewed said that their child/children aged between six and eight lack the information literacy skills to obtain information. For example, one child research participant indicated that they cannot obtain information from books because they “don't know what one to start with.” One parent said that their child would be unable to find a book in a library as they “wouldn't understand” how to do that. One teacher also said that their pupils would be unable to find a book in a library because “they wouldn't know the organisation and layout of a library” and another teacher said that their pupils would be unable to find a book in a library because they “wouldn't have a clue” how libraries “worked.” A lack of reading skills was also identified as a barrier to children aged between six and eight obtaining information. For example, child research participants discussed finding books “too hard to read” and the words “too tricky.” Moreover, parents variously discussed their children not being “confident” readers or being “poor” readers and this being a barrier to their obtaining information. In addition, teachers variously stated that a lack of reading skills can be a barrier to their pupil's obtaining information as lack of skills can make their reading “quite laboured” and “a hard thing” to do and some pupils cannot get “past the point” where obtaining information is “difficult,” they lack “fluency” so information “floods into your head” and “really” struggle to “read for information” which is “a barrier to them finding out.” Children, parents and teachers also indicated that a lack of spelling skills can be a barrier to children aged between six and eight obtaining information. For example, one child indicated that they have been unable to obtain internet information because they “spell it [search terms] wrong.” One parent explained that lacking spelling skills is a barrier to their child obtaining information stating that “It happens on a regular basis, that spelling isn't a strength that he has got, he knows the words but he can be wildly wrong.” Parents also discussed their children's lack of spelling skills being a barrier to their obtaining internet information specifically. For example, one parent stated that a lack of spelling skills can “stop” their child “getting right through to the information that they are looking for.” Another parent said that their child's “spelling of some words,” means that they can be unable to find information online. Teachers also discussed pupils who lack the spelling skills to successfully obtain information. For example, one teacher said that they have pupils whose “spelling is poor” and who “need help with spelling” and that this is a barrier to these pupils obtaining information. Teachers also discussed a lack of communication skills being a barrier to children aged between six and eight seeking and sharing information. For example, one teacher said that their pupils are unable to “really

explain” their homework to their parents, and another teacher discussed a pupil who has a lisp, stating that when this child reads, “it sounds like she doesn't know what she is doing. She does but she can't communicate it because of this lisp.”

The finding from this research study that lacking the reading and communication skills to obtain information can be a cause of child information poverty supports Childers and Post's (1975) theories regarding barriers to information needs, searches, acceptance and use. That is, Childers and Post (1975, p.32) argued that barriers to information needs, searches, acceptance and use can be “very low” reading abilities and a lack of communication skills and this research study determined, from child research participants, parents and teachers, that lacking reading skills can be a barrier to children aged between six and eight obtaining information. Teachers also discussed a lack of communication skills being a barrier to children aged between six and eight sharing information too.

The finding that children aged between six and eight can lack the skills to obtain information, and that this can cause information poverty, also supports findings from empirical research studies which found that adolescents and adults can experience information poverty because they lack skills. For example, Buchanan and Tuckerman (2016 p.538, 543), in their research with the adolescents, noted that the adolescents had “significant literacy issues (encompassing reading, computer, and information),” they struggled “to understand words in books” and experienced “difficulties with online searches and webpages.” In addition, Kennan et al (2011, p.205, 207, 208), who investigated the information experiences of Australian refugees, reported that refugees can “face barriers” obtaining information due to a lack of “literacy” skills. Moreover, Sligo and Jameson (2000, p.865), who researched barriers to cervical screening amongst New Zealand Pacific women, found that some women's information access was impeded due to a lack of literacy skills. That is, the authors reported that a “lot of the ladies” were “more or less illiterate” and were unable to access information (Sligo and Jameson, 2000, p.865). In addition, Kennan et al (2011, p.208), when investigating the information experiences of Australian refugees, noted a lack of information literacy skills impacting on information access, concluding that “there is a strong relationship between information literacy” and “information poverty.” Moreover, Pitts (1994), when researching American high school students search and use of information, identified individuals lacking access to information

due to a lack of information literacy skills.

Findings from this research study did evidence however, that not all children aged between six and eight lack the information literacy, reading, spelling and communication skills to obtain information. For example, one parent interviewed said that their child can locate a book in a library, that their child “could definitely do that,” and another parent indicated that they do not consider a lack of spelling skills to be a barrier to their child obtaining information as their child is “good at spelling” and “doesnae need any help at all.” Moreover, an additional parent said that their child does have the information literacy skills to obtain information online, this parent was “100% sure [participant names child] will search that thing out if you give him the computer.” A further parent also said that their child does have the skills to obtain information online. This parent stated:

She seems to be able to find it [information] no problem [...] she doesn't have to spell of course, because it auto corrects and it auto finds your words, but she can anyway but she knows how to just type the start of the word and then click on it so she's not even fully putting the word in.

Although there are no published empirical child information poverty studies, the finding from this research study, that children can lack the information literacy, reading, spelling and communication skills to obtain information, supports existing research involving children from outwith the field of information poverty. For example, Rutter, Ford and Clough (2014), who worked with 12 children (8-9) in the UK to investigate children’s reformulation of search queries, found that lacking information literacy skills was a barrier to children obtaining internet information. The authors reported that child research participants “frequently missed relevant information and found it hard to choose between search results,” “information was available” but the children “did not see,” and the children failed “to extract information” (Rutter, Ford and Clough, 2014, p.427). Furthermore, Cooper (2002), who investigated the information seeking behaviour of 21 children (age 7) in their school library media centre, reported that children struggled to obtain information because of a lack of skills. In this case the children lacked the skills to use a computer index and found the words in a book “too small to read” (Cooper, 2002, p.916). In addition, Shenton (2007, p.337), when exploring causes of information-seeking failure for children (3-

18), reported that children struggled to locate books in a public library, the children lacked the skills to do so, some children believed that non-fiction books were organised in alphabetical order by subject while one child did not realise that the books were in “any order at all.” Moreover, using data from the same study, Shenton and Dixon (2004, p.34) reported that children (4-9) had “poorly developed reading skills” which were “particularly major handicaps” to information-seeking. Furthermore, Foss et al (2012, p.568), when researching the home internet searching of children (7-11), noted children “reporting frustration” due to “developmental limitation” including “spelling” and “low reading ability.”

7.2.2: Children lack motivation and perseverance

The researcher established from child research participants and from parents and teachers interviewed that children aged between six and eight can experience information poverty because they lack the motivation to seek information and the perseverance to continue efforts once initiated. That is, child research participants variously outlined that they “can’t be bothered” to obtain information, that they think “what’s the point” in seeking information and if they struggle when seeking information, they “just give up.” In addition, almost half of parents interviewed indicated that a barrier to their children obtaining information is a lack of motivation or perseverance. For example, parents interviewed variously discussed how, when seeking information, their children expect “the instant thing,” have a need for “immediacy,” lack “patience” and are “too lazy.” Their children consider obtaining information “laborious,” “too much like hard work” and if they do not “find what they are looking for immediately,” they “give up.” Furthermore, almost half of teacher interviewed indicated that a lack of motivation and perseverance can be a barrier to children aged between six and eight obtaining information. For example, teachers interviewed variously outlined that their pupils can have “quite a short window and attention span,” can lack the “stamina,” “perseverance” and “resilience” to obtain information, that pupils can have a “laziness” and “need for instant satisfaction,” that pupils can expect to find information “straight away,” can require “instant access,” “instant answers” and information that will “jump out at them” and if they face any barriers when seeking information, they “give up.”

The finding that children aged between six and eight can experience information poverty

due to a lack of motivation and perseverance supports Childers and Post's (1975) theories regarding barriers to information needs, searches, acceptance and use. Childers and Post (1975, p.34) identified that "attitudes and philosophies" or "predisposition" can be barriers to information needs, searches, acceptance and use. That is, Childers and Post (1975, p.37, 38, 42) outlined that the "despairing" and "fatalistic" attitudes of individuals who are "resigned to those conditions of life," who are unwilling to "delay gratification or plan for even the short-term future" and are not "very active" when searching for information can be barriers to information needs, searches, acceptance and use. Thus, Childers and Post (1975 p.37, 38, 42) argued that a lack of active information seeking can be a barrier to information needs, searches, acceptance and use and this research study found that some children aged between six and eight are not active information seekers, lacking the motivation to seek information and the perseverance to continue efforts once initiated.

The finding from this research study that children aged between six and eight can experience information poverty due to a lack of motivation and perseverance also supports findings from the empirical research with adolescents undertaken by Buchanan and Tuckerman (2016). Buchanan and Tuckerman (2016, p.542) identified adolescents that did not persevere to obtain information, instead exhibiting "non-motivated and passive information behaviours." Findings from this research study also support the findings from empirical research undertaken by Black (2014). Black (2014, p.215) researched the information seeking experiences of distance/online students in British Columbia and identified research participants who experienced information poverty because they were not "motivated" to seek information or were not "persistent when searching challenges were encountered." Furthermore, Hayter (2005), when researching the information worlds of residents on the disadvantaged estate in Northeast England, indicated that some estate residents lacked motivation and perseverance which was a barrier to their obtaining information. That is, Hayter (2005, p.124, 139, 191, 192) said that when seeking information some estate residents "lacked the energy" to search and "gave up." Lacking motivation or perseverance was also a contributory factor to information poverty identified in empirical research by Chatman (1991). Chatman (1991, p. 445, 447), when researching university janitors in the United States, noted that some janitors lacked the motivation to obtain information, undertaking "limited" searches for information or even "no information seeking" at all, believing that the effort was "not worth it."

The data did indicate however, that not every child aged between six and eight lacks the motivation or perseverance to obtain information. For example, parents interviewed variously discussed their children who do persevere when seeking information. One child “expects to find out” and “never let’s go,” another child “won’t stop” until they have found out what they want to know, and an additional child will “definitely find” the information that they seek.

Although no published child information poverty studies exist, the finding from this research study that children can lack the motivation or perseverance to obtain information confirms the findings of existing empirical research studies involving children from outwith the field of information poverty. For example, Foss et al (2012, p.565), when researching the home internet searching of children (7-11), reported that children aged seven rarely persevered when seeking information, instead stopping searches because of “boredom.” In addition, Shenton (2007, p.327, 350, 351), when investigating causes of information-seeking failure amongst children (3-18), noted children that did not satisfy their information needs because they were “unwilling to expend the effort necessary” and gave up their searches “at a relatively early stage.” Furthermore, Lu (2010, p.83), who researched the information seeking of children in Taiwan, surveying 641 children (11-12), identified children that did not persevere to obtain information, children that were “too lazy,” didn’t have the “patience” and considered information seeking to be “too much trouble, too much work.” Moreover, the finding from this research study that some children do persevere when seeking information confirms the findings of Bilal (2000, p.659) who, when researching the cognitive, affective and physical behaviours of children (11-12) using a search engine, reported that for child research participants “Persistence” and “patience” were “prevalent” and that the children displayed “resilience” when seeking information. In addition, while Foss et al (2013, p.565) reported that child research participants age seven rarely persevered when seeking information, the authors found that older child research participants (9-11) were much more likely to persevere until they found the information that they sought.

7.2.3: Children lack access to information sources

The researcher determined from child research participants and from teachers (though not discussed by parents interviewed) that children aged between six and eight can experience

information poverty because they lack access to information sources. Lacking access to information sources was the main barrier to obtaining information that the researcher identified child research participants discussing during fieldwork. The researcher found that children can lack access to adult, children, young people, computers/the internet and books as a source of information. For example, this study found that some child research participants lack access to parents and teachers as an information source, that is, their parents and teachers are unwilling or unable to provide them with information or to assist them to obtain information from other sources. One child research participant outlined that they are unable to obtain information from their parent because their parent "doesn't really know the English." Another child said that their mum will not answer their questions because she is "always into her phone when I try and ask her something." Child research participants also discussed occasions that their teachers do not provide them with the information that they seek. For example, one child said that they had been told by their teacher to "go and sit down on your seat" when they had asked them a question. Moreover, just over half of teachers interviewed indicated that a barrier to children aged between six and eight obtaining information can be a lack of access to information sources. For example, one teacher discussed pupils who lack access to parents as a source of information. This teacher outlined that some parents "don't have the language skills to help" their children to obtain information. An additional teacher discussed children whose parents "can't speak English. Both parents struggle with English. No adult can read or write at home." Another teacher outlined that some parents are unable to assist their children to access information because the children are "better readers than their parents" and the children have to tell their parents what letters sent home from school say. Teachers also variously discussed children aged between six and eight who lack access to books as an information source at home, children who "don't have very many books at all," children who have "no books whatsoever, not even a newspaper at home, not even a comic" and children in whose homes books are "neglected" and not used "as a source of finding information." Research data also evidenced that children aged between six and eight can lack access to the internet as an information source. For example, one child research participant said that they cannot access the internet at home because someone else "always uses the computer." Teachers also discussed pupils who lack access to internet information. For example, one teacher said that some pupils cannot access internet information because the school does not have "enough computers" for all of them

and “a lot” of their pupils “don’t have access at home.” However, despite the fact that research data indicated that the internet can be inaccessible to children aged between six and eight, research data also indicated that internet access can be required for children to complete their homework and one school (after no consultation with parents) had recently made their pupils home reading books available on the internet only. Moreover, while the internet can be accessed via public libraries, research findings also indicated that not all parents facilitate their children’s public library access.

The finding that children aged between six and eight can experience information poverty because they lack access to information sources did not support the theories of Childers and Post (1975, p.32) regarding barriers to information needs, searches, acceptance and use or Chatman’s (1996) information poverty theories. However, lacking access to information sources has been identified in empirical research studies as a factor that can contribute to adult information poverty. For example, Drabinski and Rabina (2015), who researched reference services to incarcerated people, reported that incarcerated people “face significant information poverty” because they lack “access to information resources.” The resources incarcerated people lacked access to were books and the internet. Moreover, Groves (1996) discussed medics in developing countries that experience information poverty because they lack access to books and journals.

Data from this research study did indicate however, that not all children aged between six and eight lack access to the same information sources. For example, in terms of adults as a source of information, one child research participant said that if they want to find something out “all of my adults always help me” and another child said that their adults “help you with anything if you are stuck.” One parent said that for their child “there will always be someone there to answer his questions,” that their child is “not at risk of not being able to find it out” because their parents “would always make sure that he would.” Teachers also outlined that some of their pupils do have access to adults who assist them to obtain the information that they require. For example, one teacher stated that their pupils can get “knowledge from the adults in their life.” Research data also indicated that for some children aged between six and eight books are accessible. For example, one child said that they have family who “always give me books.” One parent said that their child has “loads and loads of books.” Another parent said that if their child asks them for a particular

book, they would purchase that book because books are “an education thing” and “important.” Teachers also variously discussed children who have “an array” of books, “every book under the sun,” “all the latest editions” and in whose homes there are “books upon book upon books.” Some teachers also discussed the efforts that they make to ensure that books are available for their pupils. For example, one teacher personally supplies the books for their class library and their classroom cupboard is “packed with my daughter’s books, books I have collected over the years.” Another teacher ensures that they make “time for a story in the afternoon” so that their pupils have access to books. Moreover, an additional teacher buys their pupils books at Christmas and summer and “always” has “a book on the go for a wee spare five minutes” believing that it is “important to build those five minutes into your day.” This research study also found that not every child aged between six and eight lacks access to the internet. For example, some child research participants indicated that they have plentiful internet access. One child said that for them accessing the internet is easy, they “just use your phone or your iPad.” Another child said that for them internet information is easily accessible, they just “go and get my laptop and type it up.” Some parents also outlined that the internet is easily accessible to their children. For example, one parent stated that their child has “an iPhone, he has got an iPad, he has got access to a pc that’s never off,” and thus for them it is “easy to get access.”

Although there are no published empirical child information poverty studies, the finding that children can lack access to adults as a source of information supports findings from exiting studies involving children from outwith the field of information poverty. For example, Shenton (2007, p.329), when investigating causes of children’s information-seeking failure, discussed children (5-7) who sought information from family members who were “ill equipped to answer.” Shenton and Dixon (2003, p.230), who explored children (3-18) in England and their use of other people as an information-seeking source, outlined that children lacked access to “an appropriate person to answer a question” and that their parents provided “inaccurate” information. Findings from this research study also confirm the findings of Walker (2012), who interviewed 33 parents of primary school children in Leeds, United Kingdom, regarding parental ability to locate, access and assess information. Walker (2012, p.552) reported that parents had differing abilities in whether able to “effectively help and support their children through their information searching.” Findings

from this research study also confirm the findings of Walter (1994, p.123) who, when exploring the information needs of 10-year-old children in California, noted that some parents were unable to provide “accurate information” or “communicate” information “effectively” to their children. The finding from this research study that not all children have access to books at home also supports the findings from a study by Save the Children and Scotland’s Commissioner for Children and Young People (2014). In that study children’s views on how poverty impacts on education and learning in Scotland (consulting 949 young people (11-18)) were explored (Save the Children and Scotland’s Commissioner for Children and Young People, 2014). It was reported that 81% of research participants “thought that growing up in a family without a lot of money did make a difference” to the number of books available in the home (Save the Children and Scotland’s Commissioner for Children and Young People, 2014, p.18). The finding from this research study that not all children have access to books at home also confirm the findings from research undertaken by the National Literacy Trust (2017) which consulted 42,406 children and young people (8-18) about the books that they own. In that study it was reported that 9% of children consulted, 1 in 11, did “not have a book of their own at home” (National Literacy Trust, 2017). Moreover, the finding from this research study that teachers can facilitate their pupils’ access to books corroborates the findings from a survey by NASUWT the Teachers’ Union, in that survey 43% of 4,386 teachers questioned had personally purchased books for children’s use in school (Lezard, 2019). The finding from this research study that children can lack access to the internet also supports existing research which obtained similar findings. For example, Calvert et al (2005), who interviewed 1,065 parents in the United States regarding their children’s (6 months - 6) computer use, found differences in internet access. That is, “Families with higher incomes and higher education levels were more likely to own computers and have Internet access from home.” In addition, Samuelsson and Olsson (2014, p.51) undertook a systematic literature review to explore digital inequalities and their findings “clearly shows that digital inequalities exist among pupils in primary and secondary education in several developed countries.” Furthermore, Meyers, Fisher and Marcoux (2009, p.316, 319) also reported that children (9-13) had varying access to computers and the internet. It was also outlined in a report in which 1675 young people (up to 19) in Scotland were asked about their digital experiences that “Not all young people have the same access to the internet” (5Rights Youth Commission, 2017, p.23).

7.2.4: Parents restrict their children's information access

The researcher identified from the majority of parents interviewed (though not discussed by teachers and only discussed by child research participants on a few occasions) that children aged between six and eight can experience information poverty due to parental restrictions. That is, through a desire to protect their children, parents act as information gatekeepers. Case (2007, p.300) defines an information gatekeeper as those who "provide a key link" to "the outside environment" and control the "flow of information" "shaping, emphasizing or withholding" it. For example, one parent interviewed said that their child's "biggest barrier" to accessing information is parental "restrictions." Another parent stated that it is them who "stop" their child from "finding out what they want to know." Parents variously discussed restricting their children's access to internet information. For example, one parent outlined that they are a barrier to their child obtaining internet information, stating "I don't think much would hold them back if we hadn't switched off Google completely and had passwords and things in place, I don't think much would stop them to be honest." This parent also described themselves as a "gatekeeper" who prevents their child from accessing internet information. Another parent outlined that they prevent their child from having "access" to the internet, explaining that their child "doesn't have passwords" to gain access. Parents also variously discussed restricting their children's access to information available via other sources too. For example, information available on television, "advertises for water and things," "the news" and "Coronation Street" as there is "content in there" that they do not "want the kids to see." Parents also said that they turn "the radio off when the news comes on" and restrict their children's access to newspapers as "pictures can be really graphic now" and "quite traumatising." Parents also indicated that for protective reasons they do not always assist their children to obtain the information that they seek. For example, parents discussed restricting the information that they supply when their children ask them about the Tooth Fairy or Santa Claus. Moreover, the main suggestion that parents interviewed made as to how their children's access to and use of information could be improved, was if they had less restrictions around their children's internet access. However, all parents who suggested this as a way to improve their children's access to and use of information were unwilling to be less restrictive and allow their children greater freedoms. Parents variously discussed being "wary" about what information their child could access online and discussed having a "fear about the internet" and what their child could be "exposed to," parents outlined that they wanted to

“protect” their child, save their child from “unnecessary worry,” prevent a “childhood issue” and stop their child from getting “upset” or accessing information on the internet that might “spoil” their childhood. Parents also discussed specific measures that they take to restrict the information that their children can access on the internet. For example, one parent purposely to “scare” their child, and ensure that their child does not access any material that the parent considers inappropriate, warns their child that “me and your dad will see like everything that you type in.” Other parents discussed how closely they supervise their children to restrict what information their children access online. One parent stated that when their child uses the internet, “I am always watching her” and a further parent said that their child is only permitted to use the internet “when we are in the same room as her so we know what she is doing.” Another parent said that they do not allow their child to be “on the internet on their own,” an additional parent outlined that their child’s home internet access is “completely monitored” by them and a further parent said that they do not allow their child to be “unsupervised on any sort of internet.”

The finding from this research study that children aged between six and eight can experience information poverty because of parental restrictions supports Childers and Post’s (1975, p.32) theories regarding barriers to information needs, searches, acceptance and use. As Childers and Post (1975, p.32, 33) stated that a barrier to information needs, searches, acceptance and use can be individuals “being locked” into information subcultures which remove them “from the flow of popular information that exists in society at large” and can leave individuals “deficient” in information prevalent in wider society. The authors arguing that such subcultures can contain an “inordinate amount of unawareness and misinformation (myth, rumour, folk lore)” (Childers and Post, 1975, p.32, 33). That is, this research study found that a barrier to children aged between six and eight obtaining information can be parents restricting their children’s access to information available in wider society, parents endeavouring to ensure that their children are unaware of certain information and providing their children with misinformation. For example, as discussed parents outlined that they are their child’s “biggest barrier” to accessing information, explained that it is them who “stop” their child from “finding out what they want to know” and specified that they prevent their children from accessing information available on television as there is “content in there” that they do not “want the kids to see.” The researcher also evidenced that parents provide misinformation to their children

regarding the Tooth Fairy and Santa Claus. That parents supply false or misleading information when their child asks them about Santa Claus or the Tooth Fairy also supports Chatman's (1996) information poverty theories. That is, Chatman's (1996, p.197) second propositional statement is that information poverty can occur because others withhold access to information and Chatman's (1996, p.196) theories also discuss deception which occurs when "false" or "misleading" information is shared in "a deliberate attempt" to distort or mask reality and that this is done for self-protective purposes. This is despite the fact that deception can mean a person is less likely to obtain useful information. As this research study found that parents deceive their children by sharing false or misleading information about the Tooth Fairy and Santa Claus, and do so deliberately, to mask reality, for reasons of protectiveness, research findings support Chatman's (1996) theories.

The research finding that children aged between six and eight can experience information poverty because of parental restrictions also supports the findings from existing empirical research undertaken with adolescents and adults. For example, Drabinski and Rabina (2015, p.42) reported incarcerated people's access to information being inhibited and this causing information poverty. That is, the authors found that incarcerated people are unable to access information because of restrictions, that is "policies that prohibit internet access as well as limits on the kinds of reading material deemed acceptable." Findings from this research study also support the findings from empirical research undertaken by Lingel and Boyd (2013). Lingel and Boyd (2013, p.987,989), when researching information poverty within the extreme body modification community, noted restrictions to information access contributing to adolescent and adult information poverty. During this research study, the authors evidenced that community members made conscious efforts to restrict those regarded as "outsiders" from accessing extreme body modification information and that this caused the "outsiders" to experience information poverty. Lingel and Boyd (2013, p.986) also discussed parents that inhibited their adolescent's internet use and prevented them from accessing information online. Hamer (2003, p.85), when researching the information-seeking of young gay males, also discussed a participant whose parent blocked them from accessing "gay information" on the internet. Lacking access to information because access was inhibited by others was also reported by Agada (1999), when they undertook empirical research exploring the information use environment of African-American gatekeepers in Wisconsin. Agada's (1999, p.79, 80) research participants

reported that when they sought information from some information sources, staff actively inhibited access to that information, throwing up “bureaucratic bottlenecks to deny” access and, as a result, information was “inaccessible.”

The finding from this research study that information poverty can occur because parents restrict their children’s access to information is complex. That is, although parents indicate that they have worthy intentions with their restrictions, it is not clear how appropriate these restrictions are. Consider, Britz and Blignaut (2001, p.67) who state that everyone has a “fundamental right” to access information. Moreover, in terms of children specifically, Sturges (2009) argues that “children have a right to serious answers to their questions” and that children’s “need for information” is “essential” that to ignore that need can “hinder and even damage the basic processes of its development.” Sturges (2009) also warns that not providing information can leave children “vulnerable” as children can be “in ignorance of dangers and possible responses to danger.” Furthermore, The UN Convention on the Rights of the Child states that children have a right to information (UNICEF, 2020). Article 13 states that “Every child” has the right to “access all kinds of information as long as it is within the law” (UNICEF, 2020). Article 17 states that “Every child has the right to reliable information from a variety of sources” (UNICEF, 2020). Article 5 states that “Governments must respect the rights and responsibilities of parents and carers to provide guidance and direction to their child as they grow up so that children fully enjoy their rights,” while recognising children’s “increasing capacity to make their own choices” (UNICEF, 2020). Thus, The Convention states that children have the right to access a plethora of legal and reliable information from multiple sources and that parents and carers have rights and responsibilities to provide guidance and direction. However, The Convention does not outline which rights take precedence and who, ultimately, has the right to decide what information and information sources should be accessible to children and at what age. In addition, UNICEF (2018) recognise that children have differing information access. UNICEF (2018) state that “Inequitable distribution of information sources and content leads to a generation of children who are not able to access the ideal mix of information necessary for them to be successful in life.” In addition, UNICEF (2018) state that they are seeking “to determine and establish some minimum standards around information quality and quantity that children need.” However, to date, UNICEF (2018) have not defined what the “ideal mix” of information for children is or who has the right to

determine this and at what age children should have autonomy to decide this for themselves. Further complexities regarding parental rights over their children's access to information are also apparent in comments made by the Welsh Education Minister. The Welsh Education Minister has questioned whether it is appropriate for parents to be allowed to withdraw their children from "sex and relationship education" teaching in schools (Martin, 2019). The Minister stated that if parents "don't believe the science around climate change" they are not permitted "to withdraw children from those lessons." The Minister questioned therefore, why should parents be allowed to decide what information their children access in some curricular areas but not others (Martin, 2019). In addition, the complexities of parents restricting their children's access to internet information specifically are reflected in a House of Lords Select Committee Report (2017, p.49). This report states that "the ubiquity of the internet means that children can access it in the privacy of their room, at a friend's house, on public Wi-Fi, using mobile data or at school," the report advises that "No one can be supervising them at all times, nor would it be appropriate that they should" (House of Lords, 2017, p.49). However, the report also states that parents "have a primary responsibility to ensure that their own children use the internet safely" and emphasises "the importance of parents taking an active part in managing or 'mediating' their children's internet use" (House of Lords Select Committee, 2017, p.49). Hence, the report advises that it is not appropriate for parents to constantly supervise their children's internet use but also highlights parents' responsibilities in ensuring that their children use the internet "safely" and in managing and mediating their child's use. However, the report does not provide guidelines as to how all recommendations can be achieved and does not define what constitutes *safe* internet use. Similarly, Livingstone et al (2017, p.85, 87) advise that, in terms of children's internet access, "overtly restrictive" strategies which seek to "nullify all risk involved" are not advisable. However, the authors do not define what an "overtly restrictive" strategy is or specify what risks should and should not be nullified (Livingstone et al, 2017, p.85, 87). Furthermore, the literature also identifies that young people do not advise that parents monitor or restrict their internet access. That is, the report which asked 1675 young people (up to 19) from Scotland about their digital experiences stated that "Parents and carers play an integral role in guiding their child but often they can do with some guidance themselves" on how to "gain reassurance over their child's safety without infringing their rights" (5Rights Youth Commission, 2017, p.28). This report also stated that "monitoring or access

restrictions” can “heavily impact on our Right to Privacy and undermines the trust between us and our parents or carers” (5Rights Youth Commission, 2017, p.28). Therefore, there are complexities regarding the finding from this research study that children can experience information poverty because their parents restrict their access to certain information and information sources.

The data did indicate however, that not all parents of children aged between six and eight restrict their children’s access to information. For example, one parent said that while they are nervous about what information their child might access online, they do not “tell them they can't use” it or “put some nanny filter on it.” This parent thinks that those parents that do so are “kidding yourself on,” “have a false sense of control” and are “deluded” as their child “could be watching someone else's phone in the playground” or at another house “that you know nothing about.” This parent also said that they do not restrict their child’s internet access because parents “can't be there all the time,” cannot “police their whole lives” or “control everything” that their children “see and hear.”

Although there are no published empirical child information poverty studies, the finding from this research study that children can experience information poverty because their parents restrict their access to information, supports existing literature regarding children from outwith the field of information poverty. For example, Bates (1996, p.8) argued that adults can “decide what information” reaches a child and Gross (2006, p.xi) outlined that children can need adult “permission” to access information. Moreover, Marshall (1997, p.2) stated that “adults have an instinctive desire to protect children” from “information which might cause them distress.” Findings from this research study also support the findings of Cree, Kay and Tisdall (2002) who undertook empirical research with 23 children and young people (9-19) with a parent or carer with HIV in Scotland. Cree, Kay and Tisdall (2002, p.50) reported that parents play a “significant ‘gatekeeping’ role” regarding their children’s access to HIV information. For example, the authors outlined that there were parents who would not pass leaflets about HIV on to their children because they did not want to “do or say anything to upset” their child (Cree, Kay and Tisdall, 2002, p.50). Studies involving children from outwith the field of information poverty have also identified parents restricting their children’s access to internet information. For example, Foss et al (2012, p.568, 569), when researching the home internet searching of children (7-11), noted that

there were parents who limited their children's computer use and had "household rules" regarding the websites that their children were not permitted to access. In addition, Ofcom (2017, p.257, 258), when exploring the media use and attitudes of children and parents, reported that over 90% of 1,129 parents of children (3-11) supervised their child's internet access. Furthermore, Vittrup et al (2014, p.5), who surveyed 101 parents of US children and 39 children (3-6) to explore parental perceptions of media and technology in their children's lives, noted that parents restricted their children's computer access. Roberts, Foehr and Rideout (2005 p.17), who explored media in the lives of 2,032 children and young people (8-18) in the United States, highlighted the existence of parental rules regarding the amount of time children were permitted to spend on a computer. The authors noted that the existence of rules regarding what children were permitted to do on a computer and parents having to know which websites their children accessed (Roberts, Foehr and Rideout, 2005 p.17). Meyers, Fisher and Marcoux (2009, p.316, 319), who investigated the everyday information behaviour of children and young people (9-13), reported that adults were "often in charge" of determining when their children could access the internet, that parents placed "limits to media access" and put controls in place which blocked certain internet sites. Studies have also previously shown that parents can have differing views regarding what constitutes appropriate internet access for their children. For example, Roberts, Foehr and Rideout (2005 p. 9) noted that households can "differ dramatically" in terms of "media norms" with some household having "strongly enforced rules," for example "about surfing the Web," while other households "pay little or no attention to the amount or nature of kids' use of any media."

7.2.5: Parent and teachers encourage children to keep information secret

The researcher established from parent and teachers (though not from child research participants) that children aged between six and eight can experience information poverty because their parents and teachers encourage them to keep information secret, that is, encourage children to conceal their information needs and to censor the information that they share. Moreover, the data indicated that some parents encourage their children to keep information secret so that their children conform to social norms. Chatman (1996, p.197, 1999, 209, 213) states that social norms exist to "aid and define" what information is "legitimate to seek and appropriate to share," that social norms are "codes of behaviour that include ways to gauge normalcy," that social norms "provide a collective sense of

direction and order” and that social norms can “set initial (and for some, lasting) boundaries.” Parents interviewed variously discussed “trying to make sure” that their child has “a filter for other people,” “actively teaching” their child that some information is inappropriate to share, instructing their child that some questions are “rude” and that some information is “private.” One child was told not to share information about their body, “what parts of him are doing and why,” and another child was taught not to ask strangers about their disabilities. Teachers also discussed parents who encourage their children to keep information secret. For example, one teacher said that their pupils can be “influenced at home” and told “not to share information.” Another teacher outlined that there are topics, such as being “pregnant” or “having babies,” that their pupils have been told by their parents that they are “not allowed” to discuss. Moreover, some teachers also outlined that they have encouraged their pupils not to share information with them and have at times told their pupils not to ask questions. Teachers indicated that this tended to be so that their pupils do not rely on them so much for information and so that their pupils share less information with the teacher. For example, one teacher said that they have been “encouraging” their pupils “not to come and tell you everything” and another teacher said that they try to discourage their pupils from asking questions during lessons by stating “do you need to ask this right now?” when a child tries to ask a question.

The finding from this research study that children aged between six and eight can experience information poverty because their parents encourage them to keep information secret, to adhere to social norms, supports Chatman’s (1996) information poverty theories. That is, Chatman’s (1996, p.197) third propositional statement was that: “Information poverty is determined by self-protective behaviours which are used in response to social norms.” Chatman (1996, p.193, 194) also stated that relevant to the “four critical concepts that serve as the basis for defining an impoverished life-world” is the “difference between insiders and outsiders” between which “informational barriers” can exist. Chatman (1996, p.194, 197) stated that insiders share “a common cultural, social, religious etc., perspective” which “provide expected norms of behaviour and ways to approach the world and defining “those things that are important to pay attention to and those things that are not.” Chatman (1996, p.197) believed that the “role of such norms is to aid and define things that are legitimate to seek and appropriate to share.” Insiders are considered to act appropriately, and outsiders are not, because outsiders deviate from “the collective

standards” (Chatman, 1996, p.194). Thus, Chatman’s (1996) information poverty theories indicate that adherence to social norms can lead to a state of information poverty and this research study found that some children aged between six and eight are taught to conceal their information needs and to censor the information that they share to conform to social norms. Hence, the researcher believes that the findings from this research study support Chatman’s (1996) theories regarding information poverty and social norms.

Previous empirical research studies have identified adults’ adherence to social norms contributing to information poverty. For example, Hasler, Ruthven and Buchanan (2013), who explored the use of online news and discussion groups by people in situations of information poverty, highlighted that social norms can impede information access. That is, the authors found that certain topics, such as unwanted pregnancies, were “socially unacceptable to admit to,” or to “seek information” on, as this would involve seeking information “that go against others’ expectations of how things should be” (Hasler, Ruthven and Buchanan, 2013, p.7, 8, 10). Social norms being a barrier to information access was also discussed by Hayter (2005, p.112) who, when investigating residents on the disadvantaged estate, noted that social norms acted as a barrier to residents’ information access. That is, “information was available” but not accessed because of “cultural mores.” Furthermore, Sligo and Jameson (2000), in their research which explored barriers amongst New Zealand Pacific women to cervical screening, found that social norms acted as a barrier to information access and sharing. The authors found that cervical screening was a “sensitive” topic for the community, and this created “significant and enduring barriers” to the seeking and sharing of information on this topic (Sligo and Jameson, 2000, p.865).

The finding that children aged between six and eight can experience information poverty because their parents encourage them to censor the information that they seek or share to conform to social norms is complex. That is, Spink and Heinstrom (2011, p.254) argued that “Cultural and social contexts” can “shape which information behaviour a child adapts” as these contexts can encourage children to develop “socially governed understanding.” Moreover, Burnett and Jaeger (2015, p.171) emphasise that “information behaviour” can be influenced by “family” and the “small worlds in which the individual lives.” Burnett and Jaeger (2015, p.172, 174) state that individuals’ information behaviours can “mirror the norms, attitudes, values and concerns of the communities of which they are a part” and

whether individuals “articulate” or “acknowledge” their information needs can be “a function of the information world in which they live.” Burnett and Jaeger (2015, p.170, 176) also state that influences on information worlds can be “inherently neutral” but can also seek to “homogenize perspectives,” “enforce a minority perception” and can be “benign” or “exploitative.” Burnett and Jaeger’s (2015) comments are considered pertinent as, during this research study, the researcher determined that not all parents and teachers concur on what constitutes appropriate information social norms. That is, data obtained showed differences in what information parents thought appropriate to share with their children regarding Santa Claus and death. One parent told their child that a dead family member had gone to heaven while another parent described heaven as “nonsense” and instead explained the process of decomposition to their child. The data also demonstrated that teachers, schools and parents can have different views on what is acceptable information to share with children, aged between six and eight, or which sources children, aged between six and eight, should get access to. For example, one child was taught the term “vulva” by a teacher during a lesson at school and their parent was unhappy about this. Moreover, another parent was unhappy that their child had less access to books because their school had recently stopped providing home reading books instead making these books available on the internet only. This change was made after “No consultation with parents” and, as a result, this child now accessed their reading book only once instead of a least eight times when a physical book was sent home. Teachers interviewed also discussed parents who had, what the teachers considered to be, inappropriate information social norms. For example, one teacher discussed pupils “who can’t read in English” but whose parents do not encourage their children to complete their homework or make efforts to “improve this skill” instead the parents encourage their children to go to the “mosque every day after school.” This teacher stated that “if this was my child, the priority would not be attending the mosque.” Another teacher discussed parents who have a lack of “appropriate prioritisation,” parents who have “huge issue with drugs,” parents who do not regard assisting their children to access information as “important” as their “burning desire” is “to feed their habit.” An additional teacher discussed a parent who had taught their child to use terms the teacher considered to be “racist” and “culturally offensive.” Furthermore, the data from this research study also indicated that attitudes towards information sources can differ between teachers. For example, one teacher said that they “always” have a book “on the go for a wee spare five minutes” because they consider

“access to books” to be “a big deal” and because many of their pupils do not plentiful access to books at home. However, this teacher’s colleagues did not provide their pupils with the same access to books, this teacher said that they did not have any time to dedicate to reading to their pupils. The teacher who did ensure that their pupils had access to books via these five-minute windows stated:

it's important to build those five minutes into your day because reading with children is never time wasted. I think it's easy to think of that as a time filler, whereas it should be something you are making time for because it's important that they hear how reading should sound, because if you don't model it to them, if they are not having it modelled at home, they need to hear it from you, and they need to hear what good expressions sound like, and they need to hear what you do when you come to a full stop, and they need to get excited by the story.

Therefore, information poverty can occur because children aged between six and eight are encouraged to keep information secret and to conform to social norms but not all parents and teachers have the same information social norms or agree on what constitutes appropriate information social norms.

Findings from this research study also indicated that not all children aged between six and eight are encouraged by their parents and teachers to keep information secret, to conceal their information needs or to censor the information that they share. For example, one parent said that they try to ensure that their child knows that they can tell their parent “anything” and that “the doors open for her to come to me about things.” One teacher discussed the efforts that they make to encourage their pupils to share information with them, outlining that they aim to “create an environment” so that their pupils “can talk.” Another teacher discussed a specific strategy that they use to encourage their pupils to share information with them. This teacher uses “time to talk cards” to allow pupils to share information without having to raise their hands and share that information in front of their peers. Children can put a card on their table and the teacher will then make time later so that the pupil can share information when their peers cannot hear. Another teacher had a similar system, a “worry box in the class,” a box used to encourage their pupils to communicate information and to be able do so more privately.

The finding from this research study that parents and teachers can encourage children aged between six and eight to keep information secret also supports existing empirical research studies involving children from outwith the field of information poverty. For example, Murphy, Roberts and Hoffman (2002, p.195, 199), when interviewing mothers with HIV and their children, noted that some mothers had “warned their child to not tell other people” about their mothers’ HIV status and, because they had been told not to, the children “had not disclosed” this information. Furthermore, Barnard and Barlow (2003, p.51, 52), when exploring the issue of drug dependent parents, reported that children had been taught to keep information regarding their parents’ drug use a “secret from others,” a “secret outside of the house,” taught not to tell “anybody outside our house what went on in our house” and “to hide things.”

7.3: Summary: Discussion: Findings from empirical component of study

This chapter discussed the key themes that emerged from the empirical component of this research study. The empirical component of this research study sought to answer Research question two: Do children experience information poverty and if so, why?

After undertaking fieldwork with 156 child research participants and interviewing 17 parents and 17 teachers, the researcher found clear evidence that children aged between six and eight can live in impoverished information worlds. Children aged between six and eight can have unmet information needs, can require adult support to obtain information successfully and can keep information secret, concealing their information needs and censoring the information that they share.

The researcher identified factors that can contribute to the information poverty of children aged between six and eight. Children aged between six and eight can experience information poverty because: they lack the skills to obtain and share information, specifically information literacy, reading, spelling and communication skills; they lack the motivation and perseverance to obtain information; they lack access to information sources, namely to adults, children, young people, books and computers/the internet; their parents restrict their information access and their parents and teachers encourage them to keep information secret, to conceal their information needs or to censor the information that they share.

Research findings did indicate however, that not all children aged between six and eight experience information poverty or face the same barriers obtaining information.

Research findings support Childers and Post's (1975, p.32) theories regarding barriers to information needs, searches, acceptance and use and Chatman's (1996) information poverty theories. Research findings also support the findings from existing empirical research studies that evidenced adolescents and adults living in impoverished information worlds. Findings from this research study also suggest that children age between six and eight can experience information poverty for some of the same reasons that adolescents and adults do. Moreover, although there are no published empirical child information poverty studies, findings from this research study support existing literature and empirical research studies involving children from outwith the field of information poverty.

The findings from the empirical component of this research study also advanced the researcher's understanding of information poverty pertaining to Research question one: What is information poverty and why does it occur? That is, via empirical component of this research study, the researcher established that children can also experience information poverty, what factors can contribute to child information poverty and that some of the same factors can contribute to the information poverty of children, adolescents and adults.

Chapter 8: Research study: Conclusion

This research study sought to better understand information poverty and explored early manifestations of information poverty in children. This study investigated two research questions. 1: What is information poverty and why does it occur? 2: Do children experience information poverty and if so, why?

To answer the research questions of this study the researcher initially reviewed relevant literature. Literature was obtained via a systematic literature review in the Library and Information Science Abstracts (LISA) database in January 2014. The systematic literature review sought any literature published prior to January 2014 that contained the term information poverty in the abstract. That is, the researcher sought material that discussed information poverty as an established concept and material in which discussions of information poverty were significant enough to appear in the abstract. The researcher also wanted to review any pertinent material not available in the LISA database, therefore, also sought relevant literature via Google Scholar, by pursuing relevant references in literature and by examining material recommended by colleagues. The researcher also obtained literature by utilising functions on Wiley Online Library and ScienceDirect. Functions utilised included the Recommended Articles function, the Citing Articles function, the Related Book Content function and the More Content written by author(s) function. The researcher also set up alerts on Google Scholar, Wiley Online Library and ScienceDirect to monitor whether any new literature relevant to this thesis was published. The researcher monitored the results of these alerts until September 2020 when this thesis was completed. Any new pertinent material published deemed relevant to this research study was subsequently included in this study.

There was also an empirical component of this research study which involved the researcher investigating whether children aged between six and eight experience information poverty. Fieldwork was undertaken with 156 children in their class groups across five schools in central Scotland. Child research participants were asked to complete five tasks and then to participate in group discussions. 17 parents of children aged between six and eight and 17 teachers who taught children aged between six and eight were also interviewed.

When this research study began in October 2013 the literature contained no theory pertaining to child information poverty and there were no empirical child information poverty research studies. To date there has been limited progress beyond calls for further attention. For example, UNICEF (2017, p.60) highlighted a need for child information poverty research stating that relevant data is “scarce” and identifying a need for research which explores “who and where are the children most deprived of information? What are the underlying causes and barriers to access? Why are some of those with access not using it?” This research study contributes to identified research gaps by investigating child information poverty and by obtaining data pertaining to causes of child information poverty and barriers to children’s information access.

8.1: Key findings

The key findings from this research study are outlined below.

8.1.1: Research question one: What is information poverty and why does it occur?

After examining relevant literature, the researcher deemed that the models key to this research study were Childers and Post’s (1975) theories regarding barriers to information needs, searches, acceptance and use and Chatman’s (1996) information poverty theories.

The researcher found no theories pertaining to child information poverty and no empirical child information poverty studies.

The researcher found that information poverty was discussed in relation to individuals and demographic groups (Case, 2007), in terms of a lack of access to information (Marcella and Chowdhury, 2018; Britz, 2007; Sligo and Jameson 2000; Diener, 1987) and with regards to information not being shared (Chatman, 1996). Literature also advised that information might not be accessed or shared due to unwillingness but also due to inability (Chatman, 1996).

As a result, the researcher defined information poverty and stated that information poverty is when individuals or demographic groups are unwilling or unable to access or share information.

The researcher also noted what factors were identified in the literature as contributory to information poverty. In some cases, the term information poverty specifically was used when contributory factors were discussed. In other cases, the researcher determined that the factors discussed were contributory to information poverty although other terms were used. For example, some authors discussed barriers to information access which (based on how the researcher defined information poverty) the researcher deemed to be contributory factors to information poverty. Any similar contributory factors discussed by several authors using the same or slightly different terms were grouped by the researcher. For example, several authors outlined that a lack of literacy skills can contribute to information poverty. Childers and Post (1975, p.32) identified “very low” reading abilities as contributory. Cochrane and Atherton (1980, p.287) discussed a lack of “literacy” skills being a contributory factor. Britz (2007, p.64) stated that whether individuals are “literate” and Haider and Bawden (2007, p.543) said that “illiteracy” can contribute to information poverty. The researcher thus concluded that a lack of literacy skills can contribute to information poverty. After determining what factors were identified as contributory to information poverty in the literature, the researcher was able to determine why information poverty can occur.

The researcher found that adolescents and adults can experience information poverty because of a lack of access to information and that this lack of access can be due to: others inhibiting access actively or inadvertently; impairments including hearing, eyesight or physical; financial costs; geographical location and a lack of skills, specifically information technology, literacy, communication and information literacy skills. Attitudes and behaviours were also identified as factors that can contribute to adolescent and adult information poverty. Attitudes and behaviours were said to be contributory due to a lack of motivation to seek or share information, a lack of perseverance to continue efforts once initiated and self-protective behaviours being employed. The literature also indicated that cultural contexts can contribute to adolescent and adult information poverty due to isolation from the wider information community and cultural norms hampering what information is accessed or shared.

The findings from the empirical component of this research study (discussed further in Section 8.1.2) also advanced the researcher’s understanding pertaining to Research

question one: What is information poverty and why does it occur? That is, based on the empirical findings from this research study, the researcher has established that children as well as adolescents and adults can experience information poverty. The empirical component of this research study also determined what factors can contribute to child information poverty (outlined in Section 8.1.2) and via the empirical component of this research study, the researcher established that some of the same factors can contribute to the information poverty of children, adolescents and adults.

8.1.2: Research question two: Do children experience information poverty and if so, why?

After undertaking fieldwork with child research participants and interviewing parents and teachers, the researcher obtained clear evidence that children aged between six and eight can live in impoverished information worlds. That is, children aged between six and eight can have unmet information needs. Almost half of child research participants indicated that they are not generally successful in obtaining information required. Moreover, children aged between six and eight can be unable to obtain information independently and thus, live in impoverished information worlds. The majority of child research participants thought that they are not generally successful in independently obtaining information and just under half of parents and teachers interviewed thought that their children/children aged between six and eight are not generally successful independent information seekers. Furthermore, while children can be dependent on adult assistance to obtain information successfully, research data indicated that some adults are unwilling or unable to support children to obtain information. For example, teachers interviewed variously discussed children whose parents “don't have the language skills to help” their children obtain information, children whose parents who “can't speak English” and children who have no adult who “can read or write at home.” The researcher also evidenced that children aged between six and eight can keep information secret, concealing their information needs and censoring information shared and can thus, live in impoverished information worlds. That is, just over half of child research participants⁹ indicated that there have been occasions that they have kept information secret, and the majority of parents and teachers interviewed thought that their child/children aged between six and

⁹That provided a response to this question.

eight have kept information secret. The researcher found that children aged between six and eight have kept information secret due to embarrassment, fear or because they desire privacy.

The empirical component of this research study also established why children aged between six and eight can experience information poverty. That is, the researcher determined that children aged between six and eight can experience information poverty because: they lack the skills to obtain and share information, specifically information literacy, reading, spelling and communication skills; they lack the motivation and perseverance to obtain information; they lack access to information sources, including adults, children, young people, computers/the internet and books as sources of information; their parents restrict their information access; their parents and teachers encourage them to keep information secret, to conceal their information needs or to censor the information that they share.

The findings from the empirical component of this research study support Childers and Post's (1975, p.32, 33) theories regarding barriers to information needs, searches, acceptance and use. That is, Childers and Post (1975, p.32, 33) stated that barriers to information needs, searches, acceptance and use can be individuals "being locked" into information subcultures or ghettos which contain "unawareness and misinformation (myth, rumour, folk lore)" and can remove individuals "from the flow of popular information that exists in society at large," leaving individuals "deficient" in information prevalent in wider society. This research study determined that children aged between six and eight can experience information poverty because their parents restrict their access to information available in wider society, because their parents ensure that their children are unaware of certain information and because their parents provide them with misinformation. For example, one parent discussed purposively stopping their child from "finding out what they want to know" and said that they restrict what information their child can access about "war or even famine or things they might see on telly or adverts for water and things." This parent prevented their child from accessing this information to exercise "caution," because they "fear" their child accessing information that "they don't have the capability to understand" as this might cause "unnecessary worry." Another parent discussed ensuring that their children is unaware of information about the Tooth Fairy. Their child had asked

them “how long the tooth fairy had been around so I Googled it but obviously all the resources would have spoiled his childhood so I would never ever let him read them.” The data also indicated that parents provide misinformation to their children regarding Santa Claus. Empirical research findings also support Childers and Post’s (1975, p.32) theories that a barrier to information needs, searches, acceptance and use can be “very low” reading abilities and a lack of communication skills as the researcher found in this research study that lacking the reading and communication skills to obtain information can be a barrier to children aged between six and eight obtaining information. For example, child research participants indicated that reading skills are a skill to obtain information that they lack, that their lack of reading skills are a barrier to obtaining information in books because books are “too hard to read” and the words “too tricky.” Moreover, parents variously discussed their children not being “confident” readers or being “poor” readers and this being a barrier to their children obtaining information. In addition, teachers interviewed variously discussed how a lack of reading skills can be a barrier to their pupil’s obtaining information as their lack of skills makes reading “quite laboured” and “a hard thing” to do, some pupils cannot get “past the point” where obtaining information is “difficult” and “really” struggle to “read for information” which is “a barrier to them finding out.” Teachers also discussed pupils who lack the communication skills to obtain and share information. For example, one teacher said that their pupils are unable to “really explain” their homework tasks to their parents and another teacher discussed a pupil who has a lisp and said when this child reads, “she can’t communicate it because of this lisp.” Empirical findings from this research study also support Childers and Post’s (1975, p.34, 37, 38, 42) theories that “despairing” and “fatalistic” attitudes of individuals who are unwilling to “delay gratification” and are not “very active” information seekers can be barriers to information needs, searches, acceptance and use. That is, this research study found that children aged between six and eight can lack the motivation to seek information and the perseverance to continue efforts once initiated. For example, child research participants variously discussed how they “can’t be bothered” to obtain information, they think “what’s the point” in seeking information and explained that if they struggle when seeking information they “just give up.” In addition, almost half of parents interviewed indicated that a barrier to their children obtaining information is a lack of motivation or perseverance. For example, parents variously discussed how when their children seek information, they expect “the instant thing,” have a need for “immediacy,” lack “patience”

and are “too lazy.” Their children consider obtaining information “laborious,” “too much like hard work” and if their children do not “find what they are looking for immediately,” they “give up.” Furthermore, almost half of teacher interviewed also indicated that a lack of motivation and perseverance can be a barrier to children aged between six and eight obtaining information. For example, teachers variously outlined that their pupils can have “quite a short window and attention span,” can lack the “stamina,” “perseverance” and “resilience” to obtain information, can have a “laziness” and “need for instant satisfaction,” can expect to find information “straight away,” can require “instant access,” “instant answers” and information that will “jump out at them,” and if any barriers are faced when information seeking, they “give up.”

The empirical findings from this research study also support the information poverty theories of Chatman (1996). That is, Chatman (1996, p.197) stated that an “impoverished information world” is a world in which information needs are “not being met” and in this research study almost half of child research participants indicated that they are not generally successful in obtaining information required. Chatman (1996, p.197) also devised six propositional statements to act as a “theoretical framework” for defining “an impoverished information world” and to use as “a guide” when exploring information poverty. The empirical findings from this research study support Chatman’s (1996, p.197) second propositional statement that an impoverished information world is a world in which others “withhold privileged access to information.” In this research study, the researcher found that parents can withhold information from their children. For example, parents interviewed said that they have prevented their children from viewing pictures in newspapers that might cause distress and that they have turned “the radio off when the news come on” because they don’t want their child accessing information there. Findings from this research study also supported Chatman’s (1996, p.196) theories regarding information poverty and deception. Deception was one of the “four critical concepts” that Chatman (1996, p.196) said serve as the “basis for defining an impoverished life-world.” Chatman (1996, p.196) stated that deception occurs when “false” or “misleading” information is shared in “a deliberate attempt” to distort or mask reality despite the fact that deception can mean a person can be less likely to obtain useful information. The ultimate aim of deception was said to be “self-protection” (Chatman, 1996, p.196). In this research study, the researcher identified that child information poverty can occur due to

parental deception. That is, that children have experienced information poverty because their parents have shared false or misleading information with them in a deliberate attempt to distort or mask reality. Moreover, this deception occurred as parents sought to protect their children. For example, parents discussed censoring the information that they supplied or providing misinformation when their children asked them about the Tooth Fairy or Santa Claus to ensure that “childhood” was not “spoiled.” Finding from this research study also support Chatman’s (1996, p.197) theories pertaining to information poverty and secrecy. Secrecy was another of the four concepts that Chatman (1996, p.193) said served as the “basis for defining an impoverished life-world.” Chatman (1996, p.197) argued that those who keep information secret, that is do not seek or share information (mainly for self-protective reasons), live in impoverished information worlds. Chatman (1996, p.195, 199) said that secrecy can occur deliberately in an “attempt not to inform others about one’s true state of affairs,” to protect from “unwanted intrusion” from any source, to keep aspects of life “private” and to maintain an “element of control.” Chatman (1996, p.195, 199) also outlined that information can be kept secret even when seeking or sharing that information could result in much needed assistance. This research study found that just over half of child research participants¹⁰ had on occasion kept information secret, not seeking or sharing that information. In addition, the majority of parents and teachers interviewed thought that there had been occasions that their child/children aged between six and eight had kept information secret or not shared certain information. This research study evidenced that children had kept information secret because they sought to keep aspects of their life private which supported Chatman’s (1996) theories. For example, one child had not wanted to give a talk about themselves at school because they “worried” about “giving too much away.” Parents also variously discussed occasions that their children had wanted to keep information “private,” outlined that there is information that their children do not “want to share,” explained that their children “keep a lot” of information to themselves and that there is information that their children are “hiding” and “not wanting to tell.” The data from this research study also supports Chatman’s (1996) theories that secrecy can occur due to self-protection as the data highlighted that children aged between six and eight have kept information secret for self-protective purposes due to fear. For example, children discussed in this research study had not sought or shared information because “it kind of scary,” because they were “a bit scared” or in case an adult would “flip

¹⁰ That provided a response to this question.

out.” Children have also not asked questions or shared information because they feared they might “look silly,” because they were “concerned that they were going to get into trouble” or for “fear of drawing you into family situations.” Empirical findings from this research study also supported Chatman’s (1996) theories regarding information poverty and social norms. Chatman’s (1996, p.197) third propositional statement was that “Information poverty is determined by self-protective behaviours which are used in response to social norms.” Chatman (1996, p.193, 194) believed that insiders share “a common cultural, social, religious etc., perspective” which “provide expected norms of behaviour and ways to approach the world. They also define those things that are important to pay attention to and those things that are not.” Chatman (1996, p.197) stated that the “role of such norms is to aid and define things that are legitimate to seek and appropriate to share.” This research study found that children aged between six and eight have experienced information poverty because their parents encourage them to adhere to social norms. For example, parents have taught their children not to seek certain information because questions are “rude,” children have been told not to share information because their parents considered information to be “private” and children have been told that they are “not allowed” to discuss certain topics including being “pregnant” or “having babies.” One child discussed had been “actively” instructed not to share information that their parent considered inappropriate, information about their body, “what parts of him are doing and why.” Thus, the empirical findings from this research study support Chatman’s (1996) theories regarding information poverty occurring due to adherence to social norms.

Empirical findings from this research study also determined that not all children aged between six and eight live in impoverished information worlds. That is, the researcher obtained evidence that not all children aged between six and eight have unmet information needs. Just over half of child research participants indicated that they do generally get their information needs met. In addition, all parents and almost all teachers interviewed thought that their child/children aged between six and eight are generally successful in obtaining information required. The researcher also found that not all children aged between six and eight require adult support to obtain information. That is, nearly a third of child research participants indicated that they are generally successful in independently obtaining information. In addition, just over half of parents and teachers interviewed

thought that their child/children aged between six and eight can successfully independently obtain information. The researcher also evidenced that not every child aged between six and eight keeps information secret. That is, just under half of child research participants,¹¹ said that there have not been occasions that they have kept information secret, concealed their information needs or censored the information that they shared. Furthermore, parents and teachers interviewed discussed their children/children aged between six and eight who do not evidence secrecy. That is, discussed children aged between six and eight who have “no filter” and who don’t “keep anything hidden.” It was said of one child that “Everything that goes on in his head comes out his mouth” and that another child “hides nothing.”

The researcher also determined that not all children aged between six and eight (who do experience information poverty) experience information poverty for the same reasons. That is, the researcher determined that not all children aged between six and eight lack the information literacy, reading, spelling and communication skills to obtain information. For example, one parent said that their child does have the information literacy skills to locate a book in a library, that their child “could definitely do that,” and another parent indicated that a lack of spelling skills is not a barrier to their child obtaining information as their child is “good at spelling” and “doesnae need any help at all.” An additional parent indicated that their child does have the information literacy skills to obtain information using a computer. This parent was “100% sure [participant names child] will search that thing out if you give him the computer.” A further parent said that their child does have the skills to obtain internet information, that their child is “able to find it [information] no problem.” The data also indicated that not every child aged between six and eight lacks the motivation or perseverance to obtain information. For example, parents variously discussed children who do persevere when seeking information, children who expect to “find out” and “never lets go,” children who “won’t stop” until they have found out what they want to know and children who will “definitely find” information. The data also indicated that not all children aged between six and eight lack access to the same information sources. For example, in terms of adults as an information source, one child research participant said that if they want to find something out “all of my adults always help me” and another child said that their adults “help you with anything if you are stuck.” One parent interviewed outlined that

¹¹ That answered this question.

“there will always be someone there to answer” their child’s questions, that their child is “not at risk of not being able to find it out” because their parent “would always make sure that he would.” Teachers also outlined that some of their pupils do have adults in their lives who assist them to obtain information. For example, one teacher stated that their pupils can “get their knowledge from the adults in their life.” Research data also indicated that for some children aged between six and eight books are an accessible source of information in their homes. That is, there are children whose family “always give me books,” children who have “loads and loads of books,” “an array” of books, “every book under the sun,” “all the latest editions” and children in whose homes there are “books upon book upon books.” One parent also outlined that if their child asked them for a particular book, they would purchase that book because books are “an education thing” and “important.” The data also evidenced that some children aged between six and eight do have access to books and that is due to teacher intervention. For example, one teacher personally supplies the books for their class library and their classroom cupboard is “packed with my daughter’s books, books I have collected over the years.” Another teacher ensures that they make “time for a story in the afternoon” so that their pupils have access to books. An additional teacher buys their pupils books at Christmas and summer and “always” has “a book on the go for a wee spare five minutes” ensuring that they “build those five minutes into your day.” The researcher also found that not every child aged between six and eight lacks access to the internet. For example, some child research participants indicated that they have plentiful internet access. One child said that for them accessing the internet is easy, they “just use your phone or your iPad,” and another child indicated that for them internet information is accessible, they just “go and get my laptop and type it up.” Some parents also outlined that the internet is easily accessible to their children. For example, one parent stated that their child has “an iPhone, he has got an iPad, he has got access to a pc that’s never off” and thus, for them it is “easy to get access.” Moreover, not all children experienced information poverty because their parents restrict their information access. For example, while one parent is nervous about what information their child might access online, they do not tell their child that “they can’t use” it or “put some nanny filter on it.” This parent thinks that those parents that do so are “kidding yourself on,” “have a false sense of control” and are “deluded” as their child “could be watching someone else’s phone in the playground” or at another house “that you know nothing about.” The data also indicated that not all children aged between six and eight are encouraged by their parents

and teachers to keep information secret. For example, one parent tries to ensure that their child knows that they can tell them “anything” and that “the doors open for her to come to me about things.” One teacher encourages their pupils to share information with them aiming to “create an environment” to encourage their pupils to talk. Another teacher uses “time to talk cards” to encourage their pupils to share information without their peers hearing. Another teacher had a similar system, a “worry box in the class,” to encourage their pupils to communicate information as the box means children can do so more privately.

8.2: Original contribution to knowledge

This research study is the first empirical information poverty study to investigate children aged between six and eight. By consulting children, parents and teachers this study gained data from three perspectives and insights pertaining to children’s home and school information environments and the interplay between. This study also informs on the role of parents and teachers in satisfying children’s information needs.

This is the first research study to provide empirical evidence that children aged between six and eight can experience information poverty - existing empirical research studies have previously only evidenced adolescents and adults living in impoverished information worlds. Thus, this research study has evidenced for the first time that information poverty can be experienced by children as well as adolescents and adults.

This research study is also the first empirical information poverty study to identify what factors can contribute to the information poverty of children aged between six and eight. This is also the first study to determine that some of the same factors can contribute to the information poverty of children, adolescents and adults.

Therefore, this research study advances understandings of information poverty in general and provides new knowledge pertaining to an understudied group (children), contributing significantly to the field.

8.3: Research limitations

While this research study makes a significant contribution to information poverty research,

the researcher is aware that this study is not without limitations.

One limitation of this research study is that while the children researched were from a number of schools and diverse backgrounds (gender, socioeconomic, ethnicity) research findings are nonetheless not generalisable as children cannot be considered a homogenous group. This lack of homogeneity is reflected in research findings as not all children aged between six and eight were found to live in impoverished information worlds or to face the same barriers obtaining information.

An additional limitation of this research study is that the parents and teachers interviewed were not the parents and teachers of the child research participants. Although this research study obtained rich insights it is nonetheless possible that if the parents and teachers of child research participants were interviewed, a more holistic picture of individual children's information poverty could have been obtained. However, the researcher decided not to interview the parents and teachers of child research participants because part of this research study involved investigating whether children had ever kept any information a secret from others or not asked certain questions. The researcher considered that it might be invasive to investigate whether a child had ever kept information secret and to then also ask that child's parents and teachers about this child and secret information too. That is, the researcher considered it more ethically appropriate to investigate the information poverty of a greater number of children rather than investigating one child's information poverty more intensively. The researcher believes that this was the appropriate decision but does recognise that not interviewing the parents and teachers of the child research participants could be regarded as a research limitation.

Another potential limitation of this research study pertains to how fieldwork with child research participants was designed. That is, when analysing data from child research participants, the researcher noted that there was some variance in the proportion of children in each class that thought that they are generally successful in obtaining information. The only notable differing variable between the children in these classes was ethnic group. In the class in which the highest proportion of children thought that they are generally successful in obtaining information all child research participants were from white ethnic group (the majority ethnic group in Scotland (National Records of Scotland, 2018)).

Moreover, there were two other classes in which high proportions of child research participants thought that they are generally successful in obtaining information. These classes contained high proportions of children from white ethnic group. In contrast, in the class in which the lowest proportion of child research participants indicated that they are generally successful in obtaining information, the majority of children were from minority ethnic groups. In fact, 79% of the children in this class indicated that they are generally unsuccessful in obtaining information and 79% of the children were also from minority ethnic groups. However, due to how the researcher collected data from child research participants, the researcher was not able to determine whether it was the children from minority ethnic groups specifically who said that they are generally unsuccessful in obtaining information. The researcher recognises that a better research design might have been a research design that enabled child research participant responses to be tied to their demographics. The researcher does recognise however, that such a research design might have made data collection lengthier and child research participant responses to questions would have been less anonymous during analysis too.

A further recognised limitation of this research study relates to how the researcher investigated whether child research participants had ever kept information secret, that is, had ever censored the questions that they asked or the information that they shared. During their investigations, the researcher sought to balance ethical researcher behaviour alongside obtaining valuable, original data from child research participants. Thus, the researcher had deemed it appropriate to investigate whether child research participants had ever kept information secret. Furthermore, while recognising the value of determining from children directly what specific information they had kept secret or what questions they had not asked, the researcher had thought it inappropriate to seek such information from children directly in group discussions in a school setting as in schools adults can be regarded as authority figures. The researcher did not want child research participants to feel pressured to share details, in front of their peers, of information that they had previously wished to keep a secret from others. Therefore, as part of this research study, the researcher decided to determine whether child research participants had ever kept information secret and provide children with the opportunity to privately supply more details on specific information that they had kept secret or which questions they had not asked (via a folded note in the pirate's treasure chest). However, very few children chose

to provide extra information. While the researcher still considers their research design to be the most appropriate for ethical reasons, the researcher does recognise that if further detail had been obtained from more child research participants, this additional data would have been insightful and would have made a valuable contribution to understandings of child information poverty. This data would have been particularly useful because information poverty is an understudied research area.

8.4: Researcher reflections

The researcher completed this research study on a part-time basis between October 2013 and September 2020. The researcher started this study eight years after obtaining a Masters in Information and Library Studies. In the period between obtaining their Masters qualification and starting Doctoral research, the researcher worked as a professional Librarian responsible for children and young people's library services. The researcher began this study with no theoretical knowledge of information poverty or information behaviour. The researcher has enjoyed expanding their knowledge of these topics as they completed this research study.

8.4.1: Reflections on research design

After some reflection, the researcher believes that the research methods they utilised in this study were effective and appropriate. That is, interviews with parents and teachers and fieldwork with child research participants enabled the researcher to obtain data which assisted in answering the research questions of this study and allowed the researcher to make an original contribution to knowledge. By interviewing parents the researcher obtained data from adults who were knowledgeable about one particular child aged between six and eight and by interviewing teachers, the researcher obtained data from adults knowledgeable of multiple children aged between six and eight. That is, teachers interviewed collectively had 47 years' experience of teaching children aged between six and eight. By undertaking fieldwork with child research participants, the researcher also gained data directly from children aged between six and eight. The researcher was also gratified that elements of their fieldwork with child research participants were featured as an example of good practice in an educational tome, *Research Methods for Understanding Professional Learning* (Hall and Wall, 2019).

An additional researcher reflection pertains to the researcher's decision to obtain data from children, parents *and* teachers during this research study. On reflection this triangulation was as valuable as the researcher had anticipated that it would be. That is, obtaining data from children, parents and teachers allowed the researcher to compare data from three perspectives. The benefits of this were apparent when research data was analysed. For example, all parents and almost all teachers interviewed thought that children aged between six and eight are generally successful when information seeking. However, almost half of child research participants indicated that they are not generally successful in obtaining information required. Thus, these differing responses between child research participants and parent and teachers, demonstrated to the researcher the benefits of triangulating their research data. As if only parents and teachers had been consulted, the researcher could have reached different conclusions regarding child information poverty. However, despite recognising the benefits of obtaining data from multiple perspectives, the researcher also realises that they underestimated the time involved in transcribing and analysing research data for three participant groups. That is, undertaking full transcriptions, and subsequently analysing interview data in particular, took much longer than the researcher had anticipated. Therefore, while the researcher recognises that triangulating their research data proved to be worthwhile in this research study, in future, the researcher would consider whether their research questions could be answered as effectively in a more time efficient manner.

The researcher also reflected on the parameters that they set during research design regarding what age of children should be investigated during this study. That is, in this research study, the researcher chose to investigate the information poverty of children aged between six and eight. The researcher chose to investigate children of this age because this age is slightly older than when information behaviour is thought to first emerge (Spink and Heinström, 2011) and because by age six children should be at an appropriate developmental stage to participate in such a research study (Lightfoot, Cole and Cole, 2009). However, although the researcher managed to recruit enough participants that fulfilled this parameter, the researcher realises that participant recruitment could have been quicker and easier if they had been less specific regarding the age of children to be investigated. That is, if, instead of specifying that they would investigate children aged between six and eight only, the researcher had widened their parameters around the age of

children to be investigated.

8.4.2: Reflections after undertaking from fieldwork with children

The researcher also obtained specific insights after they undertook fieldwork with child research participants.

8.4.2.1: Benefits of administrative support

The researcher's first reflection after undertaking fieldwork with child research participants was that they found it extremely valuable to have an adult to accompany them while they undertook the fieldwork with children. That is, it was worthwhile to have an accompanying adult to provide administrative support. During this research study a fellow Doctoral candidate attended all seven fieldwork sessions with child research participants and provided such support. The researcher found this support to be extremely helpful and while they could have run fieldwork without such assistance the support ensured that fieldwork ran more smoothly. For example, during each of the sessions with child research participants, the adult assisting handed out and collected the resources that the children needed to complete tasks which allowed the researcher to focus on ensuring that child research participants understood the questions being asked. The assisting adult also provided help during an incident which occurred when the researcher undertook their first pilot session. During this research study, the researcher's access to child research participants in their schools, for pilot sessions, had been organised via a University Outreach Team which arranges for researchers to take their work into the community.¹² However, on arrival at the first school, the researcher was told by the office staff that another class had been added to the researcher's itinerary by the University Outreach Team. That is, the researcher would now be undertaking fieldwork with two classes of children aged between six and eight, not the just one class as had been arranged in advance. This meant that the researcher would not be on time for a session arranged in a second school which was due to commence straight after the first session. The adult providing administrative assistance was asked to deal with this issue, they got in contact with the second school to check if their timings had also been changed by the Outreach

¹² The researcher utilised this team while awaiting responses to emails sent to local schools requesting to work with their pupils.

Team. This meant that the researcher could focus on checking that they had enough resources for this unplanned for second class of children and could then start fieldwork on time. Thus, after completing this research study, the researcher recognised the benefits of having an adult provide administrative support during fieldwork with child research participants.

8.4.2.2: Value of pilots

The researcher also recognised, after undertaking fieldwork with child research participants, the value of running pilot sessions. That is, the researcher found that undertaking pilots during this research study led to changes in their research design. For example, during the first pilot session (in child appropriate language), children were asked to stand up if they are generally successful in obtaining information required and to sit down if they are not. However, the researcher quickly realised that the height of the child research participants standing up was not much taller than their peers who were sitting down and this made it difficult for the researcher to quickly determine which children were sitting down and which children were standing up. Thus, after the first pilot session, the researcher changed their instructions and during subsequent sessions child research participants were asked to go to opposite sides of the room depending on their answers. This change meant that the researcher could more quickly interpret results and move on to the next task.

The researcher also learned from undertaking pilots with child research participants that it can be valuable to listen to children and allow children to influence research design. For example, during the first pilot session, child research participants were instructed to place *either* a sad or a happy face sticker on source picture(s) depending on whether they considered these sources easy or hard to obtain information from. However, after this instruction was given (during the first pilot session), one child research participant asked if they were permitted to place both stickers on a source picture as they had mixed feeling about this source. That is, this child found this source to be sometimes easy but also sometimes hard to obtain information from. Other child research participants then said that they too considered certain sources not to be solely easy or hard to obtain information from. As a result, the researcher changed their instruction and advised child research participants that, if appropriate, they could place both stickers on source picture(s). During

group discussions child research participants that had used both stickers were able to explain the reasoning behind their choices. The comments that children provided, as to why they used both stickers, were insightful and the researcher learned that whether information sources are easy or hard for children to obtain information from was more complicated than they had anticipated when designing this research study. Thus, the researcher considers that listening to their child research participants and allowing them to influence the research design strengthened their study and improved what data was obtained.

Another valuable insight that the researcher gained from undertaking pilots with child research participants was the realisation that it is important to be judicious as to when to give children the resources that they need to complete fieldwork. That is, during the pilot sessions, for efficiency reasons, child research participants were given stickers to use in subsequent tasks before they required them. This was to enable children to proceed to subsequent tasks in a timely manner. However, the researcher quickly realised that the children became extremely excited and distracted when stickers were given out and stopped paying attention to their current task. Hence, although sessions took longer, after undertaking pilot sessions, the researcher realised that it was more effective to give child research participants stickers only after their previous task had been completed.

The researcher also determined from undertaking pilot sessions the most effective way to obtain data from their child research participants. That is, how best to ask children questions so as to obtain data which could assist in answering this study's research questions. During the first pilot session the researcher asked child research participants a question, then repeated that question, then asked the same question again using slightly different terms. The researcher asked questions in this way to ensure that all children clearly understood the questions being asked. However, the researcher quickly realised, during the first pilot session, that this method of questioning was confusing child research participants and that it was better for the researcher to ask a question succinctly once and to then move around the room asking each child individually if they understood the question being asked. Moreover, the researcher also realised, after undertaking the pilot sessions, that while child research participants needed succinct instructions it could also be necessary to provide children with instructions that might seem superfluous when planning

research. For example, initially, child research participants were given pictures of information sources and asked to put a tick or a cross on these pictures depending on whether these sources were used to obtain information or not. For another task children were asked to write a number one on these source picture(s) that they use most often to obtain information from. In an additional task, child research participants were asked to place sad or happy face stickers on their pictures depending on whether these sources are easy or hard to obtain information from. When designing this research study, the researcher had not considered it necessary to ask child research participants not to place their stickers over the ticks, crosses or number ones that they had written. However, the researcher found during the pilot sessions that some children covered their writing with their stickers. While this was not an insurmountable problem, as the researcher could overcome this by peeling the stickers off or by holding the pictures up to the light, this did make analysis a lengthier process. The researcher, therefore, changed their instructions and made sure to specify to child research participants that they should place their stickers on their pictures carefully so as not to cover any of their writing. Similarly, during the pilot sessions, the researcher realised that the number ones written by some child research participants closely resembled ticks and the researcher had to clarify in these instances whether the children had written a tick or a number one. This proved to be time consuming for the researcher and interrupted the smooth flow of fieldwork. As a result, after the pilots, the researcher asked child research participants to write their number ones as big as they could and to make their ticks much smaller to ensure that the differences between the markings was clearer during analysis. Running pilots with child research participants was therefore worthwhile because pilot sessions taught the researcher that their child research participants needed succinct but precise questions and instructions.

An additional insight that the researcher gained from undertaking pilot sessions with child research participants was that it is important to correctly locate the recording device during group discussions. That is, the researcher found that child research participant voices were not always clear on pilot session recordings depending on where they had been seated in relation to the researcher's Dictaphone. This was a minor issue as the researcher could still hear the children's answers when the Dictaphone was located further away from children but child research participants being more distant to the Dictaphone did make transcribing a lengthier and harder process for the researcher. Thus, learning where to locate the

recording device during group discussions was another useful lesson that the researcher learned after undertaking pilot sessions with children.

The researcher also learned after undertaking fieldwork with child research participants that not all difficulties can be overcome by running pilot sessions. For example, one issue that continued throughout fieldwork, despite undertaking pilots, was how to best pace sessions with children. That is, the researcher found that some child research participants understood the questions being asked and the tasks for completion immediately while for other child research participants this was a more laborious process. Moreover, the researcher also found that there were confident child research participants who quickly completed allocated tasks and then started to chat to the child sitting next to them which made it even harder for the less confident children to hear, understand and follow instructions. While the issue of how best to pace sessions for varying abilities remained an issue throughout fieldwork, the researcher did learn from pilots how to better manage this situation. Better management involved the researcher stating questions and instructions once clearly and succinctly then checking with each child research participant individually that they understood what was required and offering any further clarification or assistance if needed. Thus, undertaking pilot sessions was beneficial for the researcher to determine how to best manage this issue but the researcher also learned that not every issue can be resolved by running pilots.

8.4.3: Parent and teacher interview reflections

The researcher also obtained specific insights after interviewing parents and teachers during this research study.

8.4.3.1: Need to be adaptable regarding interview arrangements

One researcher reflection after interviewing parents and teachers was that it was beneficial for the researcher to be adaptable regarding interview arrangements. For example, when undertaking this research study, the researcher learned that it was most effective to arrange interviews as soon as potential interviewees could be available even if this was not the most suitable point in the research process for the researcher. The researcher reached this conclusion after, when initially organising interviews, there could be a delay of a few weeks between the researcher approaching potential interviewees and then trying to set

an interview date. However, the researcher then found that a proportion of individuals who had volunteered to be interviewed did not respond or were not available when the researcher got back in contact to arrange a date. From then on, the researcher found that it was more effective to undertake interviews as soon as potential participants indicated that they could be available. A negative aspect of this change was that the researcher could undertake no interviews for several weeks and then have to drive over two hundred miles and interview six individuals over a two-day period. Despite this, the researcher believes that making this change was worthwhile as once they began to interview participants as soon as participants could be available the researcher did not have any potential interviewees lose contact or then be unavailable for interview. Making this change also meant that the researcher obtained a wealth of insightful data and was able to undertake enough interviews to reach data saturation.

Moreover, the researcher also learned, after interviewing parents and teachers, that it can be prudent to allow interviewees to dictate interview arrangements even when these arrangements are not as suitable for the researcher. For example, during this research study, some teachers wanted to be interviewed in their classrooms, while their pupils were present, and this meant that some pupils interrupted interviews and background noise made transcriptions more difficult for the researcher. Similarly, some parents wanted to be interviewed with their children present and their children too, on occasion, interrupted interviews which was frustrating for the researcher. After such interruptions, the researcher always did their best to ensure that interviewees returned to their point but was not always successful. A related issue was that some interviewees wished to be interviewed in groups. On one occasion two teachers and on another occasion three parents requested to be interviewed together. The researcher found that while there were positives to these group interviews. For example, hearing the opinions of other interviewees seemed to encourage participants to provide further, relevant examples or insightful data. However, the researcher also found that, during group interviews, one person often dominated the conversation, no matter how repeatedly the researcher tried to prevent this from occurring. This was frustrating, as the researcher wanted to ensure that they did not obtain less data for any one individual in a group interview than would have been obtained if an individual interview had occurred. Furthermore, during group interviews, the researcher found it difficult to follow up all interviewee comments with

further questions and to obtain examples to support each interviewee statement as, when interviewing more than one participant, multiple relevant statements were made concurrently. However, ultimately the researcher believes that accommodating interviewee requests during this research study was worthwhile as it ensured that research participants were as comfortable as possible during the research process. Thus, the researcher learned that it can be beneficial to be adaptable when arranging interviews.

8.4.3.2: Importance of confirming interview arrangements

The researcher also learned from interviewing parents and teachers that it is important to confirm interview arrangements such as dates and times with interviewees no matter how recently interviews were arranged. That is, initially the researcher did not reconfirm such details if interviews had been arranged 48 hours before or less. However, on a few occasions, participants did not attend interviews and this only occurred when the researcher had not reconfirmed interview arrangements in advance. The researcher had considered doing so unnecessary when interviews were only arranged the previous day. Thus, the researcher learned that it is beneficial to always reconfirm interview arrangements.

8.4.3.3: Need for thorough questioning

An additional researcher reflection, after interviewing parents and teachers, was that it is valuable to continue to question interviewees once they have provided initial answers. For example, some interviewees were asked about barriers to children's information access and discussed these at length. However, when subsequently asked which of the barriers to children obtaining information, they considered to be most significant, some interviewees then discussed a barrier that they had not previously mentioned. Such occurrences illustrated to the researcher the value of continuing to question interviewees on the same topic even when initial answers seem detailed and informative.

8.4.3.4: Awareness of when interviewees stop providing data

The researcher also learned, after undertaking interviews with parents and teachers, that interviewees can continue to make insightful comments, and thus provide useful data, after the formal interview process has ended. For example, during this research study, on many occasions after interviews had formally been concluded (with a debriefing to allow

interviewees to add additional comments or to ask any questions) and as the researcher and interviewees were preparing to leave, participants provided further examples to support comments that they had made during their interviews. This was despite requests for such examples being made by the researcher during interviews. Moreover, on other occasions, interviewees would provide new, relevant information as the researcher and interviewee left the interview location together. The researcher learned that the best way to manage this situation was, if comments were brief, the researcher would quickly note them down or, if comments were lengthier, the researcher would seek permission to record this additional commentary. Therefore, after this experience, the researcher would be prepared for such occurrences if interviewing in the future.

8.4.4: Alternative ways of undertaking research

As there was no literature pertaining to child information poverty available when the researcher undertook a review of relevant literature, this research study was exploratory, and the researcher sought data to contribute to better understandings of child information poverty. At the planning stage, the researcher anticipated that this study would be partly deductive because they had engaged with relevant literature and thus, would be informed (but not limited) by that literature and because the researcher had thematically grouped the contributory factors to adolescent and adult information poverty after the review of literature. However, the researcher also anticipated this study incorporating inductive aspects because there was no existing child information poverty literature thus, no child information poverty theories for the researcher to consider when undertaking their study. Now that this study has been undertaken, the researcher believes that it was appropriate to anticipate that this study would incorporate both deductive and inductive aspects as this proved to be the case.

The researcher is aware however, that their child information poverty investigations could have been undertaken in other ways. That is, while the researcher believes that their research design was appropriate, the researcher is aware that there are other worthwhile ways that this study could have been completed. For example, part of this research study involved the researcher considering whether the data obtained from research participants confirmed any of Chatman's (1996) six propositional statements regarding information poverty. One alternative way that this research study could have been undertaken is that

instead of examining whether data obtained supported any of Chatman's (1996) propositional statements or not, the researcher could have used each of Chatman's (1996) propositional statements as the basis for interview questions or tasks for child research participants. For example, Chatman's (1996, p.197) first propositional statement was that: "People who are defined as information poor perceive themselves to be devoid of any sources that might help them." An alternative way of undertaking this research study could have involved the researcher asking parents and teachers during interviews, "Do you think that children aged between six and eight consider themselves to be devoid of any sources that might help them?" However, the researcher believes that if they had investigated child information poverty only within the parameters of Chatman's (1996) propositional statements, the same wealth of insightful data might not have been obtained from research participants. Thus, the researcher believes that their research design was appropriate but is aware that this study could have successfully been undertaken in other ways.

The researcher is also aware that this study could have been undertaken using alternative research methods. That is, when designing this research study, the researcher had considered what research methods would be most appropriate to use. For example, the researcher considered whether participant observation, questionnaires, diaries or journals would be suitable research methods. However, the researcher chose not to use these methods believing that these methods would not obtain data as efficiently as the research methods chosen, that information obtained via these methods would not be as detailed or as reliable and that these alternative research methods may not be suitable for some research participants. On reflection, the researcher believes that their decision not to utilise participant observation in this research study was appropriate. That is, the researcher believes that they would not have gained as much useful data pertaining to child information poverty by observing research participants. For example, during this research study, almost half of child research participants (75 children), when questioned by the researcher, indicated that they are not generally successful in obtaining information required. The researcher does not believe that they could have obtained this research finding (and therefore, made the same original contribution to knowledge) if they had observed children. Moreover, the researcher also believes that if they had used questionnaires, diaries and journals as research methods, these methods would not have provided the

researcher with as much useful and insightful data. That is, as this research study established that lacking literacy skills, including reading and spelling skills, can be a barrier to children aged between six and eight obtaining and sharing information, this finding suggests that the researcher's decision not to utilise questionnaires, diaries and journals for child research participants in this research study was valid. The researcher also believes that not utilising individual interviews as a research method for child research participants as part of this study was appropriate. The researcher believes that instead using group discussions, allowed the researcher to work with a greater number of children. During this research study, the researcher obtained data from 156 children and the researcher believes that this is a greater number of children that could have been consulted than if individual interviews with children were undertaken. Moreover, the researcher also believes that less insightful data would have been obtained from child research participants in individual interviews, as the researcher believes that child research participants would have been less comfortable undertaking individual interviews with the researcher (who they had never met before) and therefore would have been less forthcoming.

8.4.5: Reflections on ethics

This research study was funded by the Economic and Social Research Council (ESRC). Therefore, when designing and undertaking this research study, the researcher consulted and adhered to ESRC ethics guidance. For example, the researcher followed the ESRC (2015) recommendation that if interviewing, interviewee consent should be freely offered, fully informed and continuous, and that interviewees should know that they are able to withdraw their consent at any time.

Moreover, as well as being funded by ESRC, this research was undertaken under the aegis of the Department of Computer and Information Sciences within University of Strathclyde. Hence, as well as adhering to ESRC ethics regulations, when undertaking this research study, the researcher also adhered to Departmental and University ethical research standards. For example, the researcher ensured that they followed the recommendation of the Department of Computer and Information Sciences Ethic Committee that any research with "human beings as participants" considered the "the rights, safety, and wellbeing of the participants" and that this is done "at all times" (Department of Computer

and Information Sciences, University of Strathclyde, 2015).

As well as considering ESRC, Departmental and University ethical obligations, when planning and undertaking this research study, the researcher was also conscious that they had children as research participants and because of this made certain decisions with this in mind. For example, the researcher was particularly mindful of ethics when designing the task for child research participants which sought to establish whether children had ever kept information secret. Although the researcher recognised the value of determining what specific information child research participants had kept secret or what questions they had not asked, the researcher had deemed it inappropriate to pursue detailed information from children on this topic, in a group situation, in a school setting. That is, the researcher believed that because in schools, adults can be regarded by children as authority figures, the researcher did not want child research participants to feel pressured to provide the researcher with information that may be sensitive to them. As a result of this ethical consideration, during this research study, the researcher chose to establish whether children had ever kept information secret and provided child research participants with the opportunity to (anonymously) provide more detail if they wished to but did not seek further specifics from children during group discussions. While not thoroughly pursuing from child research participants details of the specific information they had not shared or questions they had not asked, could be regarded as a limitation of this research study, the researcher believes that their decision was ethically appropriate for their child research participants. Furthermore, the researcher also considered ethics, because they had child research participants, when they decided that the parents and teachers interviewed would not be the parents and teachers of the child research participants. That is, during this research study, the researcher chose not to interview the parents and teachers of child research participants because they believed that it might be invasive to investigate whether a child had ever kept information secret and to then also ask that child's parents and teachers about this child and information that had been kept secret too. The researcher considered it more ethically appropriate to investigate the information poverty of a greater number of children rather than to investigate one child's information poverty in depth. The researcher is aware that, although this study obtained rich insights, it is possible that if the parents and teachers of child research participants had been interviewed, a more holistic picture of individual children's information poverty

could have been obtained. However, the researcher believes that their research design was more ethical for their child research participants. Therefore, these examples demonstrate how, during the completion of this research study, the researcher was mindful of ensuring that child research participants were dealt with ethically.

During this research study, it was also necessary for the researcher to apply for ethical approval prior to undertaking fieldwork with research participants. Initially, the researcher sought ethical approval from the Computer and Information Sciences Departmental Ethics Committee. However, the researcher was aware that, because their study included children as research participants, extra care and consideration of the ethics of this study may have been required and it may have been necessary to apply to the University Ethics Committee for ethical approval. While the researcher appreciated the need for their study to be ethically sound, the researcher had been advised that studies referred to the University Ethics Committee took much longer to obtain ethical approval than studies reviewed by the Departmental Ethics Committee. The researcher was therefore apprehensive that, if their application needed University Ethics Committee approval, there might be a delay to their fieldwork beginning.

Therefore, in the first instance, the researcher submitted an ethics application to the Computer and Information Sciences Departmental Ethics Committee. The application outlined the title of this study, a synopsis of the study (background and aims) and further details of the study including how research participants would be recruited, what information would be provided to research participants, how the researcher would obtain research participant consent and how the researcher would demonstrate that participant consent had been obtained. In their application, the researcher also outlined what would be required of research participants, what data they would collect from research participants and how data collected would be processed, stored and disposed of. Despite anticipating that the Computer and Information Sciences Departmental Ethics Committee may not be able to approve the application, the researcher was extremely gratified that the Departmental Committee felt it appropriate to approve the ethics application of this study and did not believe it necessary to refer the application to the University Committee¹³. Moreover, the speed at which the Departmental Committee considered and

¹³ Appendix one contains evidence that ethical approval was awarded for this research study.

approved the researcher's ethics application was also particularly appreciated by the researcher. The committee was able to review and approve the application within one week which meant that the researcher was able to start organising their fieldwork just one week after their ethics application was made. As the researcher had been aware that any delay in gaining ethical approval for their study would have had ramifications on fieldwork beginning, the researcher was extremely grateful for this speedy outcome.

The researcher also sought to ensure that this research study was ethical, by allocating every parent, teacher and class of child research participants a code. The researcher then created a spreadsheet (which only the researcher had access to) and inserted research participant demographic information into this spreadsheet alongside codes allocated. All research participant demographic data was subsequently stored (on separate spreadsheets, in different locations, to the master code spreadsheet) aligned to the allocated code and anyone viewing the data from this research study was not able to connect any data to research participant demographic data.

The researcher also sought to ensure that this research study was ethical by requesting that every individual interviewed completed a Declaration of Informed Consent form. This declaration allowed the researcher to determine and evidence that an interviewee was a willing and informed participant in this research study. The text on the Declaration of Informed consent for teacher interviewees was as follows:

I hereby declare that I am willing to take part in an interview to support the PhD research of Frances Breslin Davda (frances.breslin-davda@strath.ac.uk), from the Computer and Information Sciences Department of University of Strathclyde. The research is as follows:

Title: An exploration of child information poverty

Interview purpose: To explore primary teachers' views and experiences of their pupils' information behaviours.

I understand that all of the data I provide today will be anonymised, and that some or all data may be used (quoted) for educational or publication purposes. I

understand that I have no obligation to participate in this study, and that I am free to withdraw my participation at any time, without having to explain or give a reason.

Participant signature:

Participant printed name:

Date:

The text on the Declaration of Informed Consent form completed by parent interviewees was very similar to the text on the teacher consent form, except the term parents' was used instead of the term primary teachers', and the term childs' was used instead of the term pupils'.

During this study, obtaining consent for child research participants, to participate in this research study, did not occur how the researcher anticipated when designing this research study. That is, the researcher had thought it would be necessary to obtain consent from parents for their children aged between six and eight to participate in this study. However, when the researcher contacted class teachers to seek to work with their pupils to investigate child information poverty, teachers advised that, because fieldwork with children would be taking place in classrooms during the school day, it would be the teachers who were the adults responsible for the children at that point, and it would up to teachers to determine whether it was appropriate for their pupils to participate in this study. Therefore, when undertaking this study, the researcher informed class teachers (instead of parents as anticipated) as fully as possible about the research study and what participation would involve for their pupils, and the researcher gained permission from class teachers to allow the children aged between six and eight to participate.

8.4.6: Reflections on data analysis

During this research study, the researcher used thematic analysis to analyse research data.

8.4.6.1: Thematic analysis of interview data

To start analysing interview data, the researcher created one Excel spreadsheet for all parent interview data and one Excel spreadsheet for all teacher interview data. In each spreadsheet, the researcher created 17 worksheets, one worksheet for each of the 17

parents interviewed and one worksheet for each of the 17 teachers interviewed. After each interview was completed, the researcher fully transcribed the data from that interview and entered all data onto a worksheet on the parent or teacher spreadsheet as appropriate. Data entered included questions asked, responses given and any non-verbal data the researcher noted from interviewees during their interview. For example, if an interviewee nodded their head to indicate agreement. Each interviewee's worksheet containing interview data was labelled with their allocated code. That is, no demographic identifying data was stored on worksheets alongside interview data.

The researcher then created two more spreadsheets (one for parent interview data and one for teacher interview data) and then organised interview data by interview question. That is, these new spreadsheets grouped the responses of all parents and teachers interviewed to one interview question on a single worksheet. For example, every parent interviewed was asked: Can you think any difficulties or challenges that your child faces when trying to find things out? The responses of all parents interviewed to this question were placed together on a worksheet, titled Challenges.

Two additional spreadsheets were then created by the researcher (one for parent interview data and one for teacher interview data). These spreadsheets were initially an exact copy of the spreadsheets which grouped the responses of all parents and teachers interviewed to each interview question on worksheets. The researcher used these final two spreadsheets to seek patterns within the grouped interview data. For example, on the spreadsheet that grouped all responses of teachers interviewed to the question asked about difficulties or challenges that children can face when trying to find things out. The researcher noticed that more than one teacher interviewed had discussed a lack of skills being a challenge to children aged between six and eight obtaining and sharing information. The researcher therefore created a heading of Skills on this worksheet and any teacher quote that indicated that skills can be a challenge to children obtaining and sharing information was placed under this heading. After all quotes pertaining to skills being a barrier had been identified and placed under this heading, the researcher then re-examined these quotes to determine if any further grouping could take place. The researcher noted that some teachers had discussed reading skills as specific skills that could act as a barrier and that some teachers had indicated that information literacy skills could also be a barrier.

Therefore, the researcher deemed that further grouping within skills could take place and, as a result, created two subheadings, under the Skills heading. The researcher created the subheadings Reading Skills and Information Literacy Skills and then continued to review the quotes to determine if any further patterns could be identified in the data.

The researcher then continued to investigate whether any other patterns could be identified within the data and created new worksheets if any data of interest was noted that was beyond the scope of an interview question. For example, the researcher noted more than one quote which suggested that teachers can influence whether children aged between six and eight can access information sources such as books. As the researcher had not asked teachers about this specifically during interviews, there was initially not a worksheet which grouped these responses. The researcher therefore added a worksheet labelled Teacher Influence to the spreadsheet and any quotes found, that pertained to teacher influence, were placed on this worksheet for further analysis.

As data analysis continued, on some occasions the same quotes were placed on more than one worksheet and/or under more than one heading within a worksheet if deemed appropriate. For example, one teacher interviewed was asked whether their pupils could generally successfully obtain information and this teacher said that most of their pupils “would give up.” The researcher therefore placed this response onto the worksheet which grouped all teacher responses to the question regarding children’s success in obtaining information. However, the researcher also placed this quote onto the worksheet which contained all teacher data pertaining to challenges to children aged between six and eight obtaining information. The researcher then subsequently placed this quote under a Perseverance/Motivation heading on the Challenges worksheet, as the researcher determined that more than one teacher interviewed had indicated that children aged between six and eight can lack the perseverance and motivation to obtain information.

8.4.6.2: Thematic Analysis of child research participant data

Thematic analysis of child research participant data was undertaken in a similar way as thematic analysis of interview data. That is, the researcher undertook seven sessions with child research participants during this research study. All data obtained from each of these

seven sessions was entered on to a spreadsheet and in this spreadsheet the researcher created one worksheet for each of the seven sessions.

The researcher then created a second spreadsheet, with a separate worksheet created for each task undertaken. The researcher grouped the data obtained from child research participants on these worksheets. That is, one worksheet was created for each of the five tasks child research participants were asked to undertake during fieldwork and all relevant data obtained from that task (during all of the seven child research participant fieldwork sessions) was grouped on a worksheet.

Once all child research participant data had been grouped by the researcher. The researcher created a third spreadsheet, initially an exact copy of the second spreadsheet which grouped child research participant data by task undertaken. The researcher used this third spreadsheet to seek patterns within the data, creating headings and adding additional worksheets as data analysis continued.

On reflection, although the researcher undertook fieldwork with 156 child research participants and interviewed less adults (34), the researcher found that transcribing and analysing research data for child research participants was much less time consuming than transcribing and analysing adult interview data. For example, the researcher found that it was relatively quick to determine how many children in a class did or did not use a particular information source. To do so required the researcher to examine a pile of pictures of information sources and note how many children had marked a picture with a cross and how many with a tick. In contrast, analysing and transcribing interview data took much longer. The researcher also found that transcribing and analysing a one hour child research participant fieldwork recording was much quicker than analysing a one hour adult interview recording. This was because in a one hour interview recording, interviewees tended to talk for the majority of the interview, whereas, in a one hour child research participant recording, verbal discussions were a much shorter proportion of recordings because some child research participant data was obtained outwith group discussions. For example, during fieldwork some research data was obtained by counting how many children went to one side of the classroom.

8.5: Recommended further research

Based on research findings, the researcher recommends that further relevant research is undertaken.

8.5.1: Investigate homogeneity and child information poverty

The researcher believes that worthwhile future research could investigate, in more depth, the finding from this research study that some, but not all, children aged between six and eight experience information poverty. A future research study could investigate why this is the case. Moreover, future research could also explore why those children that do experience information poverty can face different barriers accessing and sharing information.

Other beneficial future research would be research that investigates the finding from this study that there may be a link between a child's ethnic group and whether a child has unmet information needs, as this research study found that there may be a correlation. That is, in this research study, there was some variance in the proportion of children in each class that thought that they generally successfully obtain information. The only notable differing variable between the children was their ethnic groups. This research finding would benefit from further investigation because (due to how data was collected from child research participants) the researcher was not able to determine whether it was the children from the minority ethnic groups specifically who indicated that they are generally unsuccessful in obtaining information. Therefore, future research which investigated this potential correlation more thoroughly would be of interest.

Other relevant future research studies would be longitudinal studies which investigate child information poverty at different ages, exploring whether children are more or less likely to experience information poverty at certain ages and whether the causes of child information poverty differ depending on a child's age.

8.5.2: Explore how to improve children's independence in obtaining information

Future research could investigate the finding from this research study that children can live in impoverished information worlds because they require adult support to obtain information but adults can be unwilling or unable to assist children to obtain information.

Future research could investigate how to improve children aged between six and eight independence in obtaining information. For example, this research study found that a barrier to children age between six and eight obtaining and sharing information is a lack of skills, specifically information literacy, reading, spelling and communication skills. Future research studies could explore which of the skills to obtaining information lacked are most integral. That is, is children lacking the skills to find a book in a library a less significant barrier to their obtaining information (and cause of their information poverty) than a child lacking the skills to read? Valuable future research could also investigate the differences in children's information literacy, reading, spelling and communication skills at different ages and explore how children's dependence on information intermediaries changes as their skills develop.

8.5.3: Examine children's motivation and perseverance to obtain information

Future research could also examine children's motivation to seek information and perseverance to continue efforts once initiated as research to date has contrasting findings. That is, this research study found that some children aged between six and eight do persevere when seeking information, but other children do not. Moreover, in Lu (2010) and Shenton's (2007) research, child research participants (11-12 and 3-18 respectively) did not persevere when seeking information while the children that participated in Bilal's (2000) research (11-12) did. Moreover, Foss et al (2013, p.565) reported that child research participants aged seven rarely persevered when seeking information but that older child research participants (9-11) were much more likely to persevere until they found information sought. Therefore, research which more thoroughly investigates child information poverty occurring because children are not motivated to obtain information or do not persevere when seeking information could be of value. For example, research which investigates whether a child's age impacts on their motivation and perseverance to seek and share information. Or research which considers whether a child's environment impacts on their motivation and perseverance to seek or share information.

8.5.4: Investigate children lacking access to information and information sources

Another area in which further research could be pertinent could be to investigate more thoroughly the finding from this research study that children can experience information poverty because they lack access to information and information sources. Future research

could explore in more depth which specific information sources children require access to and why these sources are inaccessible. Such research could determine the frequency and significance of this barrier and consider how this barrier could be eradicated.

Valuable future research could also investigate the finding from this research study that parents restrict their children's access to information and information sources which can cause child information poverty. As this research study outlined complexities around this issue. That is, not all parents and teachers agree on what information and information sources children aged between six and eight should have access to. Moreover, while parents indicate that they have worthy intentions when restricting their children's access, there is a lack of clarity as to what restrictions are appropriate. The literature outlined that individuals have a "fundamental right" to access information (Britz and Blignaut, 2001, p.67) and, in terms of children specifically, that "children have a right to serious answers to their questions" and that children's "need for information" is so "essential" that to ignore this need can "hinder and even damage the basic processes of its development" (Sturges, 2009). In addition, the UN Convention on the Rights of the Child states that children have a right to information and outlines that parents and carers have "rights and responsibilities" to "provide guidance and direction" regarding their children's information access (UNICEF, 2020). However, the literature also evidenced a lack of clarity regarding who has the right to decide what information and information sources should be accessible to children at what age. Therefore, useful future research could clarify parental rights regarding restricting their children's access to information and information sources. Future research could also determine when children should get autonomy as, to date, clear, definitive guidance is not available.

8.5.5: Explore child secrecy

Future research could explore the finding from this research study that children aged between six and eight can keep information secret, can conceal their information needs and censor the information that they share. As this research study is the first empirical information poverty study to establish that children aged between six and eight can evidence secrecy. Valuable future research could investigate whether children younger than six evidence secrecy. That is, research which determines at what age secrecy (in the context of information poverty) first manifests would be insightful.

Moreover, the findings from this research study suggested that older children were more likely than younger children to keep information secret. That is, all parents of 8 year old children interviewed compared to just over half of the parents of 7 year old children interviewed said that there have been occasions that their children have concealed their information needs or censored the information that they shared. Furthermore, some parents specified that a change seemed to occur around the ages six or seven in terms of their children keeping information secret. Parents interviewed variously said that around age six or seven their children developed “an awareness now of things,” “an embarrassment” “that wasn't there before” and at age “six or thereabouts” children are “very more kind of self-conscious.” Therefore, as well as research which investigates when secrecy in the context of information poverty first manifests in children, research which investigates whether there is a change in children evidencing secrecy between the ages of six to eight would also be useful.

Further research could also explore with children directly, to obtain more in-depth data, what information they have kept secret, that is, what specific questions children have not asked or what information they have not shared. As this research study evidenced children aged between six and eight keeping information secret but did not obtain a great deal of data from children directly regarding the specific information that had been kept secret. Therefore, further research which obtains such data would be of interest.

8.5.6: Replicate current study

It would also be advantageous for this research study to be repeated with participants from similar demographic groups but also with participants from demographic groups not involved in this research study. That is, in this research study there was a fairly even split of male and female child research participants, nearly two thirds of child research participants were of white ethnicity (the dominant ethnic group in Scotland) and all schools attended by child research participants were located in Quintile 1, the 20% most deprived data zones in Scotland (Scottish Government, 2019). Moreover, all parents interviewed were aged between 31 and 50, and had attended university or college. The majority of parents interviewed were also female and of white ethnicity. Parents interviewed also lived in a range of data zones and their children (aged between six and eight) were a fairly even split

of male and female. Furthermore, all teachers interviewed were aged over 21, female and primarily of white ethnicity. Teachers taught primarily in state schools and their schools were located in a range of data zones. As this is the first research study to undertake empirical research investigating children aged between six and eight, in the context of information poverty, any research studies which obtained data to compare the findings of this research study to would be of value.

8.5.7: Investigate appropriate interventions to tackle child information poverty

Additional useful future research would be research which investigates at what age interventions to tackle child information poverty should occur. That is, early interventions may be advisable as this research study has determined that children, adolescents and adults can live in impoverished information worlds, and that some of the same factors can contribute. Moreover, research from other fields indicates that intervening as early in life as possible is recommended, as early interventions are believed to be more cost effective and more likely to resolve an issue (Heckman, 2000). Heckman (2000), in particular, is a strong advocate of early interventions. However, there is a lack of consensus regarding early interventions. For example, Gardner et al (2019, p.7) argue that there is “scant evidence” to support claims that early interventions are more cost effective and more likely to resolve issues. Gardner et al (2019, p.8) believe that there are limitations to Heckman’s research including the fact that Heckman (2000) compared “differing interventions at different ages.” Gardner et al (2019, p.8) believe that their research, which explores the effectiveness of parenting programmes in improving children’s behaviours, is more appropriate to investigate the effectiveness of early interventions as parenting programmes use similar interventions “across a wide range of developmental stages.” Based on their research findings, Gardner et al (2018, p.17, 19) conclude that child behaviour is equally open to change between the ages of two to eleven and that, while interventions should not be delayed to minimise consequences, it is never “too late to intervene later in childhood.” Therefore, future research which investigates when interventions to tackle child information poverty are likely to be most effective is recommended. Research is also needed to determine how to intervene to tackle child information poverty sensitively and appropriately.

8.6: Implications of research findings for policy and practice

Findings from this research study have a number of implications for policy and practice.

8.6.1: Need to raise awareness of child information poverty and its contributory factors

Findings from this research study suggest that it would be worth raising awareness of child information poverty and its contributory factors. That is, consider that all parents and almost all teachers interviewed thought that their children/children aged between six and eight are generally successful in obtaining information required. However, almost half of child research participants indicated that they are not generally successful information seekers. Therefore, it could be that children are experiencing information poverty, but their parents and teachers are unaware. Moreover, findings from this research study also indicate that children aged between six and eight can live in impoverished information worlds because their parents and teachers are unwilling or unable to assist them to obtain information or because their parents and teachers encourage them to keep information secret. Hence, an implication of research findings for policy and practice is that it could be valuable to raise awareness of child information poverty and how parents and teachers can impact. That is, parents and teachers may not be aware that children are experiencing information poverty and there may not be awareness that parents and teachers are obstructing children from accessing and sharing information. In addition, parents and teachers may not realise the consequences of obstructing children from accessing and sharing information or the consequences of encouraging children to keep information secret. Raising awareness could assist in tackling child information poverty.

8.6.2: Make children's access to information/information sources more equitable

The data from this research study also indicated that there would be value in making efforts to ensure that children's access to information and information sources is more equitable. That is, in this research study it was determined that children age between six and eight can experience information poverty because they lack access to information sources, and computers/the internet were identified as a source of information that some children lack access to. The researcher also found that while the internet can be accessed in public libraries not all parents facilitate their children's public library use. Despite this, research data also showed that internet access can be required for children aged between six and eight to complete their homework and that one school had stopped providing home

reading books to their pupils, instead providing access to these books via the internet only, a change made with no consultation with parents. Moreover, the researcher also determined that there are children aged between six and eight whose lack access to adults as a source of information. That is, this research study identified parents who lack the information literacy skills to assist their children to obtain information to complete their homework and found that there are children aged between six and eight who have better literacy skills than their parents. Therefore, there needs to be awareness that not every child has access to computers/the internet as a source of information and that not every child has adults available who are willing or able to assist them to obtain information. Children should not be at a disadvantage educationally because they do not have computer/internet access or support from adults at home. Books were also identified in this research study as an information source that some children aged between six and eight lack access to. Moreover, teachers interviewed stated that increasing access to books could improve their pupils' access to and use of information. The researcher also determined that some children have "no books whatsoever, not even a newspaper at home, not even a comic" and that there are children in whose homes books are "neglected" and not used "as a source of finding information." Research data also indicated that some teachers make efforts to ensure that their pupils, who lack access to books at home, can access books. Some teachers personally supply books for class libraries, some teachers buy their pupils books as gifts and some teachers dedicate lesson time to sharing books with their pupils. However, the researcher also identified that not all teachers make the same efforts to enable their pupils to access books. Thus, an implication of research findings for policy and practice is that there could be value in efforts being made to ensure that children's access to information and information sources is more equitable. Consideration is needed to determine how certain information sources could be made more accessible to children or how certain information could be made available via other more accessible information sources. For example, that children lack access to information sources could be raised with those in charge of allocating school budget to seek funding increases or the reallocation of existing budgets. In addition, links could be made with external partners to try and overcome this lack of equity. For example, Glasgow City Council in partnership with Apple Education have recently provided all Glasgow school pupils aged 9 to 18 with an iPad for use at home and in school. This partnership seeks to make the same technology available to all pupils of the same age to "help towards closing

the attainment gap” and to support “equality and inclusion for all” (Glasgow City Council, 2020). Therefore, further projects of this nature or similar projects which make the resources available to younger children may be needed to ensure that children’s access to information and information sources is more equitable. Moreover, it should not be the responsibility of class teachers to personally purchase books so that children have access. In addition, it should not be the case that some children aged between six and eight are unable to access books because their teachers are unwilling or unable to purchase books using their own monies. Therefore, as data from this research study indicated that some children aged between six and eight only have access to books via their teachers and that some teachers are purchasing those books personally, it should be considered whether budgets could be made available to purchase more books for schools. For example, for class libraries. It could also be considered whether other bodies could facilitate children’s access to books. For example, Scottish Book Trust are a charity that gift Scottish children books. Findings from this research study suggest that there would be value in Scottish Book Trust extending their current schemes so that children aged between six and eight access to books is not dependent on individual teachers.

8.6.3: Implications of research for library practice

Findings from this research study have implications for library practice. That is, research findings suggest that librarians, other library staff and library resources could contribute to tackling child information poverty. Consider that, in this research study, the majority of child research participants indicated that they are not generally successful in independently obtaining information, primarily because adult support is required to obtain information successfully. For example, child research participants variously discussed needing adult assistance to obtain internet information, of needing an adult to “spell the word” or put “up a web site.” In addition, just under half of parents and teachers interviewed thought that their children/children aged between six and eight are not generally successful independent information seekers. Parents variously explaining that they have to “guide” their children and provide them with “direction” and “support” to obtain information, and teachers variously discussing pupils who “struggle to work independently” and are “reliant on teacher support” to obtain information successfully. Moreover, this study also evidenced that while children aged between six and eight can need adult support to obtain information, some adults are unwilling or unable to support children. For example, one

child research participant said that their parents are “not interested” in answering their questions and another child said that their parents do “not have the knowledge” to provide information sought. Teachers also discussed parents who “don't have the language skills to help” their children obtain information, parents who “can't speak English” and discussed pupils who do not have an adult who “can read or write at home.” Therefore, these research findings suggest that if qualified librarians were placed in well-resourced libraries in every primary school, this could assist in tackling child information poverty. That is, children can need adult assistance to obtain information successfully but not every child aged between six and eight has access to an adult willing or able to assist them. Librarians could help to overcome child information poverty by assisting children to obtain information and by providing appropriate training so that children can become capable independent information seekers.

Research findings also suggest that there could be value in placing qualified librarians in well-equipped libraries within primary schools, because this research study also found that not every child aged between six and eight has access to books at home. For example, this study evidenced children who “don't have very many books at all,” children who “have no books whatsoever, not even a newspaper at home, not even a comic” and that there are children who “never ever get read to.” Moreover, some teachers interviewed discussed making efforts to ensure that their pupils have access to books. For example, variously discussing how they look to “foster a love of books” or to “pass on my love of books” to pupils and of taking “time out of my day” to “read them a novel,” taking “time to read a story from start to finish” to keep pupils “engaged with words, with print, with books.” Some teachers also personally supply books for pupils for home use and for class libraries. However, research findings also indicated that while some teachers can and do make efforts to ensure that their pupils have access to books, other teachers do not. Therefore, these research findings suggest that placing qualified librarians and well-equipped libraries within every primary school could also be worthwhile, to ensure that all children are able to access appropriate books and that access is not dependent on parents and teachers being willing and able to facilitate.

Research findings also suggest that measures could also be taken to make libraries more accessible to children aged between six and eight. That is, findings from this research study

suggest that some children aged between six and eight do not use libraries to obtain information, in fact some children aged between six and eight may not be aware of public libraries as an information source, and that this might be because their parents do not facilitate their public library access. Consider that, one parent interviewed said that they did not think that their child “would know if he wants to find something, he would get it from the library and that’s because I have not done that. You know kids tend to do what their parents do so probably if I had taken him to the library, he might want to do that, but we have not.” Another parent interviewed also said that their child does not use libraries to obtain information and that this is “probably our fault because we don’t really use the library that much,” and an additional parent thought that their child does not use libraries to obtain information and that this was their parents’ “fault” because they had “not really taken him to the library very often.” Teachers also outlined that children aged between six and eight can be dependent on their parents to facilitate their public library access. For example, one teacher said that children aged between six and eight, “cannae go to the public library on their own” and “it’s down to parental encouragement and support.” Moreover, another teacher said that their pupils do not use libraries to obtain information and that this might be due to parental influence. Therefore, research findings suggest that children aged between six and eight can be dependent on their parents to facilitate public library access but not all parents facilitate access. Thus, making libraries accessible to children aged between six and eight via their primary schools could be a worthwhile endeavour. It should also be noted that one parent interviewed suggested that their child having access to school and public libraries via school was the way their child’s access to and use of information could be improved. Hence, this research finding also suggests that measures could be taken to make libraries more accessible to children aged between six and eight.

Another implication of research findings, pertaining to libraries, is that findings from this research study also suggest that increasing public library investment could also be of value in tackling child information poverty. That is, in this research study, one teacher interviewed said that increasing funding could improve their pupils’ access to and use of information and discussed libraries specifically, stating:

I would love to visit the library more, again, that comes down to their money because they don’t have the people freed up to see school groups the way they did.

A few years ago, we would take them for three or four visits, that's stopped, money [...] last time I asked, 'we really don't have the facilities and the people power to do that right now.'

This research finding suggests that investing in public libraries could be of value, as this teacher thought that enabling children aged between six and eight to visit public libraries could improve their access to and use of information, however, a lack of library resources prevented this from occurring.

8.6.4: Clarify guidance around parental rights regarding child information access

This research study identified that there is a lack of clarity regarding parents' rights to restrict their children's access to information and information sources, and regarding at what age children should have autonomy to decide for themselves. Thus, an implication of research findings for policy and practice is that there is a need to resolve the complexities around this issue and ensure that clearer guidance is made available and widely cascaded.

8.6.5: Effective interventions

Another implication of research findings for policy and practice is that research findings suggest that overcoming child information poverty will involve tailored and targeted interventions. That is, findings from this research study indicate that not every child aged between six and eight experiences information poverty and that those children who do experience information poverty face different barriers accessing and sharing information. Research findings also indicate that there may be a link between a child's ethnic group and whether a child lives in an impoverished information world. Thus, research findings suggest that intervening to tackle child information poverty may involve determining whether a child is experiencing information poverty and if so what factors are contributory and therefore, what are appropriate interventions to tackle information poverty for that child. That is, what are the contributory factors to information poverty for that child and therefore, what interventions would be most appropriate. Consideration would also be needed to determine when interventions should occur to ensure maximum beneficial effect.

The researcher also considers significant the finding from this research study that some children experience information poverty because their parents lack skills. For example,

some parents lack the information literacy skills to assist their children to obtain information to complete their homework and some children aged between six and eight have better literacy skills than their parents and have to help their parents obtain information. This research finding also has implications regarding effective interventions, as this research finding suggests that it could also be necessary to direct interventions at parents in order to tackle child information poverty.

This research study also evidenced that children, adolescents and adults can experience information poverty, and that some of the same factors can contribute. For example, this research study established that lacking literacy skills, including information literacy skills, can contribute to child, adolescent and adult information poverty. Therefore, it would be worth directing further attention towards when and how the literacy skills to obtain information are currently taught and how effective existing teaching is. It might be that children's literacy skills could be improved if there was an increased financial investment in literacy education in schools, that is, if budgets for improving children's literacy skills are increased. Changing school curriculums to focus more intensely on developing children's literacy skills or directing intervention efforts towards the improvement of literacy skills might also be worthwhile. It could also be that if interventions to tackle low levels of literacy skills in childhood take place, this might mean that information poverty due to low levels of literacy skills does not endure. That is, if individuals are targeted as children they might not experience information poverty due to low levels of literacy skills in adolescence and adulthood.

8.7: Final summary

This research study sought to better understand information poverty and explored the early manifestations of information poverty in children. This study investigated two research questions. 1: What is information poverty and why does it occur? 2: Do children experience information poverty and if so, why?

After reviewing relevant literature, the researcher defined information poverty to be when individuals or demographic groups are unwilling or unable to access or share information. Factors found to be contributory to adolescent and adult information poverty were a lack of access to information, attitudes, behaviours and cultural context.

During the empirical component of this research study the researcher undertook fieldwork with 156 children, aged between six and 8, and interviewed 17 parents and 17 teachers. The researcher obtained clear evidence that children aged between six and eight can live in impoverished information worlds. Children aged between six and eight can have unmet information needs, can require adult support to obtain information and can keep information secret, concealing their information needs and censoring the information that they share. The researcher evidenced that children aged between six and eight can experience information poverty because: they lack the skills to obtain and share information, specifically information literacy, reading, spelling and communication skills; they lack the motivation and perseverance to obtain information; they lack access to information sources, namely to adults, children, young people, computers/the internet and books; their parents restrict their information access; their parents and teachers encourage them to keep information secret, to conceal their information needs or to censor the information that they share. Research findings did indicate however, that not all children aged between six and eight experience information poverty or face the same barriers obtaining information.

Empirical research findings support Childers and Post's (1975) theories regarding barriers to information needs, searches, acceptance and use, and Chatman's (1996) information poverty theories.

Findings from the empirical component of this research study further informed the researcher's understanding pertaining to Research question one: What is information poverty and why does it occur? That is, via empirical component of this research study, the researcher established that children (as well as adolescents and adults) can experience information poverty, what factors that can contribute to child information poverty and that some of the same factors can contribute to the information poverty of children, adolescents and adults.

This is the first research study to evidence that children aged between six and eight can experience information poverty and the first study to identify what factors can contribute to child information poverty. This is also the first empirical study to determine that children can experience information poverty for some of the same reasons that adolescents and

adults do. This research study advances understandings of information poverty and provides new knowledge pertaining to the information poverty of children, who are an understudied group.

The researcher recommends that additional research is undertaken to further develop understandings of child information poverty. Based on the findings of this research study, the researcher recommends that future research studies (with participants from similar and different demographic groups) explore why some but not all children aged between six and eight experience information poverty, why children face different barriers accessing and sharing information, what interventions should occur to tackle child information poverty effectively and when interventions should take place.

Research findings have a number of implications for policy and practice. The researcher determined that there is a need to raise awareness of child information poverty and its contributory factors, a need to raise awareness of how parents and teachers can impact and a need to raise awareness of the consequences of child information poverty. The data from this research study also indicated that there would be value in making children's access to information and information sources more equitable. Findings from this research study have implications for library practice, research findings suggesting that librarians, other library staff and library resources could contribute to tackling child information poverty. The researcher also highlighted that there is a need to resolve whether parents have the right to restrict their children's access to information and information sources and, if so, at what age should children have autonomy. Moreover, clearer guidance should be made available and cascaded widely. Findings from this research study also indicated that interventions to tackle child information poverty are needed and may need to be tailored and targeted but not necessarily always targeted at children exclusively. Furthermore, it may be that if contributory factors to child information poverty are tackled in childhood these factors will not endure and result in information poverty occurring in adolescence or adulthood.

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Ethics application has been approved

Hello,

Your ethics application "The manifestation of child information poverty" (ID: 422) has been approved.

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