An Explorative Study of How Children Perceive their Play Experience of Digital Games

ESTHER ASLAN

A research study submitted in partial fulfilment of the requirements of the University of East London for the Professional Doctorate in Educational and Child Psychology

APRIL 2020

Student Declaration

This work has not previously been accepted for any degree and it is not currently being submitted for any other degrees. This research is being submitted in partial fulfilment of the requirement of the University of East London for the Degree of Applied Educational and Child Psychology.

The thesis is the result of my own work and investigation, except where otherwise stated. Other sources are acknowledged by explicit references in the text. A full reference list is included in the thesis.

I hereby give permission for my thesis, if accepted, to be available for reading and for inter-library loans, as well as for the title and summary to be made available to outside organisations.

Esther Aslan

April 2020

Acknowledgements

I would like to give thanks to all the children who gave their time to be part of this research.

I would also like to thank my supervisor, Dr Helena Bunn, whose advice, guidance and encouragement was always a guiding light for me.

Finally, a huge thank you to my son, Ammar. You were the inspiration. Never stop playing.

Abstract

Digital gaming has become a staple in the play repertoire of most children. Consequently, so has research into its potential impact on childhood development. Within this field of research, one branch has specialized in the exploration of the possible educational potential of digital gaming.

This study aims at an investigation of the experiences and meaning-making of children of a middle age with playing in general and digital game playing from a sociocultural and humanistic-existential perspective. Through this perspective, the study attempts an exploration of how children can learn from digital games beyond mere instrumental learning, engaging instead in deeper and less formal learning processes which allow them to mature, to gain new insights and to form new identities.

The study takes a mixed method approach. Thirty-two children (mean age 10.5) were asked to fill out questionnaires on their digital gaming habits, and eight children (mean age 10.1) were interviewed in friendship pairs on their play and digital game play experiences.

Reflective thematic analysis was used to analyse the interviews. Findings suggest that children experience digital gaming as a digital extension of offline play with many common play characteristics. However, they also point out intricate differences. Children perceive their opportunities for growth and agency in digital games as limited, while restructured social rules result in some children experiencing greater self-efficacy and self-concepts. This study is arguably the first to explore children's emotions and feelings about offline play in relation to digital game play.

Based on the findings, suggestions for the use of digital gaming in a therapeutic context are offered. A comprehensive literature review and a critique of this study are included and further implications are considered.

Table of Contents

Thematic Analysis

List of Tables

List of Figures

1: Introduction

1.1 Chapter Overview

The introduction starts with an assessment of the use of digital games for educational purposes, as well as the state of research on traditional and digital forms of play during certain periods of childhood. I then affirm the aim of the current research, offer a description of digital games and a definition of key terms. Finally, I state the research questions before closing the chapter.

Before entering the introduction I would like to explain why I have chosen to use the term digital games over the commonly used terms computer or video games. In 2019 the term digital gaming was introduced in the thesaurus of psychological index terms contained in the literature databases of the American Psychological Association's (APA). APA defines the term as 'The act of practice of playing games using digital technology' and I believe it captures the growing variety of different digital playing formats more aptly.

1.2 Digital Games: Beyond Amusement

In the public discourse, digital games are generally viewed with suspicion and caution due to their understood association with negative effects, such as an increase in aggressiveness, the promotion of social isolation, or addictive behaviors (Lissak, 2018; Kardefelt-Winther, 2017). Such perceptions may further be nurtured in the media following difficult incidents such as mass shootings, when politicians and legislators are quick to suggest that the perpetrator's glorification of violence (Trump, as cited in Tassi, 2019) has been encouraged by their excessive use of violent digital games.

The nature of this public debate, however, is not in keeping with the latest developments and findings from the scientific field, which have provided an increasingly differentiated understanding. Since the late 1990s, there has been a steady increase in

empirical studies and theoretical approaches on digital games, their possible effects, as well as their role as new cultural and social phenomena (e.g. Greenfield & Cocking, 1996; Vorderer & Bryant, 2006; Blumberg et al., 2019). Therefore, an establishment of research can be noted, which takes an interdisciplinary approach and goes beyond a narrow perspective on digital games (e.g. Ferdig, 2009). Against this backdrop, a renewed awareness of the potential of simulations and games is emerging among researchers of learning and cognition *(*Arnseth, 2006). This awareness is particularly focused on discussions and projects in relation to the advent of 'serious gaming', a term which describes the use of digital games within the context of education, training, health, and many other areas.

Abt (1970) was the first to elaborate on the use of games for purposes other than leisure. In his book *Serious Games*, he proposed that *'*We are concerned with *serious games* in the sense that these games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement*'* (Abt, 1970, p.9). Abt states that the educational purpose of a serious game is not limited to the way the game is designed, but can vary according to the context of use. For example, a game of chess can be played to encourage strategic thinking in the context of military training.

Sawyer (2003) first made the link between serious gaming and digital games in his 2003 paper, where he describes how digital games can be used for policy-making. While Abt's definition of serious games is also mostly valid when applied to digital games, a more specific definition is offered by Michael Zyda (2005), who comments that *'*Serious games have more than just story, art, and software. They involve pedagogy: activities that educate or instruct, thereby imparting knowledge or skill. This addition makes games serious*'* (Zyda, 2005, p.26).

While a 2013 survey of a representative sample of American year-eight teachers reported that 74% of them used digital games for classroom instructions (Takeuchi & Vaala, 2014), one innovative school in New York City, Quest2Learn, has based their entire curriculum around digital game play and design. The experimentation with *serious game* play also extends beyond schools. For example, the health (Wattanasoontorn, Hernandez , Sbert, 2014) and military sectors have also developed and encouraged digital game play to educate and promote desirable skills and behaviours (Samčović, 2018).

1.2.3 Digital Games: Usage

In 2019, the Entertainment Retailers Association (ERA) released figures according to which the digital games sector accounted for more than half of the entertainment market in the UK. The Association stated that the value of the gaming market rose to £3.864 billion, more than twice the amount of its value in 2007, which for the first time ever showed gaming with a larger market than video and music combined (Parsons, 2019).

Ofcom, the UK's communications regulator, provide figures in their report *Children and parents: Media use and attitudes* (2020) on children's media use and literacy. According to the report, online gaming is increasingly popular among 5–15-year-old children and young people, with 79% of 8–11-year-old children playing games for an average of 9.5 hours a week.

The report further details that, among all the media activities they explored, engagement in gaming showed the biggest gender disparities: boys of all ages spent more hours per week playing games than girls, with the difference by gender increasing with the age of the child.

Ofcom also report that gaming could have a strong social element with two in five online gamers aged 8–11s (38%) using online chat features within the game to talk to others.

Children also reported that online gaming could strengthen friendships. Boys are more than twice as likely to chat through the game to people they already know outside the game than they are to chat to strangers. Overall, it can be noted that digital games now constitute mass market commercial products and that the playing of digital games is rooted in long-established patterns and practices of media consumption. They represent a stronghold in the repertoire of recreational activities for children and young people (Kyas, 2007).

1.3 Digital Games: Impact of playing

Despite the pervasive use of digital games, very little research has been carried out on the beneficial or harmful aspects of digital games for the cognition or learning of school-age children (Blumberg et al., 2019). There is, however, a substantial body of research outlining the impact of digital games on pre-schoolers and adolescents. Research on pre-schoolers focuses on the importance of the quality of content and the narrative features of digital games with respect to the potential positive effects of play on learning outcomes (Clark, Tanner-Smith, Killingsworth, 2016; Fish, Russoniello, O`Brien, 2014). It is not only the quality of the games which plays a role, but also the quality of adult guidance. Adults are decisive in how they mediate a child's involvement with the game and how they foster its relationship with digital game play (Wang, Taylor, & Sun, 2018).

Research on adolescents' usage of digital games tends to focus on the social ramifications of their interactions with the games and particularly the negative effects of violent digital games, such as reduced prosocial behaviour and aggressive cognition, behaviours and affect (e.g. Calvert et al., 2017; Weber, Ritterfeld, Kostygina, 2006). To date, few studies have explored how adolescents can benefit from the promotion and sustenance of friendships through digital game play (e.g. Anderson & Jiang, 2018; Pempek, Yermolayeva, & Calvert, 2008).

There is also a growing body of literature on young adults outlining how playing certain types of cognitively demanding digital games can encourage broad enhancements in perceptual, motor, and cognitive skills (Bediou et al., 2018; Powers et al., 2013).

In their Social Policy Report, Blumberg et al. (2019) document the need to investigate digital game play as a means for cognitive development, particularly during middle childhood, in order to inform policy decisions at the local, state, and national level. They highlight this developmental period because children aged 6–12 years comprise a large number of the pre-adult population playing and using these media forms (e.g. Ofcom, 2020), yet the impact of their digital game consumption remains little researched in comparison with infants, toddlers, pre-schoolers, and adolescents (e.g. Anderson & Subrahmanyam, 2017; Hirsh-Pasek et al., 2015). To date, the few available studies on digital gaming have explored middle childhood largely with regard to their acquisition of content knowledge and general skills (Allsop, 2016; Crowley, Pierroux & Knutson, 2014).

The American Academy of Paediatrics Council on Communications and Media (2016) also highlighted the need for research of digital media use among school-age children in order to better delineate its positive and negative effects in the long term (Chassiakos et al., 2016).

The period of middle childhood is marked by many cognitive advancements such as increasingly sophisticated development of metamemory (Schneider & Ornstein, 2015), types of strategies used to recall memory content (Bjorklund, Dukes, & Brown, 2009), selective attention to the recalled content (Miller & Seier, 1994), spatial and mathematical reasoning (Gilligan, Flouri, & Farran, 2017), reading comprehension and fluency (Hasbrouck & Tindal, 2006), argumentation (Papathomas & Kuhn, 2017), theory of mind (Weimer et al., 2017) as well as related executive functions (Best & Miller, 2010), such as working memory (Lecc et al., 2017) and cognitive flexibility (Dick, 2014).

A survey of the literature concerning digital game use reveals a distinct lack of research addressing the impact of digital games on these cognitive processes and abilities during middle childhood. (Blumberg et al., 2013).

1.3.1 Play Value in Playing Digital Games

Children often refer to their engagement with digital games as 'play'. Considering the increasing amount of time and opportunities that children have with digital games, both of which may previously have been taken up by traditional forms of play, the question appears warranted whether digital games offer the same developmental benefits as traditional forms of play.

A number of scholars (e.g. Scott, 2019; Palaiologou, 2016; Nikolopoulou & Gialamas; 2015 Veranikina & Herrington, 2006) have explored and reviewed the current understanding of the potential of digital game play to enhance pre-school children's cognitive development, as compared to the developmental value of traditional make-believe play in which children spontaneously engage during their early childhood years. They are drawing on theories of play and seek to understand how they may be applied to digital forms of play.

Theories of play describe ways in which play may advance cognitive, social, and emotional development (e.g. Verenikina et al., 2003). Children freely engaging in play acquire the foundations of self-reflection and abstract thinking, develop complex communication and metacommunication skills, and learn to manage their emotions and to explore the roles and rules of functioning in adult society (Verenikina & Herrington, 2006).

Interestingly, a recent Economic and Social Research Council (ESRC) funded review of play in middle childhood revealed the fact that our understanding of the function and nature of play in this developmental period is restricted (Roberts, 2015). Studies of children's play in middle childhood have primarily examined break times in school (e.g. Pellegrini and Bohn-Gettler, 2013), social and antisocial behaviour (e.g. Vlachou et al., 2013), or how

children utilise outdoor spaces (e.g. Holt et al., 2008). This, however, does not provide a full account of play in middle childhood comparable to what we know about play in the early years.

Many studies about play in middle childhood draw on adults' recollections of childhood experiences (Henniger, 1994; Sandberg, 2001; Sebba, 1991) or on parents' reports of their children's play habits. Such studies consistently reveal the perception of parents that their own children spend considerably less play time outdoors than they did as children, engaging in electronic game play instead (Clements, 2004; Valentine & McKendrick, 1997).

It is also noteworthy that there appear to be inconsistencies between adults' recollections of their childhood play, parental reports of their children's play, and children's own descriptions of their play, with only a handful of studies examining the latter (Howard, 2017). Despite the lack of studies that have focused on how children describe their play experience, some notable claims have been made about how changes to children's play patterns in the western world have impacted children's health and development. Changes in play patterns are used to explain an increase in mental health concerns in adolescence (Gray, 2011); reduced active play has been linked to an increase in childhood obesity (Karnik & Kanekar, 2015) and antisocial behaviour (Jarvis, Newman & Swiniarski, 2014). Some studies claim that an increase in parental concerns about public safety and strangers may have led to changes in play patterns (e.g. Carver, Timperio & Crawford, 2008); additionally, increasing emphasis on academic achievement leaves less room for free play (Jarvis, Newman & Swinirski, 2014).

Howard et al. (2017) are some of the very few researchers who have asked children age 7–11 directly to describe their play experience. They were particularly interested in the questions of what, where, and with whom they played and how play made them feel. The authors claim that their study was the first paper to explore the latter topic in any stage of childhood.

The authors were not looking into specific forms of play. But from a wide repertoire of play, children attributed especially joyful play experiences to digital games. They described a great deal of emotional attachment to play, citing happy and sometimes even elated feelings, and reported a host of negative emotions when not able to play.

As is the case with early years' research, an insight into patterns of play in middle childhood and the emotions children associate with their play experiences would allow a better assessment of its importance and contribution to development. Waldman-Levi & Bundy (2016) point out that understanding children's very own perspective on their play is important and can offer guidance in policy and practice to assist health, care, and development.

1. 4 Aim of the Research

The sections above identified a dearth of studies which explore traditional forms of play and digital game play in middle childhood, a well-known period of many significant developmental milestones. The present study therefore aimed to add further insights into the play and digital game play experience of children in middle childhood, and to continue the exploration of educational value in digital games. By exploring children's accounts of traditional game play and digital game play, the study also attempted to find out whether children derive similar experiences and meaning from both forms of play. However, I wanted to explore its value from a somewhat different perspective. I believe that digital games often possess educational potential, a fact which is mainly overlooked in the current debate on *serious gaming*. As research in this area is still in its infancy, the current study did not attempt to limit itself to the exploration of merely instrumental learning, but to better understand informal learning, development, and growth processes.

I have adopted two main theoretical foundations for the exploration of children's game play: the sociocultural theory (e.g., Vygotsky, 1978; von Humboldt, 1993) and the

humanistic-existential theory of learning (e.g., Combs, Richards, & Richards, 1976). They are briefly explored below.

In his sociocultural theory, Vygotsky (1978) proposes that children take on an active and constructive role in the learning process and their change in relation to the sociocultural world. Children gain and grow into cultural worlds through social participation and the experience of difference, resistance, and otherness. This experience opens up new ways of seeing and interpreting the world. Similarly, Wilhelm von Humboldt's concept of *Bildung* is based on an active child (Von Humboldt, 1993). In his paper, von Humboldt proposes that the child forms their individual intellect and mind in a permanent process of encountering different cultural worlds.

This is also echoed by works from Mead (1938), who proposes that children develop a self-image, or identity, through interaction with others. He went further to elaborate that it is through game and play that children start to understand themselves and their social world. While Mead did not refer to digital games in 1927, he referred to the value of engaging in 'role play', which supports the building of the self. When moving up to the next stage of play, which Mead termed 'game play', children gather knowledge of roles that go beyond the role of distinct and separate others, finding their place in relation to everyone else involved in the 'game' or in their social world. Mead captured these concepts in his theory on Symbolic Interactionism.

Looking at digital games from a sociocultural framework perspective, one can observe that games have created virtual social worlds with the capability to simulate and advance interactive processes, creating opportunities for new forms of communication, interactions, cultures, and role plays. Furthermore, digital games have opened up new possibilities and simulative capabilities that offer quasi-real experiences to the players.

As part of the present study, I was interested in how these virtual social worlds can

offer environments for self-education, as well as potential for supporting growth processes and identity formation.

The humanistic-existential theory of learning emphasises the creation of meaning in children. While traditional psychology treats learning as a change in behaviour, humanistic psychology defines learning from a perceptual orientation as the discovery of meaning (Combs, Richards, & Richards, 1976). Roger states that 'by significant learning I mean learning which is more than an accumulation of facts. It is learning which makes a difference in the individual's behavior, in the course of action he chooses in the future, in his attitudes, and in his personality. It is a pervasive learning which is not just an accretion of knowledge, but which interpenetrates with every portion of his existence' (Rogers, 1961, p. 280).

Put shortly, humanistic learning is all about a form of experience that leads towards a decentralisation or transformation of the child's former world view. It involves a kind of deep, orientational knowledge that cannot simply be acquired by learning in the sense of adding new information to a repertoire of existing knowledge. It transcends the horizons of the common everyday world and is bound to change the way a child makes sense of their world as well as of themselves. Far from being a plain learning process, learning from a humanistic point of view points at the reframing of former world views, thus leading towards a more reflexive, flexible, and complex relation to the world and others.

I aimed to speak to children and to explore how their engagement with digital games offered a potential environment for informal learning processes such as growth, identity development, and new meanings.

1.4.1 Digital Games: Types and Characteristics

For the purpose of the current study, it was considered irrelevant to explore how children choose to access digital games however, a brief overview of the main access forms

will help to gain an insight into the choices that are currently available to children. Kyas (2007) identifies four types of access forms to digital games:

Arcade Games

These games appear on slot machines that offer primarily skill-oriented games in exchange for coins. The machines are usually available in arcades, but they have increasingly been pushed into a niche existence since home devices are now offering a far more superior experience in terms of graphic and sound.

Computer Games

These games are played on conventional computer systems, which are made up of a computer and monitor and are controlled with a keyboard and/or mouse. The actual game software can be downloaded or installed by inserting a CD-Rom/DVD.

Virtual reality games are now also offered on computers and can be accessed by wearing the corresponding headsets.

Video Games

These games are played on consoles, which are computer-like devices designed entirely for the purpose of digital game play. The devices are connected to the home television, and games can either be downloaded or accessed by inserting CDs/DVDs. The on-screen visual action is controlled by the use of gamepads, joysticks, steering wheels, headsets, and even light guns. Consoles are more user-friendly than computers, and current contenders are the PlayStation 4 by Sony, Nintendo's Wii, and the Xbox 360 by Microsoft.

Games Played on Portable Consoles

These systems have their console, screen, and gamepad integrated into one unit. They are even easier to control than stationary consoles and can be used anywhere due their battery

power. The games are delivered through special MiniDiscs or downloaded when connected to the internet. The current market leaders in portable consoles are Microsoft, Sony, and Nintendo. The Nintendo switch device is particularly popular as it functions both as a portable handheld and home console.

Digital games are also increasingly played on portable tablets and mobile phones. Ofcom (2020) reported that 49% of 8–11-year-old children own a tablet and 37% own a smartphone.

According to Kyas (2007), all digital games have three things in common: graphic, sound and interactivity. Music as well as speech and sound effects support the on-screen action. Often, the sound adapts dynamically to situations in the game, allowing for an immersive gaming experience.

It is essential for the user to control what is happening on the screen, as nothing much would happen without their manipulation. This is the third component all games have in common: interactivity. The opportunities and challenges for the player can vary, but the fundamental gaming principle is the overcoming of obstacles (Ladas, 2002). Many game challenges only come up as the game progresses, and Fromme (1997) postulates that the child's exploration of the game world resembles a form of self-organised learning via a trial-and-error approach. This, Fromme suggests, activates children's and young people's innate inquisitive behaviour. While some games only offer a limited pre-programmed path of action, the latest generation of games allows the manipulation of objects and landscapes in real time, thus allowing a greater scope of user phantasy.

1.5 Definition of Key Terms

Digital Games

In this study, the term *digital games* is used as a collective term to refer to the various types of electronically-controlled digital or software programmes which are played with assistance of hardware devices such as computers, games consoles, mobile devices, and other game-like technology gadgets. The games can be played online or offline, as well as alone or with other players who may be physically present or reached online.

The term *digital game*s may sound somewhat more generic compared to *'computer'* or *'video games'*, but it allows the scope of the study to encompass the various different formats and sources of games played on different electronic devices.

Middle Childhood

Middle childhood is usually defined as encompassing ages six to 12. The period begins when children enter school in Western countries and lasts until the onset of puberty (Collins, 1984). In Piaget's view of the significant psychological accomplishments of middle childhood in the realm of intellectual competence and in diverse cultures, the age between five and seven is regarded as the beginning of the 'age of reason' (Rogoff et al., 1975).

Middle childhood is also a time when children develop foundational skills for building healthy social relationships and learn roles that will prepare them for adolescence and adulthood (Collins, 1984). When children enter school, they also enter the society or culture they are a part of, and continue to establish a language, set of rules, behaviours, and roles for every single person. A society of children provides children with opportunities for learning and practicing social skills such as negotiation, communication, and problem-solving.

The formation of a sense of self or self-concept continues to take shape in middle childhood. In societies where children are exposed to various forms of powerful media, children may evaluate their evolving sense of self based on images or information on

television, commercial, and social media (Huesmann & Taylor, 2006).

Play

Play is distinguished from other forms of human activity in a number of ways. It is defined as a 'spontaneous, self-initiated and self-regulated activity of children, which is relatively risk free and not necessarily goal-oriented. Play is intrinsically motivated: normally children have an internal desire and interest to engage in play, they are actively involved in creating their play and are in control of it. An essential characteristic of children's play is the dimension of pretend – that is, an action and interaction in an imaginary, "as if" situation,which usually contains some roles and rules and the symbolic use of objects' (Verenikina & Herrington, 2006, p.23).

1.6 Digital Games: Genres

The current study was interested in finding out the experiences that children have when playing digital games. This said, gaming experiences might be different according to the kind of game that is played. Previous studies have particularly focused on the level of violence in games and how they affect experiences and transfer of skills (e.g. DeCamp & Ferguson, 2017; Zvyagintsev et al., 2016). As such, it is worthwhile noting the available genres of games.

The current market is flooded with hundreds of new digital games every year, and their classification can be difficult. Nonetheless, Kyas (2007) proposed that the four main genres are action, strategy, adventure, and sports.

Action Games

These games include first-, multiplayer-, and tactical shooting challenges, they still represent the most popular genre (Williams, 2019). The main challenge is to defeat an

24

enemy in various challenging set-ups, and a quick reaction is crucial, rather than complex cognitive processes. When playing multiplayer shooting games, users can connect with other players online and play with or against each other. Communication usually takes place through the microphone. *Fortnite* is the most popular game in this genre to date, with 78.3 million players worldwide in August 2018 alone (Sheppard, 2019).

Schindler & Wiemken (1997) explain that *human* opponent players are not only able to choose from various strategies and tactics but can also learn and adapt to the actions of the team players.Other games in this genre include action-adventure, science fiction, military simulations and martial arts games. The common denominator of all the games within this genre is the elimination of opponents by different means, more or less all of them violent.

Strategy Games

Games in this genre require the user to apply some sort of strategy, either to conquer an opponent's territory, to manage complex economical systems of an industry or city, or to build a city from the ground up with all its structures and elements. Among this genre are also puzzle games, which require the user to apply a combination of logical thinking and skill.

While there may be some violent confrontations in the conquering games, the overall level of violence in this genre is low.

Adventure Games

In these games, a user controls their screen alter ego through a story which only unfolds through the progression of the protagonist. The primary task consists of the solving of challenges and mysteries. Unlike action games, the protagonist cannot die, but the progression of the story merely stalls if challenges are not completed successfully.

Sports Games

These games offer the simulation of movements and competitive scenarios of different sporting activities such as football, tennis, basketball, or motor sports. The main focus is on the simulation of a competition with the highest attainable level of realism.

One of the games in this genre is *Funsports*. Here, the emphasis is on phantastical action and not so much on realistic simulation. Users can manipulate cars and other objects in a way which would not be possible in real life.

Open World or Sandbox Games

This relatively new gaming genre offers players a virtual world in which they can explore and approach objects and tasks freely. The minimal character limitation is in contrast to a linear and structured game play with specific aims to work towards. Famous games in this genre are Roblox and Minecraft.

1.7 Research Questions

This study has an explorative approach, with the following research questions as guidelines:

How do children experience their digital games play?

What is their experience of non-digital play?

What meaning do children attach to their play of digital games?

1.8 Chapter Summary

The introduction started with a consideration of using digital games for educational purposes and what is known of traditional and digital forms of playing during certain periods of childhood.

The researcher then explored the aim of the research, a description of digital games and definition of key terms. The chapter finished by stating the research

questions. The next chapter will give a detailed outline of existing literature on children's experiences of traditional and digital games play, as well as what is known about their informal learning and maturing experiences from that engagement.

2: Literature Search

2.1 Introduction to the Literature Search

I have stated in the introductory chapter that little is known about how children of middle childhood experience their digital games play and play in general. Given these findings, this thesis aims to add to the literature by exploring the voice of the child and what it says about their experience and meaning-making of digital and non-digital play. Hence, the literature search proposed in this chapter pursues two questions:

How do children of middle childhood experience their play in general?

How do children of middle childhood experience and make sense of their play of digital games?

I have used a systematic literature search approach (Grant & Booth, 2009) to identify and critically analyse literature in this area.

The chapter begins by describing how literature was identified and selected with search terms; inclusion and exclusion criteria are made explicit. Following this, the results are presented. The first section of the results addresses literature found on how children experience their play in general, and the second section addresses literature on how children experience their digital games play.

The chapter then moves on to summarise findings and closes with remarks on the implications of the findings for current research.

2.2 Details of the Systemic Literature Search

The literature in this current search was identified using a robust systemic approach, following guidelines from the PRISMA statement (Liberti et al., 2009). Specifically, the studies were identified through searches using four electronic databases: PsycINFO, Academic Search Complete, Child Development & Adolescent (through EBSCO host); SCOPUS (Elsevier), which constitutes the largest abstract and citation database of peer-reviewed literature. These searches were carried out during the period from 25th August 2019 to 31st January 2020. Furthermore, literature was identified through citation searching and by visually scanning reference lists of the articles included in the search.

Search terms were created and alternative terms were generated using the thesaurus functions of the databases. Search terms were inserted in the 'Find' field on the basic search screen of the databases. Limiter options under the 'Limit To' on the left of the results page were applied to exclude articles according to the inclusion/exclusion criteria (Appendix A).The following combinations of search terms were used:

Word combination for the **first** literature search (general play experience):

Childhood Play Behaviour OR Childhood Development OR Children

AND

Play

Word combination for the **second** literature search (digital game play experience):

Computer Games OR Video Games OR Digital Games

AND

Play

The combination of search terms was kept deliberately wide as an initial scoping search has shown that literature addressing the voice of the child in play may feature under various disciplines and research purposes.

Literature was selected using a staged process including an initial screening of titles and abstracts followed by a thorough screening of full text articles.

The first literature search revealed a total number of six papers from all four databases, with a further two being identified through citation searching and scanning reference lists of included studies. The second literature search revealed a total number of four papers; a further paper was identified through citation searching and scanning reference lists of included studies.

A visual representation of the search process for both systematic searches can be viewed in Appendices B and C.

Literature was screened using inclusion and exclusion criteria, which were generated with the aims of the current search in mind (see Appendix A).

Only texts published after 2009 were considered. This specific year was chosen according to the observation of Granic, Lobel & Engels (2014) that from this year onward, a small but significant body of research documenting some of the benefits of digital gaming has

begun to emerge. It had been anticipated that literature of the past ten years with its more diverse interest in digital games would feature the voice of the child more frequently.

In an effort to consider quality articles, literature was required to have been published in peer- reviewed journals. However, the search also considered dissertations and book chapters as an important supplement to the small evidence base.

For literature titles to be considered in this search, they had to feature the direct voices of children in middle childhood on their experiences of play, whether real or digital, either on play in general or on specific games focused on in an article. Hence, this requirement was used to set the inclusion/exclusion criteria. The voice may have been captured in questionnaires, focus groups or interviews, i.e., in an empirical or quantitative research method format.

Adults' assumptions of children's experiences based on observations etc. were not considered.

Furthermore, the search excluded experiences of children with special needs and mental health conditions. Their needs and experiences can be very different and diverse and warrant dedicated research in that specific area.

2.2.1 Data Extraction

Key information from studies is summarised in a data extraction table (see Appendix D). Key data was extracted following the guidelines from the PRISMA statement (Liberati et al., 2009).

2.3 Results

This section critically analyses the key information of the eight texts included in the first search on how children experience their play (full details of the main characteristics of the included studies can be found in Appendix D).

2.3.1 Overview of the Texts Included

The search resulted in eight empirical studies, all of which adopted similar research designs. Three studies encouraged children to draw pictures of their play experience before giving them the opportunity to expand on their experiences during group discussions guided by semi-structured questions. Bernstein & Magalhaes (2009) encouraged children to take pictures of play activities before discussing their favourite play picture in a group setting. The remaining four studies all adopted focus groups in their exploration of how children experience play.

The studies were conducted across different countries: one in Greece, one in Tanzania, one in Norway, one in Ireland, two in Canada, and two in the UK. I was not concerned about their overall generalisability as as in line with the view of Crain (2011), I believe all children have the same innate impulse to play along with innate needs served by the play experience.

2.3.2 How do Children Experience their Play?

Across all the reviewed studies, children of middle childhood associate play with a host of positive experiences and show a great deal of emotional attachment to the activity. It is described as fun, 'epic, awesome, joyful, marvellous, and fantastic' (Howard et al., 2017), making them feel like 'screaming, singing' and 'comfortable' (Glenn et al., 2013), and is a crucial contributor to a child's feeling of well-being (Moore & Lynch, 2018).

Reading children's narratives, it becomes apparent that play during middle childhood fulfils some of the same developmental nee as it does during the early years. Children give examples where they have to practice their development of self- regulatory behaviour when upset (Glenn at al., 2013). The use of role play is described as escaping the demands of real life, and practicing different identities, where skills of empathy are also rehearsed.

The search revealed four themes in relation to what children of middle childhood describe of their play experience.

2.3.3 First Theme: Their Own Agent in Play

Children still seem to rely on and to refer to adults as giving impulses and setting frameworks within which they play, but this appears to be increasingly at odds with their growing desire for autonomy. They like to be their own agents in play activities, whether at home or during school break time (Prompona, Papoudi & Papadopoulou, 2019). For their play to be deemed a meaningful experience it has to offer a satisfactory and pleasant breathing place, where children can participate in self-chosen activities, shape the outcome of their play, and assume a level of responsibility. For example, while children may regard drawing as an activity of fun and play, its play value was more ambiguously rated when the art activity was directed or guided by an adult (Moore & Lynch, 2018). Some children talk of a sense of defiance when adults want to take away some of their self-chosen play activities: 'I am doing it anyway' (Howard et al., 2017).

Interestingly, when Bernstein & Magalhaes (2009) explored pictures of play activities taken by children in Zanzibar, they could not find any adults, neither in their pictures nor in their narratives. When prompted, they responded quite matter-of-factly that adults were not involved in play. Play was solely their occupation. The same children also appeared far more creative and resourceful in their play activities. It is not apparent whether this is related to being left entirely to their own play or the fact that they are not over-provided with toys and play facilities like children in developing countries. The latter may stifle resourcefulness and creativity.

Children's narratives consistently pointed out that being 'in control' of their play led to happy emotions.

2.3.4 Second Theme: Social Play

In line with Vygotsky's (1977, 1978) sociocultural approach to play, children make meaning in play through the interaction with others. The narrative of children of middle

childhood suggests that play with a peer group is increasingly important. When describing their play they talk about joint planning, thinking, and execution of joint thoughts, as well as learning from each other. But for this play to be regarded as a positive experience, it also has to give a sense of 'doing well' (Moore & Lynch, 2018), a conscious confrontation with play activities that can lead to a sense of achievement.

Children talk about competing with each other, and it becomes apparent that rules of social interaction and certain etiquette are more at the forefront in their play interactions. This sort of group play is described and broken down into associative and cooperative play by Rubin, Watson & Jambor (1978); it represents higher levels of interaction when children play together, coordinate and do similar things.

Some children talk about seeking anxiety-provoking play situations such as exploring unknown terrain and finding ways of negotiating this fear.

Children talk about difficult emotions during play when they lose agency, are assigned roles they do not wish to assume, or are harmed by peers.

2.3.5 Third Theme: Gender Differences

Gender differences in play are observed in several studies both in the UK and Tanzania. Children become increasingly gender-conscious, and their plans and actions are increasingly thought up with their own gender group in mind. Boys seek more adventurous play and utilise spaces further away from the home setting, while girls' narratives of play are more focused in and around the house, with the fostering of social networks being more important than thrill-seeking activities. Whether the fact that girls tend to be more guarded by adults in their play leads to the adoption of more sedentary play activities is not apparent from papers included in this search.

Bernstein & Magalhaes (2009) noted that girls gravitated towards play to do with home making, cooking, and caring roles and suggested that culture had a bearing on how play

is executed and experienced by children.

2.3.6 Fourth Theme: Children and Parents Have a Different Understanding of Play

Children often cite parents as having their own ideas about what constitutes meaningful play and will try to impose their ideas on children. This is often received with some frustration. Lehrer & Petrakos (2011) found that parents might perceive something as a play activity, such as swimming, playing football, or playing a musical instrument, while their own children did not regard these activities as play experiences.

This leads on to the fifth and final theme which was found across the reviewed studies.

2.3.7 Fifth Theme: Changing Landscapes of Play

The landscape pattern of children's play has changed. A combination of parental and institutional safety concerns has led children to choose less active and adventurous play activities. Children often cite parental concerns when they decide to cede some of their play choices.

The emergence of digital gaming has frequently led children to choose digital play over active and interactive play activities. Interestingly, children in the current studies have not described watching television as a play activity, while digital gaming often featured on top of the list of what play means to them. While the reviewed studies make concerned remarks of how digital games have become a stronghold in children's lives, they do not offer an insight into the play value of engagement in this play activity.

The increasingly sedentary nature of children's lives presents a new challenge to the health sector and educators. This, however, is not limited to children's physical health.

In the present studies, there is a relative lack of focus on the value of digital games engagement as play per se. If digital games are a stronghold in children's reported play

35

repertoire, research also needs to assess their developmental value from the same perspective that is taken when considering the importance of play in child development.

Interestingly, many children in the reviewed studies cite their parents' disapproval of digital game play as a legitimate or valuable play engagement. Children, as revealed above, react with frustration and discontent in response to adult imposition of their ideas of play. This gives children the impression of losing agency, along with negative feelings, and results in a sense of defiance. If digital gaming has become a staple daily activity choice for so many children, who at the same time have to negotiate parents who are constantly opposing this choice, what does it do to a child's experience of play and subsequent well-being?

This is a valuable question to be pursued in future research.

2.3.8 Conclusion

The first literature search has yielded and summarised studies focused on the voices of children in middle childhood on their experience and meaning-making of play. Their voice was elicited in similar ways across international and national studies and has revealed several themes.

Children appreciate their agency in play and rate the membership and negotiation of peer groups as increasingly important. They cite some gender differences in the way they go about their play. Children associate the ability to play with a host of intense positive feelings and the inability to play as not conducive to feelings of well-being. Many children cite play with digital games as part of their play repertoire, and it remains inconclusive as to whether this type of play can lead to similar feelings of well-being and well-doing that other, more traditional forms of play can offer.

With this in mind, the second literature search aims to give an overview of studies exclusively focused on children's statements about their play in digital games, and how they make sense and meaning of digital game play.

2.4 Second Literature Search

This section critically analyses the key information of five texts on the subject of children's experiences with digital games play (full details of the main characteristics of the included studies can be found in Appendix D).

2.4.1 Overview of the Texts Included

The second search resulted in five empirical studies, which, similarly to the first set of reviewed studies, all adopted qualitative research designs. The studies were conducted across different countries: two in the USA, one in Finland, one in the UK, with the last study only mentioning a European city (Hannaford, 2012).

Again, considering the question whether findings from different countries might be generalizable, I assume the position that the digital gaming landscape and the type of digital games being played by children in Western Europe and the US are very similar if not the same. Thus, experiences made by children in the USA may reasonably resonate with the experiences children make in Western Europe.

2.4.2 How Do Children Experience their Digital Games Play?

Bassiouni & Hackley (2016) reported findings from interviews with children, which Bassiouni (2013) had collected as part of her PhD research and presented in her thesis 'Children's experiences of video game consumption: development, socialisation and identity'.

They set forth the question of how digital games may be influencing the developing identity of UK children, acknowledging the fact that very few studies explored this aspect from a child's subjective experience. While the authors mention 'few studies', they do not make reference to a single study that has actually done so. They argue further that children are no longer mere consumers of digital games but actively involved in a game play where choices can be exercised. These choices can influence the social development and nascent

sense of self of pre-teen children whose identity is particularly malleable.

Bassiouni carried out semi-structured interviews with five focus groups totalling 22 children age six to 12 and three further in-depth interviews with three children. Data was analysed using discourse analysis; three resulting themes are reported.

Play with digital games offers an entry into a peer group along with a peer identity. Children socialise with others both during game play and outside of it, where the topic of game play is also pursued. A disparity between girls and boys was noted on how they experience and process digital games both online and offline. Both genders generally choose different games. Boys rated the ability to move up to games with a higher age ranking as particularly important, almost as a 'rite of passage'.

The second theme related to children with special needs such as ADHD. Some children talked about their inability to connect to children in real life, and how they enjoyed being able to have a cyber-friendship group, rating it as good for their well-being. They also commented on their ability to focus and attend to the game which they could not do with non-digital activities. While the authors did not set out to interview children with special needs, some children made disclosures during the interview that warranted the inclusion of a theme dedicated to this topic.

The final theme revealed how children have become consumers who make conscious decisions involving researching, budgeting, planning, and buying, in relation to their digital gaming lifestyle. Often children involved in digital games have a superior knowledge of subjects of digital advances to their parents, endowing them with a certain position of expertise within the family. This leads to personal confidence.

The authors conclude that play of digital games has the potential to enhance social skills as they offer opportunities to extend and deepen bonds within children's existing social circles. They continue with somewhat conflicting information by claiming that digital games provide opportunities to narrow the distance in certain forms of attitudes between children and

adults, due to the fact that digital gaming opens up a world of more mature play. However, they also claim that digital gaming has created a culture unique to children.

Children may enjoy the social elements of play, but the study fails to clarify whether engagement in the social cyberspace functions according to the same social rules and etiquettes as in the real world. One participant in the study mentioned that he failed to connect with peers outside the digital world but enjoyed great success within the digital world. This begs the question whether children assume different identities and make different meanings across digital and non-digital social spaces. Are these identities really separate from each other or is there some fluidity in their meaning-making across the spaces? What sort of informal and deep learning takes place within the children as they negotiate a social space that may have its own rules for being successful? These are questions that may be worthwhile pursuing in future research.

The authors of the second study included in the search (Mertala & Meriläinen, 2019) also acknowledge that digital gaming in children has been studied extensively during the past decade, while children still are usually positioned as passive consumers in this research. This is at odds with the modern view which sees children as active agents who actively make sense of their lives (Tangen, 2008).

The study is set in Norway and pursued two research questions with 26 children who had just entered middle childhood: Which aspects of digital games appear meaningful to children and why are these aspects meaningful?

Children were asked to draw their idea of the best game in the world, and the researchers engaged them in a discussion on the topics relevant to the study while they were drawing the pictures. The children's narratives and pictures were subjected to a descriptive and interpretative analysis which revealed four themes in relation to the children's meaning-making.

While many children drew pictures of games that were influenced by popular gaming culture

such as Minecraft, not all of the children actually had experience with playing the game. Their narrative revealed that they might have heard other children talk about it or that they had watched YouTube videos of other people playing the game. This means that children can show knowledge of the game in the non-digital world allowing them to partake in peer discussions and play. Gaming appears to be so deeply ingrained in popular culture that while some children may not even engage in it, it helps to acquire some information on the topic to be able to partake in certain peer activities in the non-digital gaming world.

The second theme revealed transmedia influences, namely, that children integrated game elements into their pictures which they knew from other games, media and films. The authors do not hypothesise about the deeper meaning of this inclusion, however, Fromme et al. (2009) theorise that children who recognise elements in digital games originating from other digital games or the non-digital world engage in some level of deeper learning or *Bildung* which involves gaining and extending world views and relations. While they recognise these elements on an interface level, the educational value gained for the social 'off-game' sphere means participation in new social environments. This happens through a process which Fromme et al. refer to as 'immersive didactics'.

The third revealed theme is in line with previous research findings (for example, Kafai, 2006), namely, that children appreciate their digital games play because it gives them the opportunity to engage their phantasy and to try out different roles. Kafai suggest that players experiment with 'immoral' identities and actions without fear of real-life consequences. Children in this study, for example, had no qualms with identifying as a 'baddie'.

The final theme revealed children's desire for personalisation in digital games in the form of creating their own avatars. This allows them to experiment with different identities, and the study confirmed Van Reijmersdal, Rozendaal & Buijzen's (2013) findings that children of early middle childhood have been found to identify the strongest with game

characters. Girls in the reviewed study often changed the main protagonist from male characters to female characters. The option to personalise avatars is often included in digital games to increase identification, game immersion and intrinsic motivation (Birk et al., 2016). The study concludes by stating that children have an emerging ability to critically evaluate their play experience of digital games. Children can identify a male-dominated game and choose to add more female touches as well as express their frustration that their use of creativity is hampered by 'unresponsive background graphics' or similar issues.

In the next study, Hamlen (2011) set out to understand in which ways children's digital game play choices related to their creativity, motivation, learning preferences, and beliefs about how to play games. In a mixed-methods design, the researcher asked 118 children aged nine to 11 to answer survey questions in relation to the type of games played, how often and how long they played, etc. The survey also gave children the opportunity to write one to two sentences on why they liked the game they played most often. The qualitative analysis of the answers revealed that children were mainly motivated by psychological and mental factors rather than particular qualities of the digital games themselves. Children appreciated the freedom from restrictions that some games brought, as well as the freedom to play with 'violence'. They also cited opportunities to socialise in online games and opportunities to boost one's self-esteem. The primary motivation for many children, however, was the 'having to really think hard' about a game play, such as a challenge or a mental effort required for the game they liked to play. The author states that these findings were not only in line with previous findings, which revealed that children seek game challenges (Downes, 2002), but also that they contradicted the common assumption that digital games crippled the cognitive ability of children.

While the author does not point it out in her study, scenarios in digital games often reward efforts or an increase in effort after failures (Johnson et al., 2018). A study by Ventura,

Shute & Zhao (2013) showed a positive correlation between the amount of digital play experience and adult participants' persistence in solving difficult tasks outside the play environment. Their research showed that those playing digital games on a regular basis display more stamina in problem- solving. Experimental results revealed in Salminen and Ravaja's paper (2008) also indicate that players' responses to failure are often met with interest and excitement instead of with frustration or anger. According to McGonical (2011), players can present themselves as 'relentlessly optimistic' and be highly motivated to repeat a gaming activity after initial failure. This phenomenon is summed up by Granic at al. (2014, p. 71), who point out that 'although playing games is often considered a frivolous pastime, gaming environments may actually cultivate a persistent, optimistic motivational style'.

While the aforementioned studies have only studied this phenomenon with adult players, it would be interesting to pursue it further with children of middle childhood and to determine whether their own narrative reveals informal learning processes which influence personality development towards more flexibility and a greater readiness to embrace challenges.

The fourth study included, by Sarachan (2013), explored whether 16 children aged six to 11 play in virtual worlds as suggested by the 'rules' and/or user-interface or whether they define their own use of the space. The author refers to previous research (Meyers, 2009) which suggests that children define their virtual identities within a collaborative and educational context, but he acknowledges that the description offers a decidedly adult-centred focus on learning and emotional development. He continues to note that this research fails to explain the appeal of digital games for children. Sarachan points out that engaging in virtual spaces should be seen as an extension of regular play, with its combination of social and non- social activities and creative and rule-based play. Referring to research by Leander et al. (2010), he notes the appeal of digital games to children might

be, among other aspects, the freedom of choices in play, at least mentally, which has been taken from them as suburbanisation and safety concerns have regimented free non-digital play. Hence, virtual worlds may offer some of the advantages of real-life playgrounds.

The study takes an ethnographic approach by watching children play three particular digital games and asking them about their play, choices, and accomplishments during and afterwards. It revealed that all children found tasks matching their developmental age with socialization in game play more important for older middle-childhood children. Children enjoyed aspects of game play that allowed them to explore and to be creative. Exploring has led many children into a state of flow, which allows them an immersion in the game while also maintaining a sense of control and freedom (Csikszentmihalyi, 1990).

The author makes the interesting observation that a design of the games interface which reflects the familiarity of the real world encourages children to make familiar choices. On the other hand, more experimental spaces might increase the ability to develop new mental schema.

The development of new mental schemes in digital game play may also give raise to increased reflexivity in children, new ways of viewing the world and themselves, and ways to give meaning to their world.

The final study included in this search is by Hannaford (2012). Hannaford is a teacher in an international English-speaking school in a European city. She set out with observations of children frequently performing imaginative narrative play triggered by experience from books and television, from there investigating whether digital games could likewise trigger similar imaginative play. Hannaford talks about imaginative play being, in some part, identity practice, and quoting Gee (2007), she goes further to say that children engaged in digital game play express 'discourse identities'.

The author gathered 'a small group' of eight- and nine-year-old children in an after-school club for a number of weeks and observed them playing free games available on the internet. Children were interviewed at different time points following a semi-structured

interview, and transcripts were analysed using Thematic Analysis. During a break from digital game play, children were encouraged to draw or write a story involving the play world of the digital games they had been playing. In her introduction, the author refers to having found 'thematic categories', but there is not much evidence in terms of categories in her findings section. The analysis, however, confirms that children can take game contents and engage with them in an imaginative manner offline, evident for instance in the pictures drawn by the children. One point the author noted from one of the children's narratives is noteworthy. Referring to a game-play experience, one boy states "You see how other people use their language. Some people say "Hi", some people say "S'up", some people say "Goodbye", but some other people, like my brother says, "Let's bounce"". Hannaford refers to this statement as evidence of the boy showing a developing understanding of language.

Taking this further, the boy might also have come to understand how the use of language can vary in different cultural domains in life. This insight constitutes a moment of deep informal learning, which has come about through reflexivity.

Raudonat (2017) states that digital games have opened up social and communicative spaces which offer opportunities and triggers for the continued development of social and communicative competencies. The development of such competencies occurs through communication and interaction with fellow individuals or groups. They are based on learning processes underpinned by rehearsal, experiences of consequences, and reflection, and are encouraged by situational circumstances. The corresponding learning process relates to the extension and increasing flexibility of operational skills as well as the acquisition of specific knowledge and the ability to distinguish scenarios. The aim is to master an appropriate and successful conduct in social situations, such as understanding others, as well as the management of social demand situations and the effective implementation of goals and

intentions in social interactions. Whether or not the conduct is appropriate always depends on the demands of the specific situation and the normative context.

2.4.3 Conclusion

The second literature search revealed and summarised five studies which explored the voice of children in middle childhood on their experience and meaning-making of digital game play. Their voice was elicited in similar ways across international and national studies and has revealed several themes.

Children appreciate engagement with digital games as it gives them access to a peer group and peer identity. They enjoy the social aspects of game play, such as connecting with friends in the cyber world. Being able to play with phantasy, to explore and be creative, has been stated as equally important, as well as the pursuit of mental challenges and rewards for mastery. Children's narratives revealed that they appreciated the freedom in digital game play and their frustration with games which restrict this desire for freedom. One recurrent theme in all studies was the emphasis children placed on the possibility of playing with different identities without fear of any real-life consequences when adopting questionable characters in the digital world. A good quality game offers the possibility for children to personalise their characters in forms of Avatars, and is, all-in-all, sufficiently intriguing to lead to a level of immersion which provides a 'flow' experience.

The meaning and experience made by children in their digital game play is not very different from their non-digital game play. Children appreciate the social elements, their use of phantasy, creativity, exploration, and practice of identities. Universally, in play children want to be assured of the freedom to make their own choices without being restricted by adults or game design. Differences between genders have been noted in non-digital and digital game play.

2.5 Research Aims

According to Fritz (2009), digital games can be grasped as places for learning, which have numerous incentives and opportunities for learning. The German-speaking author states that 'Lernen beginnt dort, wo Anreize entstehen, wo Situationen bewältigt werden müssen, wo Anforderungen gestellt werden. Dies gilt für die reale Welt ebenso wie für die verschiedenen Spielwelten' (Fritz, 2009, S. 42). This means that learning happens in places where incentives exist, where situations have to be mastered, and where challenges are set. This applies to the real world as much as to the digital gaming world.

Bopp (2005) refers to the immersive didactic of digital games: as digital games offer highly interactive media environments, players are constantly challenged by the system to act. The result of inappropriate responses is usually unpleasant: game loss, boredom, or nothing. Players need to possess skills that enable them to engage with the gaming context in an interesting manner. In order to do so, they must go through a process of learning (Bopp, 2005). Bopp considers digital games as an arranged learning environment, which is carefully designed in such a way that players do not become conscious of their didactical design. Hence, it does not jeopardise the immersion into the game narrative.

The reviewed studies have shown that digital games offer manifold opportunities for learning beyond the accumulation of formal cognitive skills such as in literacy, mathematics, or spatial orientation. There is also the opportunity for deeper and informal learning as elaborated in the introductory chapter. Learning is not limited to what the design intended to convey, i.e., through 'serious gaming'. The type of stories that children tell suggests that we can only gather insights on the type of informal learning that may take place by speaking with them. As this informal deeper learning is often meaningful and culturally salient to the participant and unanticipated by the researcher, the current research is adopting an exploratory qualitative

approach which is outlined in the next chapter.

2. 6 Summary

This chapter began by describing how literature was identified and selected with search terms as well as stating inclusion and exclusion criteria. Subsequently, the results were presented. The first section addressed literature on how children experienced their play in general, the second presented literature on their experience with digital games.

Finally, the chapter summarised findings and hinted at the value of pursuing children's experiences of informal learning processes that may occur during digital game play.

3: Methodology

The previous chapter explored and critiqued the existing research on children's experiences of general play and play with digital games (with focus on middle childhood). Digital games have become a stronghold in children's reported play repertoire, and I believe that research needs to look at the developmental value of digital games from the same perspective that is taken when considering the importance of general play in childhood development. In this context, the voice of the child in middle childhood is particularly interesting, since it is underrepresented in published research (Roberts, 2015).

3.1 Research Aims and Questions Restated

The aims of this study are therefore:

1. to understand how children make sense of their experience of playing digital games by focusing on how they describe their experience, and experience which will be examined from a sociocultural and a humanistic-existential position,

2. to explore how children derive similar and different meanings from general play and digital game play,

3. to gain an insight into the deeper learning process that can take place when children engage with digital games,

4. and to add to the research on the topic of digital gaming in children by using a qualitative method, and to see how this research could outline further directions in terms of guidelines on supporting healthy child development in a changing landscape of play.

Therefore, the study will be exploring the following research questions:

1. *How do children experience their digital games play?*

2. *What is children's experience of non-digital play?*

3. *What meaning do children attach to their play of digital games?*

This chapter describes and discusses the methodology applied to the exploration of how children experience and make meaning of their digital games play and play in general.

The chapter starts with a reflexive and epistemological stance. Secondly, ethical considerations applied in this study are addressed. Following this, the research design is described, and a presentation of the methods used for data generation and analysis is provided.

3.2 Reflexivity

Willig (2012) pointed out that the researcher shapes their research both personally and as a theorist. Being reflective about my personal background and my epistemological stance during this qualitative piece of work acknowledges that my identity, my biases, epistemology, and theoretical position have implications on my research journey and the subsequent presentation of my results.

Therefore, as I was preparing for, carrying out, and writing up the research, I reflected on a number of factors that might have influenced my analysis.

I grew up in a household saturated by the ideas of Rudolf Steiner's education principles. According to Steiner, the use of technology like TV and digital games by children should be avoided, since it supposedly harms childhood development and creativity (Manzoor, 2016).

These principles are deeply imbedded in my mind and continue to shape my preconceived ideas and probably my worries about children who engage with digital games.

Since my own son started playing on a games console, I had to renegotiate some of my preconceived ideas, for his joy in connecting with his friends online and building up a reputation as a "*good gamer*" is clearly evident. Being a good 'gamer' matters in his social circles, and this reputation seems to have a tremendous effect on his self-esteem. However, I also observe the gaming habits of some of his close friends and the children I meet as a trainee educational psychologist, and I wonder whether these habits do not result in a lessened ability to regulate their emotions, subsequently leading to increased isolation when peers withdraw in response to undesirable social behaviour. I also wonder whether excessive gaming can, in fact, adversely affect a child's creative responses to problems outside the virtual world.

As I was interviewing children on their gaming habits, I realised that they are not merely passive consumers of the digital world. There is, instead, a multitude of intricacies adults are unaware of in terms of how they evaluate their experiences. This insight left me, not only excited, but also very humbled.

As a result of these experiences, I formed a view which could be considered as 'critical realist'. Therefore, I believe that my experiences and my epistemological position might have an influence on how I view participants' responses.

3.3 Epistemology

This study assumes a critical realist position, which is an integration of ontological realism and epistemological constructivism or interpretivism. This position is usually associated with the work of Roy Bhaskar (1978, 1989, 2011).

Frazer and Lacey note that "Even if one is a realist at the ontological level, one could be an epistemological interpretivist … our knowledge of the real world is inevitably interpretive and provisional rather than straightforwardly representational" (1993, p. 182). Critical realists therefore maintain that there is a real world that exists independently of our constructions, theories and perceptions (ontological realism), at the same time acknowledging that our understanding of this world is unavoidably a construct of our own Weltanschauung and standpoint (epistemological constructivism or relativism).

I accept that there is a social reality of playing digital games that is experienced by children, and the questionnaires and interviews tell us something about these experiences. However, the way in which each child experiences digital games will be different, similarly, the way I understand these experiences will be different from their views. This epistemological belief is in line with my underpinning theoretical framework of sociocultural theory (Vygotsky, 1978) and humanistic-existential learning theory, which postulate that experiences are understood in terms of individual and wider contexts. In these contexts, experiences are influenced by an interaction between underlying social and cultural processes inherent in specific contexts, cultures, and histories (Willig, 2012). These contexts may not directly reflect children's experiences of reality. Instead, the way in which children talk about digital gaming and the resulting experiences are socially constructed and will frame children's experiences. With this Weltanschauung, I assume that children's stories cannot exist independently from their cultural, social, and historical context. I also consider that I am integrated in the world that I study and therefore cannot take a 'God's eye view' (Putnam, 1990) which is independent of any particular Weltanschauung. I have actively constructed the context within which an explanation of the stories is attempted. Therefore, a critical realist position was assumed, as it fits with the type of knowledge the research questions set out to

explore; it does not take the stories about children's perspectives at face value, but seeks to add further meaning through my interpretation (Willig, 2012).

3.4 Method

A mixed method exploratory design was chosen for this study to better understand children's digital gaming landscape, associated behaviours and the meaning and experience they make from playing in general and digital games in particular.

For the quantitative element of the research, questionnaires were given to children on the topic of play and playing digital games in particular. On the one hand, the questionnaires collected demographic data, but they also included questions along a simple question-answer schema, which subsequently did not have to be covered during the interview. The information gathered through the questionnaires – particularly in combination with open-ended questions – offered a convenient conversation starter (Witzel, 2000) during the interviews.

In keeping with the aims and the research's methodology, I adopted a qualitative method for the second part of the project, as the next step in exploring the research questions in greater depth. Furthermore, using qualitative methodologies is in keeping with the responsibilities of educational psychologists to fulfil their role in encouraging the voice of children and young people (Hardy & Hobbs, 2017). Therefore, a small number of children was chosen from all the children who filled out questionnaires, and four interviews were carried out, each involving two children.

The interviews added individual personal experience and enabled a deeper understanding of the questionnaire responses. While I have put more emphasis on the qualitative findings in the research, both methods added valuable information to the overall findings.

The closed answers of the questionnaires were interpreted via descriptive statistics, whereas the open answers and interviews accounts were interpreted using the six-step method of Reflexive Thematic Analysis outlined by Braun and Clarke (2006).

3.4.1 Reflexive Thematic Analysis (RTA) According to Braun and Clarke (2006)

The aim of this research is to understand how children experience their general play and digital games play by analysing their stories, opinions, and views. RTA appeared adequate for this study as a framework for exploring new realms of research by describing the findings of the data.

According to Strübing, Froschauer & Lueger (2003), this type of interview analysis is the least demanding and mainly serves to gain an overview of themes, to summarise their key messages, and to explore the context of their occurrence.

As opposed to other methods of qualitative data analysis such as conversation analysis (Hutchby & Wooffitt, 1998) or Interpretative Phenomenological Analysis (Smith & Osborn, 2003), RTA is not underpinned by a certain theory. It is this very theory neutrality and the flexibility that, according to Braun and Clarke, makes RTA a more advantageous method compared to others.

For example, when applying RTA, the researcher may adapt and tailor the application in a flexible manner, according to their ontological and epistemological beliefs and the nature of their research questions.

Themes or patterns within data can be identified in one of two primary ways in RTA: in an inductive or 'bottom up' way, or in a theoretical deductive or 'top down' way (Braun & Clark, 2006, p. 83). In reality, as Braun and Clarke (2019) point out, the separation is not always so rigid. For a theoretically coherent and consistent analysis, I took a critical realist approach to RTA. This approach focuses on reporting an assumed reality evident in the data, therefore adopting an inductive approach to coding and theme development. However, as a critical realist, I also acknowledge that the understanding of children's reality is unavoidably a construct of their very own 'Weltanschauung', hence, I have also taken some constructionist approaches to data analysis, which focus on looking at how a certain reality may have been created by the data. Braun and Clarke (2019) emphasise that the separation of coding

approaches is not always rigid, but that it is important for the analysis to be theoretically coherent and consistent.

RTA enjoys wide application, but there is no clear agreement about what thematic analysis is and how to go about doing it (Tuckett, 2005).

In an attempt to defend themselves against the accusations of randomness on one side and an anything-goes critique of qualitative research on the other (Antaki et al., 2002), and in order to warrant comparability with other RTA-based research, Braun and Clarke (2006) have developed a six-phase step-by-step guideline on how to proceed with the analysis. This guideline attempts to place the analysis on a solid foundation. The authors have elaborated on these six steps in great detail and on a practical level. A summary is outlined under Interview Analysis (3.7.6).

3.4.2 Summary of rationale for research design

The research questions and rationale for these set out in the Introduction as well as my personal Weltanschauung, suggest I take a critical realist position in this study. Both the children's questionnaire and interview data reflect a social reality of game play but this reality is individually constructed by the children and the analysis is an interpretation made by me where I construct the findings based on my own understanding, experience and knowledge, so the analysis is constructed by the Weltanschauung in which the data is viewed.

The method of data analysis needs to be compatible with the epistemological position (Willig, 2013). As outlined above, RTA can be conducted from different epistemological standpoints and provides the most useful methodological framework as theories can be applied to it flexibly. The inductive approach taken to interview analysis is also in line with my epistemological position while appreciating that a purely inductive approach would be too simple as themes do not directly represent the spoken word (Banister et al., 2011) but are actively constructed by me, informed by the literature and my experiences, beliefs and

assumptions.

Prior deciding on taking a RTA approach to data analysis I was also considering the possibility of using an Interpretative Phenomenological Analysis (IPA) approach. IPA, however, is more prescriptive than RTA in relation to its theories and methods and I was not solely focusing on developing a rich description of each child's subjective experience. RTA allowed me to focus on patterns of meaning across data sets, as opposed to the children's individual experiences, enabling the analysis to make generalisations about the group's reality.

3.5 Ethical Considerations

Any research involving human participants demands strict adherence to ethical principles. When involving children in research, these principles become even more salient, as children may not be in a position to adequately assess the risks involved in a given project.

Ethical clearance for this research was sought and granted by the University of East London (see Appendix E). Furthermore, I was guided by principles for conducting research with human participants set out by the British Psychological Society (2014) and specific requirements set out by the Local Authority within which I chose to carry out the project.

3.5.1 Consent from Parents and Assent from Children

Phelan & Kinsella (2013), for example, emphasise that younger children in particular may give their consent only temporarily. Hence, gaining consent was an ongoing matter throughout the research project. Furthermore, their denial may not be direct, but in the form of non-obvious body language, distractions, etc. A researcher working with children has to be particularly mindful and perceptive of these subtleties.

I had the opportunity to meet qualifying children together with their parent/s through family

and friendship circles (see 3.6.4 for recruitment processes). With parental permission, I gave the children a brief idea of what I was doing, namely, gathering information about play and digital gaming from children, and if they expressed an initial interest, I left the 'research pack' with the respective parents. The pack included information (see Appendix F) and consent forms for both parents/carers and children (see Appendix G) as well as the research questionnaire (see Appendix H). Children were given a one-page sheet of very simple and clear statements on which they could indicate through happy and unhappy smileys whether they understood their rights in relation to consent, anonymity and withdrawal (see Appendix G). On the questionnaires and consent forms, children could also indicate whether they wanted to take part in the next stage of the research project – the interviews.

When I arranged to meet with the children for the interviews, I reiterated their rights and again outlined the interview process. I provided the consent forms which they filled in prior to the completion of the questionnaire, and we went through them together again. I familiarised the children with the digital voice recorder and allowed them to have a play beforehand if interested.

In all cases, a consent form signed by a parent/guardian was required before I proceeded with accepting questionnaires and interview willingness from the children.

3.5.2 Anonymity

A general principle is that participants who share information, ideas and experiences with a researcher have the right to stay anonymous. It is important to assure prospective participants of this right, particularly where data is shared and published.

In case of the questionnaires, identifiable information had to be requested to the extent that I could contact the participants a second time for the purpose of the interview. However, after the completion of the interviews, the top parts of the questionnaires containing personal details were removed and destroyed, and the questionnaires were numbered. There was no

need to keep the link between questionnaires and interview transcripts.

As the research topic tapped into children's personal worlds, circles of friends, and individual play behaviour, therefore giving away very intimate details about their person, ideas, and behaviours, I discussed the benefits of picking pseudo names for the presentation of the findings with the children. This was well received by them. The children chose pseudonames for the interviews, and they were exclusively used used by them and by me. There are no recordings in any paper or electronic files which link the pseudo names to the children's real names.

3.5.3 Risks

I also had to consider if participation in the project could possibly constitute any form of risk to the children. For some children, talking about digital gaming accessed online could trigger distressing memories or experiences, for instance of cyber bullying. Some children may only become aware of certain issues through the process of being interviewed or filling out the questionnaire.

After the completion of the questionnaires and interviews, all children received a debrief form with my contact details and details of *ChildLine*, which they were encouraged to use if they had any more questions in relation to the project, if they wanted to talk about something that left them feeling unsure, and/or if they wanted to inform me that they no longer wanted me to use their questionnaire responses or interview transcripts. They were also given the option to get their parents to approach me on their behalf.

I could not identify any other real risks that could result from the participation in the project.

3.5.4 Safeguarding

I am under duty to safeguard the participants as much as myself during the research process. I interviewed children in pairs, and interviews were carried at the homes of either one of the friendship pairs. While all the interviews took place in a quiet side/study room, one parent of the children was present in the home throughout the interview. Children felt comfortable in their own or their friend's home setting, and they were given the option of how and where to sit. Often, we would sit on the floor while snacking on nibbles, having juice, and talking about digital games. This appeared to allow for an adequate power balance where children could terminate their engagement any time or refuse to answer certain questions.

I have outlined in section 3.6.4 Strategies for Data Collection that I was initially planning on interview children in schools. Due to initially willing schools withdrawing from participation I have resorted to interviewing children in their own homes. Interviewing children at home with parents present required careful consideration on how to respond to the possibility of disclosures from children that caused concern over their safety and well-being. Concerning disclosures could have involved things that are happening online or within their families. The protocol I would have followed in the event of a concerning disclosure would have not differed to the protocol I am required to take when entering a private family home when carrying out assessments in the capacity of a trainee educational psychologist for the local authority. On the consent form for children I pointed out that I may have to tell a grown-up if they told me something where I am worried about them or someone else. If the level of disclosure warranted the breaking of confidentiality I would have referred to the Local Authorities Multi-Agency-Safeguarding-Hub (MASH) after informing parents that I intend to do so unless the safety of the child would have been compromised by informing parents first. Any immediate concerns would have been directed straight to the police and MASH as is safeguarding policy within the Local Authority. Any such incidents I would have shared with

my university supervisor and also my placement supervisor at the Local Authority.

Any concerns shared with me where concerns regarding their online safety were triggered I would have shared with the child's parent after telling the child that I would have to do so as outlined in their consent form.

I appreciate that a serious disclosure from a child known to me in a friendly capacity (along with their parent) would have put me under a considerable dilemma and I have identified this as one of the potential limitations when interviewing children known to me in a private capacity.

After the interview many parents expressed an interest in the findings and queried whether they would be given access to the final work. Parents and children were assured that they would not only have access to the full thesis once approved and published, but also that a summary of findings would be shared with parents/guardians and children. This summary would be pitched at an appropriate level.

3.6 Quantitative Element of Research

3.6.1 Participants

Questionnaires were filled out by 32 children of middle childhood. Of the respondents, 17 were boys (mean age =10.5; youngest 9 and eldest 12) and 15 of the respondents were girls (mean age =10.4; youngest 9 and eldest 12). In total, 45 questionnaires were given out to children or their parents.

3.6.2 Questionnaire Design

According to Robson (2011), a questionnaire of good quality possesses three characteristics:

- it provides a valid measure of the research questions,

- it encourages co-operation of respondents,

- it yields accurate information.

The questionnaire developed for the purpose of this research comprised 29 items. Most questions followed a Likert-scale schema, and five questions allowed for open-ended responses.

The questions aimed at eliciting demographic information such as age and gender of the children, their hobbies, and whether they actually played digital games. If they confirmed the latter, further questions enquired about the devices they play on, what games they play and about some of their game-play habits. Some questions related to popular beliefs about digital game play and asked children whether they shared these common assumptions (for example: 'Do you think you can become addicted to computer games?'). Other questions tried to find out whether children experienced any transfer effects such as carrying over emotions from digital game play to the offline world. These statements were then further explored during the interview stage.

To maximise the validity of the questionnaire, I accounted for a number of specific techniques which Mey (2005) recommends in the development of questionnaires aimed at young participants. The recommendations relevant to the design of the questionnaire for this research included the following:

- Questions are to be worded as simple and clearly as possible.

- Leading questions, i.e., questions which suggest a particular response, ought to be avoided.

- Limited vocabulary of children is to be considered, for example, by avoiding difficult sentence structures and keeping items relatively short. The length of the questionnaire should not be overwhelming for children.

- Make sure that children understand the same thing from the questions and answer

requirements as those who devised the questions.

- The scope of children's experience is of great importance – questions in relation to matters, situations, opinions, etc. that do not correspond to their scope of experience cannot warrant a valid answer.

- Consider issues around including double negative questions, i.e., what does the answer option 'I do not agree' in relation to the question 'I am not good at maths' mean?

The design of the questionnaire was kept simple, and the instructions were brief and to the point, clarifying the purpose of the questions, namely, to find out about children's play and digital game play games. A copy of the questionnaire can be found in Appendix H.

3.6.3 Piloting the Questionnaire

I designed the questionnaire following the guidelines above. Before distribution, I shared it with two boys aged nine and 12 known to me through friendship circles as well as an Educational Psychologist colleague. Minor amendments were made to the wording and layout of the questionnaire, and the boys requested more specifics about how to return the questionnaire and to whom.

3.6.4 Strategies for Data Collection

The initially planned strategy for distributing the questionnaires among children of middle childhood was through contacting primary schools within the local authority I am on placement with as a trainee educational psychologist. As 'cold calling' schools is not permitted by the local authority, I followed the protocol of placing an advert into the weekly news bulletin, which is emailed out by the local authority to all schools. The advert, which was approved by the head of service, invited schools to participate in the project, with a brief description outlining some of the possible advantages for schools through exploring the

matter of digital gaming with their children further, as well as information on how to get involved. Two schools expressed an interest but subsequently withdrew for different reasons.

I then resorted to both purposive and snowball sampling in the recruitment of participants. Purposive sampling is a non-probability sampling often used in qualitative research in order to access 'knowledgeable people with in-depth knowledge about particular issues, maybe by virtue of their professional role, power, access to networks, expertise or experience' (Cohen, Manion & Morrison, 2013, p. 157). In this instance, I have reached out to children of middle childhood age from family and friends. Following this, the recruitment progressed through snowball sampling. Blaikie (2000) states that 'Once contact is made with one member of the network, that person can be asked to identify other members and their relationship' (p.205). In this way, every child provided key access to others from which I have then created my sample.

Two known disadvantages of such sampling methods in quantitative research approaches are the quality of the resulting data and a selection bias which may limit the validity of the sample (Van Meter, 1990). Because children were not randomly drawn, but were dependent on the subjective choices of the children first accessed, this snowball sample may be biased and does not therefore allow general conclusions from this particular sample (Griffiths et al., 1993). Secondly, this snowball sample may be biased towards the inclusion of children with interrelationships, and therefore may over-emphasise cohesiveness in social networks that may gravitate towards similar playing and gaming habits (Griffiths et al., 1993), and may have missed 'outliers' who are not connected to any social network I have tapped into (Van Meter, 1990). Thirdly, snowball sampling may have resulted in the age of the participating children being at the top end of middle childhood with none of the children being younger than nine years old.

3.6.5 Questionnaire Analysis

The questionnaires were analysed using descriptive statistics which looks at patterns and trends in answering the research questions. Results are presented by means of tables and graphs in the next chapter. Answers in relation to the qualitative question 'What do you think you can learn from playing computer games?' were included in the coding and theme analysis process during the qualitative stage of analysis.

Some of the answers also helped me to purposefully prepare for the interviews by, for example, looking up certain digital games the children mentioned to be playing.

3.7 Qualitative Element of Research

Qualitative information was gathered from semi-structured interviews with children about their experience and meaning-making of play in general and digital games play in particular. Some qualitative information was also gathered through open-ended questions from the questionnaires.

I chose some open-ended questions during the questionnaire phase, as well as semi-structured interviews, because I wanted to understand children's views, experiences, and meaning-making. While each child may be playing the same games on the same consoles, their experiences and views can be different, and I wanted to allow them the freedom to express their perspectives. The semi-structured interview technique helped children to engage with me in a conversational manner, and the use of structured and unstructured techniques fits with my epistemological position of critical realism.

As a critical realist, I recognise the significance of meaning construction and communication among children and emphasise that play takes place in the context of pre-existing social relations and structures, which can have both constraining and facilitating implications for play. In this sense, the social world of children has an external reality and

exerts powers over the way they act, but at the same time 'human action may be affected by social causes without being fully determined by them' (Elder-Vass, 2010, p. 87). This means that, as a critical realist. I seek to use interviews to appreciate the interpretations of the children and to explore the social contexts, constraints, and resources within which those children act (Smith & Elger, 2014).

The semi-structured interview attempts to capture the benefits of both the open-ended and structured interview without being limited by their disadvantages. Similarly to the open-ended interview, it starts with an opening question that encourages a narrated interview passage. What follows are the questions directed by the interview schedule.

One advantage of this type of interview is its great flexibility in respect to honouring the areas of deeper interest of the participants. At the same time, however, all participants are asked the same questions, warranting a more generalizable analysis beyond just a case study.

The interviewer acknowledges that they have considerable influence in their questioning and must possess high quality social and linguistic skills.

3.7.1 Participants

Participating children for the face-to-face interviews were chosen from the pool of children who filled out the questionnaire and volunteered to participate by indicating their willingness at the end of it. All of the children indicated in the questionnaires that they played digital games almost on a daily basis. The selection of the first four children was random. The randomly selected children were then asked to nominate an interview partner whom they knew to have also filled out the questionnaire. I then checked with the nominated interview partner whether they would be willing to be interviewed with the nominating friend and all children were happy to do so. This resulted in six boys (mean age=10.1; youngest 9, and eldest 12) and two girls (aged 10 and 12). One child who indicated on the questionnaire that he was happy to participate in the interview changed his mind upon

contact.

The number of participants recruited is in line with Braun & Clarke's (2019) recommendation of six to 10 participants for a small RTA project. Whilst I had eight participants for the face to face interview, I also had some qualitative data for analysis from the open-ended questions within the questionnaires.

3.7.2 Limitations of Interviewing Children in their Homes

Kath (2008) points out that interviewing children in their own social setting is messy and competes with methodological purity. The researcher is to 'expect the unexpected' and for the sake of transparency I would like to mention a few limitations which may have had an influence on the interviews given by the children.

On occasions I had to deal with situations where other family members such as siblings walked into the interview space which constituted a situation that compromised the interviewees' privacy. During these moments I stopped the interview and found that the children took charge of the situation by pointing out to siblings that they had 'something important to do' and that they should leave. Also, while parents may have not been physically present in the interview space, one parent was never far away and this could have potentially had an impact on how comfortable some children felt in giving truthful answers and perhaps increase the social desirability bias (Lee & Woodliffe, 2010).

Reflecting on my own performance there may have been moments where I felt insecure in a space which is not neutral or my own and speaking about a topic where the children themselves are clearly the experts. I felt it useful to write about these experiences in my journal after the interviews and therefore staying critical and reflective and not taking my data at face value.

3.7.3 Interview Development

In designing the interview schedule, I was guided by Smith, Harre and van Langenhove's (1995) recommendations:

- Start with an analysis of the overall topic to be explored in the interview and the broad range of themes to be covered.

  In this research, this was informed by some of the questions and findings from the questionnaires, popular mainstream beliefs about digital games, previous research findings, as well as my theoretical framework of sociocultural theory (Vygotsky, 1978) and humanistic-existential thoughts. In exploring meaning, I acknowledge that meaning can change over time and social context. Therefore, I have included questions to encourage thinking about past play behaviours.

- Arrange different areas of the topic into a logical sequence and keep 'deeper' questions towards the middle of the interview to allow children to ease their way into the questions and become more relaxed and comfortable.

- Develop prompts and probes which may be used to further explore some answers.

I was further guided by Mey's (2005) recommendations on constructing interview questions for children:

- Keep the questions as neutral as possible and avoid value judgements through questions.

- Do not use jargon and adjust the language to the developmental level of the children in order to encourage familiarity and to not alienate children from the process.

- Keep questions open-ended to encourage a rich story. Most closed-ended questions were covered through the questionnaire.

3.7.4 Pilot

To enhance the validity and reliability of the questions, the interview was piloted by talking through the questions with two boys aged 10 and 12, who chose the pseudo names of Rick and Morty. Rick and Morty had previously filled out the questionnaire and agreed to be interviewed. I approached the boys asking whether they would agree to act as my 'expert panel' and help me to refine questions and 'jargon' and to increase comprehensibility. This resulted in minor changes to the phrasing and sequence of questions as well as some deletions. For example, when asked 'How would you describe play' the boys thought it would encourage more explanations when asked 'Imagine an alien came to earth and you had to describe to them what it means to play. How would you describe it'?

The pilot process not only increased children's understanding of what was being asked of them (Hayes & Delamothe, 1997), but it also offered me the opportunity to gain experience of conducting the interview with the children, and thus may have improved the accuracy and the descriptive validity of the data collected.

The pilot responses were not included in the final interview analysis.

A copy of the final interview schedule can be found in Appendix I.

3.7.5 Interview Process

Friendship Pair Interviews

Some of the challenges in interviewing children lie in fostering and maintaining their interest while generating stories which are firmly grounded in their social realities (Mey, 2005). Nonetheless, Miller and Glassner (2004) point out that in the context of interviews children are not only able but also willing to share their perceptions with an adult and 'create meaningful worlds'.

The set-up and context of the interviews, however, has an impact on the stories that children will end up telling, For example, Michell and West (1996) found that interviewing

children either alone or in focus groups can yield different responses from the same participants. Apart from individual and focus group interviews, some researchers have opted for interviewing children in 'friendship pairs'.

In the past, paired interviewing has been used with pre-school children (Mayall, 2000). The idea is that choosing a friend to take part with them may offset inhibition, create a supportive social context, and encourage a better conversation. While interviewing 5–9-year-old children in self-selected pairs on healthy eating, Mauthner (1997) found that they felt comfortable enough to quibble with each other, call each other names, and argue over 'who knows best'.

Highet (2003) found the benefits of friendship pair interviews to be:

- a frequent and sustained dialogue between children. Focus groups, for example, may result in a more fragmented dialogue.

- a good fit with informal settings,

- many parents being cooperative and supportive in their response to their children being interviewed in friendship pairs,

- children being visibly more relaxed and more enthusiastic to share experiences with a friend,

- while children are more comfortable and familiar with each other, they gain some degree of control over the interview, which in turn facilitates a better balance in the relationship between the interviewer and the children,

- paired interviews, unlike one to one or focus group interviews, can open up glimpses into more personal territory.

Interviews were arranged with the children's parents during the autumn term of 2019. All children and parents were informed about the purpose of the research, the method of data collection, and of their individual rights with regard to confidentiality, anonymity, and

consent at the time of filling out the questionnaire (as outlined in 3.5.1 Consent from parents and assent from children).

Children's parents were contacted by telephone, and mutually agreeable dates and times for the interviews were arranged. Interviews took place at the homes of one of the children pairs. All parents of participating children were very forthcoming in offering their homes for the interviews and following conversations with both parent/s and children we came to an agreement that worked for everyone involved with regards to accessibility of location, commitments and timings.

At the beginning of the interview, I reminded the children of the questionnaire they filled out and again showed them their consent and information sheet which they read through and acknowledged. I reminded them that they did not have to answer a question if they did not want to, and/or that they could altogether stop the interview. I explained to them how the interview was going to be conducted and showed them the digital voice recorder, explained why a recording of the interview is being made, and how it was going to be used.

Following advice given by Mey (2005), I reassured the children that there were no right or wrong answers. I also kept in mind that children might often get the sense that adults already know the answer to a question. Therefore, I reiterated the statement that they were actually the experts on the topic of their play. I ensured that children did not feel bored by the questions, that they felt sufficiently challenged to share their experiences, and that their responses were taken seriously.

Prior the interview, children were encouraged to pick pseudo names, which I explained to them I would be using to refer to them throughout the recording and when writing about the interview. All children found this particularly exciting and appeared to have given much thought to their pseudo names. I provided snacks and drinks for the interviews, and two breaks of 10–15 minutes were given. Interestingly, children continued to discuss the topic of digital gaming during the breaks, revisiting some of their answers, sometimes

disagreeing with each other, and further exploring the topic.

Children were interviewed using the interview schedule. While I generally followed the structure of the schedule, I modified some questions and sequences and added ad-hoc questions I felt appropriate. This usually happened when children turned to each other in discussing a question further, either confirming their agreement or disagreeing with each other. This, I felt, led to particularly valuable information. This flexibility in interviewing is in line with Mayring (2014), who describes how a semi-structured interview is open to modification according to how the researcher perceives what is appropriate while processing through the interview. The open-ended format of the questions encouraged a dialogue in which children could discuss their experiences openly, whilst ensuring that key topic areas were covered across the sample.

Some of my question strategies derived from psychological consultations, such as circular or probing questioning. These questions are characterised by a general curiosity about the stories that are being told and prompted more insights and connections between different experiences. At the end of the interview, children were given the opportunity to add further comments, and the structure was flexible enough to allow for following-up issues raised by the children which might not have been anticipated. Children were given thanks for their valuable participation, and they were reminded of what I would next be doing with the interviews. I also reiterated that, in the case of a change of mind about me using their interviews, they could let me know either directly or through their parents.

3.7.6 Interview Analysis

Qualitative information was gathered from semi-structured interviews with children about their experience and meaning-making of play in general and digital gaming in particular.

The procedure outlined by Braun & Clarke (2006) was used to analyse the interview

transcripts. The phases are described as follows:

Phase 1: The Researcher's Familiarisation with Data

During this phase, interviews were transcribed by a professional transcription service, and data was shared with the service in accordance with University of East London's data management regulations.

To check for the quality of the transcriptions and to fill in inaudible gaps, I listened to the interviews and read through the transcripts several times. Having frequent reads through the transcripts is encouraged during this phase. 'During this phase, it is a good idea to start taking notes or marking ideas for coding that you will then go back to in subsequent phases' (Braun and Clark, 2006, p. 87).

Phase 2: Generation of Initial Codes

Here, I coded interesting features across all of the interviews and qualitative responses in the questionnaires in a systematic fashion, and collected data relevant to each code. 'Codes identify a feature of the data (semantic content or latent) that appears interesting to the analyst, and refer to the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon' (Boyatzis, 1998, p.63). These codes have set the foundation for the subsequent theme discovery. Initial codes were marked on the side of the transcript (see example of a worked transcript in Appendix J) and then noted down on a big poster (see example Appendix K) which helped me during the theme exploration.

Phase 3: Search for Themes

This phase called for the collation of codes into potential themes and gathering all data relevant to each potential theme. Connections between themes were also be made. 'You end

this phase with a collection of candidate themes, and sub-themes, and all extracts of data that have been coded in relation to them' (Braun and Clarke, 2006, p.90). I have colour coded the codes on the poster according to possible connections and similarities and gathered codes together according to colours on a separate poster (see example Appendix L).

Phase 4: Review of Themes

I have checked whether the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2). While doing so, a thematic 'map' of the analysis was generated. Braun and Clarke suggest that 'data within themes should cohere together meaningfully (internal coherence), while there should be clear and identifiable distinctions between themes (external heterogeneity)' (2006, p.91). I ensured that these two criteria applied not only to the identified themes on the basis of the already coded data extracts, but also to the entire data set. At this point, it was necessary to somewhat recode the data set. Braun & Clarke suggest that, if at this point new themes become apparent, a renewed entry into the coding phase is required. 'The need for re-coding from the data set is to be expected as coding is an ongoing organic process' (Braun and Clark, 2006, p. 91).

Phase 5: Definition and Naming of Themes

This is the core of the fifth phase. 'At this point, you then define and further refine the themes you will present for your analysis, and analyse the data within them. By "define and refine", we mean identifying the "essence" of what each theme is about (as well as the themes overall), and determining what aspect of the data each theme captures' (Braun and Clark, 2006, p. 92). Part of my refining process was also to explore whether a theme required sub-themes. To aid the review of themes, it was helpful to have an Educational Psychologist colleague look over the themes and codes with me and to offer discussions which subsequently lead to refining some themes.

Phase 6: Report Production

Here I was instructed to 'tell the complicated story of your data in a way which convinces the reader of the merit and validity of your analysis. It is important that the analysis (the write-up of it, including data extracts) provides a concise, coherent, logical, non-repetitive and interesting account of the story the data tell – within and across themes' (Braun & Clarke 2006, S. 93).

Despite these guidelines, a major criticism of RTA is that its trustworthiness can easily be inadequate, unless diligent attention is given to quality and rigour during the analysis process (Nowell et al., 2017). Braun & Clarke (2019) point out that coding is an 'active and reflexive process that inevitably and inescapably bears the mark of the researcher'. Hence, there is no one accurate way to code, which makes the need for inter-rater reliability and multi-independent coders redundant.

Braun and Clarke continue that themes do not emerge from the data, as this would assume a reality which is waiting to be discovered, but that themes are constructed by both the interviewer and interviewees. Therefore, it is important to be transparent about the researcher's context and position in relation to the study, and to acknowledge that newly constructed information is interpreted against the background of this prior knowledge. With this in mind, I have made my Weltanschauung transparent in sections 3.2 and 3.3.

3.7.7 Quality Assurance

To offer some quality assurance in relation to the analysis process, in the next chapter, I have attempted to be as transparent as possible in how I achieved my theme generation. I have also chosen to offer some quality assurance of my analysis by employing some of Yardley's (2000) principles for quality in qualitative research. These are as follows:

- Internal Coherence

This refers to how the identified themes are as close to the accounts given by the interviewees and, how they are echoed in the interview data overall (Smith, Flowers & Larkin, 2009). Several verbatim transcript passages are included in the Findings chapter to make transparent the link to identified themes. The amount of times codes appear across the transcripts, for example 'with friends' or 'frustrating', can also be considered a type of data validation. Moreover, similar themes could be seen occurring across the first part of the interview, on general play, and the second part of the interview, on digital game play. This means that the children's experience and meaning of play was narrated similarly during both parts of the interview. This resulted in two thematic maps with similar themes offering another form of data validation.

I also gave consideration to opposites and contradictory perspectives within the transcripts. For example, within the theme of 'A different persona' (cf. Figure 12; Thematic Map 2), it was acknowledged that children explained that they could either become a worse or better person playing digital games.

- Transparency of Evidence

Transparency of evidence encompasses the explanation of the process of analysis, i.e., how the themes were lifted from the interview transcripts. This process has already been clarified in the Method section, and an audit trail (see Appendix M) outlining how the main themes correspond to the interview transcripts has been included in an attempt to make the process more transparent and to show how my analysis progressed from description to explanation in the final chapter. Included in Appendix H is also an example of a worked transcript. Furthermore, together with my

supervisor I went over my search and review of themes (phase 3 and 4), which allowed for discussion and reflection on codes and an assessment of the theme-finding process. This, I believe, constitutes also some internal validity and suggests that the identified themes are sound.

- Postscript Serving as a Form of Research Journal

    As a critical realist, I acknowledge that I am actively involved in co-producing the experiences and meaning the children share with me. In an attempt to 'monitor' this process, I took time after each interview to complete a 'postscript' not only including the factual information around the interview situation, but also acknowledging my thoughts and feelings in response to the stories shared with me. The journey of completing this project has changed many of my preconceived ideas about digital gaming, and I have included an extract of my postscripts as means of recording and making my reflexive awareness transparent (Appendix N).

3.8 Conclusion

This chapter outlined the methodology and methods used to explore the research questions. This included reference to the underlying epistemology, ethical considerations, as well as procedures of data collection and analysis. The presentation of the results of this research will follow in the next chapter.

4: Findings

4.1 Chapter Overview

This chapter describes the findings from the questionnaires and interviews. The research aimed to explore how children of middle childhood experience and make meaning of non-digital and digital play. In particular, three research questions were pursued:

How do children experience their digital games play?

What is children's experience of non-digital play?

What meaning do children attach to their play of digital games?

Descriptive statistics were used to examine the quantitative data obtained from the questionnaires. Descriptive statistics offer 'ways of representing some important aspect of a set of data by a single number' (Robson, 2011, p. 407). The analyses provided an insight into the children's digital gaming habits, behaviours, and attitudes. Percentages were used to represent the answers of the children.

The qualitative data, gathered via interviews, was analysed using Braun & Clarke's (2006) Reflective Thematic Analysis. Children's experiential accounts of their play experience and digital games play in particular were analysed for common themes across all accounts. The presentation of the questionnaire findings is followed by the presentation of the themes.

4.2 Questionnaire Findings

A statistical analysis was carried out upon 32 questionnaires filled out by children who regularly play digital games. In addition to supporting the identification of children willing to

participate in the interviews, and providing information to explore further during the interviews, the questionnaire responses were also analysed to gain an understanding of trends in digital gaming behaviours and attitudes. Therefore, findings contributed towards answering the research question of how children experience their digital games play.

Percentages were used to offer access to the data set as a whole. While I have chosen to use the term digital games in this study to capture a variety of electronic game play, I have chosen to use the term computer games in the questionnaires and interviews, as it corresponds more to the everyday language the children use to refer to that type of play.

A copy of the questionnaire can be found in Appendix H.

4.2.1 Questionnaire Responses in Detail

Children started by giving identifiable details for the purpose of interview selection and supplied one-word answers in response to the question 'What are your hobbies'. This information was mainly gathered for the purpose of interview preparation with the children. The hobbies data is visually represented in the form of a word cloud (Figure 1). The more frequently a hobby was named, the bigger the font size of the keyword. The playing of computer games was cited most frequently as a hobby. followed by playing football and drawing.

Figure 1: Word cloud depicting the hobbies children cited

Mobile devices such as tablets, mobile phones and laptops are the most popular devices for accessing digital games (Figure 2), and the PlayStation appears to be the most popular console for game play. Its popularity is in line with latest sales figures which rank PlayStation as the best-selling video game console of all time (Sirani, 2020).
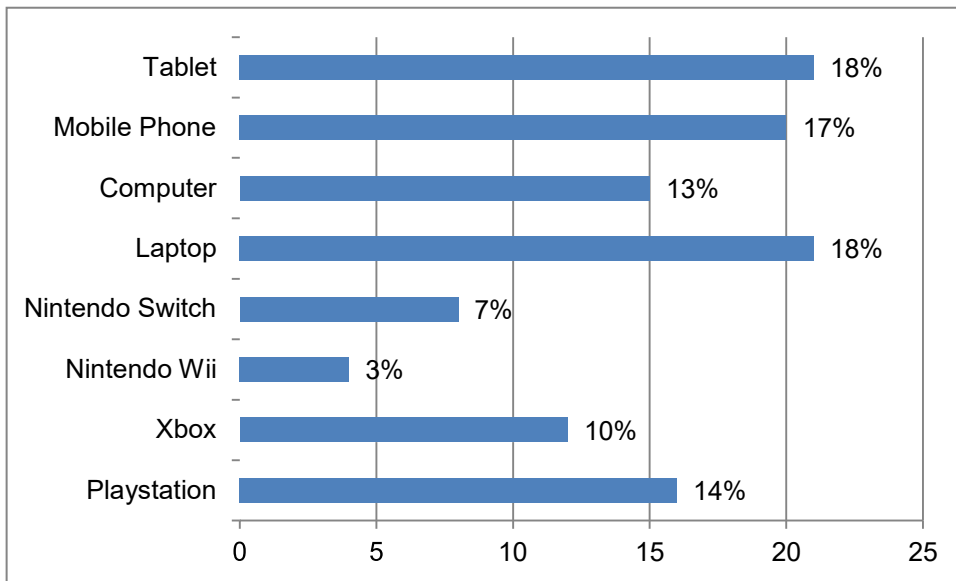
Figure 2: Devices children use to access digital games

More than half of all respondents stated that they were playing digital games every day (Figure 3), and girls reported almost 40% less play-time per day than boys (Figure 4).
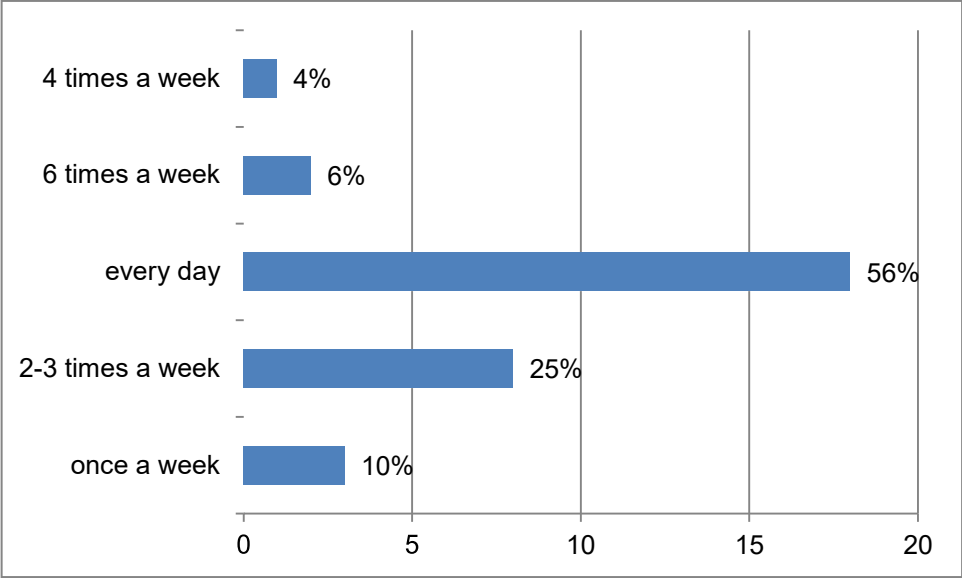
Figure 3: How often children play digital games per week
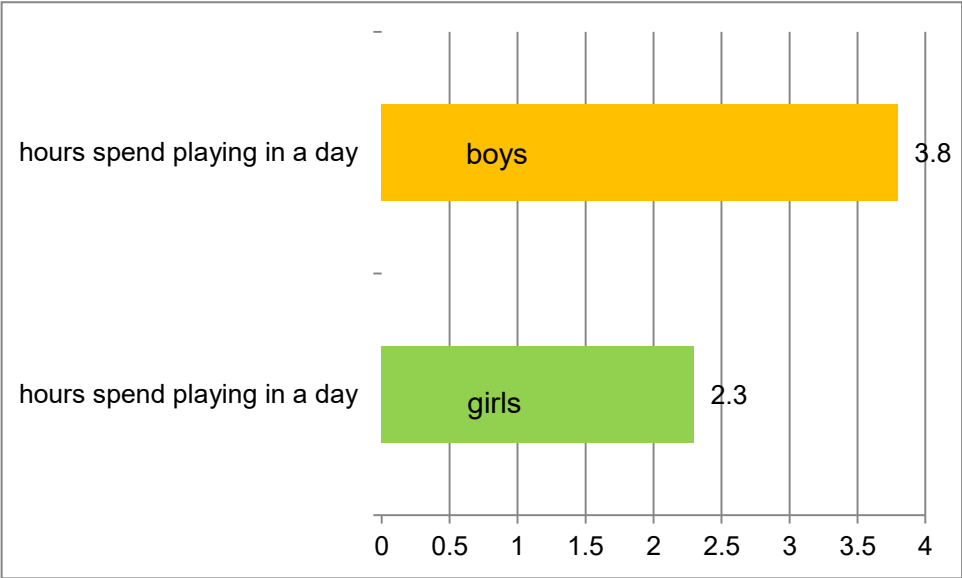
Figure 4: Hours spent playing per day

A word cloud was created to depict children's answers to the question "Have you got favourite game(s)" (Figure 5). The three most frequently games played are Fortnite, Minecraft and Roblox, which are all so-called Massively Multiplayer Online Games (MMO), or a community close to a social network where a very large number of people can play simultaneously.
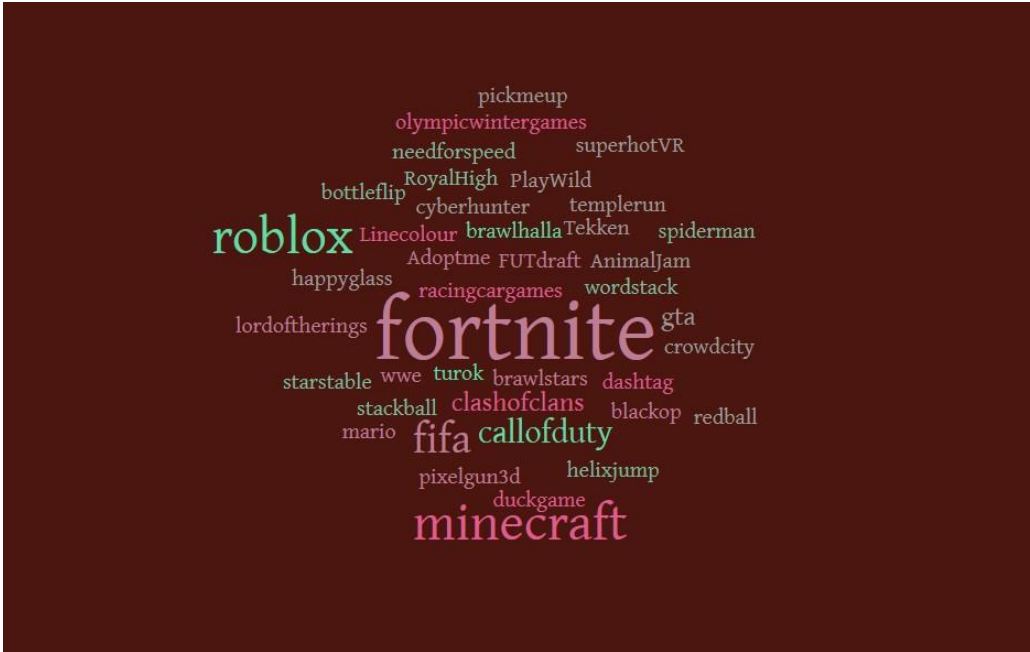
Figure 5: Children name their favourite digital games

There was an even distribution of children indicating an inclination to play digital games alone, with friends physically present, and with friends online (Figure 6). Children had the option to tick as many answers that applied to them. 8% of the children indicated that they played with strangers online. One child made a note next to the 'Play with strangers' option writing 'It could be dangerous'.
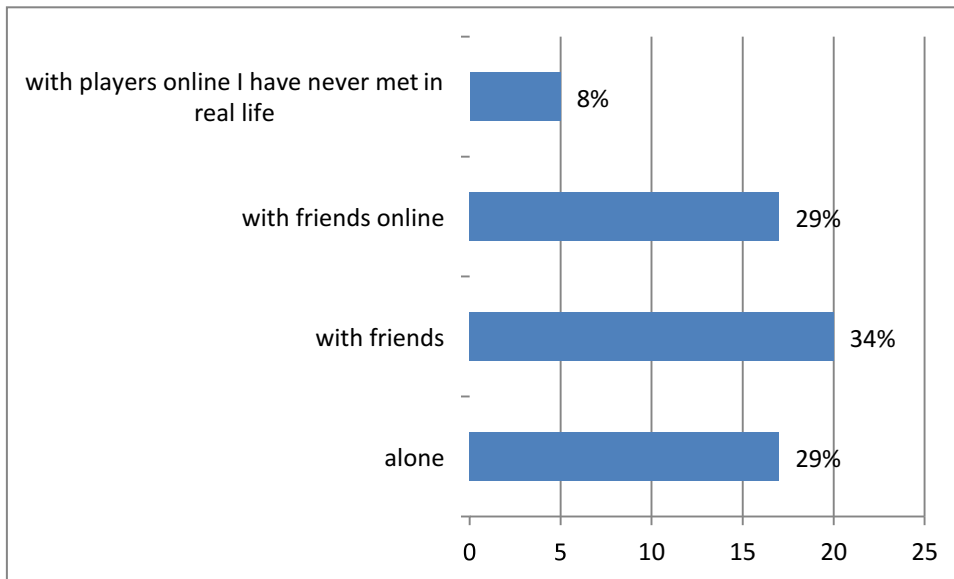
Figure 6: Children indicate how they like to play digital games

Children who indicated that they played with friends online were asked whether they played with either sex or only one. The majority of the boys and girls who play digital games online do so with either sex (Figure 7 and 8).
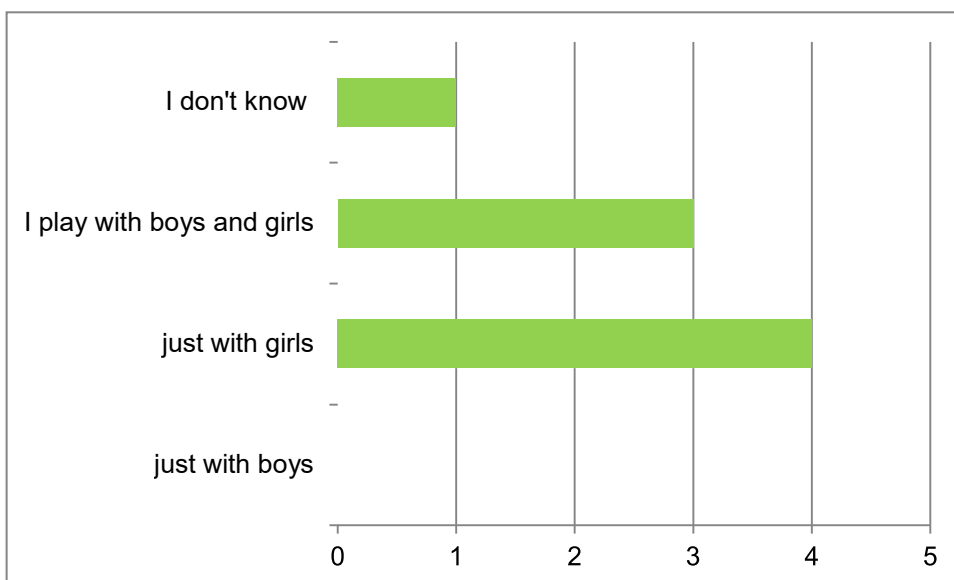
Figure 7: Who girls play with
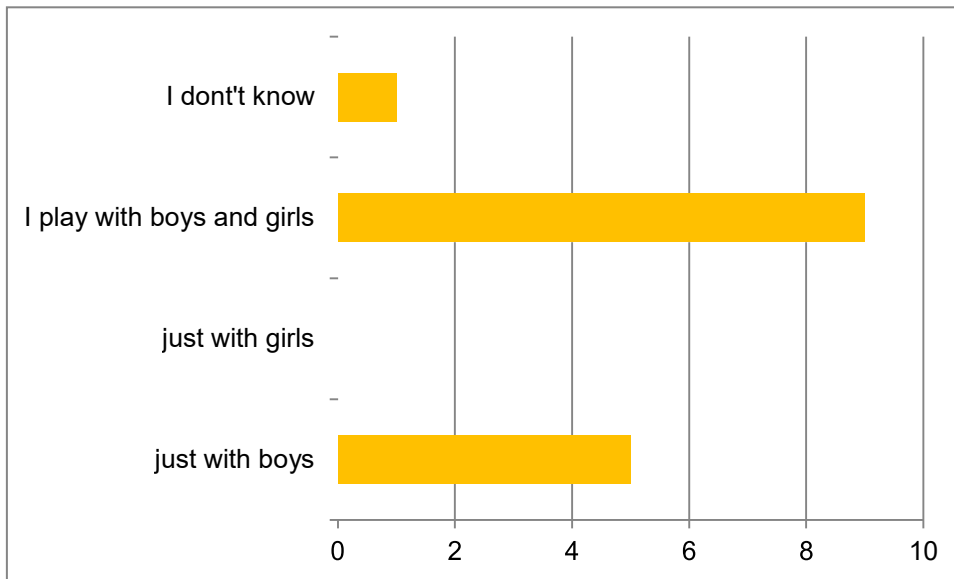
Figure 8: Who boys play with

Children were asked about their parents' attitude towards digital games and had the option to tick as many statements that applied (Figure 9). The majority of children indicated that their parents exhorted them to play outside more often. Interestingly, nine children made qualitative notes next to the answer options indicating that their dads liked playing digital games but not their mums.

I was keen to pursue children's perceptions of what they thought their parents felt about their digital game play during the interviews, in order to get an idea whether children thought this might affect their game play habits or attitudes.
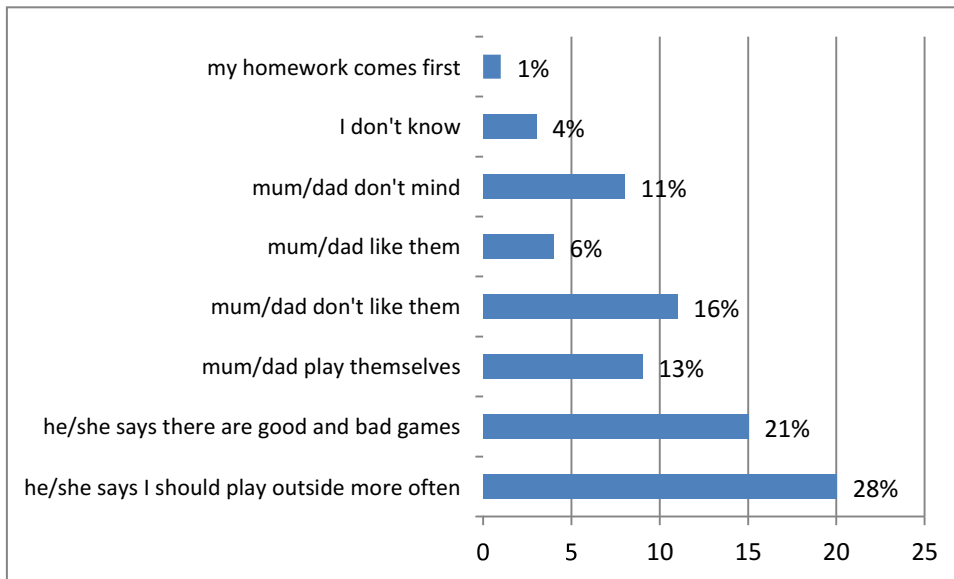
Figure 9: Children indicate what their parents think about digital games

Children provided one word answers to the question 'What do you think you can learn from playing computer games?'. Answers are depicted in a word cloud (Figure 10). The four most frequent answers were Nothing, Cooking, Spellings, and Eye to Hand Coordination. As I explored these answers further during the interviews, many children referred to the game Minecraft as a source of teaching. For example, 10-year-old Fusion commented: *'If you are playing Minecraft, you can learn how to bake a cake because they actually give the actual ingredients of how to bake a cake'*. Ten-year-old Gean elaborated that *'when I played Minecraft that would teach me a lot, like, I learned about obsidian from the lava, I learned a bunch of new materials and just like building that, I learned quite a lot from Minecraft'*.

Figure 10: Children name what they think they can learn from playing digital games

Almost half of all the children indicated that they were mindful of the age limit set by games publishers, and more children than not agreed that digital games had the potential to make you addicted to them (Table 1). The majority of children indicated that they watched other people playing digital games online. When I explored this further during interviews, it turned out that they watched videos primarily accessed through YouTube, which served to enhance one's own game-play skills, to find out about new games, and give the pleasure of watching someone skilfully engaging in the same hobby. For example, nine-year-old Jenny commented '*I know about new game because most of the time, yeah, nearly every single day I look on YouTube. And when new videos come and then it says, like, new updates or trailers, or new game, I literally straightaway get my mouse click on that video and I literally keep my eyes glued to the screen*'. Ten-year-old Gean picks up skills from watching tutorials on YouTube: '*Like sometimes you get to, you can learn yourself and then on the actual menu you can – it tells you what the buttons are, or you could watch a tutorial on YouTube*'.

The majority of children indicated that digital games had the potential to make them feel both more relaxed and angrier. The topic of feelings associated with game play was pursued further during the interviews.

Table 1: Children questionnaire answers given in percentages

	Do you look at the age limit for computer games?	Do you think you can become addicted to computer games?	Do you watch other people play games?	Can games help you feel more relaxed?	Can games make you feel angrier?
Yes	47%	39%	81%	26%	16%
No	22%	26%	16%	3%	32%
sometimes	28%	NA	NA	58%	49%
I don't know	3%	3%	3%	13%	3%
Depends	NA	32%	NA	NA	NA

The next nine questions (Table 2 and 3) tried to ascertain whether children perceived any transfer from the digital game play into other domains of life, and whether they felt preoccupied by the game play beyond the actual play.

Half of all children did not seem to be preoccupied with particulars about a game play in school, but at least three quarters of all children indicated that at least sometimes they spent time thinking about how to improve a digital game.

Digital game play has a strong social element, with over 80% of children indicating that they at least sometimes talked to their friends about the games they played. When I pursued this further during the interview, 10-year-old Thanos commented that *'If all your friends at school just talking about the game, and then you have no idea what they are talking about, you can't join their conversation and talk to them about that. So, you want to play that game'.*

Over half of all children indicated that they, at least sometimes, were interested in developing their own game one day, and almost half of all children indicated that, at least sometimes, they felt that offline experiences were merging with digital gaming experiences.

Table 2: Children questionnaire answers given in percentages

	Sometimes when I'm at school I think about how I could solve a game challenge or play a better games	I think about how a game could be improved	I talk to my friends about the games I play	I think it would be fun to develop my own game one day	There are situations in real life where I get the feeling that I am in the game
Yes	22%	53%	66%	47%	19%
No	50%	19%	12%	28%	47%
sometimes	19%	22%	19%	6%	28%
I don't know	9%	6%	3%	19%	6%

The majority of children indicated that they were not forgetting to eat while playing, but 69% stated that they liked to snack during game play, if only sometimes. The majority of children denied trying out moves played by characters in digital games in the offline world and an equal number of children either denied or agreed, if only sometimes, to be dreaming about their digital game play.

Overall, responses in Table 2 and 3 indicate that at least some children experience a transfer taking place from their digital into their non-digital worlds with 'talking to friends about the games I play' scoring the highest agreement.

Table 3: Children questionnaire answers given in percentages

	I forget to eat when I am playing games	I like to snack when playing games	Sometimes I try game moves in real life	Sometimes I dream about the games that I am playing
Yes	22%	41%	31%	13%
No	53%	31%	60%	47%
sometimes	22%	28%	6%	34%
I don't know	3%	0%	3%	6%

In line with the critical-realist epistemology adopted in the present study, the questionnaires sought an insight into children's reality of digital gaming habits, behaviours and attitudes, and supported the exploration of the research question of how children experience their digital games play.

Furthermore, the answers helped me to prepare for the interviews, for example, by doing research into the particular games children play. The subsequent interviews sought to understand how children interpret their reality.

4.3 Interview Findings

This section presents interpretations of the semi-structured interview data based on what the eight participating children shared about their perspective on play and digital play. The themes that I address in this section were identified from the interviews through an active coding process, which was detailed in Chapter Three.

The first part of the interview explored with the children the research question of how they experience their non-digital play. The second part of the interview explored with the children the research questions of how they experience and make meaning of their play on digital games.

Both parts were subjected to a separate reflective thematic analysis, hereby providing separate sets of themes and thematic maps. The chapter finishes with making links between the themes generated for all research questions.

Participant information can be found in Table 4. To protect their identity, children chose pseudonyms for themselves.

Table 4: Participant Information for Interviewed Children

Pseudonym	Boy/Girl	Age (years)
Jenny	Girl	10
Teddy	Girl	12
Gean	Boy	10
Thanos	Boy	10
Fusion	Boy	10
Jenkins	Boy	12
Batman	Boy	9
Superman	Boy	10

4.3.1 First Thematic Analysis

The first thematic analysis explored the research question of children's experience of non-digital play. As shown in Figure 11, four main themes were identified: 'Play as a social experience', 'Feelings associated with play', 'Agency', and 'Adults don't play'. From these four main themes, five sub-themes and two subordinate sub-themes were identified. There are, of course, aspects of children's experience of play which overlap across these themes. The following should, however, be considered as a sound interpretation of experiences and meaning-making in general, for it does not consist of isolated ideas, but of ideas which all stand in relation to each other.
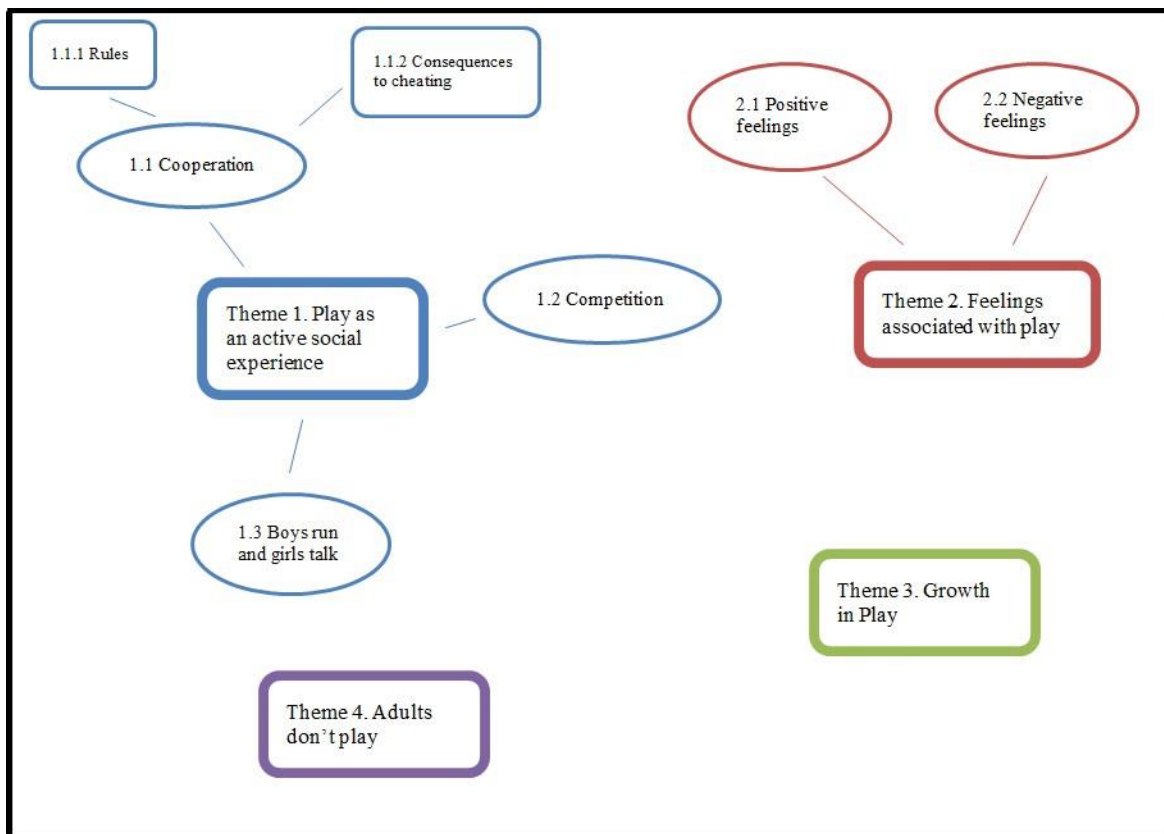
Figure 11: Final Thematic Map 1 identified from children's views about how they experience their non-digital play

4.3.2 Theme One: Play as a Social Experience

This theme had the greatest allocation of codes, sub-themes and subordinate sub-themes in comparison to other themes. All children described their experience of playing as something that happens through an active interaction with others, mainly peers, and the three sub-themes and two subordinate sub-themes encompass how children experience their play through that interaction.

All children were confident in describing play as something happening with friends.

> *Thanos:* I think play is just you just mess around with your friends and try and beat
>
> them and it's just having fun with your friends I think play … is.

Fusion: I most of the time play with my friends out on a bike going to, like, places. We go to, like, this kind of mountain part in N.

Jenkins: Basically say, you're playing – the only games that I can think of we don't play with friends or you don't need like a second person is probably computers.

Jenkins: So when I'm playing with my friends, you are just more happier and it's just, it's better because you can, like, relate to each other and just that sort of thing.

While peers and physical activity were identified as important objective criteria for play, some children regarded a process of mental activity as playing too, for example, reading, drawing, or chatting.

Teddy: I do a lot of drawing. I have a couple of sketch books. And then I can't call them diaries because they're not diaries. I just, like, have a notebook that I put all my notes in.

Interviewer: Football and basketball. Tell me, what else do you play?

Gean: I could sometimes just read a book and do homework.

Jenny: Sometimes I just play, like, normal game like tag sometimes with friends outside. Sometimes I just, like, talk around with them for a while, we tell each other about stuff that they always like about –

Sub-Theme 1.1: Cooperation

Children described how play came about through a process of cooperation and negotiation with peers.

Jenny: Because, like, I get, I always – when I play tag, I always like to cooperate with other people too, and it's, like, really fun and then you forget why you like playing with them. Like, I always think of that and it disappears.

Jenkins: Well, the same thing like Fusion said, put your hands up and who has the most votes or if you have pens or anything, we basically – if we have a red pen or blue pen, the red pen is equals football and the blue pen equals basketball and they put it behind their back and shuffle them and then you need to pick one.

Thanos: Well, if there's more than, like, two or three people we would mostly go outside. Because on the PS4, it's, like, just maybe two or three people playing at a time. And some people just don't want to do that so we just go outside.

This process of negotiation and cooperation offers many possibilities for the development of social-emotional skills as Fusion describes very candidly. He describes how play is managed as they go along to maintain it a play experience.

Fusion: Well, when I play I try – if I'm not good at the game, I will get annoyed easily. I try to stay my calmest and then I'll tell one of my friends if I'm struggling a bit and then we can only do a good decision about if there's one thing I can do and the other ones can't do for, like, say if it's like hide and seek. I'm not a good hider because there are not many places that I can be.

Fusion: And then if it's a game that the person who doesn't really like the game too much will give them [0:08:54] [Indiscernible], like, help them out and, like, give them something that can help them because they are not good at the game.

Subordinate Sub-Theme:1.1.1 Rules

When children talked about play, they associated it with games that have rules. A game with clearly defined rules is much easier to describe and explain. Rules can be

negotiated through cooperation and negotiation or can be pre-set. Children are, of course, more likely to internalise rules they have negotiated themselves. Rules seem to coordinate the interactive play, and it is important that everyone honours the rules, which requires an overall acceptance from all children.

> *Interviewer:* Interesting. OK. How about you, Fusion, how would you describe what play is to an alien?
>
> *Fusion:* Well, a little bit like Jenkins said. It's like he wants the alien to copy him. While I'm doing what he is doing or whatever, what I'm doing is, like, a sport, and then I tell him, like, what's about that. Say football, I would say, game is an activity and, like, helps you with fitness and stuff. And if it's football, you're, like, passing the ball and stuff. While you're passing the ball to foot to foot, you pass it to him and you will probably try copy the best you could.
>
> *Interviewer:* So you would explain the rules to the alien. OK.

Gean talked about a game he and his friends had come up with spontaneously on the morning of the interview, and he described the rules.

> *Gean:* Sometimes we play, what's it called, the PlayStation. But other times like today, we went on the trampoline and we have the game where you have to throw the ball into the trampoline and the people out there try and make it so the ball don't touch the bottom of the trampoline.

Jenkins, too, elaborated on the rules of his favourite game, a game which he and his peers had come up with on the school playground.

> *Jenkins:* Yeah. And if you squeeze someone's thumb once they are murderer. If you squeeze someone's thumb twice, they are a sheriff. Basically, it's a game of tug. So if

the murderer destroys all the other people then the murderer wins. But if the sheriff destroys the murderer before the murder, yeah, tugs all the people then the sheriff wins. And basically, sometimes people lie about who they are so it's really hard.

However, too many or complicated rules can lead to an activity no longer being regarded as play. This leads to rules not being internalised.

> *Jenkins:* It's just, like, a pretty simple and fun game because I don't like games that are, like, really complicated because that doesn't really make a game fun if there are too many things. And, like, it just – it's one of those – because it's, like – it's just fun because it's not complicated and you can play it with your friends. And usually, games you play with your friends are way better than normal.

Subordinate Sub-Theme 1.1.2: Consequences to Cheating

With rules comes also the possibility of breaking rules – either unconsciously or consciously. Children described how cheating the rules had consequences such as injuries and how it provoked strong feelings. Cheating is associated with the primary emotion, anger.

> *Thanos:* Football, if I get cheated on, I get mad and then I get them back but I don't cheat when I do it. I just, I use the shoulder pass and then do it to them [??? 55:26].
> *Interviewer:* It sounds like when you're cheated on in life, that's more of a bigger deal than in computer games. Why do you think it's different?
> *Thanos:* Because in the game, it's like it's on a TV.
> *Gean:* It's just a game, it's not real life and doesn't affect you really.
> *Thanos:* Yeah, 'cos you … cannot be injured and then that would, like, affect the game.

In the transcript above, Gean makes an interesting point where he compares being cheated on in digital game play to cheats in offline play. He implies that the consequences of offline cheats could have real and potentially serious consequences.

Cheating can put an abrupt end to a play activity experienced as a flow moment (described in more detail in Theme 2), and children are reminded of their vulnerability. This takes the experience out of the here and now.

Fusion describes how cheating can lead to reiteration of the rules, while Jenkins points out that cheating annoys him and creates conflict in play. Not only does it put an end to play, but it also affects their sense of competition and blocks their opportunity to win fairly.

> *Fusion:* My reaction, I wouldn't be happy. I would say like, "Don't cheat." As we said, "Don't do that and don't do that."
>
> *Interviewer:* I see.
>
> *Fusion:* If we have to, we will repeat over the rules, which is only going to take, like, a minute or two.
>
> *Interviewer:* I see. How about you, Jenkins?
>
> *Jenkins:* I would get annoyed because when they cheat, you are just like, "You can't do that. You can't do that." And then if they win by cheating and then they start milking it, you just start getting annoyed. It's like, "No! You did not win. Stop saying you won and stop telling other people you won because you didn't." And stuff like that.

Sub-Theme 1.2: Competition

Children's play is not aimless and the aim they attach to their play can often have considerable value for them, which becomes apparent in this sub-theme. The strong feelings of competition and desire to improve one's play became particularly salient in the movement play they described. Every child makes an effort to gain more or do better than their peers.

Gean: I'd describe play as when you're trying to have fun, and you're just messing around and still being competitive and laughing and just, like, do an activity. And that's, like, usually the aim of the game is for fun. And then it is usually a game as well when you're having fun.

Fusion: Well, I just like having fun and just like my friends telling me what's good as a goal keeper, what are the best.

Children described they would rather forfeit a play experience if it meant they could not compete adequately.

Gean: There's games that I don't play with somebody because they're just really good and I can't beat them. So, I just choose not to play that the one that they're all good at.

Jenkins: So when we do play football, I usually just like – because, like, I'm really bad at it and I really don't – I just really don't like it. I usually sit out. So yeah.

Thanos made an interesting point when he described how play has changed for him over time. Younger children, he implies, lack the awareness of their skills in play, assume they are good at play and have more confidence. As children grow up their self-doubt, reflection and critical analysis of their performance grows too.

Thanos: Well, I think when you're older you just want to be the best out of everyone. When you're younger, you're just like, you just think you're the best so you do it.

Interviewer: So, when you're younger you just think you're the best anyway.

Thanos: Yeah, even though you're just not. And then when older you just realize and

then you just try to be the best and that makes you more competitive.

Sub-Theme 1.3: Boys Run and Girls Talk

Both boys and girls described differences in their play. While boys and girls described

male play as more active and aggressive, girls and boys described female play as more

sedentary and chatty.

Interviewer: Not quite the same. Can you think something that's not quite the same?

Superman: I think boys play more rough than girls.

Jenny: Like, most of the time I hang out with my friends, like, my best friends. Like

not the ones I only meet in school, like, most of the time outside, like, near my street

or near my – the place I go, which is nice because we can also talk around.

Gean: I think boys play more than girls. Just in my class only, like, two girls played

like computer games, they aren't just on phones texting. And then, like, most of the

boys had, like, a PlayStation and play actual games.

Jenny expressed some disbelief at the nature of boys' play and wondered

whether they would ever act like girls.

Jenny: They play differently to girls because they always, like, play fight and they do

like more stuff they shout, they scream while girls are, like, wondering, like, what is

even going on with them. They're, like, wondering when are they ever gonna

change like me? I always think if they're going to change.

Fusion described how he thinks that girls had a less competitive edge and were more sympathetic towards the feelings of their peers.

> *Fusion:* At school once in my primary school, we were playing with a girl, me and my friends because she wanted to join in, and, like, her other friends did as well and it was – so it was a split, so boys and girls against boys and girls so yeah. And then they are usually like, 'Oh no! I don't want to win against my friend because they are my friend and I just don't want to, like, be mean to them.' And then boys don't – just don't really care really.

Children also described differences in how they choose to resolve conflict that arises in their play. While boys described how they got angry and got back at their peers, girls fell out and parted ways. This notion is also captured in Theme 2 Feelings associated with Play with corresponding interview excerpts.

4.3.3 Theme Two: Feelings Associated with Play

The children interviewed in this study attached strong feelings to their play activities. While the opportunity to play was associated with positive feelings, it was reported that those feelings quickly changed into negative ones when dynamics were changed.

Sub-Theme 2.1: Positive Feelings

Children described their play experience with words such as *having fun, feeling great and good, messing about, laughing* and *an activity that makes you happy.*

Feelings of freedom and agency were often associated with a good play experience.

Batman: Because I can just run about and do whatever I want.

Interviewer: Whatever you want. Is that important to be able to do whatever you want?

Batman: Yeah.

Interviewer: What do you like about being able to do whatever you want?

Batman: Because it feels good.

The freedom play offers from adult supervision by teachers or parents makes children happy.

Fusion: Well, it makes me feel happy because I don't get to see him all the time. It will only be school and stuff. But then every time at his house, it's much more fun because then we don't always have a teacher to say no, we can't talk and stuff.

Jenny: Because also – There aren't many people that you can, like, talk, like, privately and if I feel, like, free and they feel, like, we're all free instead of, like, with our parents and our, like, probably our siblings, like, watching us.

Play was described as having the power to make you feel better when you feel bad.

Jenny: Play is, like, when you group together and cooperate. And also, like, get along with each other in case you like, if you're, like, in a bit of a bad mood, then you can like, get together and then it's all back to normal, but even better, and …

Batman described a form of tiredness that followed fun and energetic play which was not equal to actually feeling tired.

Batman: Not really, because outside, it's, like, a tiredness that's just, like, if you've been having fun, and, like, it's quite … I don't know how to say it, but, like, it's quite energetic and, like, sometimes, it can be quite, like, tiring. But then if you're inside play games, like it could feel, like, quite … it could feel … because for me when I play inside, not outside, it's like I feel quite, like, actually tired.

Play was described as an activity that took place in the here and now where children got caught in the moment. Play, as such, was seen as transitory. Gean used the words 'get in the zone' which captured the sentiment of a flow experience.

Gean: Yeah, when I play for my actual football and basketball teams. I don't get –
Actually, I get just in the zone and I get really ready to – [crosstalk]
Interviewer: Get in the zone, I like that.
Gean: Really try.
Interviewer: Okay. What is it when you're in the zone what is that like?
Gean: It's so fun and then you just trying to in football since you can shoulder pass, I really try and shoulder pass. That's why I like football.
Jenny: Because, like, I get, I always – when I play tag, I always like to cooperate with other people too, and it's, like, really fun and then you forget why you like playing with them. Like, I always think of that and it disappears.

Sub-Theme 2.1: Negative Feelings

A good play experience was described as being in the moment and transitory. If, however, the play activity led to actual consequences, it was no longer regarded as play. Generally, play stops when things get serious. Jenny associated this with negative feelings.

Jenny: Sometimes it can be hard because when we play but then when thing, like, gets out of hand it's, like, get, like, really hard. Things get out of hand and next thing you know everyone is going home with a bad mood.

Many children associated negative feelings with play when the rules were too complicated. This evoked feelings of inadequacy or it simply stopped being fun. When there was no fun involved it was no longer seen as a play experience.

Jenkins: If you are used to it, I feel like it would be, like, OK, you know what to do. And then you can do good at it and it will be quite easy. But if it's, like, something you just started, it will be quite hard and you would not really know what to do if someone is watching.

Fusion: It's just, like, a pretty simple and fun game because I don't like games that are, like, really complicated because that doesn't really make a game fun if there are too many things. And, like, it just – it's one of those – because it's, like, – it's just fun because it's not complicated and you can play it with your friends.

Theme 1 described how children felt a strong sense of competitiveness in their play. This sub-theme captured how some children described frustration in play when they were experiencing a challenge they could not compete with.

Batman: … to do with this people can be better than you.

Interviewer: People can be better than you. That makes it hard then?

Batman: Because say football or so on, if someone is really good, they'll just get past you and you might feel a bit frustrated about that, it'd be hard.

In fact, some children reported picking their play partner according to how they could make them feel.

> *Gean:* There's games that I don't play with somebody because they're just really good and I can't beat them. So, I just choose not to play the one that they're all good at.

4.3.4 Theme Three: Growing in Play

The feeling of having a sense of control and agency over offline play became particularly apparent when children compared digital game play with offline play. Offline play offers not only more choices and options but also opportunities to grow and improve.

Gean and Thanos described how offline play allowed them to try harder and get better while digital game play limited their competitive aspirations.

> *Gean:* I'm not really sure. Like in real life you can get more, like, angry and try harder, but in that just really annoys you. I don't know why.
> *Interviewer:* Okay. So, in real life you can get angry but then you can try harder and you can't do that on computer games.
> *Thanos:* Usually –, you can't get better at FIFA and just, like, oh, I'm gonna try harder now. It doesn't, like, … if you lose a football game one week, you can just the next week you can try harder and you can just be more focused on the game and then you probably get a bit better.
> *Interviewer:* What is stopping you in online games from becoming better, what is it?
> *Gean:* It's harder to get, like, better at online game. Let's say you're new to football, it's easier to get better at football. And let's say you're new to Fortnite, it'd be harder to get really good at Fortnite than it is to get better at football. Because, like, I got better at Fortnite, but once I've got to that stage it's as good as it can get.

Jenkins and Fusion continued this theme and described how they felt that offline play offered them opportunities to grow, learn, and improve, while digital games were just entertainment.

> *Jenkins:* Well, in real life, you can learn more. So you can grow more and you learn more about what's reality and you learn more about what you need to know to, like, survive in life. And you just understand more. Yeah. But then with video games, it's more – you learn more about the game, a different reality that's not real life. So you learn about something that has got nothing to do with survival in the world but just entertainment.
>
> *Interviewer:* I see. How about you, Fusion, how is playing computer games the same or different to playing in real life?
>
> *Fusion:* Well, very different to real life because in real life, it's like you learn more. You grow your knowledge more and more and more.

Superman pointed out that offline play offered more options, which he felt as less limiting than digital games.

> *Superman:* Because, like, say in games, you just … it's like if you're not playing a different game, then … if you're playing the same game for so long, it's quite boring because you're doing the same thing over and over again. But in real life, you could … let's just say if you got bored, you could have, like, lots and lots of options of what to do.

4.3.5 Theme Four: Adults Don't Play

When I explored with children whether adults play, there often seemed to be a delay and puzzlement in their answers, along with a general lack of knowledge of what it actually was that adults got up to. Play, as Jenkins below suggested, seemed to be regarded as a social activity unique to children, not as something they have in common with adults.

> *Interviewer:* Okay. What sort of play do they do when they're not on their phone? Do they do play?
>
> *Superman:* Sometimes, but sometimes people just go out and … not sure, I don't know what they do.
>
> *Interviewer:* How come you don't play with adults? What do you think?
>
> *Jenkins:* Because they are not really my age and we don't really have anything in common really.
>
> *Interviewer:* Okay. How about Batman, do you think adults play?
>
> *Batman:* I think they don't really play, but they go outside a lot.

Batman continued to comment that adults might play if they had a younger child suggesting that children their age no longer needed, wanted, or got parental involvement in their play.

> *Interviewer:* They go outside a lot.
>
> *Batman:* If they had a younger child, then they'd probably play with them.

Jenny comments that play offers freedom from parental control and as such their involvement is not desirable.

> *Jenny:* Because also – There aren't many people that you can, like, talk like, privately

and if I feel, like, free and they feel like we're all free instead of like with our parents

and our, like, probably our siblings, like, watching us.

Not wanting parental involvement may also be due to children perceiving adults as not being capable of their play. Many children, such as Gean below, indicated that adults might try to play, but then they would not take it seriously enough, thus suggesting that adults were lacking a genuine interest in, and appreciation of, the contents and value of play that children attached to it. Fusion continued to comment that adults were simply not good at playing. It appears that to qualify as a play partner, an adult needs to show a genuine interest and appreciation, and to take play seriously.

> *Interviewer:* What do you think adults play? How do they play?
>
> *Gean***:** I think, like, say as a professional they'd definitely be more competitive because they want to be the best but if it's just two adults that are just doing it for fun, they'll just laugh about and not try or they'll try but not much, yeah.
>
> *Interviewer:* So you say they are not as good. How else do adults play differently?
>
> *Jenkins:* Because, like, say if you are playing basketball, I feel like adults would not really be into that because they might have jobs so they are more interested in that instead of playing games and then they just don't really. They play way different because of that.

Jenkins suggested that the lack of play skills in adults might be due to having different priorities, for example, a job. This notion was continued by Teddy below, who suggested that adults did what they did, and this did not include playing, thus, again, suggesting play as something only children did. Fusion, however, suggested that adults would

love to play, but that their jobs were keeping them from doing so. Therefore, adults were considered as having responsibilities and having to deliver performances, while children were still free to play. This may also suggest that children perceive play as a leisure activity which has not got the same important status as adult activities.

> *Interviewer:* Okay, how about you? How do you think adults play, Teddy?
>
> *Teddy:* I don't think they play at all.
>
> *Interviewer:* They don't play at all?
>
> *Teddy:* Yeah, they clean and they cook, they go to work. They do everything that an adult would do.
>
> *Fusion:* If they have a job, they wouldn't be able to play very much because if they have, like, an office work or something, they will be out of there, like, 3:00 o'clock, 5:0 o'clock. And they wouldn't have all the time in the world to play with their children because I feel like most adults, if they have the time to play with their children, they would love to and like doing it. And then when there are some people, like, as my dad, he is a chauffeur, it's, like, so far the whole day, I've only seen him once.

4.4 Second Thematic Analysis

The second thematic analysis explored the research questions of how children experience and make meaning of their playing digital games. As shown in Figure 12, four main themes were identified: 'Digital games as social spaces', 'A different persona', 'Emotions' and 'Parents don't understand'. From these four themes, 12 sub-themes and five subordinate sub-themes were identified.
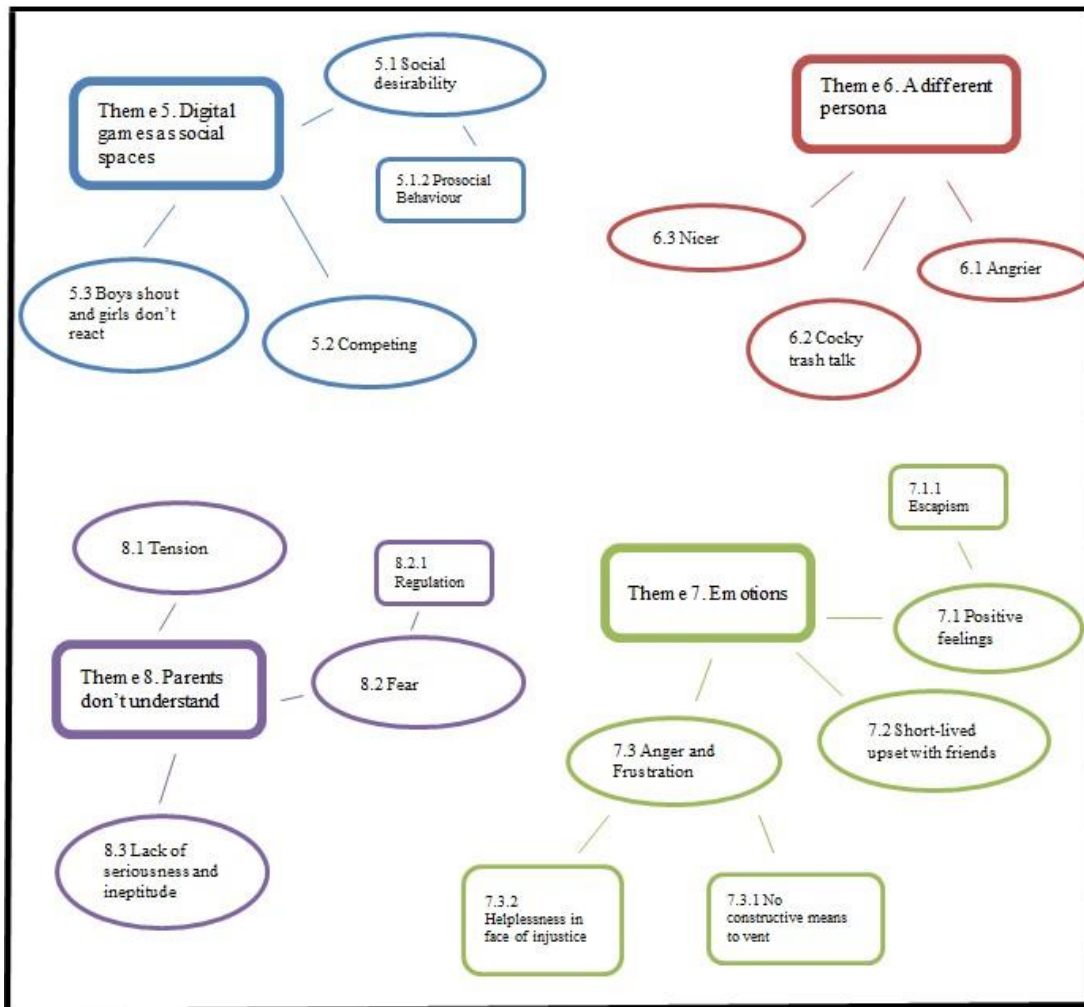
Figure 12: Final Thematic Map 2 identified from children's views about how they experience and make meaning of their digital game play

4.4.1 Theme Five: Digital Games as Social Spaces

Digital games offer social spaces where children spend their free time and maintain and deepen existing friendships. Children described their first ever gaming experiences as playing by themselves, but now the joint gaming is at the forefront of a good gaming experience. Being able to play with and against friends in multiplayer games appears to be a major motivation to play digital games.

Gean: I'd say they're important to me because you can still socialize even though you're not speaking to them while not looking at them. You can talk to people, you can hang out with your friends even though you're not at their house and just have fun.

Jenkins: Again, my friends.

Interviewer: Yeah. Why is it your friends?

Jenkins: Because it's just like I said, you got something in common. They are your friends so you enjoy playing with them and that's just why.

Digital gaming encourages a host of social activities that are not just limited to the actual play itself. Children share experiences of their game play and latest games, devices and new technologies, they swap, buy and sell games, do joint visits to gaming stores, or look through online channels (YouTube) and apps for new games, reviews, and experiences. Once they have decided to buy a game, they need to negotiate this with their parents.

Interviewer: Okay, so it's YouTube that helps you find new games. Okay, how about you, Batman, how do you find out about new games?

Batman: My brother usually tells me what games there are.

Interviewer: Okay.

Batman: Or when we go shopping to game stores …

Interviewer: Alright.

Batman: … I see games. And if they look good, I'll ask my mom if she can get it.

Sub-Theme 5.1: Social Desirability

Many children narrated that digital games were important to them for the sake of fitting in and being part of a friendship group that rates gaming highly and bonds over gaming experiences.

Interviewer: Have fun, okay. Anything else you can think of why it might be important to you playing computer games? You mentioned some good things. Interesting things.

Thanos: Well, say if all your friends at school just talking about the game, and then you have no idea what they're talking about, you can't join their conversation and talk to them about that. So, you want to play that game.

Subordinate Sub-Theme 5.1.1: Prosocial Behaviour

Within the sub-theme of social desirability, many children described instances in their game play where they felt strongly about supporting struggling friends by sharing knowledge, experiences, skills, and 'digital goods'. A friend who is not playing well does not pose a strong enough challenge, and this in turn makes the game-play experience less exciting, and chances of losing against opposing teams are higher.

Teddy: So, if I have an item in my clothing thing, whatever, there's something I use, I'd probably gift it to them or you can also greet people, you can – people which levels them up.

Fusion: I just try help them get better. If they always get bad luck, it's like their bloom isn't the best. Bloom is, like, where they aim and stuff.

Sub-Theme 5.2: Competition

Competing and winning has become more relevant as children grew up and started playing against real friends. Here is more at stake and winning and losing is not just visible to you but is made public. The play is not just a test of skill but a social situation where you can earn fame or humiliation, and this in turn increases the sense of competitive tension.

Interviewer: Now can you remember the first game you ever played?

Gean: For me, the games I play it would just usually be, it wouldn't be really competitive, sometimes it would be a high score game

Jenkins: Well, I mean there's a – if my friends ae having an argument about who is better we would settle it with a one v one, one fight

Fusion: I'll always check on YouTube what's the best way. I want to be the best player I can be. I've been playing a long time. My friends were always better than me. I see what they do and I'm like, 'Let me try and get good enough to do that.' I always try my hardest.

Being a good player is important to children to the extent that picking an opponent is a strategic matter. Preferably the opponent has to be less good, or at least on a similar skill level, to allow for some wins or at least an even match.

Thanos: There's a few people that, well, they obviously have been playing the same game with me so they like that game and yeah, they have to be funny and just, I don't really mind if they're that good if I'm just talking to them. But if I'm playing right next to them we're playing the same game, yeah, not really want them to be that good.
Thanos: Oh, I want to win and I don't want if it – I like it on the same skill level because I could win a match then they could win a match. So, it's just an even win.

Sub-Theme 5.3: Boys Shout and Girls don't React

Both boys and girls in the interview described how they experienced notable

differences in the way boys and girls approached a game play. All children in the interview played the same sort of games, apart from Teddy, who preferred games with an emphasis on socializing. She, too, however has experimented with Fortnite. Boys were described as showing stronger reactions and appeared more invested in the game, while girls were described as more constrained, as if they did not 'care about the game'.

> *Gean:* The girls don't, they don't really talk as much, they just when they die they
> don't say anything, they don't care. When I die I'm like, oh my God, and sometimes
> shout and stuff.
> *Interviewer:* Okay, so girls are quieter?
> *Gean:* Yeah, and they don't talk as much trash, they're not like, you're so bad, you're
> trash.

4.4.2 Theme Six: A Different Persona

Children described how they felt they were not themselves when playing digital games. It was described as an almost new form of role play where they presented behaviours and speech unfamiliar to them in the offline world. All children identified friends who acted completely out of character, and some added that they, too, acted differently.

> *Batman:* Yes, because it's just way different from real life.
> *Interviewer:* Tell me a bit more. How is it different?
> *Batman:* Like you're not yourself when you play games, you're like your gaming self,
> if that makes sense.

Children had interesting thoughts on why this might be so. Their theories mainly captured the notion that the lack of a visual component of the interaction, just leaving text

and voice, led to a disinhibition of behaviour. Some children referred to peers 'hiding behind a screen',' just being a voice', and not having an audience to judge them. Others described how one did not see the possible impact of an out-of-character behaviour and speech on another person, and, consequently, how one did not need to rein oneself in.

> *Superman:* But then as I would on the computer, I think because there's, like, less people to see my emotions, I could just do it, like, and just not really get … yeah.
> *Interviewer:* Okay, so they can get away with more things online.
> *Gean:* Yeah, 'cos it's just a voice.

Sub-Theme 6.1: Angrier

This sub-theme captured how children described their friends as acting much angrier on digital games than offline. Some children expressed something approaching disbelief at how different friends could act, to the extent that they did not recognise them anymore.

> *Fusion:* Well, when they are aggressive, it's like they – it's not like you don't know that kind – it feels like you don't know that kind of person even though you know them very well. And it's like when they are angry, I just feel bad sometimes because then when it's like – it hurts me a little bit, not in a bad way, in like a good way like I want to help them.
> *Batman:* Sometimes, my other friend at school, he's just normal. But then, when he gets some games, he rages and gets really annoyed and shouts.

Sub-Theme 6.2: Cocky Trash Talk

'Trash talk' began as a term used by sports fans and is often heard from professional prize-fighters such as boxers just before a match. The term has now spread to many areas where competitions take place. Not only does it serve to distract and demean the opponent in

114

the hope to decrease their performance, but children in this study also found that it was 'fun', and enhanced the mood in the game play.

> *Interviewer:* So, you mentioned trash talk a lot of times. What is it about that trash talk? Give me an example of trash talk. Okay.
>
> *Gean:* You're really bad at this game.
>
> *Interviewer:* Okay. Thanos?
>
> *Thanos:* Oh, you're trash, why do I even play with you?
>
> *Interviewer:* Okay, okay. How do you feel when you're being trash talked?
>
> *Gean:* I just feel like I'm joking around.
>
> *Interviewer:* Cocky, okay. Tell me a bit more, they're a bit more cocky?
>
> *Gean:* Yeah. Because in, like, real life when they may not be as good as it, they just – I don't know, they're just not as cocky in real life. But when on the PlayStation they actually are cocky and say oh, I'm really good, I'm gonna beat you. I do it as well.

Sub-Theme 6.3: Nicer

Teddy pointed out that digital games gave her the opportunity for practicing to be a nicer person, which she feels that, in 'real life', she is not.

> *Teddy:* I feel like a better person.
>
> *Interviewer:* You feel like a better person.
>
> *Teddy:* I'm a way better person than I am in real life.
>
> *Interviewer:* Okay. What makes a better person?
>
> *Teddy:* Just like being happy, supportive to people 'cos most people come online and then even if, it's, like, better coming online and talking to someone that you absolutely don't know, and, like, putting all your crap in front of them but then they can actually help you at the same time.

115

4.4.3 Theme Seven: Emotions

Playing digital games comes with a host of different emotions. Children described how they experienced all sorts of strong emotions which were often felt in a stronger way in the digital than in the offline world.

Sub-Theme 7.1: Positive feelings

Playing digital games was described as being important to children because it made them 'happy'. It was described as 'exciting', 'stops boredom'; games were said to 'entertain' and gave the feeling 'like I have done well in something'.

> *Interviewer:* What makes a good time on your computer game?
>
> *Teddy:* You feel free like you're conquering the world.
>
> *Interviewer:* And why do you think playing is important to you?
>
> *Fusion:* It makes me happy.
>
> *Interviewer:* It makes you happy.
>
> *Fusion:* It does.
>
> *Fusion:* It just makes me happy and I feel like it's something I can do forever and like no one bothers me and …
>
> *Interviewer:* OK.
>
> *Jenkins:* It's, like, a different reality.
>
> *Fusion:* Yeah.
>
> *Jenkins:* So in real life, if you were to go into a battlefield for the aggressive people that were to shoot you as soon as you step out, you wouldn't it and you will just be sitting down crying.

Jenkins mentioned above the notion of digital games being a 'different reality'. This notion was described by many other children. Children appreciate 'time away from the real world' for different reasons.

> *Interviewer:* Okay, so sounds like you're learning something. Okay. Batman, what else? Why is it important to you playing computer games?
>
> *Batman:* I think that time away from the real world.

Fusion stated that he liked to escape the real world where he often got hurt by his sister, and to dive into a world where he did not have to think of the upset.

> *Fusion:* I don't like – another good thing, if there's always that kind of sibling who doesn't like you that much and playing game just gets your mind off it as my sister hurts me a lot and just when I play, I don't really think of it.

Sub-Theme 7.2: Short-Lived Upset with Friends

As I explored with children how they experienced arguments with friends in digital games and how they were resolved, the general consensus was that they remained relatively short-lived and were not carried over into the offline world. Children usually stopped playing and then invited each other again for the next match via text or phone. When enquired why this might be, Gean pointed out that, unlike in the offline world, there were no real consequences to your well-being when cheated on during digital games.

> *Interviewer:* It sounds like when you're cheated on in life, that's more of a bigger deal than in computer games. Why do you think it's different?

> *Thanos:* Because in the game, it's like it's on a TV.
>
> *Gean:* It's just a game, it's not real life and doesn't affect you really.
>
> *Thanos:* Yeah, 'cos you … cannot be injured and then that would, like, affect the game.

Sub-Theme 7.3: Anger and Frustration

The experience of anger and frustration while playing digital games was a theme that all children had something to say about. Many felt that digital games had the potential to aggravate negative feelings more than would be possible in the offline world.

> *Superman:* When I'm, like, in real life, I don't really respond more. But in a computer game, I get more angry than I would in real life.
>
> *Interviewer:* You doubt yourself, interesting, okay. What do you think, Batman, what is it that can make you angry in a game?
>
> *Batman:* I think because … I can't really explain.
>
> *Interviewer:* If you could explain it.
>
> *Batman:* I think it's because, in real life, they … it's not as annoying …

Subordinate Sub-Theme 7.3.1: No Constructive Means for Venting

When children explored what it might be that could make them angrier and more frustrated in digital games, Gean and Thanos captured their feelings as not being able to turn the angry energy into something constructive. In the offline world, they can get angry, but then channel this anger into trying harder. Once you have reached a certain skill level in a digital game, it is as good as it gets, and then you are kept from growing better.

> *Gean:* I'm not really sure. Like in real life you can get more, like, angry and try harder, but in that just really annoys you. I don't know why.
>
> *Interviewer:* Okay. So, in real life you can get angry but then you can try harder and you can't do that on computer games.
>
> *Thanos:* Usually –, you can't get better at FIFA and just, like, oh, I'm gonna try harder now. It doesn't like … if you lose a football game one week, you can just the next week you can try harder and you can just be more focused on the game and then you probably get a bit better.
>
> *Interviewer:* What is stopping you in online games from becoming better, what is it?
>
> *Gean:* It's harder to get, like, better at online game. Let's say you're new to football, it's easier to get better at football. And let's say you're new to Fortnite, it'd be harder to get really good at Fortnite than it is to get better at football. Because, like, I got better at Fortnite, but once I've got to that stage it's as good as it can get.

Superman tried to understand the increased frustration by blaming the repetitiveness of some games.

> *Superman:* Because, like, say in games, you just … it's, like, if you're not playing a different game, then … if you're playing the same game for so long, it's quite boring because you're doing the same thing over and over again. But in real life, you could … let's just say if you got bored, you could have, like, lots and lots of options of what to do.

Subordinate Sub-Theme 7.3.2 Hopelessness in Face of Injustice

Another reason children identified as adding to elevated anger and frustration in digital games was their experience of cheaters and injustice. They described a sentiment of having no agency over upsetting experiences. Superman described

that, in offline play, one would apply to a referee who then would punish the perpetrator, thus restoring the equilibrium. This resource and satisfaction was felt as unavailable in digital games.

> *Superman:* I'll just, like, I'll probably if the ref was saw it, then sometimes they will just, like, give them a red or yellow card and then they would give me a free kick or a penalty for, like, other … I think it's like consequences to the other team or a reward to the team for, like, … not a reward, just like something that would look, like, sort of make them feel better.

Children also described their helplessness in the face of those who paid to win. The more money one spent on a game, the more success they would score, regardless of skill.

> *Gean:* Probably make it so you can customize a character and make it so it's not pay to win. Because when it's pay to win it's annoying when you come up against someone who spends a lot of money on their team and stuff.

Jenny described that even if there was the option to pursue someone who caused you stress through cyberbullying channels, it still wasn't 'a thing'. Hence, a player was vulnerable to distress they just had to live with.

> *Teddy:* Yeah, yeah, I do. So, basically in real life you know who the actual person is and then on the computer game that they can always play and act, like, act to be a different person than they actually are. So, for example, online they can get caught for cyberbullying but that thing isn't, like, a major thing at the moment. So, let's say you can be more rude and more mean to someone online than you can be in real life

because either way it damages the person, it still hurts their feelings, but online you don't notice it as much.

To make a digital game better, all children unanimously described their ideal game as one where they had more agency and freedom. If they had the option to create their dream game, it would involve many choices and options, and would not allow people to pay to win.

> *Jenkins:* I would include a not to pay to win. So the people that are rich can't buy something to win easily because that's unfair. I would include 1v1 so, like, player versus player.

4.4.4 Theme Eight: Parents don't Understand

This theme captures children's stories about their parents' attitudes to digital games, which is predominantly one characterised by dislike, fear, and confusion. Teddy stated that parents needed to understand the fact that in these times, playing digital games was the norm.

> *Teddy:* Oh, I can't really say anything because one, they're my parents, can't disrespect them like that, but I can obviously, like, change the subject saying, like, let's say it's coming up to 2020 and there's just that time. I think it's just like, how do I say this? Was it this time experience, what – How do I say this? For example, you have – I can't do that timing this is, like, time major of computer games.
> *Interviewer:* Okay, so we're in an era of computer games, yeah?

Fusion elaborated on how parents simply did not understand what their gaming was all about. According to him, parents judged the picture they saw on the screen and deemed it as unhealthy, but he stressed that there was so much more to a game which parents could not see.

> *Fusion:* What I would say it's like a game because a game is a game. It's like nothing that is in reality. But I'm a parent. It's a fun game. You can talk and stuff. You can make much. You can do, like, Parkour and stuff. It's not always just about shooting and fighting. Everybody thinks it is as adult. But it's actually also about you can build different kinds of creations. There's so much stuff you can do except just shooting and fighting.

Sub-Theme 8.1: Tension

Children describe how their enjoyment of digital games can often be dampened by the way parents feel about them. Their desire to engage in an activity which is played by peers they want to be regarded by stands in conflict with their desire to please their parents. Here, it became most obvious that the children interviewed were of middle childhood age, where the idea of opposing parents still comes with feelings of guilt.

> *Jenkins:* But it is so – it's still makes me feel different because if my mom and my dad hated video games, it would make me feel different because then, like, I'm doing something and playing something that my mom and dad don't like and it just makes – you just feel, like, a little bit upset.

Sub-Theme 8.2: Fear

Children had different explanations as to why their parents did not like their game play, and one reason for that which they were repeatedly offered was one of fear: fear that their children might 'get bad eyes', 'become psychotic' or 'commit genocide' if left to their games for too long.

>*Jenkins:* Because they probably think that, 'Oh, if my child plays these aggressive computer games, they will turn into a mass killer, "committing genocide," or something like that'. But that's not just really the case. They are only playing it to have fun.

Subordinate Sub-Theme: 8.2.1: Limit

This fear drives many parents to control their children's game play by regulating game time, setting limits, and controlling the nature of the games. While children expressed some frustration about the control, they generally expressed understanding and compliance with their parents' attempts.

>*Interviewer:* Okay. Okay, so what do your parents think about computer games?
>*Gean:* They think it's really bad for me and they try to limit me.
>*Interviewer:* Okay. How about, what does your mom think, Thanos?
>*Thanos:* Yes, she is quite strict and she doesn't just let it slide … on it the whole day.

Sub-Theme 8.3: Lack of Seriousness and Inaptitude

When attempts were made to integrate parents into their digital game play, children evaluated their involvement critically. The main criticism related to parents not taking the play seriously and their poor skills and confusion about it.

Gean: I've only played with parents.

Interviewer: Okay. So, how are they when you play computer games with them?

Gean: They are really bad.

Interviewer: They are really bad.

Gean: And we just laugh at them, they don't take it seriously.

Thanos: Yeah. They just laugh if they, like, die.

Gean: It's so bad, and they don't know when they die.

Thanos: They're just confused. What's happening?

4.5 Children's Reflections on Offline Play versus Online Play

When children thought about the differences between offline and digital play, a common theme was the experience of feeling limited in their agency in digital games, and the fact that, in the offline world, they had more freedom to make choices and channel emotions into growth experiences. Gean pointed out that a digital game only allows you to be as good as the game is programmed to allow you and beyond that there is no scope for improvement. This leads to frustration.

Interviewer: Tell me more, that's an interesting point you make, can be more frustrating, why do you think it can leave you more frustrated?

Gean: I'm not really sure. Like in real life you can get more like angry and try harder, but in that just really annoys you. I don't know why.

Interviewer: Okay. So, in real life you can get angry but then you can try harder and you can't do that on computer games.

Thanos: Usually -, you can't get better at FIFA and just like oh, I'm gonna try harder now. It doesn't like...if you lose a football game one week, you can just the next week you can try harder and you can just be more focused on the game and then you probably get a bit

better.

Interviewer: What is stopping you in online games from becoming better, what is it?

Gean: It's harder to get like better at online game. Let's say you're new to football, it's easier to get better at football. And let's say you're new to Fortnite, it'd be harder to get really good at Fortnite than it is to get better at football. Because like I got better at Fortnite, but once I've got to that stage it's as good as it can get.

Jenkins refers to digital game play as a form of entertainment in a different reality where you pick up skills that are only useful and limited to that game. 'Real life' however, offers growths opportunities that raise your overall awareness and 'survival' skills.

Jenkins: Well, in real life, you can learn more. So you can grow more and you learn more about what's reality and you learn more about what you need to know to like survive in life. And you just understand more. Yeah. But then with video games, it's more – you learn more about the game, a different reality that's not real life. So you learn about something that has got nothing to do with survival in the world but just entertainment.

Interviewer: Right. OK.

Jenkins: Yeah.

Interviewer: So you grow more in real life. Tell me about that.

Jenkins: So it's like if you grow more as in like you become more aware.

Interviewer: I see. OK. Not so much when playing computer games.

Figure 13 below shows a link between the sub-theme 3.2 'Growth' in offline play with the subordinate sub-theme 7.3.1 'No constructive means to vent' in digital play. Children experience the emotion of frustration in both offline and online play but it is only in offline play where they feel they can channel it more constructively into a growth experience.

125
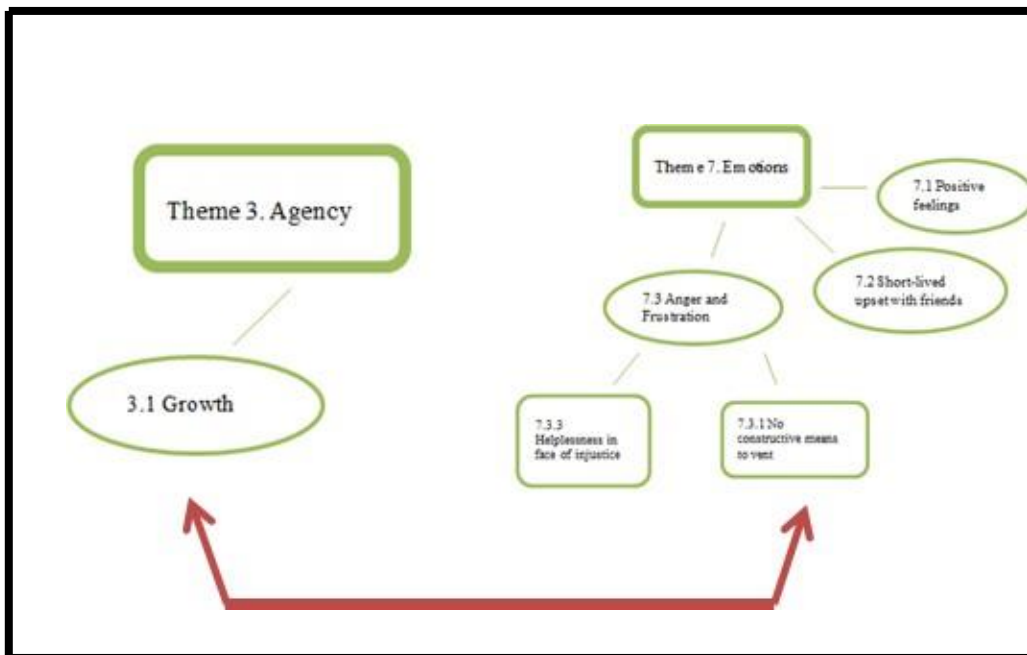
Figure 13: Link between first and second thematic map

4.6 Summary

This chapter presented the experiences and meaning children make of their offline and digital game play. The themes presented pointed to play being a vital occupation which children claim as a space unoccupied by adults. Children experience any play as something that happens in the here and now with no consequences that go beyond the immediate experience. Children grapple with many emotions during their play, which are felt stronger, though are short-lived, during digital game play. Children have different explanations to make sense of this difference. They also described some of the tension they experienced in digital game play, trying to respect parental limits and their desire to integrate with a peer group.

Finally, children experience their agency and growth opportunities limited in digital game play and feel that they can channel feelings of frustrations more constructively in offline play.

5: Discussion

This study explored children's perspective on play and digital games play by means of questionnaires and by asking them about their experiences and how they make meaning of them. Key findings are considered in relation to the literature and explored in more detail in the context of middle childhood and self-educational processes against the backdrop of Vygotsky's sociocultural theory and the humanistic-existential learning theory. Finally, the strengths and limitations of the study are discussed, and implications for parents/guardians and education professionals as well as for future research are considered.

5.1 Key Findings from Questionnaires

The questionnaires not only supported the identification of children willing to participate in the interviews and provided information to explore further during the interviews, but also helped to gain an understanding of trends in digital gaming behaviours and attitudes. Therefore, findings contributed towards answering the research question of how children experience their digital games play.

More than half of all children (58%) indicated that they played digital games on a daily basis, with boys averaging a daily playtime of 3.8 hours and girls 2.3 hours. The fact that girls reported less playing time is in line with Ofcom's (2020) findings where girls of all ages report playing less digital games than boys. Children in the current study reported playing longer than the national average (Figure 4), as Ofcom (2020) reported that 79% of the 8–11-year-olds were playing games for around 9.5 hours a week.

However, the self-reported playing time could be higher, as noted by Williams et al. (2009) in their research. They compared students' self-reported time playing games with actual behavioural data and noted that all players, but girls in particular, underreported their actual playing time. They attributed this underreporting to social desirability bias in survey responses, given the critical attitude and prejudice towards digital games in many households, educational establishments, and society as a whole. This underreporting of media use has also been observed in many other social scientific research studies (Kahn, Ratan & Williams, 2014).

The majority of children (71%) reported playing digital games with friends, either online or physically together, favouring Massively Multiplayer Online Games (MMO) such as Fortnite, Minecraft and Roblox. An increasing body of research exploring MMOS find their value for educational purposes in community-related effects on the gamers (Godwod, 2019). In these games, the game design and social entities of the player community are tightly intertwined, and researchers have observed a development of high social and moral codes (Fromme, Jörissen & Unger, 2008), a development of social-communication skills (Raudenaut, 2017), and an enhancement of social problem-solving skills and abilities (Kim, Park & Baek, 2009) such as altruistic behaviour, competition, collaboration, and sharing of knowledge (Godwod, 2019). As such, it seems that MMOs offer huge potential for deeper informal learning, and evidence for this learning was also found in children's narratives in the current study, which is explored further below.

5.1.1 Transfer Effects

The last 14 questions in the questionnaire enquired whether children experienced any transfer between the virtual and real worlds. For example, children indicated whether they spoke to their friends about the games they played, thought about improving a game, or whether they experienced moments in real life which felt like they were having an in-game

experience. Many children agreed with these comments, if only sometimes. Fritz (1997) developed an elaborate theoretical model describing transfers from digital games into the real world, particularly concerning their structure and occurrence; the word 'transfer' referring both to the transformation of what is transferred, and the process by which it is adapted to another world. Fritz postulates that transfers can take place across five different levels, for example, on a script or metaphorical level. On a script level, a player might be preoccupied with the game after game play and ponder about the particulars of a game. On a metaphorical level, a player might experience a Déjà-vu experience relating to the game when not actually playing. Fritz continues by describing 10 different types of transfers that can take place on any of these levels. For example, many children in the interviews and questionnaires indicated that they might turn to friends or YouTube to improve their game play. This sort of transfer would be a conscious problem-solving transfer, while a Déjà-vu experience is labelled an associative transfer, referring to a spontaneous connection between virtual impressions and real pictures and experiences. Children also referred to an emotional transfer taking place when indicating whether digital games had the potential to make one angrier.

Bigl (2009) interviewed adult game players on their experience of transfer effects between and within virtual and real worlds. Participants stated how the experience of various transfers often facilitated a positive aha experience or sudden insights. It is these very sudden insights which Frick (1987) refers to as Symbolic Growth Experiences in his paradigm for a humanistic-existential learning theory. There is evidence in the narratives of the children that such learning is also taking place during transfers, and this is elaborated on further below.

5.2 Key Findings from the Reflective Thematic Analysis

The interviews explored all three research questions with the children:

How do children experience their digital games play?

What is children's experience of non-digital play?

What meaning do children attach to their play of digital games?

The first part of the interview explored how children experienced their non-digital play, and the second part focused on their digital games play and the meaning they attached to it. Therefore, two separate reflective thematic analyses were carried out and then explored for similarities and differences.

Consistently with the reviewed research, children described play as an activity which is fun and characterised by choice, freedom, challenge, competition, and being physically active. Peer interaction was described as a key motivator to engage in play, both for offline and digital play. While only two girls were interviewed, all children made regular comments in relation to observed gender differences across both types of play. As likewise noted by Brockman, Fox & Jago (2011), girls preferred to spend more time fostering social networks, while boys went about their active play more boisterously. While girls were described as more sombre during digital games (5.3 Boys shout and girls don't react), boys appeared to invest stronger emotional attachment in their play.

In line with Sarachan's (2013) findings concerning the motivation of children in virtual worlds, children in this study experienced digital game play as an extension of regular play with its combination of social and non-social activities, as well as creative and rule-based structures. In this sense, digital games have created new interactive worlds and subcultures

which are characterised by tentativeness and ludicity. Sarachan (2013) also noted how engagement in digital games might encourage the development of new mental schemata required for functioning in these new subcultures.

While digital game play may generally be considered an extension of regular play, the thematic analysis of both forms of play also yielded some intricate differences experienced by children across their play. Children referred to traditional social practices in their digital play which they renewed or even reconstructed. This social construction is subsequently passed on to new members. For example, children talked about enjoying peer interaction, competition, and challenges across their play, but acknowledged how social practices around cheating, consequences, emotional expressions, and identity had shifted.

5.2.1 Semiotic Domains

Continuing the notion of new subcultures and mental schemata. James Paul Gee (2003) proposed the notion of semiotic domains. According to his theory, different areas of the living environment can be referred to as 'semiotic domains'. To function soundly in modern complex times, it is important to acquire, not only a number of domains from within the everyday world, but also several special domains, which have their own modus operandi and modes of communication. To open up to a new environmental domain requires acquiring a new literacy or new mental schemata. In the case of digital games, the domain, according to Gee, is a special, multimodal variation of a 'visual literacy'. Gee continues that, as one acquires the literacy of a new semiotic domain, one also starts seeing the world and oneself in a new way, in other words, one experiences an increase in reflexivity. Particularly in the non-every-day domains, connections are made to cultural groups, and new interpretive paradigms are developed which transgress the boundaries of one's own culture. As one interacts with the principles and modes of another semiotic domain, one experiences that the usual learning

and thought processes no longer work in this domain, which encourages their extension or transformation. The encounter of different world views goes even further in digital domains than in non-digital domains, as one can, for example, take on the identity of someone else.

There is plenty of evidence in children's narratives that this learning in the new semiotic domain is encouraged through peer interaction, during chats about games on the playground, or watching tutorials, as well as across wider social structures that have emerged around the digital game play such as watching YouTubers, visiting interactive or physical game stores, reading reviews, and negotiating with parents. Therefore, the learning that takes place is not just limited to the actual process of digital game play. The lateral learning, such as researching, buying, building up self-efficacy, status, and reputation is a considerable additional factor. Children battle with thoughts on fairness and injustice, for example, if they decry a system where money rather than skills moves you forward. Within the game, children move through social game challenges and structures, and the immersive didactics underlying the game ultimately lead to the gain and extension of world views and relations through participation in new social environments in the digital and offline worlds.

To sum up this section, there is evidence in children's narratives that virtual peer interactions, or participation in digital social environments, encourages learning processes, reflexivity and extension of world views. Digital games have created new social and interactive worlds, which simulate and further interactive processes and offer new forms of communication. These new social environments also seem to offer opportunities for new learning, which is evident in children's narratives. Vygotsky (1978) explains how learning is encouraged through interactions with others and describes these phenomena in his Sociocultural Theory. It appears that his theory can also be applied to virtual social spaces and a brief summary of his theory is provided below.

5.2.2 Sociocultural Theory

In his sociocultural theory, Vygotsky (1978) proposed that learning has its basis in interacting with other people. Following this interaction, the acquired knowledge is integrated on the individual level. Learning, however, is not just limited to adult and peer influences, but cultural beliefs, attitudes, and social factors likewise influence cognitive development. As children are allowed to stretch their skills and knowledge, often by observing someone who is more advanced than they are, they are able to progressively extend their Zone of Proximal Development (ZPD). Vygotsky stressed that, through playing and imagining, children are able to further stretch their conceptual abilities and knowledge of the world, and the type of play that lends itself to such development is imaginary and role-play as well as the re-enactment of real events.

5.2.3 Assuming and Reflecting on Different Virtual Identities

In this study, children talked about not being own selves when playing digital games, instead assuming the role of a 'gaming self'. This gaming self can either be 'angrier', 'cockier', 'nicer', or engage in a form of 'trash talk'. Through playful role-taking, opportunities to take perspectives of other players, and acting-as-if, children obtain and negotiate in-group and in-game identities (Fromme, Jöriseen & Unger, 2008). Children also have shown the ability to reflect on their different personae and identify elements which encourage and allow them to be someone else. Jenny, for example, described how she could be nicer in online games, because fostering relations came easier to her in digital games than the offline world. Many other children mentioned that the lack of real-life consequences and audience encouraged the experimentation with different ways of being, thus suggesting that digital games might offer perceived low-risk opportunities for social interaction with others. The educational theorist Winfried Marotzki (2006) proposed that

individuals gained and grew into cultural worlds, not only through social participation, but also through the experience of difference, of resistance, and otherness.

In line with Bassiouni & Hackley (2016), who concluded that digital games posed a culturally forceful trend in which peer acceptance and affiliation was negotiated, children in this study likewise experienced the participation in the gaming culture as strongly driven by peers. Gean captured this candidly by saying that *If all your friends at school just talking about the game, and then you have no idea what they are talking about, you can't join their conversation and talk to them about that. So, you want to play that game* (Sub-theme 5.1 Social Desirability).

I believe that children's ability to assume and reflect on different identities points to transcendence from plain instrumental learning towards a form of deep informal learning and self-educational process that has reframed some of their former world views, thus leading towards a more reflexive, flexible, and complex relation to the world and others.

5.2.4 Development of New Social Rules in the Virtual World

When talking about cheating and fairness and how children settle arguments in digital games, participants suggested that ill feelings were relatively short-lived with friends in the digital reality. Children reflected that there were means to disengage with whoever caused the upset by switching off the console, but, overall, there were no real-life consequences to that upset, and as such, there was no need to harbour upset feelings. This is in contrast to what children described about dynamics in the offline play where arguments can lead to upset and frustration (Subordinate sub-theme 1.1.2 Consequences to cheating). Through active reflection and reasoning, children have created cultural norms in the digital world which work specifically for this semiotic domain or subculture. This, I believe, is another example where digital games have encouraged self-educational processes and stretched children's horizons to adapt and function successfully in another domain.

5. 2.5 'Adults don't Play'

Across both the non-digital and digital play narratives, there was a notable absence of parents. Children perceived adults as having little understanding of their world of play and the rules and rituals which governed it. There was a general consensus that adults do not play and that if they attempted to do so they did not give it due value. In some respects, children also guarded their separateness and enjoyed having an expertise in an area which adults were generally confused about. Having social spaces not occupied by adults is a common characteristic for children's play, and those spaces are of central importance for personality development (Rosenstock, Schweiger & Spiecker, 2013). Children in Bernstein & Magalhaes' (2009) study explained the absence of parents in play as a matter of course, and Glenn et al. (2013) found children expressing dislike in response to parents imposing their ideas of appropriate play. This imposition was experienced by children in the current study as a form of tension (Sub-theme 8.1 Tension), where parents' desire to redirect playing habits was at odds with their desire to do what their friends were doing (Sub-theme 5.1 Social desirability).

Fusion made an interesting point when he tried to understand parental fears in relation to digital games (Theme 8. Parents don't understand). He suggested that parents only saw the fighting and shooting and based their judgement on what they see. In that vein, Schulmeister (1997) proposed three different educational levels or spaces in digital games which could open up to individuals depending on their level of engagement:

1. The presentational space opens up when a player interacts with the software, for example, the icons, avatars, and visible action. This is the digital game space which is generally criticised by media, public opinion, and in this study, by parents.

2. The deeper level encompasses the 'action space'. This space only exists while players interact with the presentational space. It is a moment where the software becomes a socio-technological artefact. This is also the space which Fusion refers to when he says that in a digital game *'You can talk and stuff. You can make much'* (Theme 8 Parents don't understand)

3. The third level is the interaction frame or code space. It incorporates the interaction scripts and stored content and ultimately decides the choices and options available to the player. When children complain about being limited in their digital games (Subordinate sub-theme 7.3.1 No constructive means to vent) this is down to what the code space allows for.

Based on what non-players see on the presentational space, it has become a widespread fear that digital games have the potential to destroy children's imagination, to make them aggressive and to addict them. Unfortunately, the debate is still carried out in an excessively unilateral fashion, and the blame for any alleged challenging behaviour or problems in children is often blamed on digital game consumption (Horner & Swarbrooke, 2012). In fact, some politicians go as far as blaming mass shootings on the consumption of digital games (Trump, as cited in Tassi, 2019).

Traditional media enjoy widespread public approval and are enjoyed among people across the lifespan. Today, no one would consider reading or listening to music as particularly harmful, and even television managed to improve its reputation (Gelder, 2015). There are now educational television programmes tailored to children and many parents enjoy passing on series and films that remind them of their childhood to the younger generation. Familiarity breeds liking and from an evolutionary perspective things that are familiar are likely to be safer than things that are not (Raghunathan, 2012). Adults who did not grow up with the computer, smartphone, and internet may view their move into the world of children's play

suspiciously (Gelder, 2015). It is conceivable that these fears will settle when today's digital natives grow up and other introductions are evaluated with apprehension. Children in this study have captured this sentiment very candidly, too, for example, when Superman said *'I think that … in my opinion, I think that sometimes it would be when they were child, they were … depending on how old they are, I think it might have … because they didn't have any things you could play on in their days.'*

These fears, however, are not new. Two hundred years ago, there was an urgent warning issued against the dangers of reading (Paul, 2010). Reading was not only suspected to lead to physical damages, but also to corrupt the gullible readers such as children and, as one would expect from these times, women. There were concerns about the possibility that readers could get addicted and about the wider impact reading material could have. For example, there was a public outcry when Johann Wolfgang von Goethe published his novel *The sorrows of Young Werther* (Gelder, 2015). European readers were captivated by the protagonist, and it gained an instant cult following (Treen, 2012). It is something that our generation might find amusing today, but it is a fitting example how the same fears later on were provoked by the picture houses, the radio, the television, and now digital games.

5.3 Emotions and Feelings

Most of the reviewed studies on play found children expressing a host of strong feelings in relation to their play experience (Moor & Lynch, 2018; Howard et al.2017). Bassiouni & Hackley (2016) reported how children associated positive emotions with digital game play, as it offered them an alluring and empowering world of identification. Howard et al. (2017) claimed being the first UK study to address the views of children of any stage of childhood on the emotional importance of play. In the light of the reviewed literature, I believe the current study to be the first to explore children's emotions and feelings about

offline play in relation to digital game play, and findings suggest that children are able to make intricate observations in relation to their emotions and feelings about their digital game play and how they make meaning of it.

Children in this study generally agreed in their view of play being a fun activity that is done with friends and which can make you feel like being in '*the zone*' (Sub-theme 2.1 Positive feelings). Play stopped being play when it was taken out from its immediacy, when consequences followed, or when friends fell out (Sub-theme 2.2 Negative Feelings). Similarly, they described digital game play as being the best experience when they could play and compete with friends (Theme 5 Digital games as social spaces), and how it offered a form of escapism (Subordinate sub-theme 7.1.1 Escapism). Children also noted that they felt negative emotions such as frustration and anger in a much stronger way during digital game play, and that they could get away with strong emotional reactions because they were hiding behind a screen with no consequences to behaviour (Theme 6 A different persona). Gentile, Bender & Anderson (2017) explained this elevated anger based on their findings from a large group of elementary school children who were observed playing violent digital games. Playing these games led to more aggressive thoughts and greater cortisol levels which triggered the human fight-or-flight response. While arousal levels are increased, there is no chance to physically discharge this stress, and the hyperarousal leads to disproportionate expressions of anger and frustration.

While I am in support of this biological explanation, I would also like to propose a psychological perspective on why I believe children may experience greater stress levels.

5.4 Existential Humanism

Jean-Paul Sartre, among others, postulated that an existential humanism is a humanism which sees individuals needing to experience freedom if they are to create meaning in their

lives. This freedom is exercised by making choices, by freely choosing the individual projects a person wants to engage in, and by establishing goals. Engagement in these self-chosen projects, or experiments in living, allows for the search of personal values which give one's life a meaning. If individuals are unfree, they experience existential meaninglessness and do not develop their full potential. Meaninglessness is also experienced when individuals find themselves engaged in a form of Sisyphus activity, doing the same thing over and over again, or if they are being kept in a form of existence that cannot easily be changed. Existential humanists therefore argue that not having opportunities to pursue freely chosen projects leads to the experience of frustration, anxiety, and depression.

Children freely choose to play digital games, and they described how this play was experienced as being in a different reality (Superordinate sub-theme 7.1.1 Escapism). Bassiouni & Hackley (2016), too, found that children described digital games as a representation of reality where presence, identity, and meaning were established. Existence in this reality, however, was described as at times causing more frustration and anger than the offline reality. When children pursued this emotion further, they found that this might be due to experiencing a lack of agency and control and being limited in their choices, opportunities, and abilites *'to try harder'* as *'once I've got to that stage it's as good as it can get'* (Suboridnate sub-theme 7.3.1) in a digital game. Jenkins pointed out that digital games were just *'entertainment'* and that *'in real life you grow more'*. Although Jenkins dismissed any learning potential in digital games, he reflected on his gaming experiences in relation to real-life play and found the latter to offer him growth opportunities as *'one can do more'* (Theme 3: Growth in Play). Superman pointed out how with some games you just do *'the same thing over and over again'* (Sub-theme 7.3 Anger and Frustration). The frustration from experiencing limitations in agency in digital games was also something picked up on in the study by Sarachan (2013), where children criticised the little control they had in their play

with the games. When children in the current study were asked about the three things they would like to include in a good digital game, they agreed that more choices and opportunities would be on top of their wish list, along with not being confronted with injustice where people can 'pay to win'.

Children explain their frustration and anger in the virtual reality as originating in their lack of agency, 'stuckness', and some form of Sisyphus activity. Viewing their explanations from a humanistic-existential point of view, children have identified the precise reasons for their increased sense of frustration in digital games and how this can be rectified: by having more choices, opportunities, challenges, and agency. This, they feel, may lead to more fun, happiness and growth. I believe this insight to be the result of fundamental deep learning achieved by the children by engaging in, transferring, and reflecting on both 'realities' they are involved in.

5.5 Play in Middle Childhood

In all of the reviewed studies on play, children expressed how important it was for them to have free choice and agency in their play. As such, digital gaming may not entirely fulfil the going definition of play (see 1.5 Definition of key terms), because the children themselves have identified digital gaming as lacking opportunities of agency. However, there are interesting reflections in the children's accounts which may suggest that children of middle childhood experience some play benefits from digital games which they feel they might have lost when transitioning into middle childhood.

5.5.1 'You Think you Are the Best'

Lecturing in the 1930s, Vygotsky asserted that 'in play, a child always behaves beyond his average age, above his daily behaviour; in play it is as though he were a head

taller than himself' (1978, p. 102). This sentiment is captured by Thanos, who commented on how play has changed for him as he grew older*: 'Well, I think when you're older you just want to be the best out of everyone. When you're younger, you're just, like, you just think you're the best so you do it ...even though you're just not. And then when older you just realize ...'* (Sub- theme 1.2 Competition). As children get older, their capacity to expand, reflect, decentre, and generalise grows (Bee, 1995), and Thanos, among other children in this study, has come to a developmental stage where external appraisal of his competencies is influencing his self- esteem. The value now placed on external appraisal leads to a play experience which may make him feel less 'tall' (Vygotsky, 1978, p.102) than during his early-years play. Interestingly, when the same children speak about their digital play experience, there still seems to be something left of feeling a head taller. Gean comments that *'Because in, like, real life when they may not be as good as it, they just – I don't know, they're just not as cocky in real life. But when on the PlayStation they actually are cocky and say oh, I'm really good, I'm gonna beat you. I do it as well'* (Sub-theme 6.2 Cocky trash talk). This may suggest that the virtual game space allows children of middle childhood a play experience where a perceived sense of unchallenged competency still exists, thus allowing feelings of self-efficacy and esteem to be furthered.

5.5.2 'No Consequences'

Bruner commented that 'play is a means of minimizing the consequences of one's actions and of learning therefore in less risky situations' (1972, p. 38). The deductive reasoning of children in middle childhood has clearly advanced, and the children in this study were able to comment on how digital game play, as opposed to offline play, was lacking the very consequences Bruner refers to. Gean and Thanos commented, for example *'It's just a game, it's not real life and doesn't affect you really and you cannot be injured and then that would, like, affect the game'* (Sub-theme 7.2 Short-lived upset with friends).

Once a play experience is perceived as something that might lead to lasting consequences, it is no longer experienced in the 'magic circle'. The concept of the magic circle comes from Johan Huizinga (1950/1938), who argued that play takes place within its own boundaries of space and time and draws children into a separate world, a world set apart from ordinary life. Therefore, it appears that children of middle childhood can experience a form of play in digital games where they do not need to worry about consequences and thus possibly experience stronger feelings of being in the moment or in 'the zone' (Subordinate sub-them 7.1.1 Escapism).

Within this zone or magic circle, 'play provides an excellent opportunity to try combinations of behaviour that would, under functional pressure, never be tried' (Bruner, 1972, p. 38). Jenkins very aptly picks up on this notion when he says *'So in real life, if you were to go into a battlefield for the aggressive people that were to shoot you as soon as you step out, you wouldn't do it and you will just be sitting down crying' (*Sub-theme 7.1: Positive feelings). The digital game offers a play experience which allows 'combinations of behaviours', which would not be possible in the offline world of play. This make-believe play allows children the development of new tools for thinking. The main thinking tool developed by this sort of make-believe play is that of symbolizing (Vygotsky, 1976); practicing the ability to symbolize and re-present reality. Without this skill, life would be passing like a dream where events simply happened and passed on without a moment's reflection.

5.5.3 Phantasy and Symbolising

In their interview with children of middle childhood, Brockman, Fox and Jago (2017) found out that they predominantly defined play as a form of physical activity. This study was able to confirm these findings with many children defining play as involving physical elements (Sub-theme 1.3 Boys run and girls talk).

Children in this study, however, would also refer to sedentary activities, other than digital gaming, as a form of play, for example drawing or reading a book (Theme 1. Play as a social experience). Gelder (2015) found in her research with younger children in Germany that they would not regard reading as play as '*you are not doing anything with friends*' (p.214). Children in this study, it seems, regard both physical and mental activity as a form of play, and I wonder whether the lines between play and leisure time aren't increasingly blurred as children grow up. Vygotsky (1987) argues that the older child replaces play with phantasy and stops relying entirely on physical objects. It may be that the activity of reading conjures up phantasy thinking, hence it is experienced as a form of play by the older child.

5.5.4 Tension

Finally, the narratives of the children suggested a perceived tension between their desire to play digital games with their friends and the necessity to negotiate parents' critical attitude toward the game play (Theme 8. Parents don't understand). While middle childhood is often described as a lull between the storms and strains of preschool and teenage years and a time firmly located in childhood, Borland (1998) observed that children might also be clingy and childlike one day and fiercely independent the next, which might explain some of the tension experienced. Children in this study commented that they respected the limits their parents set in relation to game play even though they might not be entirely happy with them. Howard et al. (2017), too, found the children in their study sometimes willing to cede control of their play to parents. While parents are still considered key people in children's lives along with their opinions and regulations, I query the impact of the critical opinion of digital games on the children's' enjoyment of their digital game play. Jenkins commented that it would make him sad if his parents were opposed to his game play, and children acknowledged that their parents were afraid of the impact their game play might have. Others commented how

their parents could 'shout' to implement their limits. With parents not entirely sure how to negotiate their own fears in relation to digital game play, often fuelled by preconceived ideas, and children in middle childhood still being torn between appeasing parents and also wanting to fit in with their peers, I wonder whether children, too, experience some degree of stress when playing digital games. This is something I could not explore further in my interviews, but it would be worthwhile to explore this notion further.

5.6 Risks in Digital Game Play

Long since, research has identified the problems video gaming, namely, playing digital games for prolonged periods of time, which is associated with detrimental consequences and interference with social, occupational, and academic functioning (Kuss & Griffiths, 2012). The Internet Gaming Disorder has now been included in the appendix of the DSM-5. There are numerous predisposing factors that might make a person susceptible to a problematic use of digital games, while gaming may also exacerbate some problems such as a decline in prosocial behaviour (Ferguson, 2015). I would like to comment on a couple of risks the children themselves have identified in the interviews.

5.6.1 Relational Concerns

Both Jenny and Fusion pointed out that digital gaming offered them an opportunity to escape unpleasant situations from the real world. For Jenny, it is her difficulty in getting on with people (Sub-theme 6.3 Nicer), and for Fusion, it is a way to get away from his hurtful sister (Sub-theme 7.1 Positive feelings). Lau et al. (2018) suggest that teenagers with behavioural problems are more likely to have poor relational strengths and find retreat in digital games from difficult in-person social interactions. However, they also note that problematic video gaming may also exacerbate relational problems, and lead to a decline in prosocial behaviour (Ferguson, 2015). Both Jenny and Jenkins reported enjoying the escape

into digital interactions. While the digital gaming world may offer a temporary escape, as is the case with other forms of addictions, the risk here may be that the escapism into the digital world could develop into a problematic relationship with digital gaming that could lead to a form of addiction.

The question that arises here is whether at-risk children can transfer some of the perceived social benefits experienced in digital games into the offline world. It would be interesting to pursue whether MMO games, or elements of such games, might offer some therapeutic benefits, particularly to those who have troubles with relations or lack self-efficacy in the offline world. For example, Young (2013) suggested cognitive restructuring by addressing agreeable self-concepts in digital games (e.g. virtual reality self is more significant than the real self), and by identifying dissatisfaction with the offline self as well as the way how needs unmet in the real world seem to be accomplished in the digital world (e.g. digital game achievement). Alternative views may be developed to construct a healthier self-concept (e.g. 'the real world provides meaning, I am worthwhile and able to attain goals in the real world'). A healthier self-concept may provide support to improve offline relationships and open up new opportunities for enjoyable social interactions outside the digital gaming world.

5.6.2 Activity Concerns

Consistent with Glenn et al.'s (2013) findings, children in this study expressed a desire to engage in movement-focused activities and to spend time outside. The authors noted how the increasing interest in digital games was a pull away from the desire to get involved in active play, and referred to the health consequences of the changing landscape of play.

Numerous studies have shown links between excessive digital game play and obesity in children (for example, Carvalhal et al., 2007). What I would also like to pick up on, though, is the comment Superman made in relation to his different forms of play. He

pointed out how his outdoor play was accompanied by a good feeling of tiredness, while his digital game play was accompanied by another feeling of tiredness, almost a form of lethargy (Sub-theme 2.1: Positive feelings). Superman may be referring to the good feeling that follows physical activity due to the rush of serotonin and endorphins in the body. There are also cognitive benefits that children can gain from active play. Carson et al. (2016) reviewed seven studies to establish the relationship between physical activity and cognitive development in early childhood. They concluded that there was some evidence that physical activity had beneficial effects on children's cognitive development. The concern with increasing time spent on digital games (Glenn at al., 2013; Howard et al., 2017) begs the question whether this might have an adverse influence, not only on the physical health, but also on the cognitive development in children of middle childhood. Mogel (2008) points out that excessive play of the same thing over and over again may indicate some form of stagnation in personality development in a child. In such children, education professionals in practice may see simplified behaviours and reactions lacking in nuances. My anecdotal, personal observation from cognitive assessments in children who report playing excessive amounts of digital gaming, is that their visuospatial skills tend to score much higher than, for example, non- verbal reasoning skills. There is a growing body of research confirming that, for example, training with digital games enables children and adolescents to improve their scores in visuospatial tests (Milani, Grumi & DiBlasio, 2019). The discrepancy in cognitive scores may, however, also be due to the fact that children who are allowed to dedicate most of their time to digital gaming are not offered a variety of stimulation in the first place. Nonetheless, this observation warrants further research.

5.7 Critique of Study

This section draws attention to the study's limitations and strengths. I will refer to the

sample, the process of data collection, the methodology, and analysis. Finally, I will present implications for parents, practice, and future research.

5.7.1 The Interview Sample

To achieve saturation, Braun and Clarke (2019) recommend 10–20 participants for a medium reflective thematic analysis project such as a professional doctorate. While efforts were made to achieve this number, I only managed to interview eight children, only two of whom were girls. It would have been interesting to pursue further some comments that were made in relation to gender difference in experiences and meaning-making in digital game play.

Despite the lower than recommended number in participants, the majority of the children were academic high achievers with some going to grammar school. This meant that they were able to express themselves eloquently and showed deep insight and reflective skills, therefore leading to rich data.

Due to the snowball recruitment technique, where children recommended other children they knew, the sample was rather homogenous in terms of age, academic background, hobbies, and digital gaming habits. While the study was interested to pursue the experiences of children in middle childhood across the ages six to twelve, the actual average age was close to the onset of teenage years. This means that the experiences and insights of younger children are missing in this study.

5.7.2 The Process of Data Gathering

I was aware of the power differences between myself and the children and the impact this could have on disclosures and the general willingness to share experiences frankly and comfortably. In an attempt to balance the power, I chose to interview children in friendship

couples in a very relaxed and familiar environment (see 3.7.4 Interview Process).

I am aware of the notion of the social desirability bias (Lee & Woodliffe, 2010) and that some children, both in the questionnaires and interviews, may have responded in a way they felt would be pleasing. I felt that this might have been particularly the case for those children who also knew me in a friendly capacity, and when touching on subjects such as fairness, cheating, and violent digital game content. I encouraged critical opinions, for example when talking about adults and parents, by making affirmative, encouraging and appreciative remarks.

5.7.3 Methodology and Analysis

There were moments during the interviews and analysis when I felt the challenges of using a language-based method of analysis. At times, some children found it tricky to find the words to accurately convey their feelings and experiences. This may have resulted in their narratives being unclear at times and words jumbled up. Some children would say '*I know it but I don't know how to describe it*'. I was aware of occasionally filling in gaps when I tried to help children find the words to describe what I thought they were trying to convey. I also realised that I had used rapport-building techniques and consultation skills such as empathising, affirming, and reflecting back as well as summarising responses using my own words.

The critical realist epistemology underlying this study allowed glimpses into the real and observable world of children's play experiences through the questionnaires and interviews. The world of play as we know and understand it is constructed from our perspectives and experiences, through what is 'observable'. The Reflective Thematic Analysis of children's constructs on play foregrounds the researcher's subjectivity in the analysis process, and findings as such cannot be right or wrong. This study bears my signature, reflects my opinions and views, and is clearly a product of my way of thinking and perceiving the

world. While coding may be weaker (superficial) or stronger (nuanced), the process of analysis is always reflective of the subjectivity of the researcher. Therefore, a bias in my interpretation is unavoidable and the analysis presented is my view of what children said.

However, I believe it is an asset of this study that similar themes were found across children's narratives on offline and digital game play, and links could be made between current findings and findings in the reviewed literature.

5.8 Implications of Study

5.8.1 Parents and Guardians

As I finished an interview with two children, one mother, who was waiting in a side room, commented that she had never asked her son about his gaming habits in such a way, and that all she was concerned about how to limit and regulate his gaming. This had turned into an endless battle of wills. She was surprised to find out that his play meant so much more than just 'taking out opponents'.

Many parents have a critical attitude toward new media and are also a little helpless. Often, the own knowledge is not sufficient to facilitate children with a playful yet safe use of digital games. Still, most perceived dangers feared from digital games are based on prejudice and misconceptions, which has been the case for every new media throughout history; from books to the radio and the television.

In an attempt to dispel these uncertainties and to relativize potential impairments from digital games, Mogel (2008) suggests that parents should play with their children more often. The gaming advice hub on *internetmatters.org*, a non-governmental industry-wide UK coalition aiming to make parents and children more digital savvy, calls for making gaming a family affair to develop good gaming habits. Good gaming

149

habits would allow for a balance of different activities and experiences as well as encouragement to maintain activities that exhaust children physically as much as mentally. Furthermore, in their report 'Gaming the system', the Children's Commissioner (2019) recommends that if gaming is considered a digital extension of play, then children should be allowed the freedom to explore and take risks, as long as they are protected from the very negative experiences, as they would be encouraged during any form of play.

Parents and guardians are not asked to become permanent playing buddies for their children, as children need and want the world of play as a space where they can explore and develop without adult interference. Nonetheless, I would recommend parents to enquire and show an interest in their children's digital game play, similarly as they would ask about any other play experience in school, the park, or the football pitch. Asking about their accomplishments, set-backs, what they are working on at the moment, and who their team mates are, can yield insightful conversations and glimpses into a different yet strongly felt reality.

5.8.2 Education Professionals

Education professionals are often confronted with children who lack self-efficacy, self-esteem, and self-worth. This has a self-limiting impact on their beliefs about learning and academic achievement and success, an inability to face classroom challenges which often leads to challenging behaviours or disengagement. Yet these very children often retreat to the digital world, and if allowed to express themselves, they may have enthusiastic narratives about their digital identities, self-concepts, wins, expertise, and enjoyment, as well as their status, challenges, and the competitions they embrace happily and eagerly. However, children are aware that adults do not value this world (Theme 8 Parents don't understand) and only mention it in the context of pointing out risks, limitations, and disapproval. I often wonder

whether education professionals are afraid of enquiring about digital game play in the fear of being seen to endorse and encourage play which may be deemed as hindering development and distracting children from what they ought to be doing instead. A child that may be struggling with their offline self-concept yet harbours a more favourable digital self-concept can be supported by identifying dissatisfaction with the offline self and how needs unmet in the real world seem to be accomplished in the digital world (Young, 2013). This study has shown that transfers from the digital into the offline world are happening in many areas and on many levels (Fritz, 1997), and the deep self-initiated learning processes in the digital world, which may happen unconsciously, could be brought to the surface of the child's consciousness to support the construction of healthier self-concepts with the digital identity as a reference point.

5.9 Conclusion

My view of the child is one of a confident individual who has a sound understanding of their needs. With this piece of research, I have tried to capture the voice of the child and their view on the most central aspect in their lives: play. I was particularly interested in where children see the play value in digital games. While researcher and academics still struggle to come to a unanimous understanding or definition of what play constitutes, children in my study had a very clear idea of what it is all about. This study does not claim to be highly representative, nonetheless, children have volunteered valuable information which warrants further investigation. It would be interesting to pursue the play value of digital games with a particular view to possible therapeutic transfers in terms of working towards healthier identities and self-concepts in the offline world in children who might be struggling in this area. It should also be considered to what extent education professionals could capitalise on popular MMO games in pursuing improvements in relational skills in children. I believe this might be further explored through case studies first, before developing more

robust frameworks. Professionals ought also to bear in mind that the digital gaming technology advances at lightning speed and the possibilities and opportunities increase almost every day. Keeping abreast with the digital gaming world as dedicated education professionals is, in my view, highly recommendable.

6 References

Abt, C. C. (1970). *Serious Games*. Viking.

Allsop, Y. (2016). A reflective study into children's cognition when making computer games. *British Journal of Educational Technology*, 47, 665–679.

American Academy of Pediatrics Council on Communications and Media. (2016). Policy statement: Media use in school-aged children and adolescents. *Pediatrics*, 138(5), 2016–2592.

Anderson, D.R. & Subrahmanyam, K. (2017). Digital Screen Media and Cognitive Development. *Paediatrics*, 140(2), 57–61.

Anderson, M. & Jiang, J. (2018). Teens, Social Media and Technology 2018. Paw Research Centre website: https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/

Antaki, C., Billig, M., Edwards, D., & Potter, J. (2002). Discourse analysis means doing analysis: A critique of six analytic shortcomings. DAOL Discourse Analysis Online [Electronic Version], 1(1).

Arnseth, H.C. (2006). Learning to Play or Playing to Learn – A Critical Account of the Models of Communication Informing Educational Research on Computer Gameplay. *The International Journal of Computer Game Research,* 6(1).

Bassiouni,D.H. & Hackley, C. (2016). Video Games and Young Children's Evolving Sense of
Identity: A Qualitative Study. Young Consumers, 17(2), 127–142.

Bediou, B., Adams, D. M., Mayer, R. E., Tipton, E., Green, C.S. & Bavalier, D. (2018). Meta-
analysis of action video game impact on perceptual, attentional, and cognitive skills.
Psychological Bulletin, 144(1), 77–110.

Bernstein, S. & Magalhaes, C. (2009). A study of the essence of play experience to children
living in Zanzibar, Tanzania. *Occupational Therapy International*, 16(2), 89–106.

Best, J. R., & Miller, P. H. (2010). Executive functions after age 5: Changes and correlates.
Child Development, 81, 1641–1660.

Bhaskar, R. (2012). *Reflections on Meta Reality: Transcendence, Emancipation and Everyday
Life*. Sage Publications.

Bhaskar, R. 1978. *A Realist Theory of Science*. Harvester.

Bhaskar, R. 1989. *Reclaiming Reality*. Verso.

Bigl, B. (2009). *Game over? Was vom Spielen übrig bleibt*. Akademische
Verlagsgemeinschaft München.

Birk, M.V., Atkins, C., Bowey, J.T. & Mandryk, R.J. (2016). Fostering intrinsic motivation
through avatar identification in digital games. In Proceedings of the 2016 CHI
Conference on Human Factors in Computing Systems (CHI'16). 2982–2995.

Bjorklund, D. F., Dukes, C., & Brown, R. D. (2009). The development of memory strategies. In M. L. Courage & N. Cowan (Eds.), *The development of memory in infancy and children* (pp. 145–175). Psychology Press.

Blaikie, N. (2000). *Designing Social Research: the logic of anticipation.* Polity Press.

Blumberg, F. C., Altschuler, E. A., Almonte, D. E., & Mileaf, M. I. (2013). The impact of recreational video game play on children's and adolescents' cognition. *New Directions for Child and Adolescent Development*, 139, 41–50.

Blumberg, F.C., Deater-Deckard, K., Calvert, S.L., Flynn, R.M., Green, C.S., Arnold, D., Brooks, P.J. (2019). Digital Games as a Context for Children's Cognitive Development: Research Recommendations and Policy Considerations. *Social Policy Report*, 23(1), 1–33.

Bopp, M. (2005). Immersive Didaktik: Verdeckte Lernhilfen und Framingprozesse in Computerspielen. kommunikation@gesellschaft, 6 (2005), 2.

Borland, M. (1998). Middle Childhood: *The perspectives of children and parents*. Jessica Kingsley Publishers.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development.* Sage Publications, Inc.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3,77–101.

Braun, V. & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597.

British Psychological Society (2014). *Code of Human Research Ethics*. Author

Brockman, R., Fox, K.R. & Jago, R. (2011). What is the meaning and nature of active play for today's children in the UK? International Journey of Behavioral Nutrition and Physical Activity, 8(15), 7.

Bruner, J. S. (1972). Nature and uses of immaturity. *American Psychologist, 27*(8), 687–708.

C. S., & Bavelier, D. (2018). Meta-analysis of action video game impact on perceptual, attentional, and cognitive skills. Psychological Bulletin,144(1), 77–110.

Calvert, S.L., Appelbaum, M., Dodge, K.A., Graham, S. (2017).The American Psychological Association Task Force assessment of violent video games: Science in the service of public interest. *American Psychologist*, 72(2), 126–143.

Carson, V., Hunter, S., Kuzik, N., Wiebe, S.A., Spence, J.C., Friedman, A., Tremblay, M.S., Slater, L. & Hinkley, T. (2016). Systematic review of physical activity and cognitive development in early childhood. *Journal of Science and medicine in Sport*, 19(7), 573–578.

Carvalhal, M.M, Padez, M.C., Moreira, P.A. & Rosado, V.M. (2007). Overweight and obesity related to activities in Portuguese children, 7–9 years. *European Journal of Public Health*, 17(1), 42–46.

Carver, A., Timperio, A. & Crawford, D. (2008). Playing it safe: The influence of neighbourhood safety on children's physical activity – A review. *Health & Place*, 14, 217–227.

Chassiakos, Y. R., Radesky, J., Christakis, D., Moreno, M. A., & Cross, C. (2016). Children and adolescents and digital media. *Pediatrics*, 138(5), 2016–2593.

Children's Commissioner (2019). Gaming the System. Children's Commissioner website: https://www.childrenscommissioner.gov.uk/publication/gaming-the-system/

Clar, D.B., Tanner-Smith, E.E., Killingsworth, S.S. (2014). Digital Games, Design, and Learning: A Systematic Review and Meta-Analysis. *Review of Educational Research*, 86(1), 79–122.

Clements, R. (2004). An investigation of the status of outdoor play. *Contemporary issues in early childhood*, 5, 68–80.

Cohen, L., Manion, L. and Morrison, K. (2013). *Research Methods in Education*. 7th ed. Routledge.

Collins, W.A. (1984). *Development During Middle Childhood: The Years From Six to Twelve*. National Academies Press.

Combs, A. W., Richards, A. C., & Richards, F. (1976). *Perceptual psychology: A humanistic approach to the study of persons*. University Press of America.

Crain, W.C. (2011). *Theories of Development: Concepts and Applications*. Prentice Hall.

Crowley, K., Pierroux, P., & Knutson, K. (2014). Informal learning in museums. In R. K. Sawyer (Ed.), The Cambridge handbook of the learning sciences (pp. 461–478). Cambridge University Press.

Csikszentmihalyi, M. (1990). Flow: The Psychology of Optimal Experience." *Journal of Leisure Research*, 24(1), 93–94.

DeCamp, W. & Ferguson, C.J. (2017). The Impact of Degree of Exposure to Violent Video Games, Family Background, and Other Factors on Youth Violence. *Journal of Youth and Adolescence,* 46(2), 388–400.

Dick, A. S. (2014). The development of cognitive flexibility beyond the preschool period: An investigation using a modified Flexible Item Selection Task. *Journal of Experimental Child Psychology*, 125, 13–34.

Downes, T. (2002). 'Children and families' use of computers in Australian homes'. *Contemporary Issues in Early Childhood*, 3(2), 182–96.

Elder-Vass, D. (2010). *The Causal Power of Social Structures*. Cambridge University Press.

Ferdig, R. (2009). *Handbook of Research on effective electronic gaming in Education (Volume III)*. Information Science Reference.

Ferguson, C. J. (2015). Do angry birds make for angry children? A meta-analysis of video game influences on children's and adolescents' aggression, mental health, prosocial behavior, and academic performance. *Perspectives on Psychological Science, 10*(5), 646–666.

Fish, T., Russoniello, C., O`Brien, K. (2014). The Efficacy of Prescribed Casual Videogame Play in Reducing Symptoms of Anxiety: A Randomized Controlled Study. *GAMES FOR HEALTH JOURNAL: Research, Development, and Clinical Applications*, 3 (5). https://doi.org/10.1089/g4h.2013.0092

Frazer, E. & Lacey, N. (1993). *The Politics of Community: A Feminist Critique of the Liberal-communitarian Debate.* University of Toronto Press.

Frick, W.B. (1987). The Symbolic Growth Experience: Paradigm for a Humanistic-Existential Learning Theory. *Journal of Humanistic Psychology*, 27(4), 406–423.

Fritz, J. (1997). Zwischen Transfer und Transformation. Überlegungen zu einem Wirkungsmodell der virtuellen Welt [Between transfer and transformation: Assumptions of an effect model of the virtual world]. In J. Fritz & W. Fehr (Eds.), *Handbuch Medien: Computerspiele* (pp. 229–246). Bundeszentrale für politische Bildung.

Fritz, J. (2009). Virtuelle Spielwelten als Lernort. In K.Demmler, K.Lutz, D.Menzke, & A.Prölß-Kammerer (Hrsg.). Medien bilden –aber wie?! Grundlagen für eine nachhaltige medienpädagogische Praxis(41–58). München.

Fromme, J. (1997). Pädagogische Reflexionen über die Computerspielkultur der Heranwachsenden. In: J. Fritz & W. Fehr (Ed.), Handbuch Medien: Computerspiele, 299–308.

Fromme, J., Jörissen, B. & Unger, A. (2009). (Self-) educational effects of computer gaming cultures. In R. Ferdig (Ed.), Handbook of Research on effective electronic Gaming (Vol. II, pp. 757–775). Hershey: Information Science Reference.

Gee, J. P. (2007) What Video Games have to teach us about learning and literacy. Palgrave, Macmillan.

Gee, J. P. (2013). Discourse Versus discourse. In Carol A. Chapelle (Ed.). The Encyclopedia of Applied Linguistics. Blackwell.

Gee, J.P. (2003). *What Video Games Have To Teach Us about Learning and Literacy*. Palgrave/Macmillan.

Gelder, M. (2015). *Kinderspiel aus der Perspektive der Kinder*. LIT Verlag Münster.

Gentile, D. A., Bender, P. K., & Anderson, C. A. (2017). Violent video game effects on salivary cortisol, arousal, and aggressive thoughts in children. *Computers in Human Behavior, 70,* 39–43.

Gilligan, K. A., Flouri, E., & Farran, E. K. (2017). The contribution of spatial ability to mathematics achievement in middle childhood. *Journal of Experimental Child Psychology*, 163, 107–125.

Glenn, M.N., Knight, C.J., Holt, N.L. & Spence, J.C. (2013). Meanings of play among children. *Childhood*, 20, 185–199.

Godwod, P. (2019). Massively Multiplayer Game-based Education. *Journal of Modern Science*, 40(1), 271–284.

Granic, I., Lobel, A. & Engels, R. (2014). The Benefits of playing Video Games. *American Psychologist,* 69(1), 66–78.

Grant, M.J. & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26(2), 91–108.

Gray, P. (2011).The Decline of Play and the Rise of Psychopathology in Children and Adolescents. *American Journal of Play*, 3(4), 443–463.

Greenfield, P. M., & Cocking, R. R. (Eds.) (1996).Interacting with video. Ablex Publishing.

Griffiths, P., Gossop, M., Powis, B. & Strang, J. (1993). Reaching hidden populations of drug users by privileged access interviewers: methodological and practical issues, *Addiction*, vol. 88, 1617–1626.

Hamlen, K. R. (2013). Understanding children's choices and cognition in video game play: A synthesis of three studies. *Zeitschrift für Psychologie, 221*(2), 107–114.

Hannaford, J. (2012). Imaginative interaction with Internet games. *Literacy*, 46(1), 25–32.

Hardy, J. & Hobbs, C. (2017). *Using Qualitative Research to Hear the Voice of Children and Young People: The Work of British Educational Psychologists*. British Psychological Society.

Hasbrouck, J., & Tindal, G. A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. *The Reading Teacher*, 59(7), 636–644.

Hayes, B.K. & Delamothe, K. (1997). Cognitive interviewing procedures and suggestibility in children's recall. *Journal of Applied Psychology*, 82, 562–577.

Henniger, M.L. (1994). Adult perceptions of favourite childhood play experiences. *Early Child Development and Care*, 99, 23–30.

Highet, G. (2003). Cannabis and smoking research: interviewing young people in self-selected friendship pairs. *Health Education Research*, 18(1), 108–118.

Hirsh-Paseh, K., Zosh, J.M., Golinkoff, R.M. & Gray, J.h. (2015). Putting Education in "Educational" Apps: Lessons From the Science of Learning. *Psychological Science in the Public Interest,* 16(1), 3–34.

Holt, N.L., Spence, J.C., Sehn, Z.L. & Cutumisu, N. (2008). Neighborhood and developmental differences in children's perceptions of opportunities for play and physical activity. *Health & Place,* 14, 2–14.

Howard, J., Miles, G., Rees-Davies, L. & Bertenshaw, E. (2017). Play in Middle Childhood: Everyday Play Behaviour and Associated Emotions. *Children & Society*, 31(5), 378–389.

Huesmann, L.R. & Taylor, L.D. (2006). The role of media violence in violent behaviour. *Annual Review of Public Health*, 27, 393–415.

Huizinga, J. (1955, originally published in 1938). Homo Ludens*: A Study of the Play Element in Culture*. Beacon Press.

Humboldt, W. v. (1993). *The limits of state action*. Liberty Fund.

Hutchby, I., & Wooffitt, R. (1998). *Conversation analysis: Principles, practices, and applications.* Polity Press.

Jarvis. P, Newman, S. & Swiniarski, L. (2014). On 'becoming social': the importance of collaborative free play in childhood. *International Journal of Play,* 3, 53–68.

Johnson, D., Klarkowski, M., Vella, K. & Phillips, C. (2018). Greater Rewards in Videogames lead to more Presence, Enjoyment and Effort. *Computers in Human Behavior*, 87, 66-74.

Kafain, Y. (2006). Playing and Making Games for Learning. *Games and Culture*, 1(1), 36–40.

Kahn, A.S., Ratan, R. & Williams, D. (2014). Why We Distort in Self-Report: Predictors of Self-Report Errors in Video Game Play. *Journal of Computer-Mediated*

Communication, 19, 1010–1023.

Kardefelt-Winther, D. (2017). How does the time children spend using digital technology impact their mental well-being, social relationships and physical activity? An evidence-focused literature review. Innocenti Discussion Paper 2017–02, UNICEF Office of Research. Unicef website: https://www.unicef-irc.org/publications/pdf/Children-digital-technology-wellbeing.pdf.

Kim, B., Park, H., & Baek, Y. (2009). Not Just Fun, But Serious Strategies: Using Meta-Cognitive Strategies in Game-Based Learning. Computers & Education, 52(4), 800–810.

Kuss, D. J. & Griffiths, M. D. (2012). Internet gaming addiction: A systematic review of empirical research. *International Journal of Mental Health and Addiction*, 10(2), 278–296.

Kyas, S. (2007). *Wie Kinder Videospiele erleben*. Peter Lang.

Kyas, S. (2007). *Wie Kinder Videospiele erleben: zu den Wechselwirkungsbeziehungen von Bildschirmspielen sowie personalen und familialen Nutzerfaktoren*. Peter Lang.

Ladas, M. (2002). Brutale Spiele(r)? Wirkung und Nutzung von Gewalt in Computerspielen. Peter Lang.

Leander, K.M., Phillips, N.C. & Taylor, K.H. (2010). The Changing Social Spaces of Learning: Mapping New Mobilities. *Review of Research in Education*, 34, 329–394.

Lecce, S., Bianco, F., Devine, R. T., & Hughes, C. (2017). Relations between theory of mind and executive function in middle childhood: A short-term longitudinal study. *Journal of Experimental Child Psychology*, 163, 69–86. Lee, Z. & Woodliffe, L. (2010).Donor Misreporting: Conceptualizing Social Desirability Bias in Giving Surveys. Voluntas:*Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 21(4), 569–587.

Lefrancois, G.R. (1994). *Psychological Theories of Learning*. Wadsworth Publishing.

Liberati, A., Altman, D.G., Tetzlaff, J., Mulrow, C., Gøtzsche, P.C., Ioannidis, J.P., Clarke, M., Devereaux, P.J., Kleijnen, J. & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. *PLoS Med*, 6(7).

Lissak, G. (2018). Adverse physiological and psychological effects of screen time on children and adolescents: Literature review and case study. *Environmental Research*, 164, 149–157.

Londal, K. (2010). Children's Lived Experience and their Sense of Coherence: Bodily Play in a Norwegian After-school Programme. Child Care in Practice, 16(4), 391–407.

MacDonald, K. (2008). Dealing with chaos and complexity: the reality of interviewing children and families in their own homes. *Journal of Clinical Nursing*, 17(23), 3123-3130.

Manzoor, S. (2016). Could Steiner schools have a point on children, tablets and tech?.

Guardian website: https://www.theguardian.com/education/2016/jun/14/steiner-schools-children-tablets-tech

Marotzki W. (2006). Bildungstheorie und Allgemeine Biographieforschung. In: Krüger HH., Marotzki W. (Eds) *Handbuch erziehungswissenschaftliche Biographieforschung*. VS Verlag für Sozialwissenschaften. Mauthner, M. (1997). Methodological Aspects of Collecting Data from Children: Lessons from Three Research Projects. *Children & Society*, 11, 16–28.

Mayall, B. (2000).The Sociology of Childhood in Relation to Children's Rights. The *International Journal of Children's Rights*, 8(3), 243–259.

Mayring, P. (2014). Qualitative content analysis: theoretical foundation, basic procedures and software solution. Universität Klagenfurt.

McGonigal, J. (2011). Reality is broken: Why games make us better and how they can change the world. Penguin Press.

Mead, G. H. (1934). Mind, self and society from the standpoint of the social behaviorist. Chicago: University of Chicago Press.

Mead, G. H. (1938). The philosophy of the act. Chicago: Univ. of Chicago Press.

Mertala, P. (2016). Fun and Games. *Nordic Journal of Digital Literacy*, 11(4), 207–226.

Mey, G. (2005). Forschung mit Kindern – Zur Relativität von kindangemessenen Methoden. In *Handbuch Qualitative Entwicklungspsychologie* (pp.151–183). Kölner Studien

Verlag.

Michell, L. & West, P. (1996). Peer pressure to smoke: the meaning depends on the method. *Health Education Research*, 11, 39–49. Milani, L., Grumi, S. & Di Blasio, P. (2019). Positive effects of videogame use on visuospatial competencies: The impact of visualization style in preadolescents and adolescents. *Frontiers in Psychology,* 10,1226.

Miller, J. & Glassner, B. (2004). The inside and the outside: finding realities in interviews. In: Sage, editor. Qualitative research: theory, method and practice. pp. 125–139.

Miller, P. H., & Seier, W. L. (1994). Strategy utilization deficiencies in children: When, where, and why. In H. W. Reese (Ed.), Advances in child development and behavior, 25 (pp. 107–156). Academic Press.

Mogel, H. (2008). *Psychologie des Kinderspiels*. Springer.

Moore, A. & Lynch, H. (2017). Understanding a child's conceptualisation of wellbeing through an exploration of happiness: The centrality of play, people and place. *Journal of Occupational Science*, 25(1), 124–141.

Nikolopoulou, K. & Gialamas, V. (2015)."Barriers to the integration of computers in early childhood settings: Teachers' perceptions". *Education and Information Technologies*, 20(2), 285–301.

Nowell, L.S., Norris, J.M., White, D.E. & Moules, N.J. (2017). Thematic Analysis: Striving to meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*,

16(1), 1–13.

Ofcom (2020). *Children and parents: Media use and attitudes report 2019*. Ofcom.
Palaiologou, I. (2014). Children under five and digital technologies: implications for
early years pedagogy. *European Early Childhood Education Research Journal*, 24(1),
1–20.

Papathomas, L., & Kuhn, D. (2017). Learning to argue via apprenticeship. *Journal of
Experimental Child Psychology*, 159, 129–139.

Parsons, J. (2019). Video games are now bigger than music and movies combined. Metro
website: metro.co.uk/2019/01/03/video-games-now-popular-music-movies-combined-
8304980/

Paul, L. (2010). Vom gefährlichen zum gefährdeten Lesen – Debatten um das Lesen im
Vergleich. Bachelorarbeit. Europa-Universität Viadrina Frankfurt (Oder). Fakultät für
Kulturwissenschaften. Studiengang Bachelor of Arts.

Pellegrini, A.D. & Bohn-Gettler, C.M. (2013). The benefits of recess in primary school.
Scholarpedia8: 30448.

Pempek, T. A., Yermolayeva, Y. A., & Calvert, S. L. (2009). College students' social
networking experiences on facebook. *Journal of Applied Developmental Psychology*,
30(3), 227–238. https://doi.org:10.1016/j.appdev.2008.12.010

Petrakos, H. H., & Lehrer, J. S. (2011). Parents' and teachers' perceptions of transition
practices in kindergarten. *Exceptionality Education International, 21*(2–3), 62–73.

Phelan, S.K & Kinsela, E. A. (2012). Picture This . . . Safety, Dignity, and Voice—Ethical Research With Children: Practical Considerations for the Reflexive Researcher. *Qualitative Inquiry*, 19(2), 81–90.

Powers, K.L., Brooks, P.J., Aldrich, N.J., Palladino, M.A. & Alfieri, L. (2013). Effects of video-game play on information processing: a meta-analytic investigation. *Psychonomic Bulleting and Review*, 20(6), 1055–79.

Prompona, S., Papoudi, D. & Papadopoulou, K. (2019). Play during recess: primary school children's perspectives and agency. International Journal of Primary, Elementary and Early Years Education, 3(13), 1–14.

Putnam, H. (1990) Realism with a Human Face, Cambridge. Harvard University Press.

Raghunathan, R. (2012, 17 Jan). Familiarity Breeds Enjoyment. Psychology Today Website: https://www.psychologytoday.com/us/blog/sapient-nature/201201/familiarity-breeds-enjoyment

Raudonat, K. (2017). Sozial-kommunikative Kompetenzen im Kontext von Online-Rollenspielen am Beispiel von Kommunikation und Interaktion im Rahmen von Spielhandlungen in dem MMORPG World of Warcraft. Universität Hamburg (E-Dissertation): https://nbn-resolving-org/urn:nbn:de:gbv:18-85526.

Roberts H. (2015). *Playtime: an evidence-informed scopying review on children's play with a focus on older children and play in middle childhood.* Centre for Science and Policy. Cambridge University Press.

Robson, C. (2011). Real World Research. (3rd ed.). Wiley & Sons.

Rogers, C. R. (1961). *On Becoming a person: A psychotherapists view of psychotherapy*. Houghton Mifflin.

Rogoff, B., Sellers, M.J., Pirotta, S., Fox, N. & White, S.H. (1975). Age of assignment of roles and responsibilities to children: a cross-cultural survey. Human Development, 18, 353–369.

Rosenstock, R., Schweiger, A. & Spiecker, A. (2013). Die ComputerSpielSchule Greifswald. *Bibliothek, Forschung und Praxis*, 37(1), 45–51.

Rubin, K. H., Watson, K., & Jambor, T. (1978). Free-play behaviors in preschool and kindergarten children. *Child Development*, 49, 534–536.

Salmien, M. & Ravaja, N. (2008). Increased oscillatory theta activation evoked by violent digital game events. *Neuroscience Letters*, 435(19), 69–72.

Samčović, A.B. (2018). Serious Games in military applications. Military Technical Courier, 66(3), 597–613.

Sandberg, A. (2001). Play memories from childhood to adulthood. *Early Child Development and Care,* 167, 13–25.

Sarachan, J. (2013). Exploring the online playground: Understanding motivation in children's virtual worlds. *Journal of Gaming & Virtual Worlds*, 5(3), 251–269.

Sawyer, B. (2003). *Serious Games: Improving Public Policy through Game-based Learning and Simulation.* Woodrow Wilson International Center for Scholars.

Schindler, F. & Wiemken, J. (1997). Doom is invading my dreams. Warum ein Gewaltspiel Kultstatus erlangte. In: J.Fritz & W.Fehr (Ed.): Handbuch Medien: Computerspiele. Bundeszentrale für politische Bildung, 289–297.

Schneider, W., & Ornstein, P. A. (2015). The development of children's memory. *Child Development Perspectives*, 9, 190–195.

Schulmeister, R. (1997). *Grundlagen hypermedialer Lernsysteme. Theorie, Didaktik, Design* (2. Aufl.). Oldenbourg.

Sebba, R. (1991). The landscapes of childhood the reflection of childhood's environment in adult memories and in children's attitudes. *Environment and Behavior*, 23, 395–422.

Shepphard, C. (2020, Jan 17). What is Fortnite's age rating certificate, how many kids play the video game and what are parents' concerns? The Sun website: www.thesun.co.uk/tech/5745474/video-game-fortnite-age-rating-certificate-children-play/

Sirani, J. (2020, Jan 30). Where Switch, PS4 Rank Among the Best-Selling Video Game Consoles of All Time. IGN website: https://www.ign.com/articles/2019/10/30/top-15-best-selling-video-game-consoles-of-all-time

Smith, C. & Elger, T. (2014). Critical realism and interviewing subjects. In: P. K. Edwards, J. O'Mahoney and S. Vincent (Eds), Studying Organizations Using Critical Realism. Oxford University Press, 109–131.

Smith, J., Flowers, P. & Larkin, M. (2009). *Interpretive Phenomenological Analysis: Theory, Method and Research*. Sage Publications.

Smith, J.A., & Osborn, N. (2003). Interpretative phenomenological analysis. In J.A. Smith (Ed.), *Qualitative Psychology: A Practical Guide to Research Methods* (pp.51–80). Sage.

Smith, J.A., Harre, R. & van Langenhove, L. (1995). *Rethinking methods in psychology*. Sage Publications.

Strübing, J., Froschauer, U. & Lueger, M. *(2004).* Das qualitative Interview. Zur Praxis interpretativer Analyse sozialer Systeme. *Koelner Z.Soziol.u.Soz.Psychol,* 56, 390–391.

Takeuchi, L. M., & Vaala, S. (2014). *Level up learning: A national survey on teaching with digital games.* The Joan Ganz Cooney Center at Sesame Workshop.

Tangen, R. (2008). Listening to children's voices in educational research: Some theoretical and methodological problems. *European Journal of Special Needs Education*, 23(2), 157–166.

Tassi, P. (2019, 5 Aug). Trump, Republican Focus on Video Games and 'Call of Duty' After

Mass Shootings is a Transparent Distraction. Forbes website:

https://www.forbes.com/sites/paultassi/2019/08/05/trump-republican-focus-on-video-

games-and-call-of-duty-after-mass-shootings-is-a-transparent-

distraction/#3f9c85a33371.

The Politics of Community: A Feminist Critique of the Liberal-communitarian Debate

Treen, K. (2012, July 1). The Sorrows of Young Werther by Johann Wolfgang von Goethe,

translated by David Constantine – review. Guardian website:

https://www.theguardian.com/books/2012/jul/01/werther-goethe-david-constantine-

review

Tuckett, A. (2005). Applying Thematic Analysis Theory to Practice: a researcher's

experience. *Contemporary nurse: a journal for the Australian nursing profession,*

19(1–2), 75–87.

Valentine, G. & McKendrick, J. (1997). Children's outdoor play: Exploring parental concerns

about children's safety and the changing nature of childhood. *Geoforum*, 28, 219–235.

van Meter, K. M. (1990). Sampling and cross-classification analysis in international social

research. In E. Øyen (Ed.), *Sage studies in international sociology, Vol. 40.*

Comparative methodology: Theory and practice in international social research (p.

172–186). Sage Publications, Inc.

Van Reijmersdal, E.A., Rozendaal, E. & Buijzen, M. (2012). Effects of Prominence, Involvement, and Persuasion Knowledge on Children's Cognitive and Affective Responses to Advergames. *Journal of Interactive Marketing*, 26(1), 33–42.

Ventura, M., Shute, V.J. & Zhao, W. (2013). The relationship between video game use and a performance-based measure of persistence. *Computers & Education*, 60(19, 52–58.

Verenikina, I. M. & Herrington, J. A. (2006). Computer play, young children and the development of higher order thinking: exploring the possibilities. In H. M. Hasan, G. Whymark & J. Findlay (Eds.), Transformational Tools for 21st Century Minds (pp. 22–27). Knowledge Creation Press.

Verenikina, I., Harris, P. & Lysaght, P. (2003). Child's play: Computer games, theories of play and children's development. In J. Wright, A. McDougall, J. Murnane. and J. Lowe (Eds.). Young children and learning technology. Conference in Research and Practice in Information Technology (Vol. 34, pp. 99–107). Australian Computer Society.

Vlachou, M., Andreou, E. & Botsoglou, K. (2013). Bully/victim problems among preschool children: Naturalistic observations in the classroom and on the playground. *International Journal of Learning*: *Annual Review, 20*, 77–93.

Vorderer, P., & Bryant, J. (Eds.). (2006). Playing video games: Motives, responses, and consequences. Lawrence Erlbaum Associates Publishers.

Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Waldman-Levi, A. & Bundy, A. (2016). A Glimpse into Co-Occupations:Parent/Caregiver's Support of Young Children's Playfulness Scale. *Occupational Therapy in Mental Health*, 32(3), 217–227.

Wang, B., Taylor, L., Sun, Q. (2018). Families that play together stay together: Investigating family bonding through video games. *New Media & Society*, 20(3). https://doi.org/10.1177/1461444818767667

Wattanasoontorn, V., Hern´andez, R.J.G., Sbert. M. (2014). Serious games for e-health care. In *Simulations, Serious Games and Their Applications*, 127–146. Springer.

Weber, R., Ritterfeld, U., & Kostygina, A. (2006). Aggression and Violence as Effects of Playing Violent Video Games? In P. Vorderer & J. Bryant (Eds.), *Playing video games: Motives, responses, and consequences* (p. 347–361). Lawrence Erlbaum Associates Publishers.

Weber, R., Ritterfeld, U., Kostygina, A. (2006). Aggression and Violence as Effects of Playing Violent Video Games? In P. Vorderer & J. Bryant (Eds.), *Playing video games: Motives, responses, and consequences* (p. 347–361). Lawrence Erlbaum Associates Publishers.

Weimer, A. A., Parault Dowds, S. J., Fabricius, W. V., Schwanenflugel, P. J., & Suh, G. W. (2017). Development of constructivist theory of mind from middle childhood to early

adulthood and its relation to social cognition and behavior. *Journal of Experimental Child Psychology*, 154, 28–45.

Williams, A. (2019, Nov 17). The 8 Best First-Person Shooters for PC in 2019. The Lifewire website: www.lifewire.com/top-first-person-shooters-for-pc-813061

Williams, D., Consalvo, M., Caplan, S., & Yee, N. (2009). Looking for gender (LFG): Gender roles andbehaviors among online gamers. *Journal of Communication*, 59(4), 733–758.

Willig, C. (2012). Perspectives on the epistemological bases for qualitative research. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbooks in psychology®. APA handbook of research methods in psychology, Vol. 1. Foundations, planning, measures, and psychometrics* (p. 5–21). American Psychological Association.

Witzel, A. (2000). Das Problemzentrierte Interview. *Forum Qualitative Research*, 1(1), 463–475.

Yardley, L. (2000). Dilemmas in qualitative health research. Psychology & Health,15, 215–228

Young, K.S. (2013). Treatment outcomes using CBT-IA with Internet-addicted patients. *Journal of Behavioural Addictions*, 2(4), 209–215.

Zimbardo, P.G. & Gerrig, R.J. (1999). *Psychology of Life*. Pearson.

Zvyagintsev, M., Klasen, M.,Weber, R., Sarkheil, P., Esposito, F., Mathiak, K.A., Schwenzer, M, & Mathiak, K. (2016). Violence-related content in video game may lead to functional connectivity changes in brain networks as revealed by fMRI-ICA in young men. *Neuroscience*, 320, 247–258.

Zyda, M. (2005). From Visual Simulation to Virtual Reality to Games. *Computer*, 38 (9), 25–32.

7 Appendices

Appendix A: Summary Tables of the Literature Search

Appendix B: Visual Representation of Literature Search Process on the Topic of Play

Appendix C: Visual Representation of the Literature Search Process on the Topic of Digital Game Play

Appendix D: Data Extraction Tables

Appendix E: Ethics Board Decision

Appendix F: Information Sheet for Parents and Children

Appendix G: Consent Form Parents

Appendix H: Questionnaire

Appendix I: Interview Schedule

Appendix J: Worked Transcript

Appendix K: Initial Code

Appendix L: Initial Sorting of Codes

Appendix M: Audit Trail

Appendix N: Postscript

Appendix A: Summary Tables of the Literature Search

Table A
Summary table of inclusion and exclusion criteria for the literature search on general play experiences

Inclusion/Exclusion	Rationale
Including publications in English and German language	The author is fluent in both the English and German language and initially wanted to include literature in both languages. Over the course of the search it transpired that the only relevant literature was in English.
Including articles in peer-reviewed journals, published books, published dissertations Excluding articles published in non-peer reviewed journals, unpublished dissertations and review and opinion pieces	Due to the limited availability of literature on the search topic the author decided to review not only articles published in peer-reviewed journals but also published books and dissertations. All three types of publications have undergone a process of quality control by peers and academics before they were published.
Including the search term "Childhood Play Behaviour"	In keeping with the research question "How do children experience their play of non-digital games" the author considered this search term to be capturing relevant literature. The PsycInfo thesaurus suggested this term when searching for articles related to children's play.
Included the search term "Childhood Development"	In keeping with the research question "how do children experience their play of non-digital games" the author considered this search term to be capturing relevant literature. The PsycInfo thesaurus suggested this term when searching for articles related to children's play.
Including the search term "Children"	In keeping with the research question "How do children experience their play of non-digital games" the author considered this search term to be capturing relevant literature. Academic Search Complete lists "Children" as one of its subject terms.
Including the search term "play"	Play is central to the research question. The author is interested in the experiences that children make while engaged in play.
Excluding articles that solely focus on digital games play	The first literature search was concerned with play in general and the second literature search

	focused on digital games play. Hence, articles solely looking at digital games play were excluded in the first search.
Including publications that feature the voice of the child on their play experience	The voice of the child is the key inclusion criteria for the review. Whether the voice of the child featured in the article was determined by scanning abstracts first.
Limiting the search to the last 10 years Excluding publications older than 10 years	The body of research dedicated to children's play is very large but the voice of the child features very little. Limiting findings to the last 10 years would give the author the opportunity to work through a manageable amount of findings.
Limiting the search to age range "school age 6–12 years".	This age range captures the middle childhood the author is interested in exploring. The author scanned method sections of relevant publications to determine the actual ages of participants included.
Excluding papers which looked at play experience across childhood years (0–18)	The focus of the current study was solely on the experiences that children of middle childhood make while playing.
The major heading "children" and "play" being chosen	These terms are extremely relevant to the above research question.
Excluding papers with subject "special needs"	The author did not consider papers looking at the experience of play in children with special needs. Special needs can be very diverse and so can be their experiences.
Excluding papers with subject "hospitalisation"	The author did not consider papers looking at play experiences of children with medical needs and/or who are hospitalised. The needs of these children are also distinct.
Excluding papers with subject "play therapy"	The author did not consider the experience of play that children make during play therapy. The author was only interested in self-directed play experiences.

Table B
Summary table of inclusion and exclusion criteria for the literature search on play experiences of digital games

Inclusion/Exclusion	Rationale
Including publications in English and German language	The author is fluent in both the English and German language and initially wanted to include literature in both languages. Over the course of the search it transpired that the only relevant literature was in English.
Including articles in peer-reviewed journals, published books, published dissertations Excluding articles published in non-peer reviewed journals, unpublished dissertations and review and opinion pieces	Due to the limited availability of literature on the search topic the author decided to review not only articles published in peer-reviewed journals but also published books and dissertations. All three types of publications have undergone a process of quality control by peers and academics before they were published.
Including the search term "digital gaming"	In keeping with the research questions "How do children experience and make meaning of their play on digital games" the author specifically searched for digital games. The EBSCOhost Web thesaurus defines digital gaming as "The act or practice of playing games using digital technology".
Including the search term "computer games"	The term "Digital Gaming" was only introduced and included in the thesaurus in 2019. The thesaurus encourages to use the term COMPUTER GAMES for references from 1973–2019.
Including the search term "video games"	The terms "video games" and "computer games" are often used interchangeably.
Including the search term "play"	The author is interested in the experiences that children make while engaged in play with digital games.
Including publications that feature the voice of the child on their play experience	The voice of the child is the key inclusion criteria for the review. Whether the voice of the child featured in the article was determined by scanning abstracts first.
Limiting the search to the last 10 years Excluding publications older than 10 years	A small but significant body of research has begun to emerge documenting the benefits of digital gaming mostly since 2009 (Granic, 2014).

	It was expected that within this body of research a more diverse approach to digital gaming research is taken, which may include children's voices.
Limiting the search to age range "school age 6–12 years".	This age range captures the middle childhood the author is interested in exploring.
The major heading "digital games", "computer games" or "video games" being chosen	These terms are extremely relevant to the above research question.
Excluding papers with subject "special needs"	The author did not consider papers outlining digital gaming experiences of children with specific special needs. Special needs can be very diverse and so can be their experiences. One paper included in the search by Bassiouni & Hackley (2016) did not set out to interview children with special needs but had one child disclose that she had ADHD during the interview. I have decided to include the paper because on the whole it did not focus on special needs in children in particular.
Excluding papers with subject "active game play"	The author did not consider papers focusing on children's play of digital games with the aim of improving fitness. These papers mainly look into the usefulness of digital games in encouraging children to adopt healthier lifestyles.
Excluding papers which look at digital gaming experience across childhood years (0–18)	The focus of the current study was solely on the experiences that children of middle childhood make while playing digital games. The author scanned method sections of relevant publications to determine the actual ages of participants included.
Excluding papers investigating digital game play and children's psychosocial wellbeing and levels of aggression	This research has a particular focus when asking children about their game play, namely, does the play affect their well-being and levels of aggression. This research does not help to answer the author's review questions.
Excluding papers investigating how digital games can support the development of specific cognitive skills in children.	This research has a particular focus when asking children about their game play, namely, to what extent may certain cognitive areas be enhanced (e.g. spatial abilities, executive functioning etc) This does not help to answer the author's review question.

Appendix B: Visual Representation of Literature Search Process on the Topic of Play

Electronic search through EBSCO Host using PsycInfo, Academic Research Complete and Child Development & Adolescent (a)

n = 14,633

Electronic search using SCOPUS (b)

n = 196

↓

Application of first set of exclusion and inclusion criteria (peer-reviewed, 2009–2019, English language, school aged children (6–12))

Total Excluded n = 14,072

(14,010 a, 62b)

↓

Total number of titles and abstracts screened

n = 757

↓

Application of further inclusion and exclusion criteria ───────────

Total Excluded n = 734

- ☐ Large number was outside the scope of the search terms
- ☐ A number of studies addressed play therapy, special and medical needs
- • A number of studies addressed play in children just at the cusp of middle childhood (4–5 years old)
- • A number of studies relied on observations of children's play, parental and teaching staff reports and observations
- ☐ Dissertation was concerned with early years children who were about to enter the school system

Articles identified through citation searching (c)

n = 11

→

Published PhD dissertations (d)

n = 2

→

Full copies retrieved and screened
n = 36 (14a, 9b, 11c, 1d)

→

**References included in
the literature review
n = 8
(4a, 2b, 2c)**

Excluded n = 22
(10a, 8b, 9c, 1d)
- Not featuring the voice of the child directly
- Opinion pieces based on previous research
- Not addressing middle childhood
- Primarily focused on children's engagement in active play for health purposes

Electronic search through EBSCO Host using PsycInfo, Academic Research Complete and Child Development & Adolescent (a)

n = 6,992

Electronic search using SCOPUS (b)

n = 6,557

Application of first set of exclusion and inclusion criteria (peer-reviewed, 2009–2019, school aged children (6–12))

Total Excluded n = 12,886

(6,670a, 6,216b)

Total number of titles and abstracts screened

n = 663

Application of further inclusion and exclusion criteria

Articles identified through citation searching (c)

n = 5

Published PhD dissertations (d)

n = 2

Total Excluded n = 734

- Large number was outside the scope of the search terms
- A number of studies addressed cognitive advances, exercise, special needs and focus on aggression
- A number of studies addressed digital game play in children across the age range or in pre-schoolers and teenagers
- A number of studies relied on observations of children's digital game play and did not feature their voice directly

---

Excluded n = 13
(7a, 4b, 4c, 2d)

- Not featuring the voice of the child directly
- Opinion pieces based on previous research
- Not addressing middle childhood
- One dissertation not available full text
- One dissertation was summarised in an

Full copies retrieved and
screened
 n = (9a, 6b, 5c, 1d)

$\longrightarrow$

References included in
the literature review
n = 5
(2a, 2b, 1c)

- included article
- Middle childhood
  children merged
  with adolescents

Appendix D: Data Extraction Tables

Data Extraction Table: Literature on Play

NNo.	Date Published	Author	Title	Country	Research Purpose	Participants	Methodology	Results & Implications
1	2018	Moore & Lynch	Understanding a child's conceptualisation of wellbeing through an exploration of happiness: The centrality of play, people and place	Ireland	To elicit children's conceptualisation of happiness Provide a justification for a rationale as to whether play should be included as an indicator of children's well-being in the national se of well-being indicators in Ireland	31 children (age range 6.0–8.33)	Focused ethnographic qualitative approach: Drawings, semi-structured focus group interviews, child-led photography	Children reports suggest that play occupation contributes to well-being "well-doing" became evident as an extra dimension to the notion of well-being, i.e., children associate well-being with what they're doing well (well-doing) Children placed importance on play value of the play environment rather than purpose build spaces and toys Play that offered feelings of well-being incl choice, flexibility, excitement, fun and challenge
2	2017	Howard et al.	Play in Middle Childhood: Everyday Play Behaviour and Associated Emotions	UK	To elicit patterns of play reported by children in middle childhood To elicit children's views on the emotional importance of play	38 children (age range 7–11; mean age 9.22)	Qualitative: Semi-structured focus groups	Children reported a diverse repertoire of play Children are sometimes willing to cede control of their play e.g. to peers, parents, teachers An intensity of emotions associated with play and not being able to play Claims to be first paper to address children's of any

| | | | | | | | | stage of childhood view on emotional importance of play

High number of comments made re electronic paly activity, confirming changes in childhood play behaviour

Pretend play persists into middle childhood |
|---|---|---|---|---|---|---|---|---|
| 3 | 2011 | Brockman, Fox & Jago | What is the meaning and nature of active play for today's children in the UK? | UK | Researchers cite previous research that noted a decline on physical activity around 10–11 years of age.

Aim was to elicit children's perception of 'play', how much of it is active play and the context of active play | 77 children (aged 10–11) | Qualitative: Focus groups | Children perceive play as some form of physical activity

Boys more likely to report engagement in physical activity as play than girls

Girls less likely to engage in unstructured physical play activities. They emphasised fostering social networks and socialising

Boys more likely to utilise neighbourhood spaces for play while girls more involved in family supervised play, e.g. gardens

Purpose build playgrounds rarely used for paly activities

Researchers question the feasibility of government spending on safe and |

								accessible pay areas
4	2013	Glenn et al.	Meanings of play among children	Canada	What are children's understanding and meaning of play	38 children (age range 7–9)	Qualitative: Children asked to respond visually (picture collages) to questions such as what do you play, where do you play, who do you play with, what does the word play mean Semi-structured group interviews were held as children presented their art work to their peers	Children see play opportunities almost anywhere and with almost anyone Children have a desire to engage in movement-focused activities Children have a desire to spend time outside The increasing interest in digital games is a pull away from the desire to be engaged in active play. Researchers query what this implies for children's health Adults are perceived as imposing their ideas of appropriate play Researchers are calling for adults to give children more agency in their play
5	2011	Lehrer & Petrakos	Parent and Child Perceptions of Grade One Children's Out of School Play	Canada Suburban neighbourhoods near Montreal	Investigated parental and child belief about play as children transition into school How do parents and children view free play at home	69 Grade 1 children	Qualitative: Children did drawings and were asked open-ended interview questions	Parents and children expressed play is important but parents found to be selective about which play is encouraged There appears to be a discrepancy between what parents and children perceive as a play experience. Parents may cite structured play activities such as soccer, swimming and playing

								musical instruments while children may more often cite unstructured play activities

Children often talk about what is important to them in terms of play but not necessarily how they spend their time.

Children who tend to choose sedentary and less social play are also more inclined to play computer games |
| 6 | 2010 | | Londal | Children's Lived Experience and their Sense of Coherence: Bodily Play in a Norwegian After-school Programme | Oslo, Norway; after school club adjacent to primary school | Investigate how bodily play affects a child's sense of coherence according to their own narrative | 36 children (age range 8–9) | Qualitative: Close observations and research interviews | Play that was perceived as comprehensive, manageable and meaningful promotes a sense of coherence. According to Antonovsky (1987) this will be decisive in the development of the child's health later on. However, mainly self-chosen play leads to SOC. Unpredictability, lack of load balance and little participation can have negative outcomes on the child's well-being. |
| 7 | 2009 | | Bernstein & Magalhaes | A study of the essence of play experience to children living in Zanzibar, Tanzania | Zanzibar, Tanzania | To gain an understanding of the essence of play to children living in Zanzibar and how context and culture influences their play | 16 children (age range 10–13) | Qualitative: phenomenological approach; Children took pictures of their play activities and chose pictures that most represented play to them during a | Children perceived activities as play that were fun, about getting fit, strengthening the body and about social interaction.

Notable was the lack of parental influence over play. It is not formerly |

| | | | | | | | | group a discussion | organised or driven by parents.

Opportunities for play differ for children living in developing countries compared to children living in the western world. Children showed great deal of creativity and resourcefulness.

Study's findings were in line with sociocultural theories of play, which stress the reciprocal relationship of play and culture and its role in learning social rules and norms and developing an identity. |
| 8 | 2019 | Prompona, Papoudi & Papadopoulou | Play during recess: primary school children's perspectives and agency | Athens, Greece | What meaning do primary school children themselves attribute to playing during recess | 82 children (age range 6–12) | Qualitative: interpretive methodological approach; focus groups | | The role of play during recess can be diverse for children and includes socialising, freedom of choice and decision making, personal satisfaction and development as well as intense feelings and struggle.

Peer interaction came out as a crucial motivator to engage in play.

The meaning the play has for children is revealed as the different forms of agency they feel they have over the occupation, i.e., the ability to act freely and create their |

								own agendas

Data Extraction Table: Literature on Digital Games

No.	Date Published	Author	Title	Country	Research Purpose	Participants	Methodology	Results & Implications
1	2016	Bassiouni & Hackley	Video Games and Young Children's Evolving Sense of Identity: A Qualitative Study	UK	Investigating children's experience as consumers of video games and the role this experience may play in their evolving senses of identity.	22 children (age range 6–12)	Qualitative: depth interviews and discussion groups	Children's comments revealed that digital games have opened up an alluring and empowering world of identification

Digital games are described as a representation of reality where presence, identity and meaning can be established

A culturally forceful trend in which peer acceptance and affiliation is negotiated

The play offers a temporary collective identity which sits in a common lifestyle |
| 2 | 2019 | Mertala | Fun and Games | Finland | Give children the opportunity to express their meaning-making around digital games | 26 children (age range 5–7) | Qualitative: Drawings and involvement in conversation during and after drawings | Children appreciate the play benefits of digital games that involve fantasy elements, personalisation (experimenting with different identities) and integration of transmedia influences |

3	2013	Hamlen	Understanding Children's Choices and Cognition in Video Game Play	USA	To better understand in what ways children's digital game play choices relate to their creativity, motivations, problem-solving strategies, learning preferences, and beliefs about how to play games	The paper is a synthesis of three studies. Study 2 fits the inclusion criteria (Hamlen, 2009) 118 students (age range 9–11)
4	2013	Sarachan	Exploring the online playground: Understanding motivation in children's virtual worlds	USA	The study pursued the question how children interact with online spaces in relation to creative play, exploring, socialising and gaming. Children were observed playing three games in particular: Club Penguin, Secret Builders and Poptropica	16 pupils (age range 6–11)
5	2012	Hannaford	Imaginative interaction with Internet games	Europe	Study explored children's imaginative interaction with digital games. It is underpinned by the idea that imaginative play is identity practice.	Small number of 8- and 9-year-old children

School of Psychology Research Ethics Committee

NOTICE OF ETHICS REVIEW DECISION

For research involving human participants

BSc/MSc/MA/Professional Doctorates in Clinical, Counselling and Educational

Psychology

REVIEWER: Katy Berg

SUPERVISOR: Helena Bunn

STUDENT: Esther Aslan

Course: Professional Doctorate in Educational and Child Psychology

Title of proposed study: An explorative study of how children perceive their play experience of digital games.

DECISION OPTIONS:

1. **APPROVED:** Ethics approval for the above named research study has been granted from the date of approval (see end of this notice) to the date it is submitted for assessment/examination.

2. **APPROVED, BUT MINOR AMENDMENTS ARE REQUIRED <u>BEFORE</u> THE RESEARCH COMMENCES** (see Minor Amendments box below)**:** In this circumstance, re-submission of an ethics application is <u>not</u> required but the student must confirm with their supervisor that all minor amendments have been made <u>before</u> the research commences. Students are to do this by filling in the confirmation box below when all amendments have been attended to and emailing a copy of this decision notice to her/his supervisor for their records. The supervisor will then forward the student's confirmation to the School for its records.

3. **NOT APPROVED, MAJOR AMENDMENTS AND RE-SUBMISSION REQUIRED** (see Major Amendments box below)**:** In this circumstance, a revised ethics application must be submitted and approved before any research takes place. The revised application will be reviewed by the same reviewer. If in doubt, students should ask their supervisor for support in revising their ethics application.

DECISION ON THE ABOVE-NAMED PROPOSED RESEARCH STUDY
(Please indicate the decision according to one of the 3 options above)

APPROVED, BUT MINOR AMENDMENTS ARE REQUIRED <u>BEFORE</u> THE RESEARCH COMMENCES

Minor amendments required *(for reviewer)*:

Information sheets (and ethics form) do not contain any information on how to request that data is destroyed if people choose to withdraw from the study (and deadline for this). This must be added. Process for acting on disclosures of harm (e.g. current bullying) must be specified and added to information sheet. Also consider explaining the terms anonymised and transcribed in children's information sheet.

Major amendments required *(for reviewer):*

Confirmation of making the above minor amendments *(for students)*:

I have noted and made all the required minor amendments, as stated above, before starting my research and collecting data.

Student's name *(Typed name to act as signature):*   Esther Aslan
Student number: 1724875

Date: 9.3.2019

(Please submit a copy of this decision letter to your supervisor with this box completed, if minor amendments to your ethics application are required)

ASSESSMENT OF RISK TO RESEACHER *(for reviewer)*

Has an adequate risk assessment been offered in the application form?

YES / NO

Please request resubmission with an adequate risk assessment

If the proposed research could expose the <u>researcher</u> to any of kind of emotional, physical or health and safety hazard? Please rate the degree of risk:

☐ H

Please do not approve a high risk application and refer to the Chair of Ethics. Travel to countries/provinces/areas deemed to be high risk should not be permitted and an application not approved on this basis. If unsure please refer to the Chair of Ethics.

☐ IUM (Please approve but with appropriate recommendations)

☐

Reviewer comments in relation to researcher risk (if any).

Reviewer *(Typed name to act as signature)*: Katy Berg

Date: 4.3.2018

This reviewer has assessed the ethics application for the named research study on behalf of the School of Psychology Research Ethics Committee

RESEARCHER PLEASE NOTE:

For the researcher and participants involved in the above named study to be covered by UEL's Insurance, prior ethics approval from the School of Psychology (acting on behalf of the UEL Research Ethics Committee), and confirmation from students where minor amendments were required, must be obtained before any research takes place.

For a copy of UELs Personal Accident & Travel Insurance Policy, please see the Ethics Folder in the Psychology Noticeboard

Parent/Carer Information Sheet

My name is Esther Aslan and I am currently studying on the Professional Doctorate in Educational and Child Psychology at the University of East London. I am also working as a Trainee Educational and Child Psychologist for Milton Keynes Council Educational Psychology Service. As part of my training I am researching children's' digital gaming habits. I am particularly interested in better understanding the subjective experience of children and their gaming habits and to explore the meaning they attach to their experience.

Your child has been invited to take part in this research. Before you decide whether you would like for your child to participate, please take some time to read the information below. This explains why the research is being done and what it will involve.

If you would like for your child to take part in this research please sign the attached consent form and return it along with your child's filled out questionnaire to your child's class teacher. If you consent to your child's involvement I will also give them their own consent form so they can confirm if they want to participate.

Why is this research being done?
It is argued that the presence of digital games in the centre of children's lives has made their social and material environment quite different from those of previous generations. The topic, however, has relatively little empirical research and robust theories have not yet evolved. This research aims to explore children's consumption of digital games from their own perspective of their experience with digital games.

Who will be in this project?
I would like to hear from as many year 6 pupils in Milton Keynes as possible.

If you agree for your child to be part of this project, what will happen?

1. Your child's teacher has provided your child with a questionnaire on computer games. The filled out questionnaire can be returned to your child's teacher along with your and your child's consent form.
2. If your child agrees to be part in the second phase of the research, I will randomly select 12 children from the returned questionnaires for an interview. Children will be interviewed in groups of three and a sample of interview questions can be found below. Children who are not randomly selected will be placed on a waiting list and if interest exceeds research capacity might not be interviewed.
3. Interviews will take place in school during school hours and will last approximately 1 hour.

The conversations I have with your child will be recorded using a tape recorder, so I can accurately recall what has been said. No one else will listen to the tape or read the notes I have made. If you are not sure about this then you will have an opportunity to speak with me about it before the interview.

Whatever is said in the interview will remain private and confidential. The only time I would have to speak to someone else would be if your child told me something that means he/she or someone else is in danger. If your child became upset during the interview then we can stop the interview straight away.

Who will know you and your child have been part of the research?
The only people who will know that your child have decided to take part in the research will be you, your child and the school. The school will know who has been involved but they will not know who said what. If anyone else might need to know then I will speak to you first to check this is OK and let you know why.

When I have talked to all of the young people who agree to take part in the project I will write a report. The responses given will not be linked to names, school or any personal details. Nobody will be able to identify your child from the report. I will keep all of the questionnaires, tape recording and notes in a safe place during the research and when I have finished the project these will be destroyed.

Contact details
The research has received ethical clearance from the University of East London's Ethics Committee and is supervised by Dr Helena Bunn (h.bunn@uel.ac.uk).
I can be contacted on esther.aslan@milton-keynes.gov.uk or alternatively on 01908 657893

What if I have more questions?

If you have any questions or you want to discuss this further then please contact me on the details above.

Kind regards,

Esther Aslan
Trainee Educational Psychologist

Pupil Participant Information Sheet

Hi! My name is Esther, and I am training to become an Educational and Child Psychologist (somebody who tries to help schools get better at working with children and young people). I work as a Trainee Educational Psychologist at Milton Keynes Council and I am also a student at the University of East London.

Why are you writing to me?

As part of my training I am doing a project about the experiences of young people who are playing computer games.

With your help I want to find out things like:

- What sort of games are played
- How and when games are played
- What children think about computer games
- How much children enjoy playing games

I hope that this project will help anyone working with young people to know what kind of things they enjoy and gain from playing computer games.

If you want to be part of this project, what will happen?

1.) You will receive a questionnaire with all sorts of questions about computer games.

2.) When you return your questionnaire it will be put into a "hat" and I will randomly select 12 children to speak to in person about their experience of playing computer games. The chat would take place in school. If your name is not pulled out of the hat you will be put on a waiting list and it might be that you don't speak to me at all.

3.) You won't be speaking to me alone. It would be you and two other children who also play games.

When we talk I will record our conversation. This is so that I can remember what you have told me. No one else will listen to the tape or read the notes I have made. If you are not sure about this then you can chat to me about it in our first meeting. What you say will be kept between us. The only time that I would have to speak to someone else would be if you tell me something that means either yourself or somebody else is in danger. When that happens I will speak to a person in your school who is responsible for keeping children safe. If you get upset by talking about any of the things I want to find out then we can stop straight away.

Who will know you have been in the research?

The people who will know that you have decided to take part in the research will be you, your parent/guardian as well as your SENCO/Inclusion Manager and class teacher in school. If anyone else might need to know then I will speak to you first to check this is OK and let you know why. When I have talked to all of the young people, who agree to take part in the project I will write one or few reports for people who work with children, so they can learn from it. I will not use your name or any of your personal information in any reports I write, so nobody will know that it was you who said it. I will keep all of the recording and notes in a safe place and when I have finished with the information I will destroy them.

If you have decided that you don't want me to use your questionnaire and interview answers (if you have taken part in the interview) for my study this can only be done up until I have transcribed (written up what you told me in interview) and anonymised (removing your names from your answers) the interview. If you would like to withdraw your answers then this can be arranged by emailing me or asking your class teacher to contact me by 30.10.2019.

What happens next?

1. If you are interested in taking part in this research then let your teacher know. They will give you a questionnaire and consent form as well as an information letter and consent form for your parent/guardian.

2. Please return the questionnaire with consent forms to your teacher.

3. I might contact you to arrange a chat about computer games.

4. If you want to know more before you make a choice, then you can ask me any questions you like at our first meeting.

5. **REMEMBER** you don't have to take part in this study if you don't want to. Thank you

Appendix G: Consent Form Parents

Parent/Carer Research Consent Form

I have read the information leaflet relating to the above programme of research in which my child has been asked to participate and have been given a copy to keep. The nature and purpose of the research have been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which I will be involved in have been explained to me.

I understand that my child's involvement in this study, and particular data from this research, will remain strictly confidential. Only the researchers involved in the study will have access to the data. It has been explained to me what will happen once the experimental programme has been completed.

I hereby freely and fully consent to my child taking part in this study.

I understand that I have the right to withdraw from the programme at any time without disadvantage to myself and without being obliged to give any reason.

Parent Name (BLOCK CAPITALS)…………………………………………….
Parent Signature………………………………………………………………….
Child's name …………………………………………………………………
Date...

Thank you!

Pupil Research Consent Form

If you want to take part in the study, fill out a questionnaire and possibly talk with me about your experiences of computer games, then please complete this form. All you need to do is tick the boxes that apply to you.

1. I have looked at any information about the project and I understand what it is about

YES   NO

2. I understand that if I get to speak to Esther I can stop talking about something if I want to

YES   NO

3. I understand that I do not have to answer any questions if I do not want to

YES   NO

4. I understand that my answers to questions will be recorded on audio tape

YES   NO

5. I understand that what I say will be kept private and only shared after it has had my name and any other details that could identify me taken out.

The only time that Esther can tell anybody else my name or any details, is if I say something which means that me or someone else is getting hurt.

YES

NO

6. I understand that I can change my mind about taking part at any time. It will not affect the way I am supported.

YES

NO

7. I agree to take part in the research project

YES

NO

Participants Name (BLOCK CAPITALS)………………………………………………………….
Participant's Signature:……………………………………………………………………………
Date………………………………………………………………………………………………….
Researcher's Name (BLOCK CAPITALS)……………………………………………………….
Researcher's Signature ……………………………………………………………………………
Date………………………………………………………………………………………………….

Thank you!

Questionnaire

I am interested in finding out the sort of games children play. I'm particularly interested in 'computer games'. Could you please help me by answering the following questions?

Remember:
1. There are no right and wrong answers — this is not a test.
2. Please answer all the questions as honestly and accurately as you can.

Name: ……………………………………… School: ………………………………………………………

1.   How old are you? …………………………

2.   I'm a: boy   girl   (please circle your answer)

3.   What are your hobbies?

4.   Do you play games on a gaming console/mobile phone/tablet? Yes   No
     (please circle your answer)

If you have answered No you can finish the questionnaire now and return it to your teacher. If you have answered yes, please answer the next questions ☺

5.   What do you use to play games on? (please tick all that apply)

Playstation

Xbox

Nintendo Wii

Nintendo Switch

Laptop

Computer

Mobile phone

Tablet

Other (please name):

6.   Have you got a gaming console in your room? (please circle)   Yes   No

7.   If yes, which one(s)?

8.   How often do you play computer games? (please tick one)

Once a week 2–3 times a week   every day   Other (please write):

9.   If you play every day, how many hours do you think you are playing altogether in one day?

10.   Have you got favourite game(s)? What are they called?

11. Do you play computer games alone or with friends? (please tick all that apply)

Alone

With friends

With friends online

With players online I have never met in real life

12. If you play with friends online, do you play both with boys and girls? (please tick all that apply)

Just with boys

Just with girls

I play with boys and girls

I don't know

13. What does your mum/dad think about computer games? (please tick all that apply)

He/she says I should play outside more often.

He/she says there are good and bad games.

Mum/dad play themselves.

Mum/dad don't like them.

Mum/dad like them.

Mum/dad don't mind.

I don't know.

14. Do you look at the age limit for computer games?

Yes
No
Sometimes

15. Do you think you can become addicted to computer games?

Yes
No
I don't know
Depends:

16. What do you think you can learn from playing games?

17. Do you watch other people play games? (for example on YouTube)

Yes
No
I don't know

18. Can games help you feel more relaxed?

Yes
No
Sometimes
I don't know

19. Can games make you feel angrier?

Yes
No

Sometimes

I don't know

Here are some statements that other children have made. Please indicate how they apply to you:

20.   Sometimes when I am at school I think about how I could solve a game challenge or play a better game.

Yes

No

Sometimes

I don't know

21.   I think about how a game could be improved.

Yes

No

Sometimes

I don't know

22.   I talk to my friends about the games I play.

Yes

No

Sometimes

I don't know

23.   I think it would be fun to develop my own game one day.

Yes

No

Sometimes

I don't know.

24.   There are situations in real life where I get the feeling that I am in the game.

Yes
No
Sometimes
I don't know.

25. I forget to eat when I am playing games.

Yes
No
Sometimes
I don't know

26. I like to snack when playing games.

Yes
No
Sometimes
I don't know

27. Sometimes I try game moves in real life.

Yes
No
Sometimes
I don't know

28. Sometimes I dream about the games that I am playing.

Yes
No
Sometimes
I don't know

29. Would you like to meet with me to have a chat about computer games?

Yes
No

Thank you for taking the time to fill out this questionnaire. Please return it to your teacher ☺

Title: An explorative study of how children perceive their play experience of digital games

Research questions:
1. How do children experience their digital games play?
2. What is children's experience of non-digital play?
3. What meaning do children attach to their play of digital games?

Interview Schedule

General Play:

Tell me some of your favourite things to play?

Why are those favourites? What do you like about them? What's special about them?

Who are your favourite people to play with?

Where are your favourite places to play? Why?

How do you decide what you want to play? Prompt if necessary: What makes you decide?

How do you feel when you are playing? Prompt if child needs help – some children are excited when they play, others may be frustrated, happy or content. There are lots of ways children feel when they play – how do you feel? Are these feelings different when you play specific games? Can you tell me a bit more?

Do you play things with some friends but not with others? Why so?

Do you think that boys and girls play the same or differently, or both maybe? How do they play the same? How do they play differently?

How do you play now compared with how you did when you were younger (here it may be good to help them – one year ago? What about five years ago)? What is the same? Why did you keep it the same? What is different? Why did you choose to play differently?

How do you think adults play? Do you play with adults? Is it fun to play with adults? Is it boring at times? Why so?

Is play easy or hard? How? Why?

Imagine you are describing to an alien what play is? How would you describe it?

Digital Play:

Do you play computer games?

How old were you when you first started?

Can you remember the first game you ever played? Who did you play with?

What sort of games did you enjoy playing then?

What consoles do you have? Do you have mobile playing devices?

What games do you play? Are they single or multi-player games?

How do you know about new games? And which games to get?

Have you got a favourite game?

What do you value about a good game?

Do you have siblings? Do they play? The same games or different?

Is there someone you enjoy playing computer games most with? Why him/her/they? Do you prefer games in which you are on your own or in a team, or otherwise? Why so?

Do you have friends with whom you play digital games as well as other games in real life? Do some friends come across the same or differently in online games than in real life games/play? How are they the same / different? Why do you think that is?

Do you play computer games with boys/girls? Is it the same or different? How is it the same / different?

Do you play with parents? What about with other adults? How are they when you play digital games with them?

Do you know about Avatar? What do you like about games that have Avatars? What kind of games with Avatar you enjoy? Why so?

Tell me, can you custom make your Avatar? Do you like games where you have lots of options to create your own Avatar, or not so many options? Why? Why not?

Do you play in groups? (If yes) Can your play partner have an Avatar with different powers to yours? How do you know about these powers? Can you pick different powers in your team to join against an enemy? Is this important? Why so?

Does the body of your Avatar get weaker with less health? How can you tell whether you are close to dying or whether you are very strong? Is this important? Why so?

Is it important to know if a specific action/move is required from you? If yes, how do you know? How can the 'game' let you know? Why is it important to know?

Why do you think playing digital games is important to you?

While playing, have you ever observed a player, a good player, and then tried to copy his skills? Or other ones that you tried to avoid? Tell me a bit more.

How do you get better at playing? Do you watch people on YouTube playing games? Why?

Tell me about a time when you were not playing well? What happened? How did it make you feel?

How does it make you feel when you play with someone who has lots of bad luck? Perhaps he/she is not good enough yet. What do you do? (prompt: Do you try to reassure them laugh at them, ignore them, teach them etc?)

How do you know whether you are doing well or not in a game?

How do you become a good player?

What is a good/bad game experience? How do you feel afterwards?

What do you think you learn from playing these games?

What does it mean to play fair on computer games?

How do you feel when you are cheated on during computer games? (Do you remember the cheat when you meet the person who cheated on you offline?)

How to respond to cheaters? Is it different to offline play?

How do you solve arguments in computer games?

Let's imagine you have the opportunity to create your own game. What are the top 3 things you would include? Why so?

There are some people who do not like computer games. Why do you think they don't like them? What would you tell them?

What do your mum/dad/carer think about computer games? Do you enjoy playing games less/more knowing how your mum/dad feels about them?

How is playing computer games same/different to playing away from the computer/console?

Do you sometimes play/enact things in your offline play that you know from the computer games? Tell me more.

If you had an entire day to spend just the way you want it without adult any interference, how would you spend it and what would you do?

What else do you think it is important for me to know?

Thank you.

Appendix J: Worked Transcript

Gean: Well, if I know them, I'm not. If I'm just about to win the game on Fortnite then they cheat, then I'd be angry.

Interviewer: How about you, Thanos?

Thanos: Yeah, if it's a friend I just, I probably wouldn't play with them at all, like I won't be one, I just know...gonna cheat but still talk to them and I won't be like angry at them.

Interviewer: So, is that different? Imagine someone cheats on you in real life in a play on the football pitch or during a board game, is it different than being cheated on, on a computer game?

Thanos: Football, if I get cheated on, I get mad and then I get them back but I don't cheat when I do it. I just, I use the shoulder pass and then do it to them [??? 55:26].

cheat
mad
retaliate

Gean: A cheat could be like a foul on purpose, like deliberately tripping them up or something like that, and then you just get angry at them and you just try and shoulder pass them, but you don't do that.

Interviewer: It sounds like when you're cheated on in life, that's more of a bigger deal than in computer games. Why do you think it's different?

Thanos: Because in the game, it's like it's on a TV.

Gean: It's just a game, it's not real life and doesn't affect you really.

cheating in cg => not real
life

Thanos: Yeah, cauz you...cannot be injured and then that would like affect the game.

no injury
no effect on game

Interviewer: So, there could be consequences in real life. Interesting. Okay, so how do you solve an argument in a computer game?

Gean: Just leave...talking to them and you can just see them in real life and it would be normal again. Or you can just see them again on the electrical.

upset not
carried over
into real life

Interviewer: Okay, how about you?

Thanos: If you get in an argument with your friends-- Well, if it's just someone random, then you just feel [??? 56:36] and then just leave and never gonna see them, never gonna meet them again probably. And if it's a friend if you're arguing that you just leave, just leave it for a while and then probably either comeback and meet them again in the electrical world.

Interviewer: Okay, so you let it rest for a while, okay. Do you ever get into full-blown arguments in computer games?

Gean: No.

Interviewer: Okay. Let's imagine you have the opportunity to create your own game. Say Sony comes to you and says, guys, we pick you two please create, what are the top three things he would include?

Gean: More than one thing to do, like options, different options. Probably make it so you can customize a character and make it so it's not pay to win. Because when it's play to win it's annoying when you come up against someone who spends a lot of money on their team and stuff.

[handwritten note in margin: options!]
[handwritten note in margin: not pay to win]

Interviewer: What does it mean pay to win?

Gean: Where you spend real money on the game to buy better things in the game. Like one of our friends you can buy FIFA points which gets you money...that he's really good.

Interviewer: So, you mentioned you want to have one of the things to customize your person, did you say one of the year number two?

Gean: Yeah.

Interviewer: So, why do you think that's important in a good game?

[handwritten note in margin: individualisation]

Gean: It's just fun to customize your character. Like on WWE, I used to play that a lot, I'd always love doing that, I do that mostly.

Interviewer: You do that mostly, all right. What's fun about it?

[handwritten note in margin: choice — freedom]

Gean: Just you get to choose what you want to do and just make it look like what you want it to look like.

Thanos: You can make them as silly as you want.

Interviewer: Okay. How about your game, now Sony asks you to do a game Thanos, top three things that have to be in the game?

[handwritten note in margin: desire for challenge]
[handwritten note in margin: no money involved]

Thanos: I think like a target that is not just easy to complete, like different like quests to do they're hard and challenging. I want the graphics to be good so you could see clearly, and I think I don't like it when you can buy things. Just, you don't buy anything. I think you can just all be on the same skill level and try and complete it.

Interviewer: Okay, so you both find that it's important you can't buy skills.

Thanos: Yeah.

Interviewer: Brilliant. Okay. So, you two, there are some people who don't like computer games. Why do you think they don't like them?

26

Gean: Could be because they're bad at them. They might just like, I'm not sure, like reading more or just different things like toys.

Interviewer: Okay. What would you tell them?

Gean: I'll just be like, you sure you don't like the computer games I find computer games would be way more fun than like Legos or something.

Thanos: I'd just said try it and then just it try out for a few months and see if you better and - get into it.

Interviewer: Okay, okay. Now some say they're just not good for kids. Would you agree with that?

Gean: I won't say they're horrible for you, they're not. They don't benefit you probably, but they don't massively impact you make you worse probably. I mean it will be bad for your eyes if you play like a lot a lot. But if you just play a reasonable amount, I don't think it's that bad.

Interviewer: Okay. Okay, so what do your parents think about computer games?

Gean: They think it's really bad for me and they try to limit me.   *Parents - bad limit*

Interviewer: Okay. How about, what does your mom think, Thanos?

Thanos: Yes, she is quite strict and she doesn't just let it slide...on it the whole day.   *Parents - strict*

Interviewer: That's interesting. So, you two, do you enjoy playing games less knowing how your parents feel about them?

Gean: Sometimes, I'm just really bored in the week and I'm like oh, I wish I could go on the PlayStation. But I'm usually fine.   *accept limits. Parent attitude affects dg*

Interviewer: Okay, so when you're playing well, you know, Mom, Dad, I don't really like it that much and I'm sitting here, does that impact on how you feel about your game?

Gean: Not really.

Interviewer: No. No. Okay. How is playing computer games the same or different to playing away from the computer? So, let's compare playing computer games and playing non-computer games. How are they the same? How are they different?

Gean: They're the same because you actually do something playing the game. They're different because online, you like it's just different because you're not actually doing the physical movement. You're just using your fingers to control the character.   *dg not physical like real play*

Interviewer: All right.

27

222

Thanos: If you're playing with your friends, you're looking at them, you're talking to them in person and on the computer, you can just hear them and talk back to them. You're not actually doing anything, you're just sitting there and just moving your thumbs or fingers.

Interviewer: It's less active. Are there any different feelings playing computer games compared to real life games?

more frustration dg

Gean: You get more frustrated on online games.

Interviewer: You get more frustrated on online games.

Gean: But sometimes it can be quite fun if you win...excitement. *excitement*

Interviewer: Tell me more, that's an interesting point you make, can be more frustrating, why do you think it can leave you more frustrated?

growth

Gean: I'm not really sure. Like in real life you can get more like angry and try harder, but in that just really annoys you. I don't know why.

growth

Interviewer: Okay. So, in real life you can get angry but then you can try harder and you can't do that on computer games.

growth

Thanos: Usually -, you can't get better at FIFA and just like oh, I'm gonna try harder now. It doesn't like...if you lose a football game one week, you can just the next week you can try harder and you can just be more focused on the game and then you probably get a bit better.

Interviewer: What is stopping you in online games from becoming better, what is it?

growth

Gean: It's harder to get like better at online game. Let's say you're new to football, it's easier to get better at football. And let's say you're new to Fortnite, it'd be harder to get really good at Fortnite than it is to get better at football. Because like I got better at Fortnite, but once I've got to that stage it's as good as it can get.

Interviewer: Thank you. We've only got three questions left boys, you're doing amazing. I can see you're all getting tired. Do you sometimes play or enact things in your offline play that you know from the computer games?

Gean: No, not really.

Interviewer: You only mentioned you may do some of the dribbling, so you guys are copying of some moves?

Gean: Yeah.

Thanos: Yeah

28

Appendix K: Initial Code

Boys play more aggressively — What is children's experience of non-digital play?

Playing with adults in real life more fun than on dig

Play not fun until you know the rules

You can get fresh exercise

When cheated on during real life play → I feel angrier than dig
suppressed anger

Playing more dig older, games have evolved — Play more social when younger doing hampering younger. Legs by myself quick topping — relate to each other in play

What to play consequences to cheating in real play — played outside more often - more imaginative but now I know it's not real - "real is fun"

is a joint decision — boredom: unhappiness

girls less competitive in play — girls, not kind in play — can get fit from play — activity that helps you keep fit

Lots of options in play — play is hard when friends fall out

with friends outside — forget why you play it disappears — younger kids fall out more often during play - more understanding as you grow older

talk - tell each other stuff — adults don't play because they have jobs — adults don't play

our creativity that makes you happy that stops boredom — siblings

real fun — being by myself - calming — football basketball — with your friends

cooperate

freedom in play leaders to let you off — listening to music — play just happens - get feeling — not fun if games are complicated — adults play differently to children - not as good — mood lifting

park - being free to talk — with friends cycling to places — getting together cooperating

competitive learning to become the best — dance — boys play fight — having fun

having fun — play can be hard people watch and judge — making up rules and games as you go along — Being cheated on in real life same as in dig you can block people in dig, not in real life so you can't be as angry with them in real play.

Sitting out in play I am not good at — challenge, who can be the best

Appendix L: Initial Sorting of Codes
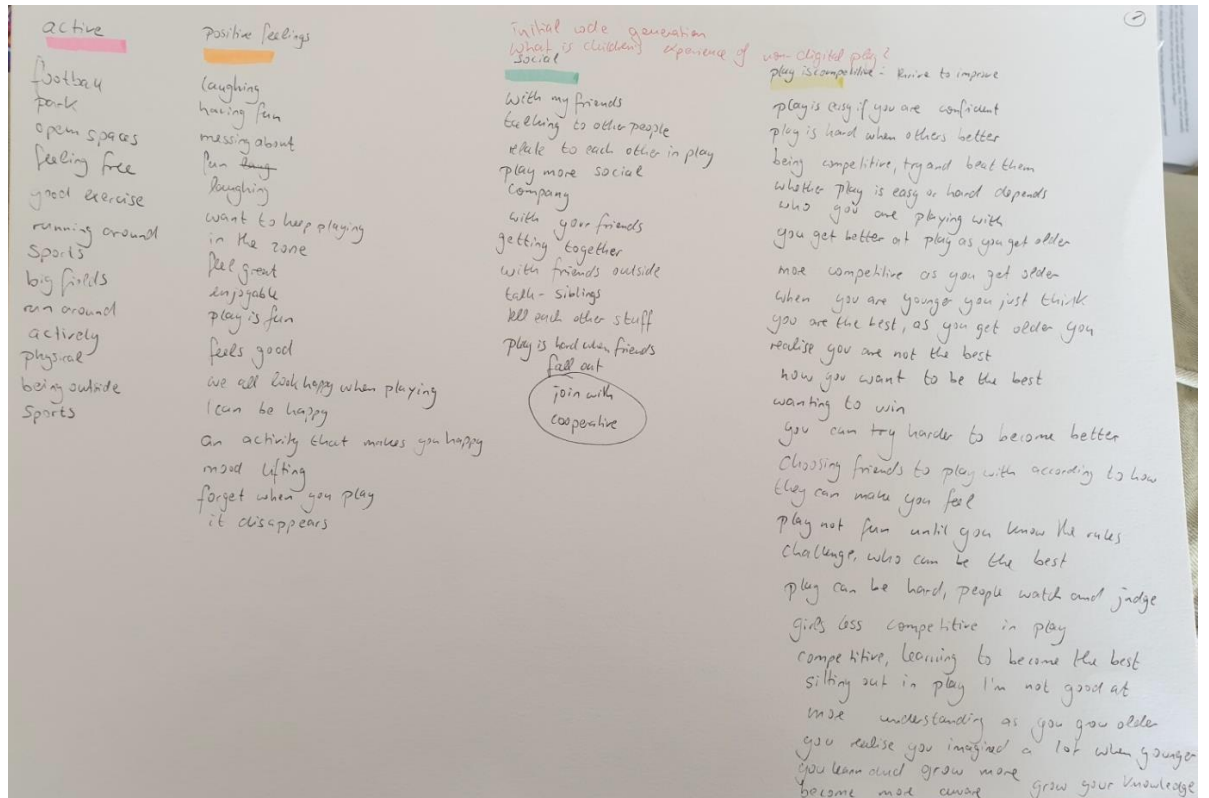
Appendix M: Audit Trail

Theme	Sub-theme	Subordinate sub-theme	Evidence in the interview transcripts
1 Play as an active social experience	Cooperation Competition Boys run and girls talk	Rules Consequences to cheating	With my friends. Talking to other people. Relate to each other in play. Getting together. Company. Tell each other stuff. **Cooperation** we decide together. Cooperating. joint discussion. we make up the rules together. **Competition** More competitive as you get older. I try and beat them. I want to be the best. I want to win. I sit out if I am not good at the play. You can try harder and become better. Play is hard when others are better. I don't want to play with friends who are better at the game. **Boys run and girls talk** Running around Sports Football Good exercise Big fields Actively Physical Boys scream Girls are talking Girls are texting Girls more mature Girls on phone **Cooperation-rules** Explain the rules. Play hard when the rules are complicated. Explain to aliens the rule of play. Making up rules and games as we go along. **Cooperation-consequences to cheating** When cheated on I get mad and get them back. Angrier than in computer games. There are consequences to cheating.
2	Positive feelings		**Positive feelings**

Feelings associated with play	Negative feelings		Laughing Having fun Feel great Feels good We all look happy when we play Mood lifting **Negative feelings** Not fun if complicated. It is hard when friends fall out Boredom makes play hard
3 Agency	Growth		Do whatever I want Being free to talk Free to do whatever I want No teacher to tell you off Options in real play More imaginative Lots of options in play We decide **Growth** You can try harder and get better You grow more Become more aware Grow your knowledge You learn You learn about reality
4 Adults don't play			Adults don't play because they have jobs. Not as good Adults go out a lot but I don't know what they do. Play on phones Not trying Not trying much
5 Digital games as social spaces	Social Desirability Competing Boys shout and girls don't react	Prosocial behaviour	Best game was when all my friends were on it. A good game is when you play with your friends. You wish before you go on your PS that all your friends are there and you can play with a full squad. Games are important to me because I can still socialise with my friends even though they are not there. **Social desirability** I have something in common with my friends when I play computer games. You want to fit in. If all your friends in school are talking about it you want to join in. **Social desirability – prosocial behaviour** Trying to help players that are not

			good
			Sometimes I help bad players, sometimes I ask good players for advice. I support newbies by gifting them things. **Competing** It feels good if I can beat my kill score. I always try to be the best. Watching YouTube tutorials can help me get better. I like watching other players to pick up tricks. **Boys shout and girls don't react** Girls have no strong reaction in computer games. They don't talk trash. They don't talk as much. It's almost as if they don't care. Girls don't play as aggressive. my friends that's a boy dies, I'll just say how bad they are, but if it's a girl, they don't, I don't think they really talk like that, like, oh, you're trash.
6 A different persona	Angrier Cocky trash talk Nicer		It's like a different reality. You are not yourself. You are your gaming self. Offline and computer games are different because you act like a completely different person. **Angrier** You get more frustrated on computer games. A friend who is shy offline talks more, more aggressive. Does not care what he says. He is hiding behind a screen. He is bad because no consequences to his behaviour. Want to smash controller because I lost. You see a lot of people getting really angry on computer games. **Cocky trash talk** We joke about when we trash talk. Sometimes they're a bit more cocky. They're just not as cocky in real life. **Nicer** You can act like a better person. I'm a way better person than I am in real life.
7 Emotions	Positive feelings	Escapism	**Positive feelings** I'm happy when I achieve things in

	Short-lived upset with friends		computer games I never thought I would.
			More fun with more experience.
			Feel good after winning.
	Anger and frustration	No constructive means to vent	Computer games are important to me cause they make me happy.
			When you have a good game experience you feel unstoppable.
		Helplessness in face of injustice	**Positive feelings– escapism**
			Computer games are important to me 'cos they give me time away from the real world.
			Computer games can help you zone out from what's around you. You are focused on the screen.
			Short-lived upset with friends
			When a friend cheats on me during a game, I'm not upset with them in the real world.
			I don't care in the real life if someone cheated on me on computer game.
			Anger and frustration
			You get more frustrated on computer games.
			Seeing friends rage hurts me.
			Responding with anger.
			In offline play you can't get as annoyed as in computer games.
			Anger and frustration – no constructive means to vent
			In real life you can get angry but then you can try harder and you can't do that on computer games.
			Anger and frustration – helplessness and injustice
			In Fortnite, I wasn't building well and it's really frustrating 'cos you can't do anything about it.
			In real play, there might be consequences to cheating and a reward for those cheated on to make them feel better.
			It's unfair because cheaters have access to hacks which makes it impossible to win against them.
			Because, like, I got better at Fortnite, but once I've got to that stage it's as good as it can get.
8 Parents don't understand	Tension		Parents don't like it because they come from a different era. We are in the computer games era. This is what we do.
	Fear	Regulation	
	Lack of seriousness and ineptitude		Adults can't relate to computer games being fun because they never

				played them in their time. **Tension** If mum and dad hated video games it would make me feel different, upset-doing something they don't like. I try to play the least I can because my parents don't like computer games. **Fear** My parents are really worried I'll get addicted Parents think computer games will turn us into mass killers. Video games don't make us psychotic. **Fear – Regulation** My parents think it's really bad for me and limit me. My mum is quite strict about computer games. She does not let it slide. I switch the PlayStation off when I think my mum might get angry. **Lack of seriousness and ineptitude** Adults may not like it because they're really bad at it. Parents don't really play seriously, just laugh about it. When I get really angry in video games they say it is just a game. Parents just laugh when they die. Parents are really bad. We just laugh at them. They don't take it seriously.

Appendix N: Postscript

Interview with Gean and Thanos on 23.11.2019 at 12pm. Boys aged 10 years.

Some topics that I found interesting:

1. Trash talk – the way the boys described trash talk it's almost like it serves to enhance the overall game play mood, like motivating music in the background. But they also mentioned engaging in a form of talk that they would get told off for under normal circumstances. That reminds me of X who can be downright rude when he plays but no one around him minds much. Which surprises me as Y is quite particular about mannerisms.
Perhaps check out 'Stimmungsgestaltende Kommunikation' from Raudenaut.

2. How important competition in play is. Not the case when younger. Boys described their early play beautifully. Being full of confident that you are competent and good at what you are doing, not compromised by self-doubt. I wonder though if these two are particularly competitive.

3. Parents don't take play seriously. Play is serious business. I wondered if they would actually enjoy parents playing with them more than they were willing to admit. Might not be cool to admit this in front of friend.

4. You can only be so good in computer games. In real life you can challenge yourself infinitely.

5. Being in the zone! Yet being cheated on in games is not as bad as being cheated on in real life. It is just a game.

6. So I am wondering … if I asked the boys to compare playing Monopoly with other forms of play … a game where emotions can get heated, where roles are played, where winning and losing can often be a stroke of luck despite all efforts to get it right. I wonder if a board game can be equally immersive though … identities so very different, statuses, reputations and dynamics established in same manner.