

Play occupations in digital spaces: Children's experiences throughout childhood



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Occupational Science & Occupational Therapy

DOCTORAL THESIS

*Play occupations in digital spaces: Children's experiences throughout
childhood*

by

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For all the children who play video games

Table of Contents

- Abstract xi
- List of original papers xiii
- List of abbreviations and acronyms xv
- Preface xvii
- Introduction 1
 - Theoretical perspectives 2
 - An occupational perspective 2
 - A transactional perspective on occupation 3
 - A point on boundaries and issues with agency 4
 - Towards a posthuman, transactional perspective on occupation 5
 - Play occupations throughout childhood 5
 - The context of technology 8
 - The digital space 9
 - A brief history of digital play spaces 9
 - Defining the digital play space 11
 - Understanding the Experience of Children’s Play in Digital Spaces 12
 - Rationale 14
- Research aims 15
- Methodology and Methods 17
 - Philosophical and Theoretical considerations 17
 - Researcher positionality 19
 - Study design and context 20
 - Emergent study design 20
 - Study I 22
 - Study II 22
 - Study III 22
 - Study IV 22
 - Context 23
 - Participants and procedures 23

Study I.....	23
Study II	23
Study III	23
Study IV	24
Data generation	24
Study I.....	24
Study II	25
Study III	26
Study IV	27
Data analysis	28
Scoping review	28
Focus group analysis.....	28
Narrative analysis	29
Ethical considerations.....	29
Findings	31
Study I.....	31
Study II	34
Study III.....	35
Study IV.....	37
Discussion	41
What is the current state of play in digital spaces?.....	41
How do children conceptualise play in digital spaces?.....	42
Variation and flexibility of play	42
Sociability of play.....	44
Freedom of play.....	44
Challenge and managing responsibilities of play.....	46
Towards a new conceptualisation of play in digital spaces	46
A multi-transactional space for play?	47
A space of freedom or a space of constraints?.....	48
The blurring of play spaces.....	49
How can we foreground children’s rights in the midst of tensions?.....	50
Implications for practice, parents, policymakers, and place designers	52

Methodological considerations.....	54
Credibility.....	55
Transferability.....	58
Dependability.....	59
Confirmability.....	60
Overall considerations.....	60
Directions for future research.....	62
Conclusions.....	65
Acknowledgements.....	67
Funding.....	69
My contributions in this project.....	71
Dissertations in Occupational Therapy at Luleå University of Technology.....	73
References.....	75
Appendices.....	101

Abstract

Play is enshrined as a right for all children and is characterised by its autotelic and intrinsic nature. As such, play is recognised as the primary occupation of children and best understood in terms of the multiple meanings it holds for individuals. The spaces in which children choose to play are considered to facilitate and limit opportunities and experiences for play reflecting a dynamic and complex interconnection between individuals, spaces, and occupations. Despite the exponential growth of gaming technologies and digital devices offering children spaces for a plethora of novel, captivating and diverse play experiences, there remains a limited understanding of how these spaces afford or constrain play, especially from the perspective of the main protagonist, the child. Exploring children's perspectives of their play in such digital spaces can uncover the multifaceted dimensions highlighting the purposeful and meaningful nature of such occupations in children's everyday life. Such understanding challenge current social discourses and support how such play experiences contribute to children's wellbeing and active participation in society.

The overall aim of this thesis was to generate a deeper understanding of children's perceptions of their play occupations in digital spaces throughout the trajectory of childhood. This thesis was informed by four, qualitative research studies.

Study I, a scoping review, aimed to identify and map the current literature examining children's perspectives of play in digital spaces by exploring how the daily relevance, personal and ecological significance, and methods were approached in the research. The review identified thirty-one articles from the past fifteen years with data extracted inspired by theories of play, ecology, and occupation. The review highlighted a significant lack of empirical research focusing specifically on children's autotelic play and which demonstrated a relevance to their everyday life. Additionally, we found that methods did not consistently involve the active participation of children. The findings from this review provided a clear rationale for the design of the subsequent three studies.

Choice making reflects a key aspect of how children experience their play, therefore, Study II explored children's experiences of their choice making in play within digital spaces. Eight participants were recruited who were aged between 6 and 7 years old. Using a focus group design and a plethora of data generation tools, the findings indicate that children enjoyed the flexibility and variety of

choices offered by their play in digital spaces yet were constrained in their possibilities for play. Further, findings highlight how children negotiate play experiences as a tension between choice making and their desire for mastery.

Study III explored the play value of digital spaces, specifically how the digital space affords play from the perspective of the child. The study was conducted using focus groups and comic strips to elicit data from eight children aged 11 years old. Findings indicate that children value the endless opportunities for play that were not necessarily available to them in real world spaces. Children discussed the play value associated with continually exploring new tasks, roles, and arenas, a space to be and do together, and to develop and learn.

Study IV explored and identified how the meaning of playing video games is situated in adolescents' everyday life. The study utilised narrative methodologies to generate data from five participants aged 16 – 17 years. The findings reflect how they engage in processes negotiating and balancing between occupations in both the physical and digital space with play integrated across their everyday lives.

These studies reveal the richness and depth of perspectives children hold with regard their play in digital spaces and uncovers a unique and diverse number of characteristics that contributes to our understanding of the meaning children hold of this key occupation of childhood. This thesis articulates how children consider the primacy of play in their everyday lives in their negotiations between play in physical and digital spaces and how the, often overlooked, social dimensions of such play experiences throughout the course of childhood serves to enhance their connections with others and promote a sense of belonging. Additionally, the perception of competence in their play fostered their sense of self whilst embodying other roles and identities reflect a progression towards a future self.

This enhanced understanding of the play occupations in digital spaces can be used to promote, offer, and design play occupations that reflect the experiences of children themselves thus recognising how and where play in digital spaces is integrated in relation to everyday life. To further explore play occupations in digital spaces, it may be fruitful for future research to be designed with children in mind to further enhance understanding.

Keywords: children, digital space, occupation, perspectives, play, qualitative, young people

List of original papers

This dissertation is based on the following original articles, which are referred to in the text by their Roman numerals:

- I. Loudoun, F.M., Boyle, B., Larsson-Lund, M. (2022). Children's experiences of play in digital spaces: A scoping review. *PLoS ONE*, 17(8): e0272630. <https://doi.org/10.1371/journal.pone.0272630>
- II. Loudoun, F.M., Boyle, B., Larsson-Lund, M. (2023). Making choices in digital play spaces: Children's experiences. *Scandinavian Journal of Occupational Therapy*, 30(8), 1460-1471. <https://doi.org/10.1080/11038128.2023.2271050>
- III. Loudoun, F.M., Boyle, B., Larsson-Lund, M. (2024). Play value of digital play spaces: Children's voices. *International Journal of Child-Computer Interaction*. 40 (2024). <https://doi.org/10.1016/j.ijcci.2024.100649>
- IV. Loudoun, F.M., Larsson-Lund, M., Boyle, B., Nyman, A. (2024). The process of negotiating and balancing digital play in everyday life: Adolescents' narratives. [Unpublished manuscript].

Original papers I, II, and III have been published in the retrospective journals with open access. Original paper IV is in manuscript form and has been submitted to a journal for peer-review.

List of abbreviations and acronyms

Cross- platform games – Games which allow players to play with other players irrespective of the platform they use. For example, player 1 could play the game Minecraft on a Nintendo Switch with player 2 who is playing using a PlayStation 5.

Digital space – the immersive space in which we can enter through the use of devices such as smart phones, tablets, laptops, or game consoles.

LTU – Luleå University of Technology.

MMORPGs – Massively Multiplayer Online Role-Playing Games. Differentiated from RPGs by the number of players. An example of a MMORPG would be the game World of Warcraft.

Online games – Games which are in part played online.

PRISMA ScR - Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

RPGs – Role-Playing Games. These games involve controlling the actions of a character.

Sandbox games – Sandbox games are video games that offer players a high level of freedom to explore and interact with the game. More often than not, they have open-world environments rather than predetermined objectives. Minecraft or Roblox would be examples of a Sandbox game.

UNCRC – United Nations Convention on the Rights of the Child.

UCC – University College Cork.

WHO – World Health Organisation.

Preface

I think about pivotal moments of contemplation and clarity over the past three years, fundamentally permitting me to “unlearn” (Murriss & Osgood, 2022, p. 210). Play as the primary occupation of childhood was embedded in my career as an Occupational Therapist in both assessment and intervention. However, in doing so I was liberating it for my own purpose and not for the child’s. I have challenged my understanding of play, considering play throughout the lifespan. I have questioned how much, and in fact, if I play and whether I should or could play more. Quickly moving from playing the Xbox, to finding a place in Super Mario World on the Nintendo Switch, I entered a digital space of my own to find inspiration and understanding, experiencing play in a digital space for myself.

When I spoke about play, children were fascinated that I played. “You play...really?” asked Luke (pseudonym, Study IV). I considered why it was so strange to hear that adults play. Was it the fact I played or was it that I played with technology? Was this bounded by the societal discourses and expectations that adults have on children in today’s society? Or was it that I provided children with a space, a space in which they could talk freely, openly, and at length about their own play in digital spaces? I questioned whether they have the opportunity elsewhere to talk about their play? Darragh in Study IV also commented that his family just “don’t understand it”. I hope that I have given all the children a place in which they could share their perspectives, their passion, their interests, and that I present these experiences with the justice that they deserve.

This thesis was conducted as part of a larger PhD project in Occupational Science, the P4Play programme. The project received funding from the European Union’s Horizon 2020 research and innovation programme under Marie-Skłodowska-Curie grant. The foundational rationale for the programme was to generate new knowledge on play occupations and to offer PhD education in Occupational Science in Europe. A total of eight early-stage researchers have explored play from the context of People, Policy, Practice, and Place. This inquiry is associated with generating knowledge regarding play in place, the contemporary space of the digital world.

Throughout this thesis I wear a multitude of theoretical glasses, positioning this thesis within a hermeneutic philosophical tradition to help grasp the meaning of play in digital spaces. Further, a posthumanist lens has been pivotal to grasp the

transactional relationship and recognise the agentic properties of technology and digital spaces. I leave at this juncture with more questions than answers as I continue to “unlearn” (Murriss & Osgood, 2022. p.210) from what I thought I knew. I hope you enjoy reading this thesis and it opens your world to play in digital spaces. For the critics among us, “technology can be creepy, until you play with it” (Sicart, 2023, p. 26) so, I entice you to play.

Sincerely,

Fiona

Introduction

The significance of play in children's everyday life has been endorsed through the United Nations Convention on the Rights of the Child (UNCRC, 1989) recognising that every child has the *right* to play. The digital age, however, is rapidly altering children's opportunities for play experiences. The availability, accessibility, and proliferation of digital devices, such as, smart phones, tablets, game consoles, and other media are presenting a range of online, immersive, and potentially infinite game spaces for play. However, the attraction of children's engagement with play in digital spaces is rarely understood by those around them, often dismissed as idle entertainment (Crowe & Bradford, 2006; Ruckenstein, 2013). There are long standing yet increasing societal and parental concerns with regards to excessive time spent gaming, addiction, violence, and social isolation (Fonseca et al., 2018; Kuss & Griffiths, 2012; Pontes, 2018; Wearing et al., 2021). Despite this, there has been some attention given to the benefits that can be accrued from play in digital spaces, such as maintaining social relationships, enhancing cognitive skills, and supporting self-identity (Albarello et al., 2021; Sauce et al., 2022; Scholes et al., 2022). Furthermore, the digital space has been acknowledged to provide possibilities for extending imagination and creativity (Hannaford, 2012; Livingstone & Pothong, 2022) and proffer opportunities for challenge and responsibility (Ferguson & Olson, 2013; Mertala & Meriläinen, 2019; Van Rooij et al., 2017).

Within wider literature, it has, however, been accepted that play is a subjective experience that is best understood by the main protagonist, namely the child. Play is what constitutes in that moment, how it is experienced, and within the context of where it occurs. Studies utilising the voice of the child of their experiences of play has indicated that children value qualities of fun, making choices, being with others, and typically less adult direction and involvement (Miller & Kuhaneck, 2008; Nicholson et al., 2014; Pyle & Alaca, 2018; Theobald et al., 2015). Thus, a child's perspective is crucial to understand play from their own lens to understand the nuances of their everyday lived experiences. Focusing on the autotelic characteristics of play, namely the doing and being of play, subsequently emphasises play for play's sake. However, given the emergence of play opportunities within digital spaces, there remains a dearth of research and understanding of how children experience play within this context. With a call for more child-centred studies which explore and enhance play in general along

with the limited understanding of the online environment, play occupations within the digital space requires further consideration.

The point of departure for this thesis is to explore, from an occupational perspective, children's experiences of their play in digital spaces. This inquiry focuses on play, being the primary occupation of childhood (Lynch & Moore, 2016) as it manifests in digital spaces. The research charts play in digital spaces from early childhood through to the teenage years and explores the breadth of play experiences from device-based play through to play as gaming in virtual, immersive, and connected worlds. The following sections attempt to explore the core concepts on which this thesis is based to provide a clear background and rationale for the four studies. I present the overall conceptual and theoretical perspectives first to help ground and to grasp the complexity of the transactional nature of play occupations in digital spaces. In doing so, I do not intend to lose the significance of play or of the child's perspective, rather, provide a clear foundation for the core concepts surrounding the inquiry. These conceptual and theoretical perspectives will be subsequently interwoven throughout the remainder of the section. I will go on to discuss play as an occupation and some of the key characteristics of play from the child's perspective. The context of technology will be then discussed which aims to provide a basis for how digital spaces are defined. Following this, a brief history of play in digital spaces will be presented to provide a context to this emerging occupation before returning to children's experiences and how this is currently positioned within a digital space.

Theoretical perspectives

An occupational perspective

Play is widely considered as the primary occupation of childhood (Lynch & Moore, 2016) with occupations described as "all the things people do" (Wilcock, 2001, p. 413) or "chunks of culturally and personally meaningful activity" (Clark et al., 1991, p. 301). Nevertheless, it is often defined beyond 'doing' to consider the complexity, multi-dimensional aspects of occupation throughout everyday life. How individuals experience the dimensions of meaning associated with occupation can be synthesised through the framework of *doing, being, becoming, and belonging* (Hammell, 2004; Rebeiro et al., 2001; Wilcock & Hocking, 2015). This shifts the emphasis from not only the doing of occupation to recognising the temporal dimensions of growth and development of a future self as well as the sense of connection to people and places. An occupational perspective has

therefore been described as “a way of looking at or thinking about human doing” (Njelesani et al., 2014, p. 233) and is argued to be central to broadening occupational therapy practice (Clark et al., 1991; Wilcock, 2001; Yerxa, 2000). By considering an occupational perspective it is recognised that individuals derive meaning in their everyday lives through occupation, reflecting congruence with individuals’ health and wellbeing (Christiansen & Townsend, 2010; Eklund et al., 2017; Hocking, 2009). Meaning is therefore considered both a subjective and socially and individually constructed experience that is inherently embedded in action (Hasselkus, 2011; Ricoeur, 1990).

A transactional perspective on occupation

Transactionalism has been presented and proposed in occupational therapy and occupational science literature as a way of resolving individualist approaches that recognise and prioritise pre-existing parts. Drawn from a dense body of knowledge from American Pragmatism, based on the theories of John Dewey and Arthur Bentley, (Cutchin & Dickie, 2012; Dickie et al., 2006), Dewey’s pragmatism was proposed as a tool in which to frame occupation as a situationally dependent phenomenon (Dickie et al., 2006). A ‘transactional perspective on occupation’ recognises the complex and dynamic interplay of people, environments, and cultural dimensions (Aldrich & Cutchin, 2012; Cutchin & Dickie, 2012) and have been described as a theory, tool, lens, or perspective in which to view, understand, and research human occupation (Lee Bunting, 2016). Dewey argued that human activity or occupation emerges out of the complex interrelation/transaction between the individual and their context. The context or as Dewey termed the *situation* is referred to as the physical, social, cultural, and political aspects (Dickie et al., 2006). Ultimately, suggesting that the human and context shape and are in fact shaped by one another. To date, within the field of occupational therapy and occupational science, literature exploring technology and digital spaces has largely drawn on transactional perspectives of occupation (Barlott et al., 2021; Fok et al., 2009; Mccarthy et al., 2022; Madsen et al., 2021). A transactional perspective on occupation has become increasingly relevant as a theoretical consideration throughout the course of this thesis reflecting on the increasingly dynamic and complex relations between human, situation, and occupation. This lens offers a perspective for considering play occupations within context, reflecting that the elements are co-constitutive and interdependent of each other rather than distinctly separate constructs, thus, dissolving Cartesian

dualisms of subject and object and avoiding dualistic views of the person and context.

It is in this regard, and through the recognition of the increasingly enmeshed and entangled nature of technology and digital spaces in children's daily lives that a transactional perspective on occupation is applied. However, in doing so, we arguably need to look beyond the dichotomies of physical and digital and recognise that occupation is distributed across multiple systems. Research with children and voice-operated virtual agents, such as, Amazon Alexa, Siri, or Google Home indicates an artificial intimacy with these technologies that is both emotional and intimate, suggesting a blurring of boundaries between human and machine (Barassi, 2023; Druga et al., 2017). Epitomised by the enmeshing of technological systems, Taylor (2009) argued "we do not simply play, but are played" (p. 336). Thus, reflecting that occupations may not be merely human actions but also emerge from machines or rather distributed across systems (Harari, 2018; Hollan et al., 2000). This notion of human, machine, or distributed action recognises that tasks reflect a transactional perspective across multiple 'systems' and it is from this perspective, that the environment or the space in which humans participate in, with, and through technology needs to be viewed from an alternative perspective. Critical theories are being increasingly being represented to help challenge dominant perspectives, dualisms, and issues of boundaries (Barlott et al., 2017; Sellar, 2009). Therefore, within this thesis I have, however, remained cognisant of the increasingly dynamic and agentic properties of the technologies which shape, and ultimately produce occupation.

A point on boundaries and issues with agency

Central to the transactional perspective is that occupations are produced through the multiple transactions of its co-constitutive parts, hence aspiring to dissolve dualist understandings of human-environment. However, concerns have been raised that the lack of consensus with boundaries (of the individual and the context) limit the application of a transactional perspective within occupational therapy and occupational science (Dickie et al., 2006; Sellar, 2009). For example, Dickie et al, (2006) recognised "the boundary of the situation is difficult to determine and articulate" (p. 91). Careful attention is therefore required to resist the fixed and bound notions of boundaries between entities. It is in this regard, that notions of posthumanism have been drawn upon from an ontological perspective. This brings with it some difficulty articulating how these parts produce action and

therefore occupation and in turn the concept of agency. Although Dewey largely assumes that actions are human endeavours (Bennett, 2010), a post humanist perspective acknowledges that the notion of agency is defined broadly as the capacity to act opposed to conventional ideas of agency being an inherently human trait or attribute (Änggård, 2016; Barad, 2007; Hayles, 1999).

Towards a posthuman, transactional perspective on occupation

In Bennett's posthuman reading of Dewey, she describes him "flirt[ing]" (Bennett, 2010, p. 102) with posthumanism as he refers to the relationship between human and environment. A posthumanist view of the world establishes that humans are understood relative to their engagement with others as well as the material and non-material worlds (Barad, 2007; Hayles, 1999). This does not mean, however, that human subjectivity is no longer important, rather, it requires a de-centring of the human towards a flat(ter) ontology, recognising the agentic properties and the role of technology in occupations resulting from a transactional and mutually reciprocal engagement between the human, context, and technology. A posthumanist perspective offers a lens in which to interrogate these relationships, to view the complex relationship between the human and technical information systems that are so inextricably embedded within our society, thus, shifting from the focus from human exceptionality (Hayles, 1999; Susen, 2022). Ultimately, this signifies that humans are not the only way in which to view the world and understanding the human as transacting and intra-acting with a network of human and non-human matter. In this sense, a posthuman understanding of a transactional perspective of occupation inevitably extends these as reciprocal human – machine/technology relations (Stilman, 2022). Throughout the following sections, I endeavour to position and utilise this posthuman, transactional perspective on occupation with regards to children's play, the digital space, and children's experiences of their play within the digital context.

Play occupations throughout childhood

Historically, play has been deemed as trivial or even frivolous, however, it is now arguably universally acknowledged as a fundamental dimension of childhood. Play is widely known to enhance children's physical, social, emotional, and psychological health and well-being providing children with opportunities to form relationships and attachments to people and places (Gleave & Cole-hamilton, 2012; Grimes, 2021; Lester et al., 2008). Play provides children with the opportunity to problem solve, develop their confidence and self-esteem (Lester et

al., 2008; Yogman et al., 2018). It is therefore, of no surprise that play has been ratified by the UNCRC (1989). Fundamentally, the UNCRC conceptualises play as being “any behaviour, activity, or process initiated, controlled, and structured by children themselves” (Committee on the Rights of the Child, 2013, p. 5), emphasising the child-led, autotelic nature of play. Despite this there are longstanding discourses, or rhetorics (Sutton-Smith, 1998) which frequently confuse play with adult-led, structured, and directed activities, instrumentalising play for its benefits for children’s learning, health, development, or general wellbeing. These are subsequently widely extolled across literature, policies, and society (Gleave & Cole-hamilton, 2012; Lester et al, 2008; Yogman et al, 2018). Research examining children’s perspectives of play opposed to other activities found variance in children and parents’ perceptions of how play was defined and that children characterise play as an activity when they have are having fun, they have freedom, opportunities for challenge and mastery, and typically less adult involvement and direction (Miller & Kuhaneck, 2008; Morgenthaler et al., 2023; Nicholson et al., 2014; Pyle & Alaca, 2018; Theobald et al., 2015; Wenger et al., 2021). The freedom to make choices is therefore a key component of children’s experience of their play. However, choice making is complex and is known to be influenced by a range of factors, such as the value of participating, the characteristics of the child, the choices available, and to what extent social approval is gained as a result (Galvaan, 2012, 2015; King & Howard, 2014; Parnell et al., 2019). It is specific to the context in which it occurs, reflecting a heterogeneous experience for each child. The prevailing narrative, however, suggests that children are not capable of making choices resulting in adults typically making these decisions on their behalf, of what to play, when to play, and who to play with, thus their possibilities for choice making can be significantly constrained within a digital space. With the proliferation and entanglement of digital devices and spaces in children’s everyday life, an enhanced understanding of how children experience choice making in their play in digital spaces is therefore necessary.

Despite older children and adults often detaching themselves from the concept of play (Cowan, 2020), play is recognised as an occupation throughout the lifespan, shifting and evolving, according to children’s development, interests, and wider priorities (Davis & Polatajko, 2014; Engelstätter & Ward, 2022; McCarthy et al., 2022; Parsonage et al., 2022; Wiseman et al., 2005). This evolution or development occurs throughout the trajectory of childhood as children’s motivations shift from play as the central occupation of childhood (Lynch & Moore, 2016) to play as a hobby or leisure pursuit that is more often than not

driven by choices of how to spend their discretionary time (Brooks et al., 2016; Bundy, 1992). Some parallels can be drawn as children approach adolescence, experiencing increased free time, enhanced responsibilities, as well as greater independence from parents (Meriläinen et al., 2023; Silvers, 2022). This involvement manifests as occupational repertoires, the constellation of occupations at a given point in time (Davis & Polatajko, 2014). These occupational repertoires are distinct to each individual, expanding, contracting, and evolving throughout the life span reflecting a multifaceted blend of occupations across everyday life (Davis & Polatajko, 2014; Jonsson, 2010; Wiseman et al., 2005). However, in acknowledging that play in digital spaces is typically situated within societal concerns, further understanding is necessary to understand the meaning of playing as situated across occupational repertoires and everyday life.

Given the significance of play, it is unsurprising that it has been studied from a range of disciplines, from sociology (Caillois, 2001; Huizinga, 2016), psychology (Csikszentmihalyi, 2002), and more recently game studies and media (Giddings, 2014; Grimes, 2021; Marsh, 2010; Sicart, 2017, 2023). However, with this comes a range of different perspectives. With occupational therapists recognising play as the primary occupation of children, it has not been overlooked from the occupational science and occupational therapy literature either (Bundy, 1997; Lynch & Stanley, 2018; Moore & Lynch, 2017; Pierce, 2000; Pizur-Barnekow & Knutson, 2009). The largely qualitative research has describes the variety of play occupations throughout childhood from solitary play to collective experiences recognising the significance of dimensions of challenge, fun, and risk with the possibilities of forming friendships (Fahy et al., 2021; Hinchion et al., 2021; Miller & Kuhaneck, 2008; Morgenthaler et al., 2023). Despite a call for more universal and targeted approaches to children's occupational therapy intervention to support the health and wellbeing of *all* children through tiered levels of provision (Hutton et al., 2016; Lynch et al., 2023), it has been argued that there continues to be a propensity of practice and research to focus on play from a developmental (Fahy et al., 2021; Lynch & Moore, 2016) and individualist perspective. This continues to inform practice guidelines even today (Royal College of Occupational Therapists, 2023). This notion of play reinforces the perspective that children are developing beings, fraught with tensions promoting adult perspectives of childhood, rather than focusing on the doing of play itself. With regards to technology, research in occupational therapy has largely focused on leveraging the benefits and potential of technology for children with disabilities in relation to education, at home, or within communities (Domínguez-Lucio et al., 2023;

Isabelle et al., 2002). For example, research has examined technology to enhance children's motor skills (Coutinho et al., 2017; Hammond et al., 2014), access to their environment, or leisure activities at home and school (Beauchamp et al., 2018; Isabelle et al., 2002; James et al., 2016). The tendency for occupational therapy practice to focus on the binary of the human and technology that relies heavily on an individualist, prescriptive and a deficit-driven approach needs to be shifted to acknowledge children's choices and motivation shifting over time and to recognise the role of technology for *all* children (Hutton et al., 2016; James et al., 2016). This provides occupational therapy with a challenge and opportunity to embrace the possibilities afforded by the era of digitalisation (Larsson-Lund & Nyman, 2020).

Given the cross-boundaries of human occupation, an occupational perspective calls for looking beyond occupational therapy and occupational science literature to contributions from disciplines such as human geographers, sociologists, anthropologists, and arguably computer scientists (Clark et al., 1991; Wilcock, 2001). These perspectives can help to generate a “logical theoretical whole” (Wilcock, 2001, p. 414).

The context of technology

Our increasing intimacy with, and reliance on technological systems requires further understanding of how humans engage in occupations within a technologically mediated society. The availability of digital tools, such as tablets, laptops, and game consoles offer online, immersive, and potentially infinite game spaces for play. The devices used can be defined simply as human-made artifacts that reflect a need to harness and control the processes of production and consumption and ultimately to determine the outcomes of these processes (Roach et al., 2019). Technology has, thus, come to be defined as the application of knowledge to accomplish a task or solve a problem in society (Franssen et al., 2018). The rapid penetration of digital technologies in and around us, our environments and our everyday lives has radically disrupted and altered the way in which we interact, communicate, learn, and live. Nowadays, technological information systems are so embedded in our daily routines and occupations, often below level of consciousness, such driving a car, or going to the bank (Hayles, 1999), reflecting this increasing blur between the boundaries of the physical and digital contexts (Fok et al., 2009). Ultimately, technologies have been described as “world-making” (Sicart, 2018, p. 50). The screen, whether it be through a

phone, tablet, computer becomes the gateway into accessing these unfolding game spaces, recognising that the process of engaging with, in, and through technologies considers a transactional, reflecting a mutual and reciprocal relationship between the technology, occupation, and the individual (Cutchin & Dickie, 2012; Mccarthy et al., 2022; Zhang & Kemme, 2011).

The digital space

The digital space is therefore not a static component, but a multi-transactional and layered space, reflecting an amalgamation of the devices that are used, the software and applications, settings, and the range of networks and spaces in which offer a range of unrealised possibilities (Livingstone, 2024; Nitsche, 2008). Nitsche (2008) offers a suggestive model to help better understand complexity of game spaces through five analytical planes. *Rule-based* space which is pre-determined by codes or mathematical rules in which the game space is designed and is suggestive of more of an absolute ontology of space. This space informs the *mediated* space reflecting the output from the systems. The *fictional* space is how the player imagines the space given the information from the mediated space, which has also been described as spaces of imagination and creativity, ‘figured’ or as-if worlds where children have opportunities to generate imagined spaces where they can generate their own meaning and identity (Holland et al., 2001). These figured worlds allow children to enter a conceptual arena which Holland et al (2001) argues differs from the everyday; “a socially and culturally constructed realm of interpretation” (Holland et al., 2001, p. 52). The *play* space reflects the meaning associated through action (Ricoeur, 1990) and the *social* space where players come together and interact with others. The transactional relationship between the five planes assemble the play moment or experience (Taylor, 2009), reflecting a complex, dynamic, and relational assemblage formulating the space, and ultimately, the experience of play. Further, the relationship between technologies and play is represented by their world making capacity which shape human experience: “to play is to create world together with other players and often with the aid of such props as games or toys” (Sicart, 2018, p. 251).

A brief history of digital play spaces

Despite only recently drawing attention from some scholars, the digital space has provided a context for children’s play for decades. Originating in arcades, play in digital spaces grew in popularity with games such as Space Invaders and Pac-Man. The launch of the Atari home game console in the late 1970s enabled families to

play together and shifted digital gaming from the arcade to the home environment. The game console market momentarily crashed with the prevalence and popularity of home computers throughout the 1980s, however, technological advancements such as improved graphics increased the popularity of game consoles once again. The first handheld game console, the Nintendo Gameboy, was launched in the 1990s which provided players the opportunity to play wherever and whenever they wanted. Nowadays, home game consoles along with the luxury of the Internet and wireless connections offer a range of possibilities. The Nintendo Wii, for example, enables players to be physically active whilst playing whilst the Nintendo Switch with its dual controllers provides users with flexibility in where and how they play including an option to play collaboratively whilst co-located. Throughout the last two decades, the extensive use of tablets and smart phones has significantly altered the mobile gaming industry and increased the accessibility of play in digital spaces. Additionally, the infiltration of wireless internet connections enable players to play with others from around the world. A plethora of platforms are used to access digital spaces for play experiences, from mobile devices such as a smart phone or tablet, to consoles including PlayStation and Xbox, to Personal Computers or laptops. The abundance of online games also vary significantly in genre, ranging from completing simple puzzles on apps to simulation games and strategy games (e.g. real-world games such as solitaire, chess on the computer) which require more complex physical and cognitive skills. Play in digital spaces can be further categorised by the mode in which play occurs, from single player to multiplayer which includes massively multiplayer online games, enabling the opportunity to play with other people as well as computer-controlled and computer-generated players, known as non-player characters.

Historically, playing in digital spaces was considered a single-player experience as individuals interacted with a device through a digital representation of themselves in games such as role-playing games. This portrayal as solitary and lacking sociality does not correlate with the conceptualisation of the ideal childhood and threatens the active involvement of children in the construction of their social lives (James & Prout, 2015). However, digital devices and spaces now afford substantial sociality within them, with children articulating the enjoyment of the social dimensions of games, viewing these spaces as an extension of the school playground (Albarello et al., 2021; Carter et al., 2020). Technology offers the ability for users to engage in occupations either co-located or remotely located whilst sharing the same digital space. Additionally, it is not uncommon for play in digital games to involve broader media systems and platforms such as YouTube,

Skype or Discord reflecting the multiplicity of systems and processes involved in play in digital spaces.

Defining the digital play space

The digital spaces in which children play may reflect real world scenarios such as playing a game of football in the game of FIFA or driving a car in Grand Theft Auto or they could be simulations of possible worlds in the games Fortnite or World of Warcraft (Chalmers, 2022). The increasingly popular game ‘Minecraft’, a cross platform sandbox game allows children to enter the game space in which they can explore and create their own worlds together with friends irrespective of which device they use. The technologies used to create these digital spaces exist in parallel to the ‘real’ world, intersecting and conjoining at different moments creating fluidity between the information and material worlds (Hayles, 1999). The expression *virtual* suggests something that is almost, yet, not quite real, however, David Chalmers, an Australian philosopher and cognitive scientist, defines virtual worlds as “an interactive, computer-generated space” (Chalmers, 2022, p. 38) arguing that they are in fact “real places in a virtual world” (Chalmers, 2022, p. 186). Play has always been entangled with dimensions of the virtual, doing the unreal or the impossible seeking out and creating new possibilities and realities beyond their expectations (Giddings, 2014). Thus, recognising that play in a virtual world is no less real than play within physical world contexts. Throughout this thesis, the spaces will be referred to as *digital* or online rather than *virtual* to emphasise that digital spaces are no less real than other play spaces in which children play.

These digital, 3D game spaces, for example, afford the opportunity to fly, run, crawl, parachute, and jump into new worlds of unrealised possibilities (Nitsche, 2008). Game spaces are an important dimension of play, in particular, they offer endless possibilities and at the same time are more accessible than ever (Aarseth, 2007; Dodge & Kitchin, 2005; Nitsche, 2008). Just as young children find endless possibilities to create dens and forts out of boxes, blankets, and other objects, repurposing them for their own, new, imaginative creations in the physical space. Digital spaces are constantly evolving, shifting, and responding to our behaviours and actions, thus a critical dimension of children’s experience of meaning in their play (Nitsche, 2008).

Understanding the Experience of Children's Play in Digital Spaces

Increasingly, both digital and non-digital play objects, such as devices and puzzles are marketed for their educational benefits which only seem to reinforce and promote the widely held belief that children need to engage in productive activities. This progress rhetoric also emphasises the concept of children *becoming* accomplished adults. The instrumental value of play accentuates the outcome, for example, the role of active play in tackling obesity (Janssen, 2015; Palmer, 2015) or improving motor skills (Hammond et al., 2014) or certain games in enhancing learning and literacy (Brownell, 2021; Dodge et al., 2008). Regardless, this prevailing paradigm increases adults' control in the time and space children have for play which potentially lures focus away from child initiated, controlled, and structured play experiences (Lester et al., 2008; UNCRC, 1989). Furthermore, this instrumental perspective of play is incongruent with an occupational perspective rather than focusing on children's experiences with play that are both available and accessible to them, reflecting a relevance to their everyday life.

With regards to the digital space, a number of frameworks and criteria have explored how play in digital spaces is characterised, classified, or categorised. For example, Bird and Edwards (2015) developed The Digital Play Framework based on Corinne Hutt's work of epistemic and ludic activities to provide indicators for how children learn to use technologies. In research by Marsh et al. (2016), Bob Hughes' taxonomy of sixteen play types was adapted for the digital realm indicating similarities in the types of play in between both physical and digital contexts. Furthermore, Verenikina et al. (2016) developed four criteria to examine the characteristics of iPad apps to support children's imaginative play. By in large, these frameworks, criteria, and taxonomies largely focus on the use of digital objects primarily based on adults' observations. Additionally, The Digital Play Framework is based predominantly on theories of education or on the educational value of computer games theory. The currently existing frameworks focus heavily on criteria for play to be organised into types and categories from observational data through an adult lens, thus obscuring the child's unique perspective.

General Comment No. 17 (Committee on the Rights of the Child, 2013) was prompted by the concerns of societal restrictions on children's play and has stressed that investment is required "to create time and space for children to engage in spontaneous play, recreation and creativity" (p. 3). The spaces in which children

play vary and evolve both throughout childhood, yet ultimately, play spaces are where children *chose* to play (Woolley & Lowe, 2013). These could be conventional spaces such as playgrounds or secret, hidden spaces (Morgenthaler et al., 2023; Wenger, et al., 2023). Research has examined play in spaces such as the natural or built environment (Ridgers et al., 2012; Waite & Goodenough, 2018), at home (Lynch & Stanley, 2018), and in playgrounds (King & Howard, 2014). However, to date, the digital space, has seen little attention. The spaces are acknowledged to shape the experiences children have to play, such as the qualities or characteristics of playgrounds or outdoor spaces affording or constraining opportunities for play. In traditional environments such as playgrounds, children use equipment such as slides, swings, and trampolines whilst the digital space children interact and engage with digital objects and characters. The adoption of General Comment 25 (Committee on the Rights of the Child, 2021) has foregrounded children’s right to play within the digital context and even go as far to state that “the digital environment promotes children’s right to...play” (p.18). By acknowledging that children’s play occurs “wherever and whenever the opportunities arise” (Committee on the Rights of the Child, 2013, p.5) and that the digital space is increasingly a place where children are choosing to play, an enhanced understanding of children’s perspectives is necessary. Research has examined the digital space affords children the opportunity to maintain friendships (Albarello et al., 2021; Carter et al., 2020; Olson, 2010) possibilities for extending their imagination and creativity (Hannaford, 2012; Livingstone & Pothong, 2022) and challenge and responsibility (Ferguson & Olson, 2013; Mertala & Meriläinen, 2019; Van Rooij et al., 2017). However, little is known regarding how the qualities of the digital space affords or constrains play value from the perspective of children.

The recognition of the environment has largely been explored through the concept of affordances (originally coined by Gibson), which examines the environmental properties that both constrain and promote occupation (Christiansen & Townsend, 2010; Gibson, 2015). Research has utilised the concept of affordances in which to examine the qualities of the digital space (Cardona-Rivera & Young, 2013; Hall et al., 2021; Verenikina et al., 2010), however, little is known regarding how the qualities of the digital space shape *children’s* experiences of play. The concept of play value offers a way in which to explore children’s perspectives of how the environment proffers play experiences. It is described by “the value an environment, object, or piece of equipment brings to children’s experience of play” (Woolley & Lowe, 2013, p.

2). To date, this has been utilised to examine the qualities of outdoor play spaces (Parker & Al-Maiyah, 2022; Wenger, et al., 2023; Woolley & Lowe, 2013), however, to date has not been utilised within the digital space.

Rationale

The UNCRC (1989) has firmly established children's right to play, however, with the exponential growth and accessibility of technologies and digital devices, they are proffering a new space in which children can play. A range of disciplines have begun to examine this phenomenon, however, this largely examines the instrumental value of enhancing children's learning, health, or overall wellbeing. Within the context of occupational therapy and occupational science, there has been some attention drawn to occupation with, through, and in digital spaces (for example: Barlott et al., 2021; Larsson-Lund et al., 2021; Mccarthy et al., 2022), however, children's experiences have been largely ignored to date. Literature is largely ambiguous with regards to play for plays sake and from the perspective of the main protagonist, namely the child. As children's play evolves throughout childhood, there remains a lack of understanding of children's experiences of play throughout the trajectory of childhood.

This thesis, therefore, proposes the application of an occupational perspective to emphasise both children's unique perspective and the subjective meaning of the doing of play occupations in digital spaces. By acknowledging play as "any behaviour, activity, or process initiated, controlled, and structured by the child themselves" (UNCRC, 1989, p. 5) this thesis centralises children's perspectives of the play experience. In doing so, the knowledge generated is co-constructed with children to better understand their experiences of play in a digital context.

Collectively, this thesis intends to generate new knowledge to extend the limited understanding we have through the following overall aim and the aims of the four individual studies which are presented in the next section.

Research aims

Overall aim of the thesis

The overall aim of this thesis was to generate new knowledge and understanding of children's experiences of play in digital spaces throughout the trajectory of childhood from an occupational perspective. The thesis centralises children's own experiences of their play.

The inquiry consists of four individual studies which correlate with the overall aim. The first study aimed to identify and map the existing literature, with Studies II, III, and IV using a qualitative approach to follow the trajectory of childhood aimed at generating knowledges on play occupations from the child's perspective.

Specific aims for each Study

Study I To identify and examine the empirical literature focusing on how play in digital spaces is studied from the perspective of the child.

Study II To explore and understand how children experience choice making within their play in digital spaces.

Study III To explore the play value of digital spaces, specifically how the digital space affords play from the perspective of children.

Study IV To explore and identify how the meaning of playing video games is situated in adolescents' everyday life.

Methodology and Methods

Philosophical and Theoretical considerations

Throughout this thesis, a constructivist paradigm was embraced, acknowledging ontologically that no singular objective meaning exists and that knowledge is therefore, a multiplicity of constructions generated through everyday lived experiences with regards to specific phenomenon (Guba & Lincoln, 1994; Lincoln et al., 2024; Schwandt, 1994). A qualitative approach guided the aim of enhancing the understanding of children's perspectives of their play experiences in digital spaces. A qualitative approach intends to understand phenomenon from the viewpoint of the individual experiencing it within the context it occurs (Carter & Little, 2007; Creswell & Poth, 2018). Given that play is the primary occupation of children (Lynch & Moore, 2016), children are assumed as experts of play and therefore, their perspectives are pertinent to understanding their subjective experiences of play in digital spaces. A central construct of the qualitative paradigm recognises that there are multiple ways in which reality is constructed (Lincoln & Guba, 1985; Woodgate, 2001). Thus, every individual has their own unique understanding of the world.

Traditionally, adults have informed on children's daily lives almost signifying that children lacked capacity to express their own perspectives on their daily lives leaving them devoid of autonomy (Nicholson et al., 2014). However, over the past three decades, there is increasing attention on the rights of children (UNCRC, 1989) as well as the recognition of the social construction of childhood through a Sociology of Childhood lens (James & Prout, 2015). Collectively, this has engendered a paradigmatic shift in the conceptualisation of children (Gallagher, 2019; James & Prout, 2015). Children are no longer regarded as passive recipients but active social participants in their everyday lives, emphasising the notion that children are both beings in the present and "future-beings" (James & Prout, 2015, p. 215), recognised as having the competence and capability of making meaning from their unique perspective of the world (Clark, 2017).

The reconceptualisation of children and of childhood has seen cumulative interest with regards to children's participation within research, shifting beyond regarding children merely as objects of research (Montreuil et al., 2021; Sevón et al., 2023a; Waller & Bitou, 2011). Significantly, this highlights the requirement for researchers to recognise and actively facilitate children's involvement in the

research process and involves listening to children on matters that concern them the most (Curtin, 2001; Kirk, 2007; Lundy, 2007; Sun et al., 2023). The ratification of the UNCRC (1989) has recognised not only children's right to play (Article 31) but additionally their right to express their views on matters affecting them, and to have those views considered and taken seriously (Article 12). Nevertheless, it has been widely acknowledged that children can only be competent participants on matters that affect them when given the space and opportunity to do so (Gallagher, 2019; Kirk, 2007; Lundy, 2007).

Subsequently, a multitude of tools, models, and frameworks have been developed to support the implementation of children's rights and involvement of children in decision-making processes (Lundy, 2007; UNCRC, 1989). Shier's (2001) pathway to participation (adapted from Roger Hart's ladder of participation) offers one way of reflecting on stages of participation with children. The model has evolved (Carpentier, 2016), such that it offers a visual representation of a continuum of children's participation and reflects that the form of participation may vary dependent on the nature and requirement of individual projects (Shier, 2001). Through acknowledging varying degrees of commitment at each level of the ladder, through *openings*, *opportunities*, and *obligations*, participation is reflected as a continuum (Shier, 2001).

Research with children, or about childhood has traditionally followed different approaches to understanding children's participation and how they experience their world. As researchers, policy makers, and wider society have come to understand the value of listening to children's perspectives of how they experience their everyday lives, a variety of approaches, methods, and techniques have been developed that support the process of maximising children's participation in the research process (Alanen et al., 2005). Although, the umbrella term of 'participatory research' is often used to describe both the collection of data with children and children's participation in decision making and the guiding of the research process, challenges remain as to how best support children in research efforts (Fargas-Malet et al., 2010). Methodological and ethical concerns require careful consideration with regards to children's capacity, the value they accrue from participation, and the power imbalance that may exist between children and adult researchers when designing research both with and for children (Kirk, 2007; Sun et al., 2023). This accentuates the need to clearly distinguish between *participatory methods* which solely involve children in data generation, and *participatory research* where children are involved in identifying the research

question, choosing the study design, methods, and interpreting the data (Montreuil et al., 2021). Additionally, it has been acknowledged that when researching with children, irrespective of the level of participation, researchers require to utilise methods and approaches that are congruent with the context of research (Einarsdóttir, 2007) and are respectful of the child's welfare throughout the process (Skivenes & Strandbu, 2006). In this thesis, children's participation was therefore considered at the level of participatory methods and considered at different phases of the research (Sevón et al., 2023).

Thus, by promoting children's active involvement in the generation of data and not merely as objects of research, an opportunity is created to fully understand their perspectives as well as the meanings they associate with their everyday occupations (Curtin, 2001; Miller & Kuhaneck, 2008; Moore & Lynch, 2018). The knowledge generated throughout this thesis has been co-constructed by the researcher in conjunction with the participants, centralising children and their voice throughout (Kirk, 2007; Sun et al., 2023; UNCRC, 1989). The active involvement of children using participatory methods (Studies II, III, IV) provides an opportunity to understand their experiences of play in digital spaces (Clark, 2017; Montreuil et al., 2021). Participants involved in the research were experts of their everyday play experiences and the research was designed in a way to ensure that they had the space and voice in which to share their unique perspective (Clark, 2017; UNCRC, 1989) to fully understand their perspective and the meanings they associate with their play (Curtin, 2001). Additionally, the use of multiple data collection methods through techniques such as the Mosaic Approach in Studies II and III, especially with younger children supported their active engagement (Clark, 2017; Kilia et al., 2015; McCloy et al., 2016) whilst ensuring children felt comfortable and able to share their unique perspective and address any potential power imbalances (Sun et al., 2023).

Researcher positionality

When considering researcher positionality, the pre-understandings, experience, prejudices, and values influenced and contributed to the way in which the knowledge was constructed (Gadamer, 1989). Additionally, the researchers' background as a children's Occupational Therapist brought extensive experience and skills of working directly with children. Yet the lack of experience as a 'gamer' which on one hand reflected previous assumptions and personal interests, on the other reflected a naivety of the *how's* and *why's* of play in digital spaces. This

presented both a challenge and an opportunity. The researcher maintained an open position in which to listen, interpret, and co-construct data with children.

The geographical, social, and cultural context in which the research was conducted further influenced the relationship and way in which the knowledge was generated. Whilst elevating the significance of the child's perspective throughout each study, the researcher remained cognisant of the dynamic and complex transactions between the child, context, and the technology which increasingly governs children's everyday life (Cutchin & Dickie, 2012; Giddings, 2014; Sicart, 2023).

Study design and context

Emergent study design

Studies II, III, and IV were designed in a way in which echoed the trajectory of childhood and followed an emergent design (Hammersley, 2022), reflecting an iterative approach to the collective whole of the thesis. This approach considered the learning and findings generated from the phenomenon to shape and influence the next study. For example, the findings from Studies I, II, and III consistently reflected that children perceived a fluidity between the physical and digital spaces in which they played. Thus, for Study IV, I wanted to understand more about how play in digital spaces was situated across the everyday lives of young people rather than merely viewing it as an isolated occupation.

Table 1 provides an overview of Studies I, II, III, and IV and their retrospective aim, design and methods, participants, and data analysis. The following sections will discuss these in more detail.

Table 1. Overview of Studies I, II, III, and IV

	<i>Study I</i>	<i>Study II</i>	<i>Study III</i>	<i>Study IV</i>
<i>Aim</i>	To expose and map the current literature examining children’s perspectives of play in digital spaces by exploring how the daily relevance, personal and ecological relevance, and methods are approached in the research	To examine and describe children’s experiences of their choice making within play in digital spaces	To explore the play value of digital spaces, specifically how the digital space affords play from the perspective of children	To explore and identify how the meaning of playing video games is situated in adolescents’ everyday life
<i>Design & Method</i>	The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) and Arksey & O’Malley’s (2005) methodological framework	Focus Group design (Krueger & Casey, 2015); focus groups using Mosaic Approach (Clark, 2017; McCloy et al., 2016)	Focus Group design (Krueger & Casey, 2015); focus groups using Mosaic Approach (Clark, 2017; Phelan & Kinsella, 2014)	A narrative approach (Mattingly, 1998; Polkinghorne, 1995); interviews and encounters using recorded clips of videogame play
<i>Participants</i>	31 Qualitative Studies	8 children aged 7 years (all girls)	8 children aged 10 years (5 girls and 3 boys)	5 adolescents aged 16-17 years (all males)
<i>Data Analysis</i>	Data charted using two data extraction charts inspired by theories of ecology, play, and occupation (Bronfenbrenner, 1977; Fisher, 2009; Fisher & Marterella, 2019)	Focus group analysis (Krueger and Casey, 2015)	Focus group analysis (Krueger and Casey, 2015)	Narrative analysis (Mattingly, 1998; Polkinghorne, 1995)

Study I

Study I used scoping review methods to uncover the existing literature with regards to the emerging context of play in digital spaces. Opposed to a systematic review which seeks to identify evidence to address a specific question(s) as well as appraise and synthesise literature, a scoping review aims to examine the extent and nature of research on a given topic (Arksey & O'Malley, 2005; Levac et al., 2010; Munn et al., 2018), thus, deemed an appropriate tool for the study.

Study II

A focus group design was applied with Study II to facilitate a discussion between the participants and to generate their collective understandings (Dahlin Ivanoff & Hultberg, 2006; Krueger & Casey, 2015). To ensure the participants felt listened to and were actively engaged throughout the focus groups, a Mosaic Approach was utilised (Clark, 2017). The Mosaic Approach was considered an appropriate way of engaging children throughout the research process and to elicit a discussion with them in conjunction with their peers. The use of photographs and pictures can help provide children with a visual form that is familiar, thus encouraging them to actively engage within the research process (Clark, 2017; Curtin, 2001; Kilia et al., 2015).

Study III

Study III reflected a similar study design as Study II, utilising a focus group design (Dahlin Ivanoff & Hultberg, 2006; Krueger & Casey, 2015) and a Mosaic Approach (Clark, 2017). However, some differences in the data generation were utilised to account for and to engage the older age group, namely making comic strips during data collection and asking participants to take photos of their play, which will be discussed in more detail within the data collection section.

Study IV

A narrative approach as both an analytical tool and data generation method informed this qualitative study (Mattingly, 1998; Polkinghorne, 1995). This approach inspired the data generation and was based on the understanding that narratives are both told and performed in everyday life. This approach enabled a focus on the ongoing process in an everyday context where meaning making occurs.

Context

Studies II and III were conducted in a primary school in a large city in Ireland. The site for data collection for Studies II and III was an ‘Educate Together’ primary school. Educate Together schools are state-funded, co-educational and are non-denominational. Study IV was conducted online reflecting the increasingly digitalised lives of young people and in line with the ethos of the research. The participants were recruited from a co-educational second level school in a large town in Ireland.

Participants and procedures

Study I

To provide a structured and systematic approach to the review, the PRIMA-ScR (Tricco et al., 2018) and Arksey & O’Malley’s (2005) methodological frameworks were adhered to. The scoping review comprised of five stages. The *first* stage involved identifying the research question(s) with the *second* stage identifying relevant studies. To gather the most relevant literature and to devise an appropriate search strategy, Librarians were consulted from both University College Cork, Ireland and Luleå University of Technology, Sweden. This process involved several test searches to ensure a systematic and rigorous search of all appropriate literature, moving beyond the concept of play to include terms such as, games and gaming as is typically used in the field.

Study II

A school principal was recruited who acted as the gatekeeper, distributing information and consent forms to the children and parents of a whole class of a primary school in a large city in Ireland. Both the parents and potential participants received separate, age-appropriate information sheets outlining the study, providing all the necessary information. A total of eight participants were recruited all aged 7 years old and were all girls.

Study III

The same school principal in Study II distributed information and consent forms to children and parents of a whole class of 10- and 11-year-olds. A total of 3 girls and 5 boys aged 10 years old participated in the Study. Different age-appropriate information sheets were provided to both parents and children, with consent and assent form returned by all participants.

Study IV

A deputy school principal of a second level school in a large city in Ireland was recruited as a gatekeeper through UCC’s Schools Outreach Co-ordinator. The gatekeeper distributed information sheets and consent forms to potential participants who met the inclusion criteria. A total of five participants, all males aged 16 & 17 years of age were recruited.

Data generation

Study I

The remainder of the *second stage* of the scoping review (Arksey & O’Malley, 2005) involved running the final search block (see Table 2) through a total of four databases (Web of Science, ERIC, PsycInfo, and SCOPUS) to gather literature from a range of academic areas, including Education, Health, Psychology, Social Sciences, and Computer Science. The searches were completed in October 2021. Included research studies were restricted by publication in English and within the last fifteen years. The *third stage* involved uploading all references and abstracts to Rayyan (www.rayyan.ai) to manage the data and to support the peer review process. The software removed duplicate articles allowing for a blind screening of first the titles and then the abstracts by the researcher and one supervisor. Discussions between the researcher and supervisor ensured agreements on any diverging opinions during the selection process. Separate full text reviews were completed by the researcher and both supervisors resulting in a total of 31 articles being retained for data extraction.

Table 2. Search blocks for Study I

Play OR playing OR games OR gaming	NEAR/2	Digital OR technology OR virtual OR internet OR computers OR video OR online OR mobile OR applications OR “videogames”	AND	Child OR adolescent OR “young people” OR “young person” OR children	NEAR/2	Perspective OR views OR opinions OR beliefs OR experience OR perception OR understandings OR qualitative
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Study II

To prepare for the focus groups and due to the age of the participants, an initial dialogue with each parent was conducted to answer any questions, ensure informed consent, and to introduce the research team. Moreover, this dialogue enabled the researcher to situate and understand child's play in digital spaces at home. Brief notes were taken from this dialogue to ensure that the first encounter with the participants at school was relevant and meaningful to each individual whilst making sure that the data generated by the child was the primary focus of the study.

A total of seven focus groups were carried out with participants attending a total of *three* sessions. The focus groups lasted between 37 and 56 minutes (mean length =45 minutes). The researcher moderated all focus groups and they were conducted within the school environment. Despite recognising the significance of examining children's play experiences within the context of where play occurs (Bronfenbrenner, 1977; Colvert, 2021; Plowman, 2016), the research was conducted within the accessible and familiar environment of their school (Gibson, 2007). The discussions, however, remained focused on children's typical play experiences aiming to alleviate and balance any contextual issues. Each focus group session began by recapping on the previous session and highlighting the aim of the current session. Participants wrote their own name badge which provided the moderator with a visual prompt to verbalise the participants name to aid with transcription. They were reminded that their participation was voluntary and that children could go back to class at any time and withdraw from the study. *Focus group one* gathered initial discussions from the participants on their typical play at home. Pens, pencils, and paper were used during this session to encourage children to draw pictures of what they enjoyed most when they played. They were encouraged to talk about their whole play repertoire not only the experiences within digital spaces. From the first focus group the researcher developed an understanding of each participants' personal play preferences. From this, pictures and photographs were sourced, downloaded, and printed in preparation for the *second focus group*. This session used these images for the children to create their own collage, cutting out, sticking down, and drawing pictures. The final focus group, *focus group three* utilised the collages made by each child to elicit an additional rich discussion of their experiences of play in digital spaces (Kilia et al., 2015; McCloy et al., 2016). Throughout each focus group, children were encouraged to talk openly about their pictures with the researcher using open

questions to gain more depth to the discussions. The combination of using focus groups and the Mosaic Approach (Clark, 2017; Krueger & Casey, 2015) facilitated a clear focus on children's play experiences as they engaged in drawing, cutting, sticking, and discussing with their peers what they enjoyed most.

Data was collected between January and March 2022 and all focus groups were audio recorded. In preparation for data analysis, the focus groups were transcribed verbatim and cross-checked several times. This was particularly necessary due to the age of the children and the difficulty of distinguishing voices whilst they talked simultaneously. Following this, the transcripts were anonymised with each participant assigned a pseudonym.

Study III

This study took a similar iterative approach as Study II, with some differences to account for the older age group, namely making comic strips during data collection and asking participants to take photos of their play.

A total of seven focus groups were completed between January 2022 and March 2022 within the school environment with each child attending *three* focus groups. The first two focus groups had three to five participants in each session as suggested by Kennedy et al. (2001), however, the final session was reduced to no more than three participants to ensure that the discussion was more likely to remain on topic and that all children were provided the opportunity to talk in-depth. The focus groups lasted between 25 and 75 minutes (mean length = 42 minutes). *Focus group one* involved exploring with the participants the types of play in digital spaces they typically engage in, why they enjoy them, and why they are important. Following this initial focus group, participants were requested to take 3-5 screenshots or photographs at home of their play in digital spaces '*that you really enjoy or are important to you*'. These were sent to the researcher electronically. These images were then printed out for *focus group two*, where the participants created their own comic strip (Phelan & Kinsella, 2014); cutting out their pictures and sticking them down in a comic format, adding captions and comments of what was happening at each stage of their game play. During the *third focus group* the comic strip was used to elicit a discussion with the participants, specifically, with regards to how the digital space affords or constrains their possibilities for play. Focus groups were carried out between January and March 2022 and were audio recorded and transcribed verbatim. Transcripts were anonymised with pseudonyms assigned to each participant.

Study IV

In Study IV, data was generated through interviews and encounters using recorded video clips of participants' game play. The use of encounters was based on a narrative approach (Mattingly, 1998; Polkinghorne, 1995). A narrative approach has been typically employed within Occupational Therapy literature in real-time as researchers observe participants in their everyday encounters (Josephsson & Alsaker, 2014; Nyman et al., 2014; Olofsson et al., 2020). In this Study, however, I wanted to observe participants in their everyday play experiences in digital space, as unobtrusively as possible (Lawlor & Mattingly, 2001). The participants, therefore, saved clips of their typical game play providing an accurate glimpse of the real-time action of their play. The recordings were chosen by the participants and sent to the researcher prior to each encounter. The clips provided by the participants reflected a variety of games and social play partners, however, all reflected their typical game play. The use of encounters and recorded game play clips allowed for one form of data generation to complement the other.

Initial interviews were conducted with each participant using a topic guide to generate data in relation to their family context and play preferences, such as what devices and games they play, who they play with and why they like playing video games. The further encounters were guided in an open manner using recorded video clips, allowing the participants to respond freely and elaborate on their play. The interviews were a natural dialogue between the participant and the researcher, thus, the data generated was co-constructed. Some broad questions were identified to guide the study, including how gaming fits around the other things you want and have to do, how does gaming fit with your relationships with other people, and tell me about your experiences of playing video games. Probing questions were used to generate further depth to the data such as, 'can you give me an example', or 'tell me more about that'.

All participants were interviewed on several occasions with each interview lasting between 40 and 70 minutes in length. The interviews all took place online through the platform Microsoft Teams, which were recorded and transcribed automatically. Each interview transcript was checked against the recording for any inaccuracies.

For Studies II, III, and IV the use of field notes and a reflexive diary was used throughout data collection.

Data analysis

Scoping review

The *fourth* stage of the scoping review process involved charting the data with two data extraction frameworks devised throughout the extraction process. The first focused on the demographics of the research articles such as, the aim, the number, and age of participants as well as the data collection and analysis methods used. Inspired by theories of occupation, play, and ecology (Bronfenbrenner, 1977; Fisher, 2009; Fisher & Marterella, 2019; Plowman, 2016), the second data extraction chart focused on children's authentic play experiences in everyday contexts. To collate, summarise, and report on the results in the *fifth* stage of the scoping review, the included articles were read several times, examined, and analysed. Using the second extraction chart, the literature was charted in relation to relevance to a child's daily life, personal and ecological relevance, and the methods used.

Focus group analysis

The data generated from Studies II and III were both analysed using focus group analysis according to the approach outlined by Krueger and Casey (2015). The data analysis process commenced as the researcher listened to and read the transcripts numerous times. This provided an overall sense of the collective discussions throughout the focus groups. In both Studies II and III, the transcripts were the primary focus of analysis with the pictures, collages, comic strips only used to clarify discussions with the participants. This ensured that the primary focus of analysis was centred on children's discussions opposed to the researchers' interpretations of the visual data. The next stage included reviewing each transcript to identify sections of the discussion which were relevant to the aim of each study to which initial codes were assigned. These were then discussed with the supervisory team to allow for preliminary categories to be formed. Further discussions at the next step allowed for these preliminary categories to be organised into themes and sub-themes. Different roles were assigned throughout the analysis by reading the initial categories and a consensus was sought by the researchers repeatedly checking and discussing the data, themes, and sub-themes. Throughout each stage, discussions ensured that the analysis remained close to the data and therefore children's perspective and voice.

Narrative analysis

Study IV was analysed using narrative analysis, focusing on what the stories told rather than the way they were structured, aiming to configure significant events into possible plots (Mattingly, 1998; Polkinghorne, 1995). As in focus group analysis, the first step involved listening and reading through the transcripts generating a sense of the stories told as a whole. A hermeneutic process of emplotment reflected an ongoing process of going back and forth with the data and theories, re-interpretating it several times throughout discussions. Possible interpretations and prepositions were considered along with awareness of the researcher position. Significant aspects of the dialogue were defined by their content as well as how they were told. These were identified by the first author by going back and forth with the data to ascertain and explore multiple perspectives (Polkinghorne, 1995). The researcher, along with one co-author, experienced in narrative methodologies, asked *how* and *why* questions that enabled an understanding of how participants negotiated and created meaning. Significant events were then removed from the transcripts and were read independently by members of the research team. Through rich discussion, a process of shifting from experience to a multi-faceted understanding of how the meaning of occupation was generated.

Ethical considerations

The active involvement of children throughout this research was critical in ensuring that the child's voice and perspective was heard as well as children having the opportunity to share their opinions on matters that concern them (UNCRC, 1989). However, it is important to recognise that ethical principles must be adhered to throughout all stages of research, demonstrating respect for participants, beneficence, and justice (Act on Responsibility for Good Research Practice and the Examination of Research Misconduct, 2020; ALLEA, 2023; Department of Health Education and Welfare, 1979; World Medical Association, 2001). Ethical approval was sought from the Swedish Ethical Review Authority (Log number: 2021-03411) and the Social Research Ethics Committee at University College Cork, Ireland (Log number: 2021-110). With Studies II, III, and IV being conducted directly with children, several ethical issues required consideration. Although many of these ethical considerations have been discussed and integrated throughout the various stages of each paper, the following section will discuss them in more detail. When conducting qualitative research with children and young

people, Kirk (2007) identifies three specific areas to consider: power relations, informed consent, and confidentiality.

Power differences between children and adults are acknowledged as one of the most significant ethical challenges when including children in research (Einarsdóttir, 2007; Heary & Hennessy, 2002; Kirk, 2007). Throughout all stages of the research, I was responsive and reflective of the needs and agenda of each participant, involving them actively within the data collection. My experience as an Occupational Therapist brought skills and experience of engaging, observing, and facilitating children's active involvement. Building up trust and a rapport with the participants created a relaxed environment in which data could be generated. For example, the initial dialogue with participants' parents in Study II helped to identify specific interests to assist in building a rapport with the younger children.

According to the Declaration of Helsinki (World Medical Association, 2001), participants have the right to be informed of the research, with informed consent sought and approved before commencing the research. Therefore, both the child participants and their parents were provided with a written explanation of the research (Curtin, 2001; Kirk, 2007). The information sheet and assent form for children were written using age-appropriate language and visuals to ensure that the format was engaging, accessible, and understandable. However, informed consent was an ongoing process throughout the data collection process ensuring that children were aware they could withdraw at any point. For Studies II and III, participants were reminded at the beginning of each focus group that their involvement was voluntary and that they could withdraw at any point. Similarly, for Study IV, participants were reminded at the beginning of each encounter that their involvement was voluntary.

Pseudonyms were assigned to each participant to ensure they were not able to be identified in the work that was published. Throughout data collection, I remained curious and inquisitive to the children's perspective, I sought a balance between drawing on my skills and experience of working with children as an Occupational Therapist and remaining open and actively listening to the children's perspectives and dialogues. At times this required patience to follow the flow of discussion whilst working hard to ensure that every participant had the opportunity and space to share and generate their perspective (Lundy, 2007). Yet, also recognising and respecting their moments of silence throughout the data collection process (Clark, 2001).

Findings

Overall, the findings from the individual studies within this inquiry demonstrate an enhanced understanding of the play occupations in digital spaces from the perspective of the child throughout the trajectory of childhood. The findings enrich the conceptualisation of play in digital spaces and subsequently inform the design and focus of each succeeding Study(ies). They are presented individually in the order they were conducted. Table 3 provides an overview of the findings from Studies II, III, and IV.

Study I

This scoping review intended to understand how qualitative research approaches children's experiences of play in digital spaces. As previously highlighted, play in digital spaces has seen interest from a range of academic fields such as computer science, psychology, and education, bridging a range of different perspectives individually and collectively. Analysis of the data in Study I by adopting an occupational perspective, specifically revealed how research was designed and conducted with regards to children's daily lives, the relevance to children both personally and contextually, and specifically what methods were used. The 31 peer-reviewed articles included within the scoping review originated from a range of countries, from The United States of America (n=11), South America (n=2), South Korea (n=1), Australasia (n=5) and European countries (n=10), such as Finland, Norway, Belgium, and the United Kingdom. Fifteen out of the included articles were published between 2017 – 2021, with the age of children ranging from 3 – 18 years of age. Out of the included papers, eighteen recruited children who were aged over 10 years of age and seven studies involved an age range spanning at least 5 years or more.

Table 3. Overview of the findings from Studies II, III, and IV

Overall theme/Plot	Study II			Study III			Study IV	
	Enjoyable play experiences	Constrained possibilities	Negotiating play	Continually exploring	Sharing play experiences	Keeping play alive	Bridging the divide	
Sub-themes / Storylines	Variation in play	Play being less valued	It's play!	New arenas	Being together	Developing and learning	The twists and turns of play	
	Managing responsibilities	Boundaries to access play	Secrets!	New tasks and roles	Doing together	Becoming a player	Playing to escape and recover	
	Creativity and challenge	Play dependent on others	Extending possibilities for play	New responsibilities				Playing creates a sense of community
								Balancing play in everyday life

Analysis of the included articles exposed the multiplicity of how children's experiences of play in digital spaces is approached within empirical literature. Four categories were formed of how the literature considered play in digital spaces; Videogames, behaviours, and social norms; Videogames for its own sake; Videogames for learning; and Videogames for health promotion. From the 31 included Studies, a total of 21 focused on play for secondary or instrumental values, such as health promotion, learning, or societal norms. The remaining ten articles examined what could be considered free play or play for its own purpose. However, out of those ten articles, it was unclear in five of the studies whether they demonstrated relevance to children's daily lives with regards to children's play that they would typically engage in with devices and digital spaces that are available and accessible to them. Additionally, it was unclear whether participants were regular video game or virtual world players in two of the studies. Despite the experiences of play for its own sake being included within the scoping review, they were not singularly described as play. The language of 'digital games', 'videogames', or 'video gameplay' were much more commonplace.

The findings stressed the significance of utilising video games in research that were relevant to the child's daily life, for example, games that are popular and available to children, such as Minecraft, Fortnite, or Clash of Clans. Further, the review discovered that participants included in some of the studies were not always consistent users of video games which resulted in a lack of personal relevance and meaning. Research was often conducted within simulated or contrived research contexts such as 'digital play groups', conference rooms, or computer labs denoting a lack of ecological relevance for the lived experience of the participants. Data collection tools that are more commonly associated with adults such as semi-structured interviews and focus groups were more often than not employed. The methods used in three articles suggest that the participants were not necessarily actively engaged within data collection with the researcher leading research *of* children which ultimately resulted in the child's voice being lost. We found that only four studies in the review considering play for play's sake utilised methods that might be considered 'child-friendly'. This, therefore, indicated that any future research needed to be designed in a way that prioritised methods that were participatory and actively involved the child in age-appropriate means.

Study II

From the findings and learning gained from the exposing and mapping of existing literature, the relevance of play to children's daily life was highlighted. This in turn helped to shape the design and emergence of Study II. With the ability to make choices being a key dimension of their experience of play, analysis of Study II revealed how the participants (aged 7 years old) experience choice making in their play within digital spaces. Despite Study I indicating that child-friendly methods were not consistently used in existing empirical studies, Study II found that when utilising methods that are child-friendly, children are competent and, in fact, are able to demonstrate both the capacity and the capability of sharing their unique perspective.

Analysis of participants choice making in their play in digital spaces resulted in three main themes for this study, each with three associated sub-themes (see Table 3). The first theme reflected that participants enjoyed the flexibility, variation, and challenge in the choices proffered by their play in digital spaces. Participants expressed that the variety available to them in the digital space prevented it from being all the same and getting boring. For example, the game AdoptMe offered a variety of pets as well as different levels and special editions, such as a Halloween or Christmas edition. Specifically, they enjoyed being able to choose for themselves and that their play experiences included play objects, for instance, Barbies, in both physical and digital contexts. Participants spoke of the responsibilities they held in their play through managing routines which resulted in a perceived competence. The dimensions of creativity and challenge in their play was something they specifically chose, such as anticipating getting new characters, unlocking new elements in the game, and earning rewards. Being able to do things that they could not in real life was also an aspect that they chose to participate in through making their own stories and characters, utilising role play and building real world elements.

The second theme summarised how participants experienced that their choices for play were constrained in digital spaces. They spoke about how play in digital spaces was often less valued by their parents irrespective of what they themselves enjoyed, what they were interested in, and whether or not they had the skills to participate in. Certain devices or games, such as the Xbox or Nintendo Switch were preferred by their parents as a result of them being perceived to have a higher educational value. Participants further discussed that they did not necessarily

recognise that play held an educational purpose. The boundaries to their choice making were further influenced by access to devices, games costing money, or games being too difficult for them. Roblox was a prime example that participants expressed restricted their play, with ‘cool’ pets costing money. The participants discussed that their choices were often dependent on being included or invited to play with others, such as by their parents, siblings, or cousins. They explained that as their siblings got older, their play evolved and developed, changing in line with their needs and wishes, which ultimately influenced the possibilities available to the participants.

The third theme reflects the negotiation that participants engaged in to facilitate further opportunities for play in digital spaces. Participants spoke of navigating around their parents, keeping secrets, and extending the social opportunities with friends. Despite play in digital spaces not consistently being valued by their parents and often amalgamated into their ‘screen time’ allowance, participants were able to distinguish how digital devices were used, describing the passivity of watching television and the interactivity of engaging in play with a device. Participants spoke of ways in which they negotiated additional opportunities for play often without adult awareness, by charging their devices in their bedroom or turning the volume down low, or putting a sign on their bedroom door saying, ‘do not disturb’. Finally, participants discussed furthering their possibilities for play, by asking their parents to arrange time to play online with friends.

Study III

The findings from children’s choice making in their play in digital spaces, highlighted the plethora of opportunities that were available to children. It was increasingly evident, that play was being shaped by the space in which it occurs, whilst additionally cognisant of the tensions between the adult dominated control and design of the space and a space in which children can engage in autotelic play experiences. I wanted to understand more about how and in what ways the digital space was proffering play experiences from the perspective of the child. The concept of play value provided an opportunity to merge children’s perspectives whilst exploring the environmental qualities of the space in which the play occurs. The analysis of the participants’ (aged 11 years old) discussions of the play value of digital spaces, specifically how the digital space afforded opportunities for play revealed an overall theme of ‘endless opportunities for play’. This reflected the range of processes that participants perceived as being proffered by the digital

space. Three further themes expose the opportunities to continually explore, a space to be together and share, as well as the digital space offering the ability to develop and learn skills which sustained the excitement of play (see Table 3).

Participants' experiences reflected that play value included the opportunity to explore and discover new possibilities in the digital space. Exploring new arenas, tasks, and roles collectively offered participants the prospect of discovering new responsibilities. The new spaces in which they could explore were often described as 'discreet' or 'secret', creating a space of anticipation that were not available to them in other contexts. They spoke of moving, flying, or parachuting 'into caves' or 'up to the mountains', navigating freely around a digital map which on some accounts reflected possible real-world experiences but without certain limitations. Further processes included that the digital space proffered a space for participants to explore new tasks and roles in their play, building extravagant mansions in the game Minecraft or pretending to be a bank robber in the game Brookhaven. Yet, interestingly, participants experiences reflected a clear distinction between the nature and feasibility of assuming new roles within a digital space versus a physical. Participants described the responsibilities that emerged from their gameplay in regard to their competence of being able to look after themselves and their assets in their play by upgrading their armour in the game Fortnite or mining for resources in Minecraft.

The sociability proffered by the digital space was consistently discussed by the participants. The use of different game modes, such as 'duo' or 'squad' facilitated play with their friends and family, however, participants spoke of working beyond the implied intentions of the game and device that they were using. Participants discussed texting their friends to arrange a time to play, making use of additional platforms, such as, FaceTime, Zoom, or Skype to play together as well as being able to talk privately. Despite often being remotely located, these possibilities proffered the participants to share the same online space in a quick and uncomplicated manner despite being in separate physical spaces. Playing together was important to participants, however, they also spoke of the value of achieving goals together which led to more in-game accomplishments. This often involved assisting younger siblings in their play or being helped by their older siblings, leveraging the skills of friends and siblings as play partners to achieve goals. Participants also discussed that some players found certain loopholes such as writing 'F space space space' in the chat which notably challenged their sense of justice and awareness of the potential risks in the digital space. Nevertheless, participants

discussed the ways in which they turned off the chat or only played with their friends to minimise this.

Finally, participants spoke of valuing the variation of play experiences which provided evolving opportunities to learn new and develop existing skills, such as dexterity, reflexes, problem solving, and planning. Participants experienced that these skills were relevant to them within the digital space but also within the physical realm, which they used in negotiation with their parents to play more, reflecting their awareness of the wider societal discourses. The variety of game levels and difficulty settings provided participants with constant learning and always having something to do, resulting in the sense of the more you play the better skills you have. Elements such as unpredictability and uncertainty in the game were valued to provide a sense of challenge and problem solving in their game play, which led to a perceived competence in their play. Additionally, the use of consistent elements within game design and the completing tasks and challenges supported their sense of achievement and proficiency. Participants spoke of how they had developed their skills within their play in the digital space from when they had first started, and looked back at certain things they did as, ‘noobish¹’, signalling their development and competence in play. They spoke of their progress within games as making them feel proud of themselves and successful both in play and as individuals.

Study IV

The collective findings from Studies I, II, and III reflect that play in digital spaces denotes a place which proffers a multitude of opportunities for children. As play in digital spaces is increasingly a part of children’s everyday life, I wanted to better understand how this was situated across the repertoire of everyday life. The analysis of data from Study IV explored the meaning that adolescents aged 16 and 17 years associate with their play in digital spaces and how this was situated in their everyday life.

The overall plot of ‘Bridging the divide’ symbolises how play in digital spaces is integrated in their everyday life as they engage in processes of negotiation and balance of their time, values, priorities, and previous experiences. This process reflected a dynamic relationship between the physical and digital spaces and the

¹ A noob or being noobish is slang and refers to the idea that someone is new to a game, implying a lack of experience or someone who is acting naively or foolishly.

fiction and reality of everyday life. The digital space signalled a place of multiple possibilities and one filled with meaning that existed in parallel with everyday life producing a place for play. For the participants, the space co-existed for opportunities to be together with friends, an 'escape' from and an extension to their everyday life. Encounters reflected that participants could experiment with identities and fantasies yet, signalled a contrast between the spaces in which they inhabited.

Four storylines are used to demonstrate the different ways in which participants negotiated, balanced, and integrated play in digital spaces throughout their everyday life. Firstly, stories revealed moments which were unexpected and exciting in their gameplay and is reflected by the storyline, 'the twists and turns of play'. These moments were unavailable to participants elsewhere and were proffered by the game directly or fabricated by the players as they engaged in play, typically with or against friends. Moments such as flying on top of rockets, gliding all over the place, and dancing towards enemies in the game Fortnite produced a space for fun. These moments, additionally, created a sense of anticipation, risk, and competence to their play, and simultaneously evolved as participants enacted their sense of proficiency of their present and future self.

The next storyline reflected that game play offered a place to escape to and relax, which is symbolised through the storyline, 'playing to escape and recover'. All participants' spoke of game play offering a space to switch off from everyday life and the freedom to be able to experience and embody other characters and roles. For example, being able to embody a character in the game Ultimate Fighting Championship provided a place to 'calm down' and experience something similar to real life whilst forgetting their surroundings. This ability to escape provided a sense of freedom without pressures and expectations of everyday life which fundamentally created a place which allowed them to be their self. Participants discussed that this process of balancing the stresses and strains of everyday life, proffered the ability to switch off but also 'switch on this focus thing' in the game scenario. The stories told reflected that playing video games was a strategy in which they negotiated their wellbeing. In doing so, participants felt that they were able to reach a balance in the patterns of their occupations in everyday life.

The storyline of 'playing creates a sense of community' symbolises the sense of belonging and community that comes from building, sustaining, and extending friendships in the digital space without any of the geographical constraints. The

shared interest in certain games or just ‘hanging out’ with friends provided a space in which they could converse easily and naturally, creating memories and forming relationships. The digital space enabled participants to invite other known peers into existing friendships groups which further generated a sense of community and belonging. The shared interest in playing certain genres of video games also provided a space in which to make new friends from other countries and specific updates and online events promoted the sense of being together. Participants spoke of the game Fortnite’s first ever concert with DJ Marshmello which facilitated the opportunity to come together be part of something bigger.

The final storyline of ‘balancing play in everyday life’ reflects the participants’ negotiation and balance across their everyday repertoire. Participants were self-aware of their time spent online and prioritised playing in negotiation with other everyday demands, routines, tasks, and roles, such as going to school, spending time with family, and other hobbies. For example, despite not necessarily enjoying school, participants spoke of the need to finish their homework first, before playing online. Participants’ game play reflected potential future identities, reflecting a temporal dimension to the choices and decisions they made. Additionally, participants recognised that at times they experienced ‘burn out’ and that they needed to build in strategies, such as taking a break, changing the game they were playing, or going downstairs so that game play did not overwhelm or consume everyday life. This self-awareness was not always the case, however, as participants spoke of it having taken time to integrate gaming in an optimal way across their everyday life. Certain games such as Apex Legends and Call of Duty, in the way they were designed, required excessive time devoted to them to unlock certain features to play the game. Ultimately, this frustrated the participants and influenced their enjoyment in the game.

Discussion

Overall, this thesis aimed to generate new understandings of children's perspectives of play occupations in digital spaces throughout the trajectory of childhood. The collective findings from the individual studies have provided unique, novel, and valuable insights into children's experiences of their play from which key findings will be discussed. Firstly, the findings provide a point of departure for the proceeding discussion, indicating the current state of play in digital by the ways in which current societal discourses and research practices obscure play for play's sake within the digital context. Secondly, the discussion illuminates the ways in which children characterise their play by proposing four core characteristics which provides a backdrop for a new, alternative, child-centred approach to conceptualising children's play in digital spaces. Thirdly, the discussion highlights the significance of the digital space in children's play, how the space shifts and evolves throughout childhood, proffering a place of meaning in children's everyday life. Finally, the ways in which we can foreground children's perspectives and rights in the digital space will be discussed amidst the prevailing discourses and competing interests which currently typically overshadow children's unique perspective. This will be utilised as a point of departure for how these findings can have implications for society, specifically health professionals, researchers, and parents.

What is the current state of play in digital spaces?

The findings from Study I, the scoping review, uncovered that play in digital spaces is rarely referred to as such. Instead, the experiences of play are represented in existing literature as 'video gaming', 'digital games', or 'gaming'. Moreover, the findings from Study II indicate that in children's negotiation and in parent's mediation of play in digital space, the term 'screen time' was frequently used. The origins of this naming convention are generally difficult to determine, it does, however, serve to obscure and disguise how we view such activities, potentially devaluing their worth by removing play as a constituent factor. However, the findings from the collective thesis and specifically, Study II and III indicate that when examined from the perspective of children, these experiences do in fact constitute play and are referred to as such by the main protagonist, the child. By concealing the language of play within the context of the digital space, our understanding of play as being intrinsic, autotelic, and freely chosen and a right for all children is not fully accepted or established. As a result, this ultimately places

the ownership of the experience of play more firmly with dominant stakeholders, such as the perspectives of educationalists, researchers, game designers, and parents and subsequently, obscures the child's perspective. It is, therefore, suggested that future research, policies, and practice, continues to emphasise the experience of play in digital spaces to recognise children's ownership of the experience and to realise their right to play within a digital space (Committee on the Rights of the Child, 2021). Moreover, the scoping review also identified that the existing literature is weak at best with regards to way in which it is designed. For example, data collection tools were used that are more commonly associated with research conducted with adult participants. However, the findings of this thesis accentuate that when age-appropriate, child-friendly tools are used, children are capable and competent of sharing their unique perspective of their play experiences. Substantively, employing child-friendly methodologies throughout Studies II, III, and IV has generated a profound understanding of how children conceptualise play within digital spaces across the span of childhood.

How do children conceptualise play in digital spaces?

Collectively, Studies II, III, and IV have highlighted that children perceive there to be 'endless opportunities' for play available within the digital space, as indicated by the overall theme from Study III. Additionally, the studies reflect how children conceptualise play throughout childhood through core characteristics of: 1) variation and flexibility, 2) sociability, 3) freedom, and 4) challenge and manage responsibilities. These characteristics reflect not only how children characterise and value play itself, but how the meaning of play can be reflected in relation to the synthesis of being, becoming, belonging (Wilcock & Hocking, 2015), in which children explore their sense of self, future self, and connections with others. The four characteristics of play will be described reflecting on ways in which the meaning is negotiated and enacted through the doing of play. The following section will describe and discuss each characteristic in turn ending with a suggestion of how play in digital spaces could be conceptualised with regards to a potential play value framework.

Variation and flexibility of play

The possibilities for *variation and flexibility* proffered opportunities for children to make choices in their play that are distinct from other forms of play. Children characterise the possibilities for variation through the constantly changing elements within the game, by playing different games, levels, and editions which they

consider to offset the risk of boredom. These choices are not always considered distinct, rather the ability to choose skins, characters, and materials reflect the nuanced ways in which the digital space proffers these experiences. With the current preoccupation of parents motivated by children's learning and mastery of skills, the variation in fact supported children's possibilities for choice making, which is arguably not available to the same degree in offline environments. In research exploring out-of-school provision, playworkers and parents expressed that by promoting children's choice making through a multiplicity of opportunities, it not only prolonged their engagement in play but contributed to their sense of confidence, independence, and self-esteem (King & Howard, 2014; Smith, 2010). The findings from this thesis reflect that the requirement for variation and flexibility not only proffered children with multiple possibilities, choices, and unexpected moments within their play, it allowed children to develop skills which resulted in a sense of constant learning and growth which can be considered as a sense of becoming (Wilcock & Hocking, 2015). It is important that this notion of prolonged engagement in play may, more often than not, be confused with concepts of addiction within the digital space. However, it could be better explained by the concept of flow reflecting the relationship between children's perceived skill, the challenge provided, in conjunction with the feedback provided from the activity (Csikszentmihalyi, 2002; Rebeiro & Polgar, 1999).

Additionally, the variation proffered by the digital space provided creativity and imagination where children could create their own characters, pretend to be, and do other things, and construct and control their play in the way they wished. This is not dissimilar from the experiences children speak about within the physical environment that indicate that children enjoy diverse and novel play experiences (Morgenthaler et al., 2023; Wenger, et al., 2023). However, the findings from Studies II, III, and IV indicate that these experiences were not bound by the same geographical constraints. Despite the tightly prescriptive and programmable nature of digital spaces which are largely designed, managed, and controlled by adults (Grimes, 2021), the findings of Study III indicate that children are able to fabricate a variety of creative and innovative experiences reflecting play value from the perspective of the child (Giddings, 2014).

Sociability of play

The findings reflect that children characterise play in digital spaces by the magnitude of *sociability* proffered which has likewise been established in research on motivations for playing video games (Albarello et al., 2021; Carter et al., 2020; Ferguson & Olson, 2013). However, the findings from this thesis add to the current understanding by recognising that children value the possibilities for playing with others, to be together and achieve tasks collaboratively, and how this could be done with ease. This notion was further extended by the findings from Study IV, which found that digital spaces strengthened existing as well as supported the formation of new relationships and thus, fostered a sense of belonging and community (Wilcock & Hocking, 2015). The promise of sociability in play is also recognised in wider play literature, however, in a scoping review of children's perspectives of the environmental qualities that enhance play in community playgrounds, it was found that children sought play with peers who were the same gender, of a similar age and ability (Morgenthaler et al., 2023). The findings of Studies II and III, however, indicate that children playing in digital spaces did so with children who were either younger or older than them, helping their younger sister to build mansions in Minecraft or being helped by an older brother and his friends to learn new moves. It has been recognised that with the dawn of same-age schooling and out of school activities, age-segregated play has become a characteristic of modern times (Gray, 2011). As a result, research largely examines same-age play, however, there are a number of benefits that can be accrued from mix-age play such as enhancing confidence, providing more challenge, establishing broader friendships, and empowering individuals (Gray, 2011; Parrott & Cohen, 2021).

Freedom of play

The findings from Study II, III, and IV reflect the opportunities that children value *freedom* in their play. The characteristics of freedom along with variation and flexibility in their play proffered children a context to demonstrate a capacity to act (Barad, 2007; Hayles, 1999). The possibilities to fly or glide across extensive virtual landscapes in Fortnite, catch a train in Brookhaven, or to be able to switch off from the demands and expectations of everyday life offered this sense of freedom albeit within the highly structured and controlled systems of the digital space. The possibilities afforded by the digital space proffered children an extensive online arena with a degree of freedom that is arguably not available to them to the same extent in other contexts. Research has indicated that, children's

use of space has shifted over recent decades; the distance in which they are allowed to travel independently from their home has rapidly decreased over recent decades exacerbated by a range of societal and cultural factors (Karsten, 2005; Spilsbury, 2005; Woolley & Griffin, 2015). Despite the abounding concerns regarding the decline of free play opportunities for children (Committee on the Rights of the Child, 2013; Gray et al., 2023; Sandseter et al., 2021) the findings of this thesis indicate that the digital space can offer children a sense of freedom and independence which to them characterises play. However, the essence of freedom is positioned within an assemblage, including adult restrictions, such as ‘screen time’.

Additionally, Studies III and IV reflect that the opportunities presented by the digital space which were devoid of many of the constraints and limitations of the offline environment. For example, the freedom to explore new locations on a map in the game Fortnite without constraints from the geographical landscape such as height, distance, and terrain or to meet up with friends. Children spoke of the freedom to ‘do what you want’ in the digital space, to make choices, and to structure and control their play in the way they wished devoid of adult direction and involvement. These findings demonstrate congruence with wider literature exploring children’s perspectives of play albeit within a physical context (Nicholson et al., 2014; Pyle & Alaca, 2018; Theobald et al., 2015), however, the findings from these studies add to the current literature by recognising the context of the digital space. The findings from Study IV demonstrated that the sense of freedom served to encourage in children a belief that digital spaces offer the ability to ‘switch off’ from everyday life and balance the variety of demands, such as the stress of school and looming exams. The opportunities to maintain a balance across the repertoire of everyday occupations is acknowledged to provide a source of supporting and maintaining health and wellbeing (Asaba et al., 2022; Eklund et al., 2017; Widmark & Fristedt, 2019). Additionally, the sense of freedom expressed by children echoes Dewey’s concepts of growth and freedom which considers the context to be conducive to developing and establishing habits resulting in a functional co-ordination (Aldrich & Cutchin, 2012). The essence of children being able to integrate play in digital spaces across their everyday repertoire through the processes of negotiation and balance reflects the ways in which the digital space and individual were co-constituting parts of each other, with the capacity to act, and transacting with each other (Barad, 2007; Bennett, 2010; Cutchin & Dickie, 2012; Taylor, 2009).

Challenge and managing responsibilities of play

Opportunities to experience *challenge, manage responsibilities* and in turn, be *responsible* were especially evident from the findings in Studies II and III. These studies cast a light on games such as Minecraft, Brookhaven, or Adopt Me that reflect opportunities for role play such as building houses or mansions, looking after pets, and protecting their farm. Children valued the sense of responsibility in being able to protect themselves by upgrading their armour in Fortnite, having to mine for resources to build in Minecraft, or earn in-game currency to play with certain features. In turn, these responsibilities led to a sense of pride, accomplishment, and competence not only with regards to how they engaged in play itself but additionally the sense of *being* resonated throughout. The sense of control and mastery in their play experiences which when balanced with a sense of challenge further contributed to promoting the repetitive cycles of play that is so critical to the feelings of competence often described by game players (Inal & Wake, 2022; Marsh & Tainio, 2009; Sailer et al., 2017). Furthermore, challenge is a distinct characteristic of children's wider considerations of play (Miller & Kuhaneck, 2008; Moore & Lynch, 2018; Morgenthaler et al., 2023; Wenger, et al., 2023). However, the sense of being responsible and in turn the feeling of competence contributes to our understanding of the meaning of play in the digital space as a place in which to foster a sense of self when considering Wilcock's framework of doing, being, belonging, and becoming (Wilcock & Hocking, 2015).

Towards a new conceptualisation of play in digital spaces

The doing of play, through the characteristics of 1) variation and flexibility, 2) sociability, 3) freedom, and 4) challenge and responsibilities served not only as an occupation in and of itself, but one in which fostered a sense of self, feelings of belonging, and a space for realising potential future identities. Despite these core characteristics of play in digital spaces being not too dissimilar from how children experience their play in offline environments (Giddings, 2014; Grimes, 2021a), collectively, the findings reflect nuances of how children experience and distinguish their play in digital spaces and the qualities they value in play. Throughout Studies II, III, and IV, play occupations evolve from simple tasks to much more complex, layered occupations. Their play shifts throughout childhood to a complexity in which adolescents utilise their play for managing their health and wellbeing. By considering a transactional perspective on occupation, we can move beyond considering the child to explore the outcome of the transactions,

reflecting the relational constructs of how children experience play in digital spaces.

To date, play in digital spaces has been conceptualised in a range of existing models and frameworks, such as Bird and Edwards' (2015) Digital Play Framework and Marsh et al.'s (2016) Digital Play taxonomy which consider the play opportunities that digital tools and technologies offer children. However, both of these frameworks have been adapted from play within physical contexts and is largely based on adults' observations of children's play. These frameworks, for example, obscures children's perspectives of play and typically place value on the instrumental nature of play opposed to that which is freely chosen by children. By considering the dimensions of how children experience and characterise play in digital spaces (from the findings of Studies II, III, and IV), we can begin to challenge current existing frameworks which are typically adult-centred, and education-focused in their approach. The collective findings generated from this inquiry provide an indication of how children's perspectives of play value, such as dimensions of variation and flexibility, sociability, freedom, and challenge and responsibilities could be formulated to support experiences which denote high play value. Further analysis and development of the characteristics that children associate with their play in digital spaces could help inform a new and novel framework which emphasises children's perspectives, shifts power, elevates play language, and fundamentally enforces children's rights within a digital context.

A multi-transactional space for play?

The significance of space as a place for children's play has been widely acknowledged with research examining the environmental qualities of the physical environment (Morgenthaler et al., 2023; Parker & Al-Maiyah, 2022; Wenger, et al., 2023; Woolley & Lowe, 2013). The findings from Studies II, III, and IV have revealed a range of unique insights as to the qualities and characteristics of the digital spaces in which they play. Children have offered a view of space that is *multi-transactional* in terms of the opportunities for play it affords, *heavily populated* in terms of the play elements contained therein, and *developmental* in its potential to grow, reflecting the changing nature of childhood from early years to adolescence. Minecraft, like many MMORPGs and sandbox games, offer children the opportunity to shape both their play and the space in which they inhabit, thus, reflecting an ever-changing composition and nature of play experiences. For example, children spoke of playing and constructing worlds to

being inhabitants of these worlds. The collective findings of this thesis emphasise that digital spaces not only shape the play experience itself, but that this in turn shapes the digital space reflecting the relational and distributed nature of occupation between human and non-human matter (Barad, 2007; Hayles, 1999; Hollan et al., 2000). This can be considered by adopting a transactional perspective on occupation by accentuating the relational, situated, and contextualised nature of play (Cutchin & Dickie, 2012). The digital space reflected a place for multiple realities through the imagined, play, and social space as well as the evolving meanings of sense of self, belonging, and identity as these dimensions transact with one another (Cutchin & Dickie, 2012; Nitsche, 2008; Wilcock & Hocking, 2015). Additionally, the mutual reciprocity of the individual and the context reflects how the space is produced and reproduced “because of and through occupation” (Delaisse et al., 2021, p. 9).

A space of freedom or a space of constraints?

Similar to children’s offline spaces, such as playgrounds and outdoor spaces, digital spaces have been designed and produced *by* adults *with* children in mind (Radesky & Hiniker, 2022; Verenikina et al., 2010). Research has generally reflected digital spaces as “adult-initiated rule systems” (Grimes, 2021, p. 155), which have typically been acknowledged to neglect the needs, wishes, and desires of children (Livingstone & Pothong, 2022; Radesky & Hiniker, 2022; Verenikina et al., 2016). Although, in some respects, these perspectives are accurate, they fundamentally lead to dialogues of digital spaces being highly structured and controlled and restricting children’s possibilities for play. The findings indicate that in fact, these perspectives are more reflective of the rule-based and mediated space as discussed by Nitsche (2008) and fail to consider the fusion of space generated by the play, fictional, or social space which are arguably more reflective of children’s perspectives of the spaces in which they inhabit in a digital space and the meanings they associate (Holland et al., 2001; Nitsche, 2008). The findings from Study II and III reflect that rather than being constrained by these spaces, children found ways in which to leverage possibilities and add additional layers to their play by making use of other technologies and software to increase the sociability of their play. Exploring their desire for sociability in their digital play, children in Study III described how they would concurrently run messaging or video platforms, for instance Zoom or Skype alongside multi-player games, such as, Minecraft in order to allow them that social contact and engagement they sought with other players. Further, turning off features such as the in-game chat

facility which enabled them to create and curate how they shaped their experiences, indicating that children are not only aware of, but understood the inherent risks and limitations of the digital space. Collectively, this reflects a play moment in the digital space being created as an assemblage (Taylor, 2009), where the multiple transactions exist, such as children's motivations to play with friends, asking parents to arrange time to play, through the use of additional platforms, the devices used, the space itself, and the valuable experiences with others.

The blurring of play spaces

The findings reflect that children perceive that digital spaces offer endless possibilities for play as suggested through the ways in which they characterise their play. However, Studies II, III, and IV reflect a fluidity between the spaces in which they inhabit throughout their play experiences (Study II) and everyday life (Study IV). The digital space reflected a continuum and constantly changing space in response to children's play, evolving throughout the trajectory of the studies. The findings from Study II reflect that children would transition their play between the physical and digital space. They spoke of playing with physical Barbie dolls as well as the online game Barbie Dreamland, with play more often than not focused on the play objects rather than the space itself. With older children, in Studies III and IV, acknowledging a distinction between the physical and digital spaces in which they played, discussing what was possible or appropriate to do in the physical or digital context. This demonstrated that children were aware of the consequences of their behaviours in the digital space, through examples of taunting other players in the online game UFC but recognising only the appropriateness of this within the digital space. Study IV found that the digital space was a place which was an extension to the physical and where they could escape from everyday life. It provided a space in which to invite friends to join and which created a sense of belonging and community (Wilcock & Hocking, 2015). The option to invite others to join the game space with existing friends created this sense of community. For example, the game Fortnite hosting its first ever concert with DJ Marshmello, created a sense of coming together and being part of something bigger. These findings reflect congruence with the concept of enacted togetherness which considers "an arena that creates opportunities to do things together" (Nyman & Isaksson, 2021, p. 43) and contributes to our understanding of meaning in the digital space. The construct of enacted togetherness embodies a space in which the sense of belonging and togetherness are negotiated with others. The doing of play or simply hanging out with friends online fabricated

this wider sense of belonging with the digital space inherently offering the possibilities for being, belonging and becoming (Nyman & Isaksson, 2021; Wilcock & Hocking, 2015). Further, Nyman and Isaksson (2021) assert that there is a call to create inclusive public places which facilitates a sense of belonging and inclusiveness and I wonder whether the digital space may be just that?

How can we foreground children's rights in the midst of tensions?

This thesis has utilised a qualitative paradigm to generate new understandings of children's perspectives of their play in digital spaces. Study I found that careful attention is required to best capture children's perspectives of their play experiences, utilising both child-friendly and age-appropriate methodologies to reduce the power imbalance and highlight to children the importance of adults hearing and listening to their unique perspectives. It is, however, important to acknowledge that there are multiple perspectives, such as those of parents, educationalists, and other stakeholders such as game designers and Occupational Therapists whose views, although largely dominant are by no means less valuable.

The diversity and complexity of the assumptions and prejudices surrounding children's play in digital spaces are informed by a multitude of societal, cultural, and historical factors. Despite a reconceptualisation of childhood and children, these dominant discourses persist. Over the last decade specifically, society has bear witness to one of the most rapid evolution of technology, reflecting incongruence with ideal and romantic notions of childhood, play, and of parents wistful memories of their own childhood, resulting in a fear or moral panic. In considering these, there is an additional layer of adult based interpretations being drawn into the assemblage of play moments (Taylor, 2009). By simply focusing on the potential harm, risks, and dangers, it is argued that the characteristics of play are lost (Robertson, 2021). Therefore, by considering and emphasising children's unique perspectives of their own experiences we can recognise the nuances of play characterised collectively by the opportunities, risks, benefits, and wellbeing accrued by participation in occupation. Nevertheless, it is not intended to present a utopian view of children's play in digital spaces. Children are indeed a marketplace, and despite the value they accrue from their play experiences, they are at risk of exploitation from wider agencies, such as the commercialisation of the gaming industry (Grimes, 2021; Livingstone et al., 2021, 2023; Robertson, 2021).

Parents more than ever before are engaging in tensions between children's independence and freedom and managing potential risks whilst supporting the health and wellbeing of their children. This constant balancing and juggling act results in a multitude of ways in which parents mediate their children's use of technology (Livingstone, 2022; Nichols & Selim, 2022). However, this thesis has generated an understanding of play in digital spaces from the lens of the child, as an occupation that is characterised by variation and flexibility, sociability, freedom, and challenge and responsibilities. It is therefore unsurprising that despite antipathy from parents, children are continuing to choose to play in digital spaces. The discourse of childhood being marked by vulnerability and in need of protection is incongruent with the findings of this thesis as it contributes to an understanding of children's autonomy, choice making, and awareness of risks in a digital space. The findings of Studies II, III, and IV indicate that children demonstrate some awareness of potential risks, and are able to demonstrate the use of strategies, such as turning off the in-game chat or using private servers to play directly with known peers. Despite the popularity of the term, 'screen time', its usefulness has been questioned within literature (Blum-Ross & Livingstone, 2018; Kaye et al., 2020; Livingstone, 2022), and from a child's perspective has been considered confusing (Balmford & Davies, 2020; Willett, 2016). This will be discussed further within the implications section to consider suggestions for ways forward.

Additionally, the findings of Study II and III recognise that children are aware of and actively negotiate around parents' perspectives of play in digital spaces. In Study II, children were aware that parents valued play for secondary benefits, such as for learning or keeping their children active. Children spoke of certain devices being valued more than others because they were perceived by their parents to 'teach you stuff'. However, this functioned only to diminish children's wishes and desires for their play. In Study IV, children spoke of not wanting to discuss play with family because 'they just don't understand it'. These findings reflect that children did not recognise that play had to hold secondary benefits and were able to distinguish between different activities on their digital devices, such as playing a game and watching television. Consistent with the findings of this thesis, research has recognised that children do not require play in digital spaces to hold secondary benefits (Livingstone & Pothong, 2022).

Amidst the tensions of 'screen time' and discourses of excessive gaming, the findings of Studies II and IV found that children's play was not dominated by

technology or the digital space. Specifically, when examining how play in digital spaces sat across everyday life, Study IV found that the children were able to negotiate and balance play in digital spaces in relation to the other demands of their everyday life as part of their occupational repertoire (Brooks et al., 2016; Parsonage et al., 2022; Razum & Huić, 2023). The processes of prioritising other everyday routines reflected the subjectivity of having variation in everyday life and were integral achieving occupational balance (Eklund et al., 2017; Håkansson et al., 2006). Children spoke of the role of parents in establishing values and priorities in everyday life and in fact children looked to parents to help them to establish these. However, literature largely explores parental mediation of screen time (Nichols & Selim, 2022) itself opposed to the broader support and guidance that children seem to be seeking (Robertson, 2021). Additionally, the use of self-management strategies by adolescents were a way in which they could integrate their play in digital spaces across their everyday repertoire.

The following section will discuss some potential implications from this inquiry for a range of stakeholders, including health professionals, researchers, and parents.

Implications for practice, parents, policymakers, and place designers

The knowledge generated throughout this thesis on play occupations in digital spaces has the potential for far reaching implications for society, including, parents, health professionals, researchers, and game designers. In acknowledging that *all* children have the right to play, the findings from this inquiry has firmly established that the digital space proffers children a space for that play to happen. The core characteristics of how children perceive their play in digital spaces provides an indication of the potential play value of the digital spaces. In this light, play in digital spaces can be accepted as a purposeful and meaningful occupation for children.

By recognising children as competent and capable of sharing their views and opinions, parents and professionals could support children in their choice making by asking and speaking with children about their play within this context shifts the locus of attention from the game to the child themselves. For many, play in digital spaces has now become an integral part of everyday life, thus, reflecting a shift in the occupational pattern and repertoire of children in today's society. Thus, signalling the importance of not only viewing play in digital spaces in isolation but how this play enhances their sense of self and how it interconnects with their

relationships with others. There is therefore a call to Occupational Therapists, to be proactive and to advance our role in light of the context of digitalisation to promote meaningful occupations for all children (Larsson-Lund & Nyman, 2020). Specifically, the thesis has enhanced the understanding of play occupations from the perspective of children themselves. The prevailing narrative children spending excessive time online and of 'screen time' must therefore be shifted, beyond the time spent to examine the content, context and opportunities available for children (Robertson, 2021). Occupational Therapists, and other health professionals are uniquely placed to encourage children to organise, direct, and control more play opportunities across children's everyday repertoire and social networks.

Additionally, within current occupational therapy models and frameworks occupations generally are sparsely considered within a digital or technological realm. The enhanced understanding of play in digital spaces generated through this thesis can now help interrogate current frameworks, integrate, and expand theories and models to acknowledge occupations with, through, and in digital technologies within occupational therapy and occupational science. Thus, reflecting the evolution of occupation within the socio-cultural context.

It is imperative that for appropriate guidelines to be developed for health promotion, an understanding of children's experience of play opposed to screen time or any other passive engagements with technology is emphasised. For those in research, acknowledging children's right to play can be promoted by utilising the language of play. Additionally, involving children in research and utilising concepts such as play value can help shift power imbalances from stakeholders to the child. By understanding the characteristics of play value from the perspective of children, game designers can design resources that better fit the needs, wishes, and desires of children themselves.

Understanding play in digital spaces as a purposeful and meaningful occupation creates both an opportunity, responsibility, and challenge for parents. This is especially relevant in the current socio-cultural context and in the midst of the societal discourses that strongly portray a polarised message of real/virtual, outdoors/indoors message of getting children off screens and playing outdoors. By only considering the potential risks and dangers, we neglect the broader perspectives and understanding of why children continue to choose to play in digital spaces and how these spaces fit the "desires and deficits of childhood" (Robertson, 2024). The findings from the thesis elevate children's perspectives of

their play and indicate clear reassurances that children are agentic individuals engaging in choice and decision making in their play, by understanding the opportunities that video games afford. This, therefore, equips parents to support and guide children with regards to the right game that offers characteristics of variation and flexibility, sociability, freedom, and challenge and manage responsibilities. This, therefore, suggests a shift from limits and bans centred around ‘screen time’ to considering adults’ digital literacy, understanding, and experiences of play in digital spaces. Children require support and guidance to find strategies to help to self-manage the demands and expectations of everyday life and to integrate play in digital spaces within the rest of family life to promote occupational balance. It could be argued that at a societal level, an enhanced understanding of these findings would help children to better understand the boundaries and expectations as situated within everyday life. The findings indicate that children demonstrate awareness of potential online risks and reflect on ways in which to mitigate these by turning off chat facilities and preferring play with friends rather than unknown peers. By recognising the meaning of play in digital spaces in relation to their self, identity and sense of belonging we can receive some solace from providing children an element of responsibility when this is balanced with boundaries and expectations.

However, the findings of this inquiry must be considered in relation to the methodological considerations discussed in the following section.

Methodological considerations.

The results and conclusions generated throughout this thesis need to be considered to establish their trustworthiness. The criteria proposed by Lincoln & Guba (1985) have been widely utilised and accepted as a tool with which to assess the trustworthiness and rigor of qualitative research, therefore this has been applied to examine the strengths and limitations of this research. A central premise to the naturalist perspective, upon which much qualitative inquiry is based and on which the criteria by (Lincoln & Guba, 1985) is established, emphasises a shift from the researcher and places it with the data itself (Lincoln & Guba, 1985). It is described as “the degree of trust one has in the person telling the tale has much to do with the degree of trust attributed to the telling” (Stahl & King, 2020, p. 26).

In examining trustworthiness, Lincoln & Guba (1985) aim to establish research that is plausible, context related, stable, and investigator free. To achieve this,

Lincoln & Guba (1985) present four terms or criteria in which to examine trustworthiness, namely; credibility, transferability, dependability, and confirmability. The criteria are not, however, utilised in the sense of universal 'rules' but in a way in which to demonstrate to the reader, the trustworthiness of the research (Lincoln & Guba, 1985; Morse, 2015; Nowell et al., 2017). This section will introduce and describe the criteria with a discussion of the strengths and limitations of each Study interwoven throughout, with some concluding remarks with regards to the collective thesis.

Credibility

Generally, the notion of credibility reflects the congruence of the findings with the researcher's presentation of them (Tobin & Begley, 2004). This criteria aims to examine whether the findings generated by the researcher can be trusted and to what extent they provide a comprehensive interpretation of the data. In order to achieve this, Lincoln and Guba (1985) advise of a number of techniques to address credibility, such as prolonged engagement, persistent observation, triangulation, peer debriefing, referential adequacy, and member checks.

To promote a comprehensive search strategy for Study I, advice and guidance was sought from librarians at both universities to assist in identifying relevant Studies to ensure consultation of "methodological and context expertise" (Levac et al., 2010, p. 5). The use of Arksey & O'Malley's (2005) methodological framework provided a comprehensive, rigorous, and systematic approach to the scoping review. Several test searches were completed prior to the final search to further ensure the optimal search strategy was achieved. However, it is important to note that the parameters of the search blocks may have excluded certain papers of note. A total of four databases were searched (Web of Science, ERIC, PsychINFO, and Scopus) to ensure literature was gathered from a diverse range of fields, such as Social Science, Education, Psychology, and Computer Science enhancing the credibility of the Study. Once the searches were completed, the researcher and one member of the supervisory team conducted blind screening of first the titles and then of the abstracts using the software Rayaan (www.rayaan.ai). Although, the programme was slightly clunky in its application, it facilitated the ability to exclude articles that did not meet the inclusion criteria, but additionally allowed for articles to put aside that required further discussion. These articles were then discussed by the researcher and one member of the supervisory team and only excluded following agreement by all parties. A PRISMA flow diagram was

additionally utilised to demonstrate transparency in the process and add credibility to the findings (Tricco et al., 2018).

Study I included only peer reviewed articles, therefore it is possible that valuable sources, such as conference papers, were missed which would have added additional relevant perspectives. Two data extraction charts were created and reviewed throughout data extraction to ensure a systematic and thorough approach. The first data extraction chart addressed content and demographics of the articles, while the second chart was motivated by theories related to play, occupation, and ecology to direct the analysis.

Studies II, III, and IV engaged an iterative approach to data collection over consecutive sessions through periodical repeated focus groups (Studies II and III) and recurrent encounters (Study IV) to provide a depth and richness to data generation and to ensure that saturation was achieved (Hennink & Kaiser, 2022). Additionally, these sessions provided opportunities to build a rapport with the participants and supported triangulation (Krueger & Casey, 2015). Although additional sessions for Studies II, III, and IV would have potentially generated further insights, data collection ended when there was a richness to the data and when that no further, new contributions to the study phenomenon were identified (Hennink & Kaiser, 2022).

The use of child-friendly methodologies with Studies II and III in particular strengthened the quality of the data and supported triangulation (Kirk, 2007; Stahl & King, 2020). Specifically, the use of the mosaic approach provided children with the opportunity to openly and freely share their perspective through the use of different age-appropriate data collection tools (Clark, 2017; Sevón et al., 2023). As a result of the methods used with the participants, the data generated was rich, reflective of the multiple discussions that emerged and evolved through the focus groups. It is possible that children presented themselves in a certain way, however, the researcher utilised skills and experience of working with groups of children to ensure that all voices were heard equitably. This was achieved by engaging the children within the process, utilising child-friendly methodologies, asking open questions, and by 'stepping back' at moments to ensure that every child had the opportunity to share their perspective. At times, the researcher had to assume the role of orchestrator which invariably meant that a power differential was established which may have created a limitation (Kirk, 2007). The researcher was, however, aware of this and every attempt was made to minimise the impact and

every opportunity was taken to ensure that children could exercise their right to choice making, participation, as well as non-participation.

The transcripts were the primary focus of the analysis which ensured that the focus remained substantively on the child's perspective, and not the researcher's interpretation of the images (Einarsdóttir, 2007). However, the pictures, collages, and comic strips in Studies II and III were used during analysis to support the context of discussions and further enhance triangulation. Lincoln & Guba (1985) argue that "the most critical technique for establishing credibility" (p.314) is through *member checks*. The credibility of the findings may have been enhanced through the use of direct member checking to establish the fit between the researcher's interpretation and the participants perspective in Studies II and III (Lincoln & Guba, 1985; Nowell et al., 2017). However, in Studies II, III, and IV, the repeated focus groups and encounters with the participants provided the researcher the opportunity to reflect back on comments made or to ask for more detail which allowed for a degree of member checking. Furthermore, like many qualitative methodologies, member checking was not relevant for the choice of narrative methodologies in Study IV. The interpretation of the data using narrative analysis is presented as one interpretation of many possible ones (Mattingly, 1998; Polkinghorne, 1995), therefore it was not appropriate to ask the participants to verify the stories as real or true.

To ensure that the researcher remained close to the data and the children's dialogue, *peer debriefing* was used to provide the researcher with the opportunity to discuss and reflect on their initial thoughts from the inquiry (Lincoln & Guba, 1985). The researcher and supervisory team were experienced and skilled in different areas, bringing multiple and diverse perspectives to the research. Each member assumed different roles in the analysis process to contrast interpretations and ensure that the analysis was grounded in the data, thus addressing trustworthiness and sensitivity to the data. Additionally, throughout all stages of Studies I, II, III, and IV several researchers were involved, providing opportunities to debrief, ask questions, and to be asked questions offering constructive critique of the processes. Throughout analysis, data was discussed by the researcher and members of the supervisory team. The researcher listened to and read the transcripts several times to provide an overall sense of the collective discussions as advised in focus group methodology (Dahlin Ivanoff & Hultberg, 2006; Krueger & Casey, 2015) and narrative methodology (Polkinghorne, 1995). As the preliminary categories were formed in Studies II and III, these were discussed with

the supervisory team to organise them into themes and sub-themes, reflecting back to the raw data. In Study IV, the significant events identified from the dialogue were read independently by the researcher and members of the supervisory team. Through discussion, multiple interpretations were considered, going back and forth with the data, reinterpreting it several times. The findings from Study IV are integrated with theoretical perspectives, concepts, and empirical research, thus enhancing the credibility of the findings. Study IV saw the conscious involvement of an additional researcher being involved to bring specific, expert experience, skills, and knowledge in the area of narrative methodologies to enhance the quality of the analysis. Successful completion of a narrative methodology third-cycle course additionally provided the researcher with a sound theoretical knowledge of the area. Studies I, II, and III have also been published in peer-reviewed journals. Through independent appraisal of the quality of the work, constructive feedback was provided that was integrated into the final versions of the papers published reflecting a credibility of the papers. Further mechanisms to support credibility included attendance at an admission seminar and mid-seminar at LTU and annual reviews at UCC which offered an opportunity to engage in a dialogue with a wider team to shape the research as a whole as well as reporting on the process and product of each individual Study (Creswell & Poth, 2018; Lincoln & Guba, 1985).

Transferability

In all studies, the use of “thick descriptions” (Lincoln & Guba, 1985) aimed to ensure that the reader can assess in what circumstances and indeed whether the findings are transferable (Lincoln & Guba, 1985; Stahl & King, 2020) These descriptions reflect the contextual interpretations of the phenomenon. Despite recognising that phenomena are socially and contextually bound, a naturalistic approach to trustworthiness also considers the transferability.

Study I included peer-reviewed literature from a variety of geographical locations, however, only included articles that were published in English, excluding non-English speaking countries. Contextual information in which the research was conducted was outlined providing a rich and in-depth description to promote transferability for Studies II, II, and IV. Throughout Studies II and III, participants were recruited from an urban setting, with participants in Study IV recruited from a urban school which had a school catchment area of more rural pupils. The specific socio-demographic information was not formally documented, therefore

may be considered as a limitation in terms of the transferability of the findings and outcomes.

In all studies, play in digital spaces was approached in relation to those which demonstrated personal relevance to children's daily lives. Games that they spoke about, such as Minecraft, Fortnite, or AdoptMe were readily available and accessible to children globally, reflecting a congruence with the potential transferability of the findings. Throughout all Studies, the researcher has provided a rich or thick description of the processes involved in recruitment, data collection, and analysis to strengthen the possibility for the reader to judge the transferability of the results.

Throughout the Study design and recruitment process, it was aimed to recruit a heterogenous sample of participants. The gatekeepers distributed information sheets to whole classes of children consisting of both boys and girls, resulting in the researcher having no influence on the process and to who consented to participate. In the end, Study II recruited all girls, Study III recruited three boys and five girls, with Study IV recruiting all males. It has been recognised that within gaming literature there is a disproportionate amount of research dedicated to gamers in general or specifically male gamers rather than female gamers (O'Keeffe et al., 2022). The lack of a heterogenous sample, specifically in Studies II and IV, may be considered a limitation. However, on the contrary, it may offer specific gendered insights into the experiences of play for girls and boys respectively. The specific socio-economic status of the schools used for recruitment may also influence the transferability. Although it could be argued that the sample size for Studies II, III, and IV were small (Studies II and III recruited eight participants and Study IV recruited five), data adequacy was achieved through repeated focus groups and encounters with the participants to achieve "a rich and nuanced account of the phenomenon" (Hennink & Kaiser, 2022, p. 9).

Dependability

For Studies II and III, the use of the mosaic approach supported the dependability of the research findings by utilising multiple data generation methods (Clark, 2017; Sun et al., 2023). Additionally, the use of repeated video recordings of game play in Study IV, reflected a variety of types of games reflect an overlap as the researcher did not rely on one data source. Lincoln & Guba (1985) discuss the requirement for research to be dependable and stable and propose that there can be "no credibility without dependability" (p.316). By considering credibility, we can

establish the dependability, therefore it is detailed in more depth within the credibility section.

Confirmability

For all Studies, the use of field notes supported an audit trail and triangulation to extend confidence that the findings and interpretation of the findings remained close to the data (Lincoln & Guba, 1985; Tobin & Begley, 2004). Field notes were taken directly after each focus group or encounter with children. Finlay (1998) maintains that researchers should “adopt a self-consciously critical, systematic and analytical approach” (p.453) when conducting research and in doing so, argues for the case of reflexivity. The term reflexivity has been described as to “carefully interrogate the very conditions under which knowledge claims are accepted and constructed” (Kinsella & Whiteford, 2009, p. 251). The researcher engaged in regular reflexive dialogues and discussions with the supervisory team throughout the research process challenging ideas and knowledge construction focused on each of the individual Studies. Additionally, the wider supervisory team as part of P4Play offered opportunities to engage in discussions through the various courses on play, occupational science, and research methods. A more continuous reflexivity focused on the entirety of the project would have been useful addition to facilitate evaluation of methodological considerations, epistemological assumptions as well as subjective responses (Braun & Clarke, 2020; Lincoln & Guba, 1985).

Overall considerations

As acknowledged within a constructivist paradigm, data was generated throughout Studies II, III, and IV through a co-construction between the researcher and participants (Burns et al., 2022; Creswell & Poth, 2018), thus the descriptions generated throughout Studies II, III, and IV are subjective reconstructions of events. In congruence with a constructivist paradigm, it is considered that there is no single objective meaning generated by this thesis, but a legitimate multiplicity of interpretations (Burns et al., 2022; Heron & Reason, 1997; Lincoln et al., 2024) therefore, it is possible that other themes and categories than those presented could have emerged. The researchers personal experience of working with groups of children could be considered a strength in establishing a rapport with children throughout data collection. However, ultimately the researcher’s bias’, values, and experiences are accepted to have shaped the research findings, which have shifted and evolved throughout this thesis as knowledge has been learnt and embedded.

The researcher remained open-minded and constantly reflected on personal and professional experiences during data collection and analysis to reduce the influence of the data (Gadamer, 1989). This is particularly significant whilst studying the phenomenon of play in digital spaces amidst the binaries and dominant discourses that exist whilst at the same time maintaining a position in which to understand the lived experience of children's play in digital spaces. As the results of all Studies point in a similar direction and that the Studies are connected to theoretical perspectives and empirical literature can be considered a validation of the thesis.

By promoting children's perspectives throughout the various processes involved in each Study, from Study design, data collection methods, analysis and in the reporting of their perspectives from using quotes, I have strived to understanding children's unique perspective. The emergent design of this thesis reflects an iterative approach, thus, not bound by initial Study designs and therefore adaptive and responsive to contextual considerations (Hammersley, 2022). By conducting three separate qualitative Studies with children, I have been able to generate data across the trajectory of childhood reflecting a cross-sectional perspective. A longitudinal perspective would have allowed the gathering of data reflecting the changes and evolution in children's perspectives throughout childhood, opposed to snapshots of children at key developmental stages. However, this may have lacked the spontaneity of data collection that lent itself to a deeper understanding of children's perspectives 'in the moment'.

Alternative perspectives, such as those of parents, grandparents, siblings, or teachers may have provided additional strengths to the trustworthiness. However, that was out with the scope of the thesis, although does provide an opportunity for future research. There are increasing attentions, such as post-humanist or new materialist perspectives which draw more attention to play in its totality with less emphasis on the singular domains. For example, Taylor (2009) assemblage of play framework proposes a methodological approach to the play experience and the Study of play by understanding the relationship between the range of human and non-human dimensions. This approach which may support a greater and broader understanding of the constituents which comprise of the play moment. However, the scope of this thesis recognises the significance of the child's perspective and firmly establishes the complexity of the phenomenon by firstly considering it from the perspectives of the main protagonist.

Directions for future research

This thesis provides a strong starting point for future research to generate an understanding children's experiences of their play in digital spaces. However, additional qualitative research would further increase knowledge with regards to the phenomenon. This could be utilised in the development of theories, models, and frameworks to enhance child and family centred practice. Further qualitative research in the direction of implementing this existing knowledge into practice, especially considering a three-tiered model of occupational therapy practice would be worth considering (Hutton et al., 2016). As with Study IV, future research would benefit from exploring children's play repertoire across everyday life with younger children, emphasising play in digital spaces as an occupation not in isolation but as part of a child's everyday life and repertoire. The inquiry has intimated at the development of a play value framework from the findings, additional research may be helpful to support the development of this with specific games that children readily play to reflect the play value of children's experiences.

The inquiry utilised methods such as the Mosaic Approach (Clark, 2017; Sun et al., 2023) and narrative approaches for data collection. Future research may consider alternative participatory approaches such as online focus groups (Brown et al., 2021; Woodyatt et al., 2016) or participatory research with children to involve their participation at all stages of the research, such as the planning stages of choosing data collection methods (Montreuil et al., 2021; Waller & Bitou, 2011).

Future studies with a mix of gender, especially within the younger age groups, would provide an enhanced understanding of choice making for both boys and girls. Further, future research could consider recruiting participants from different geographical locations, out with the Irish context. Research recruiting children from a range of socio-economic areas may reflect the potential impact of digital poverty on children's right to play within a digital context (Office of Global Insight and Policy, 2022). The studies included within this thesis provide a 'snap shot' of children's play experiences at different stages throughout childhood. Although some suggestions can be made regarding the evolution of play from children aged 6 years old to 17 years old, a longitudinal Study would reflect a more detailed description.

Additional directions for future research to include the perspectives of other groups, such as parents, grandparents, siblings, or health professionals to understand the multifaceted dimensions of play in digital spaces would generate knowledge to help realign persisting societal discourses. This knowledge could help generate understanding regarding a potential generational gap between perspectives and recognise the impact of the socio-cultural dimensions of play in digital spaces. Additionally, future research may help identify approaches to develop parents' understanding of how to develop children's digital literacy and right to play in the digital age. This is specifically relevant as it is acknowledged that "supportive attitudes are crucial for all children to be able to equally participate in a digital environment" (Office of Global Insight and Policy, 2022, p. 22). Expanding on the current literature would suggest the inclusion of the perspectives of children with disabilities, including Autistic Spectrum Disorder or physical disabilities regarding their use of technology and everyday play experiences.

In this light, the substantial sociability proffered by the digital space, reflected throughout Studies I, II, III, and IV, exposes the sense of belonging and community from engaging in play within this context. Future research could examine play occupations in digital spaces as a collective, co-occupation, family occupation or through the concept of enacted togetherness (Kantartzis & Molineux, 2017; Nyman & Isaksson, 2021; Price & Stephenson, 2009). This perspective would broaden and deepen the occupational perspective of play in digital spaces reflecting that many players of online games play 'alone' in the physical context but with friends, acquaintances, and family members within the shared online space.

Although a transactional and posthumanist perspective has been applied throughout this thesis, research specifically examining the transactional nature of the play experience may reflect the collective, relational characteristics of play in digital spaces. In turn, this would draw attention to the relations between human and non-human matter and recognise the assemblage of constituent parts which make up the play moment (Taylor, 2009).

Conclusions

This thesis contributes significant insights into the occupational perspective of children's experiences of their play in digital spaces. This thesis proposes that the language of play is central to emphasising children's experience and to realise their rights and desires in a digital space.

This inquiry has established that children value the digital space as a place for play experiences. Moreover, the inquiry has brought attention to core characteristics of how children experience play value in digital spaces, namely 1) variation and flexibility, 2) sociability, 3) freedom, and 4) challenge and manage responsibilities. Collectively these characteristics reflect the meaning in everyday life as children navigate a sense of self through feelings of competence, being responsible, and general wellbeing. Additionally, the sense of becoming as children negotiate feelings of developing and learning, a sense of identity, and potential future selves. The meaning of enacted togetherness reflects a space in which children can be, do, and belong together with friends. Thus, the digital space reflects a place which is multi-transactional and multi-dimensional where play occupations materialise or emerge. The thesis has shed light on the complex and multi-layered nature of play occupations in a digital space.

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My contributions in this project

The project was one of eight which was part of the collective P4Play research programme. The initial conception of this project was instigated as part of the P4Play programme with the supervisory team developing a research proposal prior to my recruitment into the programme. Once appointed, I developed the detailed research proposal under supervision and was subsequently approved following an admission seminar at LTU. I held overall responsibility for all Studies and all component parts of them. I worked independently throughout the projects with guidance as necessary from the supervisory team. This involved, for example, being responsible for carrying out focus groups, encounters and writing the first draft of manuscripts. As the project evolved and progressed over the three years, I felt more competent, confident and as a result the requirement for supervision reduced.

Table 4 outlines my specific contributions to each stage of Studies I, II, III, IV.

Table 4. My contributions to the research

	<i>Study I</i>	<i>Study II</i>	<i>Study III</i>	<i>Study IV</i>
<i>Design</i>	Developed Study aim and design with supervisors and university librarians	Developed Study aim and design with supervisors	Developed Study aim and design with supervisors	Developed Study aim and design with supervisors
<i>Data Collection</i>	Responsible for completing database searches	Responsible for participant recruitment	Responsible for participant recruitment	Responsible for participant recruitment
	Completed title and abstract review with supervisors			
	Conducted full-text reviews	Led focus groups	Led focus groups	Led interviews and encounters
<i>Data Analysis</i>	Devised data extraction charts with supervisors	Transcribed focus groups	Transcribed focus groups	Transcribed interviews and encounters
	Completed initial data extraction	Coded data and generated initial themes	Coded data and generated initial themes	Completed initial narrative analysis
	Completed final analysis of data with supervisors	Completed final analysis of data with supervisors	Completed final analysis of data with supervisors	Completed final analysis with supervisors
<i>Writing</i>	Responsible for initial drafts of manuscripts. Following discussion and feedback from supervisors, responsible for editing and revising final versions of manuscripts Responsible for completing administrative tasks to submit manuscripts Responsible for revising manuscripts following peer-review and submitting again			
<i>Ethics and Data Management</i>	Devised information sheets and consent/assent forms for all Studies II, III, and IV Responsible for completing application for UCC ethics committee and providing material to support Swedish ethics application Responsible for managing data throughout the research (in line with Data Management Plan developed and reviewed with supervisors)			

Dissertations in Occupational Therapy at Luleå University of Technology

Doctoral theses

- Gunilla Isaksson. Det sociala nätverkets betydelse för delaktighet i dagliga aktiviteter: erfarenheter från kvinnor med ryggmärgsskada och deras män. (Health Science and Human Services) 2007.
- Maria Prellwitz. Playground accessibility and usability for children with disabilities: experiences of children, parents, and professionals (Occupational Therapy) 2007
- Anneli Nyman. Togetherness in Everyday Occupations. How Participation in On-Going Life with Others Enables Change. (Occupational therapy) 2013.
- Cecilia Björklund. Temporal patterns of daily occupations and personal projects relevant for older persons' subjective health: a health promotive perspective. (Occupational therapy) 2015.
- Ann-Charlotte Kassberg. Förmåga att använda vardagsteknik efter förvärvad hjärnskada: med fokus mot arbete. (Occupational therapy) 2015.
- Ulrica Lundström. Everyday life while aging with a traumatic spinal cord injury. (Occupational therapy) 2015.
- Marianne Sirkka. Hållbart förbättringsarbete med fokus på arbetsterapi och team Möjligheter och utmaningar. (Occupational therapy) 2016.
- Jennifer L. Womack. The Occupation of Caregiving: Moving Beyond Individualistic Perspectives. (Occupational Therapy) 2018.
- Alexandra Olofsson, Possibilities for activity and participation outside home for persons with acquired brain injury. (Occupational Therapy) 2019.
- Jenni Riekkola, Older Couples participation in everyday life – when living in changing and shifting contexts. (Occupational Therapy) 2019.
- Ines Wenger. Inclusive Playgrounds: Insights into Play and Inclusion from the Perspectives of Users and Providers. (Occupational Therapy), 2023.
- Michelle Bergin. Playing along (with)in the hard yard: Exploring play, practices, and occupational justice in Irish schoolyards. (Occupational Therapy), 2024.

Licentiate theses

- Anita Lindén. Vardagsteknik. Hinder och möjligheter efter förvärvad hjärnskada. (Health Science) 2009.
- Ann-Louise Lövgren Engström. Användning av vardagsteknik i dagliga aktiviteter - svårigheter och strategier hos personer med förvärvad hjärnskada. (Health Science) 2010.

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References

- Aarseth, E. (2007). I Fought the Law: Transgressive Play and The Implied Player. *Situated Play, Proceedings of DiGRA 2007 Conference*, 130–133. <http://www.digra.org/wp-content/uploads/digital-library/07313.03489.pdf>
- Act on Responsibility for Good Research Practice and the Examination of Research Misconduct (2020). <https://www.uhr.se/en/start/laws-and-regulations/Laws-andregulations/%0Aact-on-responsibility-for-good-research-practice/>
- Alanen, L., Alderson, P., Alderson, P., & Barter, C. (2005). Researching Children's Experience. In S. Greene & D. Hogan (Eds.), *Researching children's experience* (pp. 2–21). SAGE Publications Ltd. <https://doi.org/10.4135/9781849209823>
- Albarello, F., Novoa, Á., Castro Sánchez, M., Velasco, A., Novaro Hueyo, M. V., & Narbais, F. (2021). The social dynamics of multiplayer online videogames in Argentinian and Chilean family contexts: The case of Fortnite. *Global Studies of Childhood*, 11(4), 302–317. <https://doi.org/10.1177/20436106211015997>
- Aldrich, R. M., & Cutchin, M. P. (2012). Dewey's Concepts of Embodiment, Growth, and Occupation: Extended Bases for a Transactional Perspective. In M. P. Cutchin & V. A. Dickie (Eds.), *Transactional Perspectives on Occupation* (pp. 13–23). Springer.
- ALLEA. (2023). *The European Code of Conduct for Research Integrity – Revised Edition 2023*. <https://doi.org/10.26356/ECOC>
- Änggård, E. (2016). How matter comes to matter in children's nature play: posthumanist approaches and children's geographies. *Children's Geographies*, 14(1), 77–90. <https://doi.org/10.1080/14733285.2015.1004523>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International Journal of Social Research Methodology*, 8(1). <https://doi.org/10.1080/1364557032000119616>

- Asaba, E., Bergström, A., Patomella, A. H., & Guidetti, S. (2022). Engaging occupations among persons at risk for stroke: A health paradox. *Scandinavian Journal of Occupational Therapy*, 29(2), 116–125. <https://doi.org/10.1080/11038128.2020.1829036>
- Balmford, W., & Davies, H. (2020). Mobile Minecraft: Negotiated space and perceptions of play in Australian families. *Mobile Media and Communication*, 8(1), 3–21. <https://doi.org/10.1177/2050157918819614>
- Barad, K. (2007). *Meeting the Universe Halfway: quantum physics and the entanglement of matter and meaning*. Duke University Press.
- Barassi, V. (2023). “I am a Robot but I care”: Emotional Ambivalence in AI Toys and its Ethical Implications in the age of Generative AI. Australian Research Council. Centre of Excellence for Digital Child. <https://digitalchild.org.au/i-am-a-robot-but-i-care-emotional-ambivalence-in-ai-toys-and-its-ethical-implications-in-the-age-of-generative-ai/>
- Barlott, T., MacKenzie, P., Le Goullon, D., Campbell, L., & Setchell, J. (2021). A transactional perspective on the everyday use of technology by people with learning disabilities. *Journal of Occupational Science*, 0(0), 1–17. <https://doi.org/10.1080/14427591.2021.1970616>
- Barlott, T., Shevellar, L., & Turpin, M. (2017). Becoming minor: Mapping new territories in occupational science. *Journal of Occupational Science*, 24(4), 524–534. <https://doi.org/10.1080/14427591.2017.1378121>
- Beauchamp, F., Bourke-Taylor, H., & Brown, T. (2018). Therapists’ perspectives: supporting children to use switches and technology for accessing their environment, leisure, and communication. *Journal of Occupational Therapy, Schools, and Early Intervention*, 11(2), 133–147. <https://doi.org/10.1080/19411243.2018.1432443>
- Bennett, J. (2010). *Vibrant Matter: a political ecology of things*. Duke University Press.
- Bird, J., & Edwards, S. (2015). Children learning to use technologies through play: A Digital Play Framework. *British Journal of Educational Technology*, 46(6), 1149–1160. <https://doi.org/10.1111/bjet.12191>

- Blum-Ross, A., & Livingstone, S. (2018). The Trouble with “Screen Time” Rules. In G. Mascheroni, C. Ponte, & A. Jorge (Eds.), *Digital parenting. The Challenges for Families in the Digital Age* (pp. 197–186). Nordicom. <https://www.diva-portal.org/smash/get/diva2:1535910/FULLTEXT01.pdf>
- Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology, 18*(3), 328–352. <https://doi.org/10.1080/14780887.2020.1769238>
- Bronfenbrenner, U. (1977). Toward an Experimental Ecology of Human Development. *American Psychologist, 32*(7), 513–531. <https://doi.org/10.1037/0003-066X.32.7.513>
- Brooks, F. M., Chester, K. L., Smeeton, N. C., & Spencer, N. H. (2016). Video gaming in adolescence: factors associated with leisure time use. *Journal of Youth Studies, 19*(1), 36–54. <https://doi.org/10.1080/13676261.2015.1048200>
- Brown, C. A., Revette, A. C., de Ferranti, S. D., Fontenot, H. B., & Gooding, H. C. (2021). Conducting Web-Based Focus Groups With Adolescents and Young Adults. *International Journal of Qualitative Methods, 20*, 1–8. <https://doi.org/10.1177/1609406921996872>
- Brownell, C. J. (2021). Writing as a minecrafter: Exploring how children blur worlds of play in the elementary english language arts classroom. *Teachers College Record, 123*(3), 1–19. <https://doi.org/10.1177/0161468121112300306>
- Bundy, A. (1992). Leisure: Delineation of the problem. *The American Journal of Occupational Therapy, 47*(3), 217–222.
- Bundy, A. C. (1997). Play and Playfulness: What to look for. In D. Parham & L. Fazio (Eds.), *Play in Occupational Therapy for Children* (pp. 52–66). Mosby-Year Book, Inc.
- Burns, M., Bally, J., Burles, M., Holtslander, L., & Peacock, S. (2022). Constructivist Grounded Theory or Interpretive Phenomenology? Methodological Choices Within Specific Study Contexts. *International*

Journal of Qualitative Methods, 21, 1–13.
<https://doi.org/10.1177/16094069221077758>

- Caillois, R. (2001). *Man, Play and Games*. University of Illinois Press.
- Cardona-Rivera, R. E., & Young, R. M. (2013). A cognitivist theory of affordances for games. *DiGRA 2013 - Proceedings of the 2013 DiGRA International Conference: DeFragging GameStudies*.
http://www.digra.org/wp-content/uploads/digital-library/paper_74b.pdf.pdf
- Carpentier, N. (2016). Beyond the ladder of participation: An analytical toolkit for the critical analysis of participatory media processes. *Javnost*, 23(1), 70–88. <https://doi.org/10.1080/13183222.2016.1149760>
- Carter, M., Moore, K., Mavoa, J., Horst, H., & Gaspard, L. (2020). Situating the Appeal of Fortnite Within Children’s Changing Play Cultures. *Games and Culture*, 15(4), 453–471. <https://doi.org/10.1177/1555412020913771>
- Carter, S. M., & Little, M. (2007). Justifying knowledge, justifying method, taking action: Epistemologies, methodologies, and methods in qualitative research. *Qualitative Health Research*, 17(10), 1316–1328.
<https://doi.org/10.1177/1049732307306927>
- Chalmers. (2022). *Reality +: virtual worlds and the problems of philosophy*. Penguin Books Ltd.
- Christiansen, C., & Townsend, E. (2010). An Introduction to Occupation. In C. Christiansen & E. Townsend (Eds.), *Introduction to Occupation: The Art and Science of Living* (2nd ed., pp. 1–34). Pearson.
- Clark, A. (2001). How to listen to very young children: The mosaic approach. *Child Care in Practice*, 7(4). <https://doi.org/10.1080/13575270108415344>
- Clark, A. (2017). *Listening to Young Children: A Guide to Understanding and Using the Mosaic Approach* (3rd ed.). Jessica Kingsley Publishers.
- Clark, F. A., Parham, D., Carlson, M. E., Frank, G., Jackson, J., Pierce, D., Wolfe, R. J., & Zemke, R. (1991). *Occupational Science*: Academic

- Innovation in the Service of Occupational Therapy's Future. *The American Journal of Occupational Therapy*, 45(4).
- Colvert, A. (2021). *The kaleidoscope of play in a digital world: A literature review*. Digital Futures Commission.
<https://digitalfuturescommission.org.uk/wp-content/uploads/2021/06/DFC-Digital-Play-Literature-Review.pdf>
- Committee on the Rights of the Child. (2013). *General comment No. 17 (2013) on the right of the child to rest, leisure, play, recreational activities, cultural life and the arts (art. 31)*. United Nations.
<https://digitallibrary.un.org/record/778539?v=pdf>
- Committee on the Rights of the Child. (2021). *General Comment 25 (2021) on children's rights in relation to the digital environment*. United Nations.
<https://digitallibrary.un.org/record/3906061?ln=en&v=pdf>
- Coutinho, F., Bosisio, M. E., Brown, E., Rishikof, S., Skaf, E., Zhang, X., Perlman, C., Kelly, S., Freedman, E., & Dahan-Oliel, N. (2017). Effectiveness of iPad apps on visual-motor skills among children with special needs between 4y0m–7y11m. *Disability and Rehabilitation: Assistive Technology*, 12(4), 402–410. <https://doi.org/10.1080/17483107.2016.1185648>
- Cowan, K. (2020). *A panorama of play*. Digital Futures Commission.
<https://digitalfuturescommission.org.uk/wp-content/uploads/2022/02/A-Panorama-of-Play-A-Literature-Review.pdf>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.
- Crowe, N., & Bradford, S. (2006). “Hanging out in runescape”: Identity, work and leisure in the virtual playground. *Children's Geographies*, 4(3), 331–346. <https://doi.org/10.1080/14733280601005740>
- Csikszentmihalyi, M. (2002). *Flow: The classic work on how to achieve happiness* (2nd ed.). Rider Books.
- Curtin, C. (2001). Eliciting Children's Voices in Qualitative Research. *American Journal of Occupational Therapy*, 55(3), 295–302.

- Cutchin, M. P., & Dickie, V. A. (2012). Transactionalism: Occupational Science and the Pragmatic Attitude. In G.E. Whiteford & C. Hocking (Eds.), *Occupational Science: Society, Inclusion, Participation*, (1st ed., 21–37). Blackwell Publishing Ltd. <https://doi.org/10.1002/9781118281581.ch3>
- Dahlin Ivanoff, S., & Hultberg, J. (2006). Understanding the multiple realities of everyday life: Basic assumptions in focus-group methodology. *Scandinavian Journal of Occupational Therapy*, *13*(2), 125–132. <https://doi.org/10.1080/11038120600691082>
- Davis, J., & Polatajko, H. (2014). Occupational Development. In C. Christiansen & E. Townsend (Eds.), *Introduction to Occupation: The Art and Science of Living* (pp. 113–153). Pearson.
- Delaisse, A. C., Huot, S., & Veronis, L. (2021). Conceptualizing the role of occupation in the production of space. *Journal of Occupational Science*, *28*(4), 550–560. <https://doi.org/10.1080/14427591.2020.1802326>
- Department of Health, Education, and Welfare. (1979). *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research*. The National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research. https://www.hhs.gov/ohrp/sites/default/files/the-belmont-report-508c_FINAL.pdf
- Dickie, V., Cutchin, M. P., & Humphry, R. (2006). Occupation as transactional experience: A critique of individualism in occupational science. *Journal of Occupational Science*, *13*(1), 83–93. <https://doi.org/10.1080/14427591.2006.9686573>
- Dodge, M., & Kitchin, R. (2005). Code and the transduction of space. *Annals of the Association of American Geographers*, *95*(1), 162–180. <https://doi.org/10.1111/j.1467-8306.2005.00454.x>
- Dodge, T., Barab, S., Stuckey, B., Warren, S., Heiselt, C., & Stein, R. (2008). Children’s sense of self: Learning and meaning in the digital age. *Journal of Interactive Learning Research*, *19*(2), 225–249.

- Domínguez-Lucio, S., Compañ-Gabucio, L. M., Torres-Collado, L., & de la Hera, M. G. (2023). Occupational Therapy Interventions Using New Technologies in Children and Adolescents with Autism Spectrum Disorder: A Scoping Review. *Journal of Autism and Developmental Disorders*, *53*(1), 332–358. <https://doi.org/10.1007/s10803-022-05431-3>
- Druga, S., Breazeal, C., Williams, R., & Resnick, M. (2017). “Hey Google is it ok if I eat you?” Initial explorations in child-agent interaction. *IDC 2017 - Proceedings of the 2017 ACM Conference on Interaction Design and Children*, 595–600. <https://doi.org/10.1145/3078072.3084330>
- Einarsdóttir, J. (2007). Research with children: Methodological and ethical challenges. *European Early Childhood Education Research Journal*, *15*(2), 197–211. <https://doi.org/10.1080/13502930701321477>
- Eklund, M., Orban, K., Argentzell, E., Bejerholm, U., Tjörnstrand, C., Erlandsson, L. K., & Håkansson, C. (2017). The linkage between patterns of daily occupations and occupational balance: Applications within occupational science and occupational therapy practice. *Scandinavian Journal of Occupational Therapy*, *24*(1), 41–56. <https://doi.org/10.1080/11038128.2016.1224271>
- Engelstätter, B., & Ward, M. R. (2022). Video games become more mainstream. *Entertainment Computing*, *42*(2002). <https://doi.org/10.1016/j.entcom.2022.100494>
- Fahy, S., Delicâte, N., & Lynch, H. (2021). Now, being, occupational: Outdoor play and children with autism. *Journal of Occupational Science*, *28*(1), 114–132. <https://doi.org/10.1080/14427591.2020.1816207>
- Fargas-Malet, M., McSherry, D., Larkin, E., & Robinson, C. (2010). Research with children: Methodological issues and innovative techniques. *Journal of Early Childhood Research*, *8*(2), 175–192. <https://doi.org/10.1177/1476718X09345412>
- Ferguson, C. J., & Olson, C. K. (2013). Friends, fun, frustration and fantasy: Child motivations for video game play. *Motivation and Emotion*, *37*(1), 154–164. <https://doi.org/10.1007/s11031-012-9284-7>

- Finlay, L. (1998). Reflexivity: An Essential Component for All Research? *British Journal of Occupational Therapy*, 61(10), 453–456.
<https://doi.org/10.1177/030802269806101005>
- Fisher, A. G. (2009). *Occupational Therapy Intervention Process Model*. Three Star Press, Inc.
- Fisher, A. G., & Marterella, A. (2019). *Powerful Practice: A Model for Authentic Occupational Therapy*. Center for Innovative OT Solutions, Inc.
- Fok, D., Polgar, J. M., Shaw, L., Luke, R., & Mandich, A. (2009). Cyberspace, real place: Thoughts on doing in contemporary occupations. *Journal of Occupational Science*, 16(1), 38–43.
<https://doi.org/10.1080/14427591.2009.9686640>
- Fonseca, R. M. G. S. D., Santos, D. L. A. D., Gessner, R., Fornari, L. F., Oliveira, R. N. G., & Schoenmaker, M. C. (2018). Gender, sexuality and violence: perception of mobilized adolescents in an online game. *Revista Brasileira de Enfermagem*, 71, 607–614. <https://doi.org/10.1590/0034-7167-2017-0561>
- Franssen, M., Lokhorst, G.-J., & Poel, I. van de. (2018). *Philosophy of Technology*. The Stanford Encyclopedia of Philosophy.
<https://plato.stanford.edu/archives/fall2018/entries/technology/>
- Gadamer, H.-G. (1989). *Truth and Method* (7th ed.). Bloomsbury Academic.
- Gallagher, M. (2019). Rethinking children's agency: Power, assemblages, freedom, and materiality. *Global Studies of Childhood*, 9(3), 188–199.
<https://doi.org/10.1177/2043610619860993>
- Galvaan, R. (2012). Occupational Choice: The Significance of Socio-Economic and Political Factors. In G. E. Whiteford & C. Hocking (Eds.), *Occupational Science: Society, Inclusion, Participation* (pp. 152–162). Wiley-Blackwell. <https://doi.org/10.1002/9781118281581.ch11>
- Galvaan, R. (2015). The contextually situated nature of occupational choice: Marginalised young adolescents' experiences in South Africa. *Journal of*

- Occupational Science*, 22(1), 39–53.
<https://doi.org/10.1080/14427591.2014.912124>
- Gibson, F. (2007). Conducting focus groups with children and young people: Strategies for success. *Journal of Research in Nursing*, 12(5), 473–483.
<https://doi.org/10.1177/1744987107079791>
- Gibson, James. J. (2015). *The ecological approach to visual perception*. Psychology Press. <https://doi.org/10.4324/9781315514413-18>
- Giddings, S. (2014). *Gameworlds: virtual media and children's everyday play*. Bloomsbury Academic. <https://doi.org/10.5040/9781501300233.ch-003>
- Gleave, J., & Cole-hamilton, I. (2012). *A literature review on the effects of a lack of play on children's lives*. Play England.
<http://www.playengland.org.uk/media/371031/a-world-without-play-literature-review-2012.pdf>
- Gray, P. (2011). The Special Value of Children's Age-Mixed Play. *American Journal of Play*, 3(4), 500–522.
- Gray, P., Lancy, D. F., & Bjorklund, D. F. (2023). Decline in Independent Activity as a Cause of Decline in Children's Mental Well-being: Summary of the Evidence. *Journal of Pediatrics*, 260, 113352.
<https://doi.org/10.1016/j.jpeds.2023.02.004>
- Grimes, S. M. (2021). *Digital Playgrounds: The Hidden Politics of Children's Online Play Spaces, Virtual Worlds, and Connected Games*. University of Toronto Press.
- Guba, Egon. G., & Lincoln, Yvonna. S. (1994). Competing Paradigms in Qualitative Research. In Norman. K. Denzin & Yvonna. S. Lincoln (Eds.), *Handbook of Qualitative Research*. (4th ed).SAGE Publications Inc.
- Håkansson, C., Dahlin-Ivanoff, S., & Sonn, U. (2006). Achieving balance in everyday life. *Journal of Occupational Science*, 13(1), 74–82.
<https://doi.org/10.1080/14427591.2006.9686572>

- Hall, J., Stickler, U., Herodotou, C., & Iacovides, I. (2021). Using Reflexive Photography to Investigate Design Affordances for Creativity in Digital Entertainment Games. *International Journal of Human-Computer Interaction*, 37(9), 867–883.
<https://doi.org/10.1080/10447318.2020.1848162>
- Hammell, K. W. (2004). Dimensions of meaning in the occupations of daily life. *Canadian Journal of Occupational Therapy*, 71(5), 296–305.
- Hammersley, M. (2022). Emergent Design. In U. Flick (Ed.), *The SAGE Handbook of Qualitative Research Design* (pp. 55–68). SAGE Publications Inc.
- Hammond, J., Jones, V., Hill, E. L., Green, D., & Male, I. (2014). An investigation of the impact of regular use of the Wii Fit to improve motor and psychosocial outcomes in children with movement difficulties: A pilot study. *Child: Care, Health and Development*, 40(2), 165–175.
<https://doi.org/10.1111/cch.12029>
- Hannaford, J. (2012). Imaginative interaction with Internet games. For children and teachers. *Literacy*, 46(1), 25–32. <https://doi.org/10.1111/j.1741-4369.2011.00590.x>
- Harari, Y. N. (2018). *Yuval Noah Harari on Why Technology Favors Tyranny*. The Atlantic.
<https://www.theatlantic.com/magazine/archive/2018/10/yuval-noah-harari-technology-tyranny/568330/>
- Hasselkus, B. R. (2011). *The Meaning of Everyday Occupation* (2nd ed). Slack Incorporated.
- Hayles, N. K. (1999). *How we became Posthuman: Virtual bodies in cybernetics, literature, and informatics*. The University of Chicago Press.
- Heary, C., & Hennessy, E. (2002). The Use of Focus Group Interviews in Pediatric Healthcare Research. *Journal of Pediatric Psychology*, 27(1), 47–57.

- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science and Medicine*, 292, 114523. <https://doi.org/10.1016/j.socscimed.2021.114523>
- Heron, J., & Reason, P. (1997). Inquiry Paradigm. *Qualitative Inquiry*, 3(3), 274–294. <http://doi/pdf/10.1177/107780049700300302>
- Hinchion, S., McAuliffe, E., & Lynch, H. (2021). Fraught with frights or full of fun: perspectives of risky play among six-to-eight-year olds. *European Early Childhood Education Research Journal*, 29(5), 696–714. <https://doi.org/10.1080/1350293X.2021.1968460>
- Hocking, C. (2009). The challenge of occupation: Describing the things people do. *Journal of Occupational Science*, 16(3), 140–150. <https://doi.org/10.1080/14427591.2009.9686655>
- Hollan, J., Hutchins, E., & Kirsh, D. (2000). Distributed Cognition: Toward a New Foundation for Human–Computer Interaction Research. *ACM Transactions on Computer-Human Interaction*, 7(2), 174–196. <https://doi.org/10.1145/353485.353487>
- Holland, D., Lachicotte, W., Skinner, D., & Cain, C. (2001). *Identity and Agency in Cultural Worlds*. Harvard University Press. <https://doi.org/10.4324/9781315819679-11>
- Huizinga, J. (2016). *Homo Ludens: A study of the Play-Element in Culture*. Angelico Press.
- Hutton, E., Tuppeny, S., & Hasselbusch, A. (2016). Making a case for universal and targeted children’s occupational therapy in the United Kingdom. *British Journal of Occupational Therapy*, 79(7), 450–453. <https://doi.org/10.1177/0308022615618218>
- Inal, Y., & Wake, J. (2022). An old game, new experience: exploring the effect of players’ personal gameplay history on game experience. *Universal Access in the Information Society*, 22(3), 757–769. <https://doi.org/10.1007/s10209-022-00872-0>

- Isabelle, S., Bessey, S. F., Dragas, K. L., Blease, P., Shepherd, J. T., & Lane, S. J. (2002). Assistive technology for children with disabilities. *Occupational Therapy in Health Care, 16*(4), 29–51. https://doi.org/10.1300/J003v16n04_03
- James, A., & Prout, A. (2015). *Constructing and Reconstructing Childhood: Contemporary issues in the sociological study of childhood* (3rd Ed.). Routledge.
- James, S., Ziviani, J., King, G., & Boyd, R. N. (2016). Understanding Engagement in Home-Based Interactive Computer Play: Perspectives of Children With Unilateral Cerebral Palsy and Their Caregivers. *Physical and Occupational Therapy in Pediatrics, 36*(4), 343–358. <https://doi.org/10.3109/01942638.2015.1076560>
- Janssen, I. (2015). Active play: An important physical activity strategy in the fight against childhood obesity. *Canadian Journal of Public Health, 105*(1), 22–27.
- Jonsson, H. (2010). Occupational Transitions: Work to Retirement. In C. Christiansen & E. Townsend (Eds.), *Introduction to Occupation: The Art and Science of Living* (2nd ed., pp. 189–208). Pearson Education.
- Josephsson, S., & Alsaker, S. (2014). Narrative Methodology: a tool to access unfolding and situated meaning in occupation. In S. Nayar & M. Stanley (Eds.), *Qualitative Research Methodologies for Occupational Science and Therapy* (1st ed.). Routledge.
- Kantartzis, S., & Molineux, M. (2017). Collective occupation in public spaces and the construction of the social fabric. *Canadian Journal of Occupational Therapy, 84*(3), 168–177. <https://doi.org/10.1177/0008417417701936>
- Karsten, L. (2005). It all used to be better? different generations on continuity and change in urban children’s daily use of space. *Children’s Geographies, 3*(3), 275–290. <https://doi.org/10.1080/14733280500352912>
- Kaye, L. K., Orben, A., Ellis, D. A., Hunter, S. C., & Houghton, S. (2020). The Conceptual and Methodological Mayhem of “Screen Time.” *International*

Journal of Environmental Research and Public Health, 17.
<https://doi.org/10.3390/ijerph17103661>

Kennedy, C., Kools, S., & Krueger, R. (2001). Methodological considerations in children's focus groups. *Nursing Research*, 50(3), 184–187.
<https://doi.org/10.1097/00006199-200105000-00010>

Kilia, M., Zacharos, K., & Ravanis, K. (2015). Four- to six-year-old children using photographs as sources of information about space. *European Early Childhood Education Research Journal*, 23(2), 164–182.
<https://doi.org/10.1080/1350293X.2015.1016803>

King, P., & Howard, J. (2014). Children's perceptions of choice in relation to their play at home, in the school playground and at the out-of-school club. *Children and Society*, 28(2), 116–127. <https://doi.org/10.1111/j.1099-0860.2012.00455.x>

Kinsella, E. A., & Whiteford, G. E. (2009). Knowledge generation and utilisation in occupational therapy: Towards epistemic reflexivity. *Australian Occupational Therapy Journal*, 56(4), 249–258.
<https://doi.org/10.1111/j.1440-1630.2007.00726.x>

Kirk, S. (2007). Methodological and ethical issues in conducting qualitative research with children and young people: A literature review. *International Journal of Nursing Studies*, 44(7), 1250–1260.
<https://doi.org/10.1016/j.ijnurstu.2006.08.015>

Krueger, R., & Casey, M. A. (2015). *Focus Groups: A Practical Guide for Applied Research* (5th ed.). SAGE Publications Ltd.

Kuss, D. J., & Griffiths, M. D. (2012). Online gaming addiction in children and adolescents: A review of empirical research. *Journal of Behavioral Addictions*, 1(1), 3–22. <https://doi.org/10.1556/JBA.1.2012.1.1>

Larsson-Lund, M., & Nyman, A. (2020). Occupational challenges in a digital society: A discussion inspiring occupational therapy to cross thresholds and embrace possibilities. *Scandinavian Journal of Occupational Therapy*, 27(8), 550–553. <https://doi.org/10.1080/11038128.2018.1523457>

- Larsson-Lund, M., Olofsson, A., & Malinowsky, C. (2021). Accessing public space in the digital society: relationship between the use of everyday technology and places visited outside the home after acquired brain injury. *Disability and Rehabilitation*, *0*(0), 1–10.
<https://doi.org/10.1080/09638288.2021.1979666>
- Lawlor, M. C., & Mattingly, C. F. (2001). Beyond the Unobtrusive Observer: Reflections on Researcher–Informant Relationships in Urban Ethnography. *American Journal of Occupational Therapy*, *55*, 147–154.
- Lee Bunting, K. (2016). A transactional perspective on occupation: a critical reflection. *Scandinavian Journal of Occupational Therapy*, *23*(5), 327–336.
<https://doi.org/10.3109/11038128.2016.1174294>
- Lester, S., Russell, W., (2008). *Play for a change: play, policy and practice : a review of contemporary perspectives: summary report*. Play England and the National Children’s Bureau.
- Levac, D., Colquhoun, H., & O’Brien, K. K. (2010). Scoping studies: advancing the methodology. *Implementation Science*. *5*(69), 1–9. <http://www.cihri-irsc.ca>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. SAGE Publications Inc.
- Lincoln, Yvonna. S., Lynham, Susan. A., & Guba, Egon. G. (2024). Paradigmatic Controversies, Contradictions, and Emerging Confluences, Revisited. In Norman. K. Denzin, Yvonna. S. Lincoln, Michael. D. Giardina, & Gaile. S. Cannella (Eds.), *The SAGE Handbook of Qualitative Research* (6th ed., pp. 75–113). SAGE Publications Inc.
- Livingstone, S. (2022). Beyond screen time: Rethinking children’s play in a digital world. *Journal of Health Visiting*, *10*(1).
- Livingstone, S. (2024). Reflections on the meaning of “digital” in research on adolescents’ digital lives. *Journal of Adolescence*, 1–6.
<https://doi.org/10.1002/jad.12322>

- Livingstone, S., Ólafsson, K., & Pothong, K. (2023). Digital play on children's terms: a child rights approach to designing digital experiences. *New Media & Society*, *00*(0), 1-21. <https://doi.org/10.1177/14614448231196579>
- Livingstone, S., & Pothong, K. (2022). Imaginative play in digital environments: designing social and creative opportunities for identity formation. *Information Communication and Society*, *25*(4), 485-501. <https://doi.org/10.1080/1369118X.2022.2046128>
- Livingstone, S., Pothong, K., & Kidron, B. (2021). *Playful by Design: Free Play in a Digital World*. Digital Futures Commission and 5Rights Foundation. <https://digitalfuturescommission.org.uk/wp-content/uploads/2021/11/A-Vision-of-Free-Play-in-a-Digital-World.pdf>
- Lundy, L. (2007). "Voice" is not enough: Conceptualising Article 12 of the United Nations Convention on the Rights of the Child. *British Educational Research Journal*, *33*(6), 927-942. <https://doi.org/10.1080/01411920701657033>
- Lynch, H., & Moore, A. (2016). Play as an occupation in occupational therapy. *British Journal of Occupational Therapy*, *79*(9), 519-520. <https://doi.org/10.1177/0308022616664540>
- Lynch, H., Moore, A., O'Connor, D., & Boyle, B. (2023). Evidence for Implementing Tiered Approaches in School-Based Occupational Therapy in Elementary Schools: A Scoping Review. *American Journal of Occupational Therapy*, *77*(1), 1-11. <https://doi.org/10.5014/ajot.2023.050027>
- Lynch, H., & Stanley, M. (2018). Beyond words: Using qualitative video methods for researching occupation with young children. *OTJR Occupation, Participation and Health*, *38*(1), 56-66. <https://doi.org/10.1177/1539449217718504>
- Marsh, A. P., & Tainio, L. (2009). Other-repetition as a resource for participation in the activity of playing a video game. *Modern Language Journal*, *93*(2), 153-169. <https://doi.org/10.1111/j.1540-4781.2009.00853.x>

- Marsh, J. (2010). Young children's play in online virtual worlds. *Journal of Early Childhood Research*, 8(1), 23–39.
<https://doi.org/10.1177/1476718X09345406>
- Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J., & Scott, F. (2016). Digital play: a new classification. *Early Years*, 36(3).
<https://doi.org/10.1080/09575146.2016.1167675>
- Mattingly, C. (1998). *Healing dramas and clinical plots: The narrative structure of experience*. Cambridge University Press.
- Mccarthy, K., Rice, S., Flores, A., Miklos, J., Nold, A. (2022). Exploring the meaningful qualities of transactions in virtual environments for massively multiplayer online role-playing gamers. *Journal of Occupational Science*, 0(0), 1–13. <https://doi.org/10.1080/14427591.2022.2108884>
- McCloy, L., White, S., Bunting, K. L., & Forwell, S. (2016). Photo-Elicitation Interviewing to Capture Children's Perspectives on Family Routines. *Journal of Occupational Science*, 23(1), 82–95.
<https://doi.org/10.1080/14427591.2014.986666>
- Meriläinen, M., Hietajärvi, L., Aurava, R., & Stenros, J. (2023). Games in everyday life: Profiles of adolescent digital gaming motives and well-being outcomes. *Telematics and Informatics Reports*, 12(April).
<https://doi.org/10.1016/j.teler.2023.100104>
- Mertala, P., & Meriläinen, M. (2019). The best game in the world: Exploring young children's digital game-related meaning-making via design activity. *Global Studies of Childhood*, 9(4), 275–289.
<https://doi.org/10.1177/2043610619867701>
- Miller, E., & Kuhaneck, H. (2008). Children's perceptions of play experiences and play preferences: A qualitative study. *American Journal of Occupational Therapy*, 62(4), 407–415. <https://doi.org/10.5014/ajot.62.4.407>
- Montreuil, M., Bogossian, A., Laberge-Perrault, E., & Racine, E. (2021). A Review of Approaches, Strategies and Ethical Considerations in Participatory Research With Children. *International Journal of Qualitative Methods*, 20, 1–15. <https://doi.org/10.1177/1609406920987962>

- Moore, A., & Lynch, H. (2018). Understanding a child's conceptualisation of well-being through an exploration of happiness: The centrality of play, people and place. *Journal of Occupational Science*, 25(1).
<https://doi.org/10.1080/14427591.2017.1377105>
- Morgenthaler, T., Schulze, C., Pentland, D., & Lynch, H. (2023). Environmental Qualities That Enhance Outdoor Play in Community Playgrounds from the Perspective of Children with and without Disabilities: A Scoping Review. *International Journal of Environmental Research and Public Health*, 20(3). <https://doi.org/10.3390/ijerph20031763>
- Morse, J. M. (2015). Critical Analysis of Strategies for Determining Rigor in Qualitative Inquiry. *Qualitative Health Research*, 25(9), 1212–1222.
<https://doi.org/10.1177/1049732315588501>
- Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Armomataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18, 1–7.
- Murris, K., & Osgood, J. (2022). Risking erasure? Posthumanist research practices and figurations of (the) child. *Contemporary Issues in Early Childhood*, 23(3), 208–219. <https://doi.org/10.1177/14639491221117761>
- Nichols, S., & Selim, N. (2022). Digitally Mediated Parenting: A Review of the Literature. *Societies*, 12(2). <https://doi.org/10.3390/soc12020060>
- Nicholson, J., Shimpi, P. M., Kurnik, J., Carducci, C., & Jevgiovikj, M. (2014). Listening to children's perspectives on play across the lifespan: children's right to inform adults' discussions of contemporary play. *International Journal of Play*, 3(2), 136–156.
<https://doi.org/10.1080/21594937.2014.937963>
- Nitsche, M. (2008). *Video Game Spaces: Image, Play, and Structure in 3D Game Worlds*. The MIT Press.
- Njelesani, J., Tang, A., Jonsson, H., & Polatajko, H. (2014). Articulating an occupational perspective. *Journal of Occupational Science*, 21(2), 226–235.
<https://doi.org/10.1080/14427591.2012.717500>

- 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.
<https://doi.org/10.1177/1609406917733847>
- Nyman, A., & Isaksson, G. (2021). Enacted togetherness—A concept to understand occupation as socio-culturally situated. *Scandinavian Journal of Occupational Therapy*, 28(1), 41–45.
<https://doi.org/10.1080/11038128.2020.1720283>
- Nyman, A., Josephsson, S., & Isaksson, G. (2014). A narrative of agency enacted within the everyday occupations of an older Swedish woman. *Journal of Occupational Science*, 21(4), 459–472.
<https://doi.org/10.1080/14427591.2013.803433>
- Office of Global Insight and Policy. (2022). *Towards a child-centred digital equality framework*. UNICEF.
<https://www.unicef.org/globalinsight/media/2966/file/UNICEF-Global-Insight-Towards-a-child-centred-digital-equity-framework.pdf>
- O’Keeffe, E., Riordan, E., Loudoun, F., & Boyle, B. (2022). Understanding the Social Dividends and Risks for Female Gamers in Online Spaces. *CHI PLAY 2022 - Extended Abstracts of the 2022 Annual Symposium on Computer-Human Interaction in Play*, 215–220.
<https://doi.org/10.1145/3505270.3558347>
- Olofsson, A., Larsson Lund, M., & Nyman, A. (2020). Everyday activities outside the home are a struggle: Narratives from two persons with acquired brain injury. *Scandinavian Journal of Occupational Therapy*, 27(3), 194–203. <https://doi.org/10.1080/11038128.2018.1495762>
- Olson, C. K. (2010). Children’s Motivations for Video Game Play in the Context of Normal Development. *Review of General Psychology*, 14(2), 180–187. <https://doi.org/10.1037/a0018984>
- Palmer, S. (2015). *Toxic Childhood: How the modern world is damaging our children and what we can do about it* (2nd ed.). Orion Books Ltd.

- Parker, R., & Al-Maiyah, S. (2022). Developing an integrated approach to the evaluation of outdoor play settings: rethinking the position of play value. *Children's Geographies*, *20*(1), 1–23.
<https://doi.org/10.1080/14733285.2021.1912294>
- Parnell, T., Whiteford, G., & Wilding, C. (2019). Differentiating occupational decision-making and occupational choice. *Journal of Occupational Science*, *26*(3), 442–448. <https://doi.org/10.1080/14427591.2019.1611472>
- Parrott, H. M., & Cohen, L. E. (2021). Advantages of mixed-age free play in elementary school: perceptions of students, teachers, and parents. *International Journal of Play*, *10*(1), 75–92.
<https://doi.org/10.1080/21594937.2021.1878774>
- Parsonage, J., Naylor Lund, K., Dawes, H., Almoajil, H., & Eklund, M. (2022). An exploration of occupational choices in adolescence: A constructivist grounded theory study. *Scandinavian Journal of Occupational Therapy*, *29*(6), 464–481. <https://doi.org/10.1080/11038128.2020.1839965>
- Phelan, S. K., & Kinsella, E. A. (2014). Occupation and identity: Perspectives of children with disabilities and their parents. In *Journal of Occupational Science*, *21*(3), pp. 334–356.
<https://doi.org/10.1080/14427591.2012.755907>
- Pierce, D. (2000). Maternal Management of the Home as a Developmental Play Space for Infants and Toddlers. *American Journal of Occupational Therapy*, *54*(3), 290–299.
- Pizur-Barnekow, K., & Knutson, J. (2009). A comparison of the personality dimensions and behavior changes that occur during solitary and co-occupation. *Journal of Occupational Science*, *16*(3), 187–193.
<https://doi.org/10.1080/14427591.2009.9686657>
- Plowman, L. (2016). Rethinking context: Digital technologies and children's everyday lives. *Children's Geographies*, *14*(2), 190–202.
<https://doi.org/10.1080/14733285.2015.1127326>
- Polkinghorne, D. E. (1995). Narrative configuration in qualitative analyses. *International Journal of Qualitative Studies in Education*, *8*, 5–23.

- Pontes, H. M. (2018). Making the case for video game addiction: Does it exist or not? In C. J. Ferguson (Ed.), *Video game influences on aggression, cognition, and attention*. (pp. 41–57). Springer International Publishing. https://doi.org/10.1007/978-3-319-95495-0_4
- Price, P., & Stephenson, S. M. (2009). Learning to promote occupational development through co-occupation. *Journal of Occupational Science*, *16*(3), 180–186. <https://doi.org/10.1080/14427591.2009.9686660>
- Pyle, A., & Alaca, B. (2018). Kindergarten children's perspectives on play and learning. *Early Child Development and Care*, *188*(8), 1063–1075. <https://doi.org/10.1080/03004430.2016.1245190>
- Radesky, J., & Hiniker, A. (2022). From moral panic to systemic change: Making child-centered design the default. *International Journal of Child-Computer Interaction*, *31*, 100351. <https://doi.org/10.1016/j.ijcci.2021.100351>
- Razum, J., & Huić, A. (2023). Understanding highly engaged adolescent gamers: integration of gaming into daily life and motivation to play video games. *Behaviour and Information Technology*, *1968*. <https://doi.org/10.1080/0144929X.2023.2254856>
- Rebeiro, K. L., Day, D. G., Semeniuk, B., O'Brien, M. C., & Wilson, B. (2001). Northern initiative for social action: An occupation-based mental health program. *American Journal of Occupational Therapy*, *55*(5), 493–500. <https://doi.org/10.5014/ajot.55.5.493>
- Rebeiro, K. L., & Polgar, J. M. (1999). Enabling occupational performance: Optimal experiences in therapy. *Canadian Journal of Occupational Therapy*, *66*(1), 14–22.
- Ricoeur, P. (1990). *Time and narrative, Volume 1*. University of Chicago Press.
- Ridgers, N. D., Knowles, Z. R., & Sayers, J. (2012). Encouraging play in the natural environment: A child-focused case study of Forest School. *Children's Geographies*, *10*(1), 49–65. <https://doi.org/10.1080/14733285.2011.638176>

- Roach, B., Goodwin, N., & Nelson, J. (2019). *Consumption and the Consumer Society*. Global Development and Environment Institute, Tufts University. https://www.bu.edu/eci/files/2019/10/Consumption_and_Consumer_Society.pdf
- Robertson, A. (2021). *Taming Gaming: Guide your child to healthy video game habits* (1st ed.). Unbound Publishing.
- Robertson, A. (2024). *Physical and Digital Aren't Playtime Rivals*. Family Gaming Database. <https://www.familygamingdatabase.com/Physical+And+Digital+Arent+Playtime+Rivals>
- Royal College of Occupational Therapists. (2023). *Occupational therapy and play Practice guideline*. <https://www.rcot.co.uk/practice-resources/rcot-practice>
- Ruckenstein, M. (2013). Spatial extensions of childhood: from toy worlds to online communities. *Children's Geographies*, 11(4), 476–489. <https://doi.org/10.1080/14733285.2013.812309>
- Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371–380. <https://doi.org/10.1016/j.chb.2016.12.033>
- Sandseter, E. B. H., Kleppe, R., & Sando, O. J. (2021). The Prevalence of Risky Play in Young Children's Indoor and Outdoor Free Play. *Early Childhood Education Journal*, 49(2), 303–312. <https://doi.org/10.1007/s10643-020-01074-0>
- Sauce, B., Liebherr, M., Judd, N., & Klingberg, T. (2022). The impact of digital media on children's intelligence while controlling for genetic differences in cognition and socioeconomic background. *Scientific Reports*, 12(1), 1–14. <https://doi.org/10.1038/s41598-022-11341-2>
- Scholes, L., Mills, K. A., & Wallace, E. (2022). Boys' gaming identities and opportunities for learning. *Learning, Media and Technology*, 47(2), 163–178. <https://doi.org/10.1080/17439884.2021.1936017>

- Schwandt, Thomas. A. (1994). Constructivist, Interpretivist Approaches to Human Inquiry. In Norman. K. Denzin & Yvonna. S. Lincoln (Eds.), *Handbook of Qualitative Research (4th ed.)*. SAGE Publications Inc.
- Sellar, B. (2009). Assemblage theory, occupational science, and the complexity of human agency. *Journal of Occupational Science*, *16*(2), 67–74.
<https://doi.org/10.1080/14427591.2009.9686645>
- Sevón, E., Mustola, M., Siippainen, A., & Vlasov, J. (2023). Participatory research methods with young children: a systematic literature review. *Educational Review*, *0*(0), 1–19.
<https://doi.org/10.1080/00131911.2023.2215465>
- Shier, H. (2001). Pathways to participation: Openings, opportunities and obligations. *Children and Society*, *15*(2), 107–117.
<https://doi.org/10.1002/chi.617>
- Sicart, M. (2017). *Play Matters* (1st ed.). Massachusetts Institute of Technology Press.
- Sicart, M. (2018). Quixotean Play in the Age of Computation. *American Journal of Play*, *10*(3), 249–264.
- Sicart, M. (2023). *Playing Software* (1st ed.). MIT Press.
- Silvers, J. A. (2022). Adolescence as a pivotal period for emotion regulation development for consideration at current opinion in psychology. *Current Opinion in Psychology*, *44*, 258–263.
<https://doi.org/10.1016/j.copsy.2021.09.023>
- Skivenes, M., & Strandbu, A. (2006). A Child Perspective and Children's Participation. *Children, Youth and Environments*, *16*(2), 10–27.
<https://doi.org/10.1353/cye.2006.0005>
- Smith, H. H. (2010). *Children's Empowerment, Play and Informal Learning in Two After School Provisions*. [Doctoral dissertation, Middlesex University].
<https://repository.mdx.ac.uk/item/83089>

- Spilsbury, J. C. (2005). 'We don't really get to go out in the front yard'- Children's home range and Neighborhood Violence. *Children's Geographies*, 3(1), 79–99. <https://doi.org/10.1080/14733280500037281>
- Stahl, Norman. A., & King, James. R. (2020). Expanding Approaches for Research: Understanding and Using Trustworthiness in Qualitative Research. *Journal of Developmental Education*, 44(1), 26–28. <https://doi.org/10.4135/9781483329574>
- Stilman, R. (2022). Attached to Technology: Exploring Identity and Human Relating in a Virtual and Corporeal World. *Transactional Analysis Journal*, 52(2), 93–105. <https://doi.org/10.1080/03621537.2022.2036484>
- Sun, Y., Blewitt, C., Edwards, S., Fraser, A., Newman, S., Cornelius, J., & Skouteris, H. (2023). Methods and Ethics in Qualitative Research Exploring Young Children's Voice: A Systematic Review. *International Journal of Qualitative Methods*, 22, 1–15. <https://doi.org/10.1177/16094069231152449>
- Susen, S. (2022). Reflections on the (Post-)Human Condition: Towards New Forms of Engagement with the World? *Social Epistemology*, 36(1), 63–94. <https://doi.org/10.1080/02691728.2021.1893859>
- Sutton-Smith, B. (1998). *The Ambiguity of Play*. Harvard University Press.
- Taylor, T. L. (2009). The assemblage of play. *Games and Culture*, 4(4), 331–339. <https://doi.org/10.1177/1555412009343576>
- Theobald, M., Danby, S., Einarsdóttir, J., Bourne, J., Jones, D., Ross, S., Knaggs, H., & Carter-Jones, C. (2015). Children's perspectives of play and learning for educational practice. *Education Sciences*, 5(4), 345–362. <https://doi.org/10.3390/educsci5040345>
- Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of Advanced Nursing*, 48(4), 388–396. <https://doi.org/10.1111/j.1365-2648.2004.03207.x>
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E.

- A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, *169*(7), 467–473. <https://doi.org/10.7326/M18-0850>
- UNCRC. (1989). *The United Nations Convention on the Rights of the Child*. <https://www.unicef.org.uk/wp-content/uploads/2016/08/unicef-convention-rights-child-uncrc.pdf>
- Van Rooij, A. J., Daneels, R., Liu, S., Anrijs, S., & Van Looy, J. (2017). Children's Motives to Start, Continue, and Stop Playing Video Games: Confronting Popular Theories with Real-World Observations. *Current Addiction Reports*, *4*(3), 323–332. <https://doi.org/10.1007/s40429-017-0163-x>
- Verenikina, I., Herrington, J., & Mantei, J. (2010). Computers and play in early childhood: Affordances and limitations. *Journal of Interactive Learning Research*, *21*(1). <https://www.researchgate.net/publication/228514840>
- Verenikina, I., Kervin, L., Rivera, M. C., & Lidbetter, A. (2016). Digital play: Exploring young children's perspectives on applications designed for preschoolers. *Global Studies of Childhood*, *6*(4), 388–399. <https://doi.org/10.1177/2043610616676036>
- Waite, S., & Goodenough, A. (2018). What is different about Forest School? Creating a space for an alternative pedagogy in England. *Journal of Outdoor and Environmental Education*, *21*(1), 25–44. <https://doi.org/10.1007/s42322-017-0005-2>
- Waller, T., & Bitou, A. (2011). Research with children: Three challenges for participatory research in early childhood. *European Early Childhood Education Research Journal*, *19*(1), 5–20. <https://doi.org/10.1080/1350293X.2011.548964>
- Wearing, S. L., Porter, D., Wearing, J., & McDonald, M. (2021). Exploring adolescent computer gaming as leisure experience and consumption: some insights on deviance and resistance. *Leisure Studies*. <https://doi.org/10.1080/02614367.2021.1942525>

- Wenger, I., Kantartzis, S., Lynch, H., Schulze, C., & Jackson, J. (2023). Making secret hiding places: An occupation of childhood. *Journal of Occupational Science*. <https://doi.org/10.1080/14427591.2023.2240815>
- Wenger, I., Lynch, H., Prellwitz, M., Schulze, C. (2023). Children's experiences of playground characteristics that contribute to play value and inclusion : Insights from a meta-ethnography. *Journal of Occupational Science*, *0*(0), 1–28. <https://doi.org/10.1080/14427591.2023.2248135>
- Wenger, I., Schulze, C., Lundström, U., & Prellwitz, M. (2021). Children's perceptions of playing on inclusive playgrounds: A qualitative study. *Scandinavian Journal of Occupational Therapy*, *28*(2), 136–146. <https://doi.org/10.1080/11038128.2020.1810768>
- Widmark, E., & Fristedt, S. (2019). Occupation according to adolescents: Daily occupations categorized based on adolescents' experiences. *Journal of Occupational Science*, *26*(4), 470–483. <https://doi.org/10.1080/14427591.2018.1546609>
- Wilcock, A. A. (2001). Occupational science: The key to broadening horizons. *British Journal of Occupational Therapy*, *64*(8), 412–417. <https://doi.org/10.1177/030802260106400808>
- Wilcock, A. A., & Hocking, C. (2015). *An Occupational Perspective of Health* (Third Edit). Slack Incorporated.
- Willett, R. (2016). Online Gaming Practices of Preteens: Independent Entertainment Time and Transmedia Game Play. *Children & Society*, *30*(6), 467–477. <http://10.0.4.87/chso.12155>
- Wiseman, J. O., Davis, J. A., & Polatajko, H. J. (2005). Occupational development: Towards an understanding of children's doing. *Journal of Occupational Science*, *12*(1), 26–35. <https://doi.org/10.1080/14427591.2005.9686545>
- Woodgate, R. (2001). Adopting the qualitative paradigm to understanding children's perspectives of illness: Barrier or facilitator? *Journal of Pediatric Nursing*, *16*(3), 149–161. <https://doi.org/10.1053/jpnd.2001.24178>

- Woodyatt, C. R., Finneran, C. A., & Stephenson, R. (2016). In-Person Versus Online Focus Group Discussions: A Comparative Analysis of Data Quality. *Qualitative Health Research, 26*(6), 741–749. <https://doi.org/10.1177/1049732316631510>
- Woolley, H. E., & Griffin, E. (2015). Decreasing experiences of home range, outdoor spaces, activities, and companions: changes across three generations in Sheffield in north England. *Children's Geographies, 13*(6), 677–691. <https://doi.org/10.1080/14733285.2014.952186>
- Woolley, H., & Lowe, A. (2013). Exploring the Relationship between Design Approach and Play Value of Outdoor Play Spaces. *Landscape Research, 38*(1), 53–74. <https://doi.org/10.1080/01426397.2011.640432>
- World Medical Association. (2001). *Declaration of Helsinki- Ethical Principles for Medical Research involving Human Subjects*. World Medical Association. <https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>
- Yerxa, E. J. (2000). Occupational science: A renaissance of service to humankind through knowledge. *Occupational Therapy International, 7*(2), 87–98. <https://doi.org/10.1002/oti.109>
- Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., Golinkoff, R. M., Baum, R., Gambon, T., Lavin, A., Mattson, G., & Wissow, L. (2018). The power of play: A pediatric role in enhancing development in young children. *Pediatrics, 142*(3). <https://doi.org/10.1542/peds.2018-2058>
- Zhang, K., & Kemme, B. (2011). Transaction models for massively multiplayer online games. *Proceedings of the IEEE Symposium on Reliable Distributed Systems, 31–40*. <https://doi.org/10.1109/SRDS.2011.13>

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