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A Sociomaterial Reading of Belonging: Mobile Children and Mobile Devices in School Spaces

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This thesis has been submitted in partial fulfilment of the requirements for a postgraduate degree of Doctor of Education at the University of Edinburgh.

I declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own.

Maureen Finn

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65,980 words

For Shirley and Jane

Acknowledgements

Life changed in many ways over the course of this research. Most notably, I lost my two dearest friends—my mum and Jane. I was told that this feeling of loss never leaves us, we just learn to live with it, and I believe this is true. The pair of them grounded me and supported me unconditionally. If they were around they would have said, "For goodness sake, stop the drama, just get it finished!" So I did, eventually, and I dedicate this work to them.

The thesis is embedded in my ongoing work with the children of the travelling communities in Scotland. I have learned so much from these young people about myself and the assumptions that we make as educators. I am so thankful to those children who took part in the research as well as to the teaching staff in the schools who supported my visits. I am also grateful to my team at STEP, particularly Dr Pauline Duncan, who accommodated my absences so well.

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Abstract

Despite national incentives and additional resourcing, large numbers of children from traditionally mobile families (specifically Gypsies and Travellers) do not engage with school in Scotland beyond the age of eleven. Community discourse suggests that the schools' curriculum and social and cultural practices exclude them.

By employing digital, visual research methods through a case-study approach this thesis explores what happens when children from Gypsy/Traveller families combine with digital media to make sense of their experiences of school. Two theoretical perspectives are connected—new materialism and dialogism—to investigate what effects are produced between children and digital media within schools' social, material and pedagogic spaces. Analysis centres on both the children's and the researchers' interpretations.

Fieldwork was structured through a series of three school-based interventions. These ran over two terms in 2018 and 2019. They involved nine children aged 8 to 11 years based in two primary schools in Scotland—one inner city, one rural. Each child participant had been ascribed Gypsy/Traveller ethnicity on the schools' data records. The children's families ranged from 'settled' (living permanently on local authority Traveller sites or houses) and semi-nomadic (travelling seasonally for work and cultural commitments).

The study found that bringing the Gypsy/Traveller child together with digital media offered a powerful way of unlocking and surfacing the children's lived experience of school. Through a series of critical and creative digital activities some children were able to perform aspects of their identities strongly in relation to their culture and some demonstrated how they experienced discomfort when school practices were in tension with this culture. However, the

study also found that children could generate a sense of belonging through a wide range of people, things and events within the school environment and that, for most, a state of belonging was never fixed but constantly negotiated in different realms.

The combination of child and media (here termed *child/media* spaces) offered distinct characteristics which, appeared to be necessary to the children's generation of their own spaces of belonging. *Here/there* spaces, *provisional* space and *shared* space offered an accessible language. In each, the child and the media were able to play out different experiences, emotions and identities, particularly in response to the unequal power relations that the children encountered. The study suggests that the *child/media* space is part physical and part mental, combining elements of each, and similar to Soja's Third Space, it can also be fluid, allowing children to move between elements of the material, the imagined and the symbolic (1996).

The study proposes the need for new understandings of how digital media can contribute to combat exclusionary practices in schools for the children of Gypsy/Travellers and from other marginalised families. It suggests that belonging is a fluid construct that can be produced in multiple ways through the *child/media* spaces described in the study. This has positive implications and opens up possibilities for new thinking about the inclusion in schools of Gypsy/Traveller children.

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1 Introduction

A crisis and an opportunity provided the initial catalyst for this thesis. In brief, the crisis was the knowledge that, despite national incentives and additional resourcing, large groups of minority ethnic mobile children (specifically Scottish Gypsy/Travellers) were not engaging with education in Scotland and self-reports of feeling excluded from schools were common. The opportunity was the continual increase of digital media into the schools system. The use of digital media in schools has provoked much debate for over 20 years. While investment continues, critics have asked whether this equates to better education, with many suggesting that the instrumental expectations of educators work against positive progress (Livingstone, 2012a). In producing this thesis I have been interested to join two research communities; on one hand those who are seeking to broaden understandings of inclusive uses of digital media in schools and, on the other, those who are adopting materialist positions to ask new questions about the norms of school practices from which many children feel excluded.

I have come to the research communities with a professional role and responsibility for promoting education for travelling communities throughout Scotland. In this position I have suggested for some time that there is an urgent need to address questions relating to how Gypsy/Traveller children experience schools and their social and spatial practices. In relation to this, I also question the extent to which Gypsy/Traveller children can enact their own identities within schools, and the extent to which these identities are fixed.

1.1 Aims of the study

My role involves supporting the education staff who work with children from Gypsy/Traveller families in Scotland and I have witnessed the difficulties many of the

children and young people have faced in adapting to the norms of school practices. The most obvious signs have been difficult emotional and behavioural episodes, which have often been described by staff as challenging. My involvement with the families has raised my awareness of the immense differences between some of the children's home-based and school-based experiences. More than most, these children often move between two distinctly different material worlds each day—each displaying opposing cultural values through their social and material practices. While the material, in these cases, involves each of the tools, bodies, actions and objects of their worlds (Fenwick, Edwards, & Sawchuk, 2011), I reflected that it was rare to hear of the effects of the material world of school—not from families, children or school staff. I began to question if the material aspects of the school environment were producing potentially exclusionary effects on the children. My concern focussed on the possible connections between the social and the material in school settings. I questioned what connections might exist. What forms of exclusion might they be sustaining? And importantly, would a deeper understanding of the connections between the social and the material aspects of schooling offer potential for reconfiguring school practices that appeared to be exclusionary?

School physical environments can have a profound effect on how children engage with learning (Clark, 2010). These material spaces, including structures such as the curriculum and social rules, are known to involve power relations and can privilege social practices and forms of knowledge that represent a specific vision - often reproducing inequalities and marginalisation for some children (McLaren, 1989).

The purpose of this study was to understand what could be learned when children from Gypsy/Traveller communities used digital media to make sense of how they belonged in

school physical environments. The study aimed to explore the ways in which the children could use digital media to develop their own critical curiosity about these environment, with the aim of empowering them in schools as well as informing educational practices and perhaps even social change (Shor, 1992). I was interested to observe how digital devices could mediate children's meaning creation in school environments. This led to important questions relating to children's subjectivity and the extent to which a child could self-author her own space in a school. Additional questions then began to emerge about the extent to which the material aspects of school, including digital media, could shape, as well as mediate, children's experiences.

In this introductory chapter I describe the context for my professional interest in inclusive forms of digital media use in schools and I provide some background to Gypsy/Traveller children's educational experiences. I then describe the value of the study before finally outlining the methods and analytical frameworks which I draw on.

1.2 Justifying the representation of children from Gypsy/Traveller families in the school system

The key focus for this work was the school experiences of children from Gypsy/Traveller communities[1]. I begin with a brief description of my own non-homogenising perspective on Gypsy/Traveller communities before introducing some of the long-held relating to education and the communities that drew me to undertake this study.

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[1] The feature common to all GRT families is a shared tradition of nomadism. Family lifestyles have been built around mobility; moving between locations within and across national borders, determined by the need to find work or attend social and cultural events. Families can travel for all or part of the year and Gypsies and Travellers usually stay in trailers on pitches on encampments, which can be council-run or privately owned. Sometimes families are forced to move. Evictions related to a shortage of legal, authorised sites are not uncommon. Increasingly, many families have begun to travel less and live permanently in houses due to changes in employment patterns, restrictions in council planning laws and the need to access healthcare. (Finn & Duncan, 2020)

While aspects of Scottish Gypsy/Traveller culture can be generalised, it is important to note that this is not a homogenous group but rather, like the many other Gypsy, Roma and Traveller (GRT) communities who live in parts of the UK and across Europe, they are diverse communities, each maintaining different cultural traditions (Davidson, Liinpää Minna, McBride, Virdee, & Clark, 2018; Liégeois, 1994). Cultural identities are constantly changing and, contrary to common belief, are not permanently situated in the past (O'Hanlon 2010). Furthermore, Levinson proposes that not only has there been a move away from static constructions of both 'culture' and 'identity' within communities but there has also been a shift to recognise vast differences within groups. As established by Hall (1993, pp. 394–395) (cited in Levinson, 2015) 'cultural histories cannot be traced from a fixed origin but they are characterised by discontinuity, differences and social displacement'. I therefore aim to write this thesis from a non-homogenising perspective while also recognising that there may be some commonalities between some Gypsy/Traveller children's lives and cultures.

High numbers of young Gypsy/Travellers in the UK (whether living on unofficial encampments, council-run sites or in housing) are either not attached or weakly attached to the school system, especially at secondary stage (Bhopal, Gundara, Jones, & Owen, 2000; Derrington & Kendall, 2008; Vanderbeck, 2005). As well as experiencing racism and discrimination from other children or school staff (Cemlyn, Greenfields, Burnett, Matthews, & Whitwell, 2009), there is a feeling from families that the curriculum is generally irrelevant to Gypsy/Traveller culture (Kiddle, 1999; Vanderbeck, 2005). Families rarely acknowledge the predicted benefits of school expressed by the dominant, settled culture (O'Hanlon, 2010). For example, many in the community hold a view of a relevant education that differs from that of education policy makers. Resnick, et al.'s (2016) deconstruction of the differences

and discontinuities between school and other learning, are useful for making a distinction between the normative school curriculum and Gypsy/Traveller view. Described through four themes, they are: individual cognition in school vs. shared cognition outside; pure mentation in school vs. tool manipulation outside; symbol manipulation in school vs. contextualised reasoning outside; generalised learning in school vs. situation-specific competencies outside. In summary, the key difference is that Gypsy/Traveller education is based on collaborative relationships, which in turn are based on real life needs and contexts. Lee and Warren (1991) offered an 'instrumental/non-instrumental' dimension to describe the differences, where communities only pursue activities that are useful for community survival.

The failure of education to represent these cultural needs have been a recurring theme in the literature. In an era when traditional cultures and ways of life have been under threat, the role of education has become increasingly important in creating access to a wider range of knowledge and skills that may improve employability (O'Hanlon, 2010). Perhaps ironically, the situation also prevails at a time when claims of new and radical improvements in education are considered to offer a personalised curriculum that meets the needs of every child and her culture (Scottish Government, 2010, 2016).

Why then are the new curriculum policies not impacting on the Gypsy/Traveller pupil experience? An explanation may lie in the fact that the perceived educational needs of the Gypsy/Traveller pupil are viewed to be too radical and too far removed from the norms of mainstream education. Over the years an array of radical thinkers and proponents of reform have put forward the case that the education system is not fit for purpose in a range of different contexts. Critiques have included the 'deschooling of society' (Illich, 1973) and the rebirth of the educator (Freire, 2010). However, the critical theorist Marcuse (1964) claimed

that, in any situation when opposition to the norms of society appear—and the Gypsy/Traveller view of education certainly opposes the norm—the dominant society channels opposition through safety valves such as 'the committee' until such a point as the ideas of non-normative thinkers are exhausted and defused and, more importantly, before they can suggest practical alternatives (Lee & Warren, 1991).

Lee and Warren (1991), drawing on some of the ideas of the socialist thinker George Sorel (1847-1922), suggested that for any radical perspective to be successful it would need to be fully embedded in a wider social theory.[2] Sorel was critical of the popular debates around both 'progressive' and 'traditional' education. He felt that ultimately both were aimed at 'improvements' in students, which were usually based on the values of others. The various debates over the purposes of education, i.e. for self-development or for vocation, only served to justify the creation of standards which served to distract from the real questions about the purpose of education in students' lives. Sorel was critical of intellectualism and what he called 'submission to the expert' and saw this as education playing a role in the homogenisation of culture. He proposed that 'the makers and the doers' of the world, from whatever culture, should be able to determine their own education based on their own creative activity. Lee and Warren were also aware of the negative criticisms of Sorrel's approach, including its idealism unsupported by practical evidence for how it would work. In response, they turned attention to the Gypsy tradition of education which, they suggested, provided the epitome of an education based on the creativity of the community that complements human life and experience.

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[2] Sorel is not widely known to the English-speaking world, and when he is known it is mainly for his Reflections on Violence (George Allen and Unwin, London, 1950. Translated by T. E. Hulme and J. Roth; first published 1908). For other writing see Isaiah Berlin: 'Georges Sorel', Times Literary Supplement, (3644, 1971) p. 1617-22, and Larry Portus: Sorel (Plenum Press, London, 1980).

Nowadays an impasse appears to have been reached between the Gypsy/Traveller community and the schooling system. The community suggests that schools make no effort to provide the appropriate education they need while the education policy claims that Gypsy/Traveller children are included in the generic offer of a personalised curriculum for all children. The literature suggests that for a generation the Gypsy/Traveller community have not felt that they have been included or belonged within the school system (Gould, 2017; Kiddle, 1999) and the recent data substantiates the community position with attendance remaining the lowest of any minority ethnic group and showing little sign of improvement (Scottish Government, 2015, 2018). While it is clear that national and international drivers of education reform may not chime with the needs of the community, and while Sorel's ideas may still have some value, this thesis takes the view that it is the children of Gypsy/Traveller communities who have the potential to drive change. Within the school system they must be enabled to determine what inclusion means for themselves and it should then be the task of policy makers to listen and enact change.

1.3   Representing the Gypsy/Traveller community view

There have been some recent attempts to enact change by seeking to represent the community's views on national forums. In 2018 there was an important development for education when a Scottish Government cross-party initiative was established with the aims of improving the lives of the Gypsy/Traveller community. A driver for this work was the need to know more about how communities were experiencing public services and, in the field of education, attention was given to the exceptionally poor attainment and achievement of the children from the communities. Data showed that these children were recorded as having the lowest attainment levels of any minority ethnic group across the UK (Scottish Government, 2018).

An important distinction with Gypsy and Traveller communities in Scotland is that, unlike other minority ethnic groups, there is an absence of advocacy groups to represent the community on public issues, making it difficult to impact on policy. While there have been some recent attempts at consultation, there is also evidence of a tradition of the community not being listened to and even being silenced by those in authority (Lloyd & McCluskey, 2008). In the few forums that exist education has rarely been a priority. For example, as part of a new Scottish Government Action Plan (COSLA & Scottish Government, 2019), MECOPP[3] has hosted a *Women's Voices* group made up of female members of the community but, typically, most attention has been diverted away from education towards other policy areas such as accommodation, social care and health.

This state of affairs begs questions about how positive change in education may happen, as well as how subsequent generations of children from the communities can begin to feel included in education communities as well as in society. In order to represent themselves effectively, they would need to develop a criticality and a capacity to communicate how they experience the current schooling system and its taken-for-granted structural norms such as a curriculum, pedagogy and practices — all designed without concern for nomadic traditions.

1.4   The effects of the school material environment

A particular focus of this study has been the material aspects of the school environment. The reasons for this interest were two-fold. Firstly, the material world is part of a visual culture which, through its visibility and immediacy, offers an accessible representation of school life

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[3] Minority Ethnic Carers' Project, a third sector organisation in receipt of Scottish Government funding

on which the child participants could comment. By reflecting on their material surroundings they may also explore how they might exercise their critical and cultural voices. Many children from mobile cultures have literacy levels that are considerably lower than their age-related abilities and they can feel disempowered in word-based contexts. The second reason to focus on the material, supported by Clarke (2010), is that the school material environment is usually particularly overlooked when consideration is being given to inclusive learning practices. Foucault's work has shown how public buildings can take on roles as objects of surveillance and regulation (1977). Contrary to the belief that they are innocent backdrops, they contribute to the administration of the school population, disciplining and separating children as a dividing practice (Ellsworth, 2005; Gulson & Symes, 2007). Fenwick et al (2011) have built on Giroux et al.'s (1996) argument that describes school spaces in terms broader than the building, suggesting that school is a modernist institution characterised by 'spaces of enclosure' such as the book, the curriculum and the classroom, each of which work to 'enclose meaning and experience' (p. 156). In such an institution the children's role is reduced to 'extracting and re-presenting a single canonical meaning', with teachers having authority over accuracy. The implication goes beyond school spaces and practices and is a reminder of the persistent ideology in some schools where there is a belief in the existence of a single meaning waiting to be found (Fenwick et al., 2011) and, by extension, a child capable of knowing.

Most research with an interest in children and school spaces has been concerned with the creative involvement of children in influencing redesigns or the development of entirely new school environments (for a full review see Fielding (2004) and Clarke (2010)). Many of these studies have been carried out in partnerships with architecture and design practices with the aim of reflecting children's age-related and cultural preferences in design decisions. In

essence, many initiatives have sought to include a tokenistic representation of pupil voice to validate adult-generated projects—though a more useful approach would be to get to the heart of why education buildings normalise certain exclusionary social practices. The limited number of debates around school environments and education has been concerned with the extent to which there is a direct relationship between learning environments and learners' performance (see Flutter (2006) for full review).   Limited evidence has emerged to confirm the links, although the literature does suggest that noticeably adverse environmental conditions are often directly associated with lower student performance (Clark, 2010).

A field of research more closely related to this study promotes the view that the school environment can have a profound effect on children's engagement with learning (Clark, 2010). Physical environments can significantly influence students' attitudes to learning and, relevant to this study, it seems that cultural preferences have been a factor (Fisher, 2001; Lackney, 1994). However, given the immediacy of the school material environment, and its potential to affect children's everyday experiences, little is known about what children think, especially those who are at risk of exclusion such as Gypsy/Traveller children. It is particularly notable that the voices of these children are rarely heard in this regard.

1.5   The importance of 'noticing' to children's critical engagement

In this study I show that the children of Gypsy/Traveller families can actively and critically engage with, and comment on, the material world of school to enable reflection on how they experience it. This was important for the children as a learning process in using their own critical voices while also being important to educators to understand children's school experiences with a view to changing practices. In line with the view that the material world is also part of a visual culture, I drew on the process of 'noticing' as a tool for children's

critical engagement. I proposed that it is possible for children to pare back taken-for-granted ideas about the material elements of their school surroundings to enable dormant perspectives to emerge and be shared. Brown (2001) draws a distinction between *objects* and *things*. For him, *objects* are the things we are surrounded by but that we fail to notice. *Things*, on the other hand, are the objects that become noticeable or knowable, or which may disturb us (Brown 2001). It was important to the study to know the ways in which things were noticeable. This would mean knowing whether children needed to make efforts to understand school things in particular ways or whether they were easy to accept without question—and whether acceptance was a positive aspect. A second interest was whether home-related or cultural things, which were more familiar, affected how children noticed.

From a theoretical perspective, I suggest that agency over experience does not reside solely with the pupils in these situations. Bennett's *Vibrant Matter: A Political Ecology of Things* (2010) is among the most relevant contributions towards radical thinking about the interplay between objects, materials and life-forms, including the human. It falls under the umbrella term 'new materialism', which informs much of this thesis. Bennett describes how things have their own agency, commanding types of attention 'as existents in excess of their association with human meanings, habits or projects' (2010, p.4). She suggests the need in humans for 'a certain anticipatory readiness' and the need to be open to thing-power (ibid). Vitality and vibrancy of things are key concepts. Vitality is 'the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle' (p.6). A materialist approach does not necessitate a decentring of the child to make way for things. Rather, there is a need to recognise shifting subjectivities. The thesis backs Thomas's (2009) call for the need to more seriously understand how children relate with, and constitute, our material worlds, suggesting that, by doing this, society might be capable of much more.

1.6 Digital media and the participatory creator

This study makes a case for the use of digital media to help address many of the issues described in this chapter. There are multiple discourses that take different perspectives on what is effective educational use of digital media in schools (Livingstone, 2012). Meyers et al. (2013) propose that rather than consuming content and developing traditional ICT skills, children need to become creative agents who 'operate within a socio-technical network that affords opportunities for extension, sharing and learning' (p. 367). The authors value agency, sociality and creativity and are critical of formal education, comparing it with informal environments, which are felt to be superior because of the way they allow children to express themselves freely outwith the constraints of the curriculum and its associated standards. When schools adopt a singular view of technologies they are often motivated by raising attainment, resulting in the unique attributes of digital media remaining untapped. It is important that digital media, as a part of what technologies offer, is explored in an open-ended way. For digital media to support Gypsy/Traveller children the emphasis would need to shift from institutional to children's needs.

1.7 My own study

This study's main concern has been to produce much-needed insights that can justify the use of digital media and support practitioners working with Gypsy/Traveller children to exploit their potential and move beyond instrumental uses. Its observations raise awareness of what is noticeable to the Gypsy/Traveller child in the school environment, enabling teachers to reflect on and improve taken-for-granted aspects of school practices. It also explores the integration of critical, digital creation and authoring into everyday school practices. In the study, the possibility of these practices is interrogated using a dialogic lens drawing on the work of Bakhtin (1981) and the more recent work of Wegerif and colleagues (see Vrikki,

Wheatley, Howe, Hennessy, & Mercer, 2019; Wegerif, 2005, 2007a, 2011; Wegerif & Mansour, 2010).

The study explores digital pedagogies through which marginalised children, such as Gypsy/Travellers, can critique and make sense of their experiences. When discussing pedagogy, Fenwick et al. draw attention to the idea that it is the enactment of knowing locations, 'not least because a knowing location is not necessarily human alone' (2011, p. 153). This important position, which the authors suggested had been under-researched, raises timely questions about the extent to which the environment could become an active agent in digital media use. To my knowledge, previous work has never combined the use of mobile devices and digital media with children from marginalised cultures to interact with the human and non-human aspects of a potentially hostile school environment.

My research is also distinctive in that it explored the processes through which marginalised children could define their own spaces for learning and expression of identity within the combined contexts of the school material environments and digital media use. The study stands out in that the child's agency is explored with the other human and material agents in these spaces, enabling meanings to come into existence between them. The children's meaning-making processes support the view that there is no single meaning out there waiting to be found (Fenwick et al, 2011). Instead, meaning-making is always in a state of constant revision and the process is always provisional.

1.8   The research questions

The purpose of this case study was to understand what could be learned when children from Gypsy/Traveller communities used digital media to make sense of how they belonged in school environments. To address this aim I asked the following research questions:

1. What does it mean for the children of Gypsy/Traveller cultures to belong in school spaces?

2. How do critical, creative and digital processes combine to support Gypsy/Traveller children's meaning-making about belonging?

3. To what extent can Gypsy/Traveller children generate their own meaningful, digital space of belonging?

To answer these questions it was necessary to design a series of activities where the children had opportunities to experiment with the use of digital media and I could analyse their responses. Each of the research questions required a different activity and analytical focus. Figure 1 shows the progression of children's visual, digital skills relative to the research activities and the resulting analytical focus.

Preparatory activities: Draw, cut, crop, zoom, combine, layer

Activity One: Noticing the environment, capturing, zooming, framing

Activity Two: Selecting, visual editing, creating and thinking

Activity Three: Generating and communicating ideas
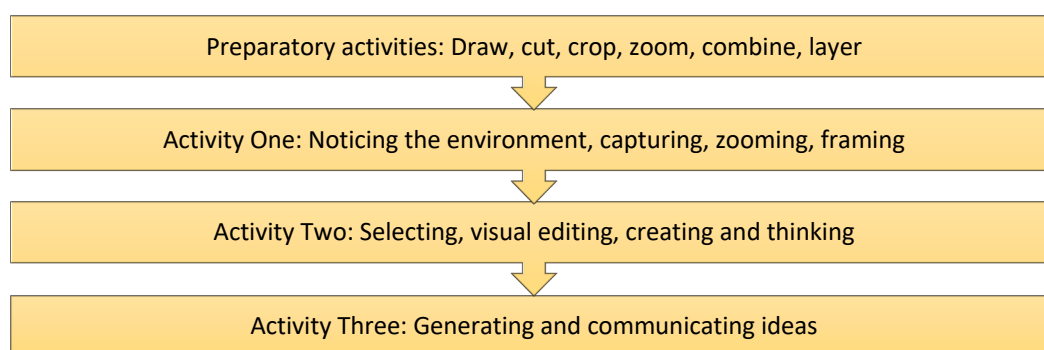
Figure 1: The progression of children's visual, digital activities

Question 1 was concerned with children's awareness of the school environment to understand how they felt they belonged. The children captured images of what they noticed and I

analysed these in relation to how school was experienced, drawing on their personal narratives. In line with Bennett I analysed the capacity of objects to make things happen and produce effects for children within the school context. To understand how inclusion was experienced, I drew on Baroutsis and Mills' three spaces of belonging—the material, the pedagogic and the relational (2018). This allowed me to understand the inter-relationships between the things that affected the children as well as offering a framework for discussion.

To address Question 2, the children selected images of the school environment and responded using visual editing techniques. Here, I was interested in the meaning-making processes and the interactions and interrelationships between the children, the devices and the represented objects on the screen. The literature around dialogism and dialogic pedagogy (Bakhtin, 1981, 1986; Wegerif, 2007b, 2011) provided a detailed level of analysis and informed how I could interpret the children's connections. The children's use of visual elements in the digital interface were also central to understanding their critical and creative processes.

Question 3 focused on the nature of the digital spaces that could be generated by the children using the media. To answer this, the children were asked to communicate ideas that were meaningful to a specific audience using digital media. For the analysis, I placed the children's creations within a spatial frame, allowing me to reflect on the characteristics of each of the digital spaces where children were able to explore and communicate aspects of their identities through the digital media.

1.9   The participants and setting

This case study involved a series of interventions with two groups of children within two primary school settings is Scotland. The two schools offered many differences as one was

small with fluctuating pupil numbers and a number of Scottish Gypsy/Travellers as well as Irish Travellers. This school was situated in a rural setting. The other school was on the outskirts of a city with 265 children—less than 5% were Scottish Gypsy/Traveller. Both schools had connections with local authority-run Gypsy/Traveller sites. Nine children aged 8-11 years participated in the study from both Scottish and Irish Traveller communities.

1.10 Theoretical perspective

The thesis took an interdisciplinary approach and combined elements of childhood studies, theories of belonging and visual digital pedagogies. Two main theoretical perspectives—dialogism and sociomaterialism—are rarely aligned but for this study they offered a wider lens through which I could understand the ideas and processes at play in the research setting. Dialogism enabled an understanding of the close interactions between the child and the social and material aspects of school spaces that were noticed. A sociomaterial lens enabled a much wider view that included the range of assemblages in the school environment. This view does not necessarily align with the tradition of school education research, which privileges the 'knowing' or intentional human subject, who can usually be viewed as a separate entity—separate from the material. With a materialist view, knowledge and learning change 'from a representational idiom, mapping and understanding a world that is out there, to a view that the world is doing things, full of agency.' (Fenwick et al., 2011, p. 3). It is also possible in a materialist study to interrogate only the things in the school environment and how they affect learning but in this study the human subject—the child—is still considered as central, knowing and intentional. In this situation it is not *either/or* but rather both child and the material. After all, the central concept of belonging which runs through this work is arguably a very human-focussed construct. In a study of children's experiences it would be remiss not

to foreground the spoken and visual languages and ideas achieved through the child in the research context. In my approach I try to represent the agencies of both the child and the material things and spaces, as well as the interconnections between them.

1.11 Justification

This thesis followed the publication of a digital learning and teaching strategy for Scotland (2016) which stated that 'despite the pervasive nature of digital technology, its benefits are not always fully felt within our education establishments.' (Scottish Government, 2016, p.3). This also coincided with the launch of The National Framework for Digital Literacies in Initial Teacher Education (2020) (see a summary in Annex 10.2), a document which urges training teachers to effectively incorporate technology into their classroom curricula. While the report emphasises six themes to guide teacher action, there is a light touch acknowledgement of the inequity of experience that some children will bring and an absence of strategies that might see digital media as having a role in addressing the exclusionary practices that many children face. Instead, the document is heavily weighted towards ICT skills development and health and safety concerns. Additionally, research has shown that teachers do not feel confident and many have a limited view of how technology and digital media can be integrated across all aspects of learning (Livingstone 2010) and these issues are not addressed.

The children of minority ethnic groups such as Gypsy/ Travellers rarely have regular access to digital media in the home (Scadding & Sweeney, 2018). Contributing factors can be an inhospitable home environment, affordability, absence of support or mentors and parental nervousness over children's safety. Whilst these factors can be present in many families from different socio-cultural and economic settings they are more pronounced in

communities with a tradition of nomadism, exacerbating a digital divide between peers in classes.

The importance and originality of this study is that it takes an exploratory approach to understand what types of learning and inclusion are made possible when this diverse group— specifically Gypsy/Traveller children—connect with digital media in an everyday school environment. Understanding the possible links between the Gypsy/Traveller child and her culture, the school environment and the digital media will help teachers rethink normalised digital curricular practices from a marginalised minority group perspective.

This study also adds new insights into how children experience the school environment. By giving prominence to the agency of the material world, as well as human agency, this research contributes to a deeper understanding of the vibrancy of things in children's school lives. For too long these children have been failed by the school system. The findings offer teachers a new way of looking at the school and offer new insights into how the material aspects of the school environment can make the difference between children feeling that they are included or that they do not belong.

 Finally, primary schools are recognised as having important roles to play in creating positive change (O'Hanlon, 2010). However, to date children have rarely been consulted and staff know little of the material, cultural and contextual factors that affect the young people's school experience and decisions (Bhopal, 2004). The study generates new insights into how children's voices and criticality can be nurtured as participants in knowledge-sharing research processes. The combination of digital, visual methods and dialogic pedagogy offer appropriate and accessible ways for thinking and creating as part of a school ecology.

Teachers will benefit from the new knowledge that can be produced when children have relevant ways to identify and express themselves within the school environment.

1.12 The thesis structure

The overall structure of the study takes the form of nine chapters, including this introduction. Chapter 2 reviews three fields of literature and begins by framing the Gypsy/Traveller child in relation to current theories in Childhood Studies. It then turns to how the construct of inclusion is understood in relation to schools and, drawing on theories of belonging, proposes alternative ways of thinking about inclusion. Finally, the review provides a brief overview of the use of technologies and digital media in schools. By critiquing instrumental approaches it outlines some of the current thinking in digital media as a disruptor to exclusionary education practices. A theoretical framework brings these three fields together and, in doing so, surfaces the need for a way of thinking that includes the material world in each of the disciplinary fields of the review. The third chapter is concerned with the research methodology and lays out the theoretical dimensions, including how materialism and spatiality can be positioned alongside a constructivist approach. Chapter 4 outlines the research methods, providing detail on the setting design, tools and the issues around researcher reflexivity and ethics. The following three chapters (5, 6 and 7) respond directly to the research questions. They present and analyse the data gathered during the children's activities and offer an initial interpretation. Chapter 8 summarises and critically analyses the themes from the three data chapters and draws out their importance in terms of the literature. Finally, Chapter 9 concludes the study with a summary of themes and suggestions for what the findings can mean for future practice.

2 Childhood, belonging and digital media

2.1 Introduction

This research explores what can be learned when children from Gypsy/Traveller communities use digital media to make sense of how they belong within the school environments from which they are known to feel excluded. This chapter undertakes a thematic review of the literature to understand how the study can learn from and be located within three bodies of knowledge. I undertake an integrative review of three distinct themes— Childhood Studies, Inclusion and Belonging, and Digital Media— with each providing a necessary foundation for the research.

I begin by critiquing the construct of the Gypsy/Traveller child against the literature on conceptions of childhood. Kraftl and Horton's (2019) work was useful for reflecting on what childhood means within the Gypsy/Traveller culture. Also, by drawing on their proposals to 'decentre and recentre' the child, the review is able to benefit from a less humanist position and apply a sociomaterialist approach.

The second theme explores the notion of inclusion in relation to education. Here, I pay attention to Yuval-Davis' theories of belonging (2006) in setting out a structure for an overarching understanding of the factors that may be at play when families do not feel included and even marginalised by school practices. Several theories of belonging are referenced as they offer alternative and increasingly complex readings of inclusion for this study, particularly from a politically-based perspective. Antonsich's (2010) alternative view, written from the perspective of a geographer, most strongly rejects the commonly held characterisation of belonging as a social experience and offers important foundations for this

study. Instead of the emphasis on the social and relational aspects of belonging, Antonsich proposes 'place-belongingness' as an alternative and, in doing so, creates opportunities to consider children's familiarity with local, geographic and symbolic spaces (p.647).

In the final section I extend the notion of symbolic spaces, which have been discussed in each of the previous reviews by discussing the utility of digital media in offering a space for meaning-making and representation. To do this I draw on a fairly wide range of literature over the past 10 years that deal with the various themes that have framed the uses of mobile digital media in both school and alternative sites for learning. I do this by drawing comparisons between those studies that adopt predominantly sociocultural approaches with those that take a materialist position. I conclude by exploring the potential of a materialist approach to digital media use aligned with the concept of belonging.

Figure 2 illustrates how each theme in the review, in turn, builds on the preceding one. For example, how we understand the Gypsy/Traveller child's digital media production is critiqued in the context of the different ways that she can belong in school spaces. This, in turn, is contextualised within the context of a spatiality framework, which I describe more fully in 3.5. As the narrative in each section of the chapter develops it produces an overarching theoretical interest in the inter-relationships between human and non-human aspects of school practices.
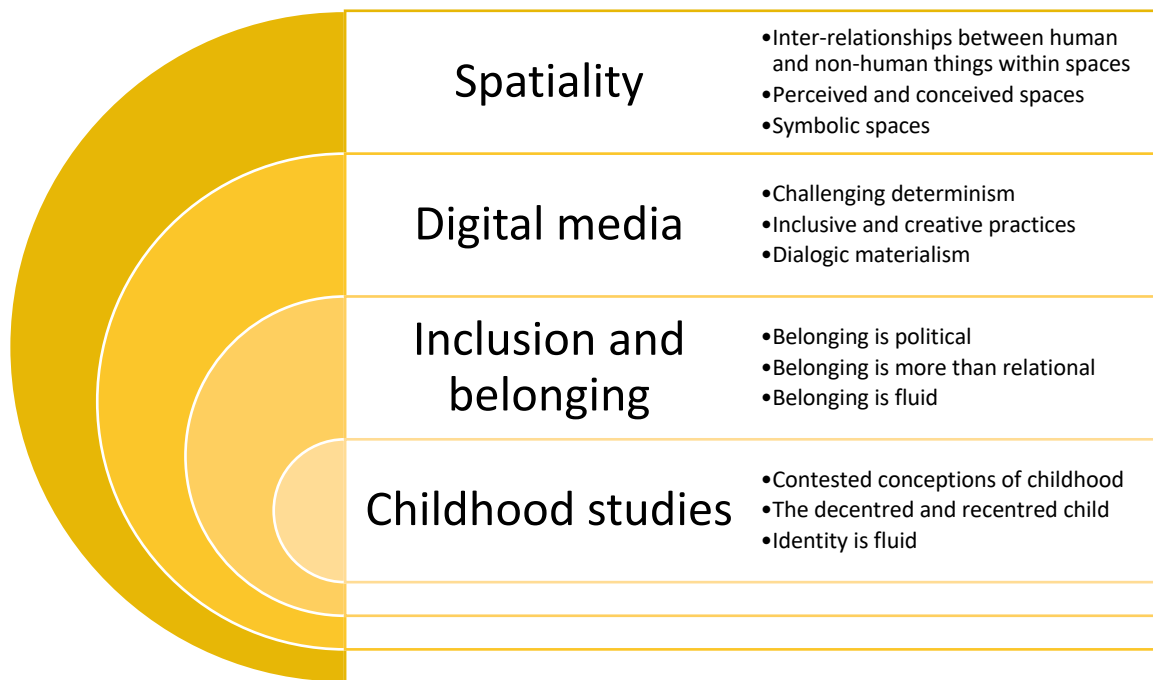
Figure 2: Theme development in the literature review

2.2   Childhood studies and the Gypsy/Traveller child

2.2.1   Rationale for positioning the Gypsy/Traveller child within the childhood studies literature

Before developing the main themes of the review it was important to develop a clear understanding of how the participating children should be framed. The participants were the children of Gypsy/Traveller families aged between 8 and 11 years and they were also pupils who attended primary schools. By drawing on theories of childhood I sought a deeper understanding of issues surrounding the children's identity, agency and voice. Childhood studies also allowed a more systematic critique of how the children were positioned by adults, society and governments as atypical or non-conformist and to question whether this is fundamentally a political issue. In the first section I review the literature relating to conceptions of childhood with a focus on what can be learned through the various 'turns' in Childhood Studies.

2.2.2 Turns in childhood studies

The Gypsy/Traveller child does not conform to normative, contemporary understandings of childhood. To gain clarity on how to position the Gypsy/Traveller child, it is necessary to revisit the significant shifts in how children and childhood have been understood over the past 30 years. Qvortrup et al.'s sentiment, 'children are beings not becomings', (1994, p. 2) sums up the main shift in the 1990s that moved scholarly thinking away from a modernist view of the child—that was, as an adult in the process of development. This modernist position had been dominated by structural ways of knowing and usually persisted through work in discrete subject disciplines such as biology and psychology. At the heart of this position was a belief that children were thought to be capable of structured development both physically and cognitively into adults who would become fully participating members of a society. With the view, also came a belief that there was potential for societal control over children's development processes.

A new paradigm of childhood emerged, which began with a fresh look at the ontological question of 'what is a child?', resulting in a repositioning of the child as, 'socially constructed rather than universal; as a reflective social actor rather than a passive presence within overwhelming structural determinations; and as an individual whose very ontological existence needed to be acknowledged as independent and autonomous' (Spyrou et al., 2019, p.7). In short, the new paradigm claimed to overcome the dualism between the biological child and the social child and moved towards a socially constructed version of childhood. The new child had her own agency and was seen as capable of being 'active in the construction and determination of their own social lives' (James & Prout, 1990, p. 8). The repositioned child as agent had implications for the field of childhood studies and it became more broadly

exposed to other influences becoming informed by disciplines such as history, politics, culture and geography.

2.2.3   The Gypsy/Traveller community perspective on childhood

The Gypsy and Traveller community view of childhood, both in the past and now, may be seen to be in opposition to the theoretical repositioning described as the turn in childhood studies. The commonly held view of the child by the community remains closer to the modernist ideology of 'children as becomings' rather than beings (Qvortrup 1994). Gypsy/Travellers are considered to be young adults from around the age of 12 and there is an expectation that they should work, marry and gain financial independence at a young age (Bhopal 2011). Families' expectations on the child as 'becoming adults' are often based on fixed views of the cultural, economic and practical skills required to become contributing members of the community and the necessity for children to develop these skills as early as possible (Harding, 2014).   This position demonstrates the tension between how the Gypsy/Traveller community and mainstream society view the child.

The community does not generally value individualism or the nurturing of children's unique competencies (Hamilton, 2016) in the same way that settled families might. Instead, Gypsy/Traveller culture promotes interdependence and is focussed on extended community and family needs rather than individual needs and gains (Jordan, 2001; Levinson, 2008). Families believe that by contributing to the social and economic life of the community, young people will become confident and develop a strong sense of identity (Liégeois,1994). This often materialises as cultural practices such as children growing up in close proximity to the natural world. They will typically be able to use natural materials and resources effectively, often with a strong entrepreneurial aptitude.

2.2.4   Representations of Gypsy/Traveller children in the literature

Tensions certainly exist between the Gypsy/Traveller communities' and society's perceptions of childhood and the situation is not helped when any new knowledge in the literature has focused excessively on examination of ethnicity rather than adopting more intersectional perspectives. For example, broader issues around gender, class, and cultural differences between groups might be usefully examined (Levinson & Sparkes, 2003). Cultural expectations relating to gender are recognised as a defining factor in many children's lives but they rarely present in the literature. There are strong patterns within the Gypsy/Traveller community where boys will be educated by older generations to join male relations by working in their trades and girls will be trained by older women, becoming skilled at domestic tasks at an early age (Derrington, 2016; Levinson, 2008; Marcus, 2019). Of particular concern is the absence of academic research that represents the views of individual community members in relation to these issues and, in an extensive search of the literature, Marcus found nothing substantial specifically about women (2019). Casey (2014) raises questions about the gender-blindness that characterises much research regarding Gypsy/Travellers. He suggested that by underestimating gender factors, there is a tendency to give primacy to race and discrimination issues that on their own fail to reveal the added 'gender burden' that pertains to Gypsy/Travellers, in particular women.

2.2.5   How society views Gypsy/Traveller children

I have discussed the emergence of the socially constructed child and its limited representations in the literature and I have also described some of the Gypsy/Traveller perspectives on childhood. Following the theme of the socially constructed child, it is also relevant to consider a wider societal perspective on Gypsy/Traveller childhood because,

ultimately, it is this position that influences how Gypsy/Traveller children experience education.

The societal perspective on the child is entirely influenced by attitudes to the Gypsy/Traveller communities in the broadest sense, suggesting that the child is inseparable from the community. The Gypsy/Traveller child is viewed as being primarily a product of the culture—one which is separate from the majority of mainstream society. Critics suggest that Gypsy/Traveller communities are marginalised from the mainstream, particularly in relation to services such as health and education (Scottish Government, 2015). However, O'Hanlon (2010) stresses the importance of reflecting on the term 'marginal'. Viewed from a different perspective, O'Hanlon draws on Freire (1977) who asserts that a marginal person is not 'outside of', but is 'inside of' his/her own culture, values and lifestyle. In the main, those from the dominant culture in any society or national context view themselves as being at the centre of 'something', and see the marginal people as 'sick' (O'Hanlon, 2010) and in need of help from the dominant culture.

2.2.6   Falling through the curriculum hoop

Schools are seen as an integral part of society and are rarely critiqued by those outside the education sector, however, they are actively involved in reproducing and legitimising particular constructions of childhood through a curriculum designed by governments (Vanderbeck, 2005). Unlike in England, Scotland does not have a national curriculum and the guiding policy, Curriculum for Excellence, claims to be innovative and inclusive (Scottish Government, 2010). To achieve this ambition the curriculum builds on key legislation such

as the Equalities Act[4], which places race, gender, age, disability, religion or belief, and sexual orientation as protected characteristics. The Additional Support for Learning Act (Scottish Government, 2017) outlines local authorities' duties to provide additional support for learning when any child or young person needs support for whatever reason.

However, there appears to be a tension between the inclusive curriculum and policy, and Gypsy/Traveller children's experience, given that the majority leave school at age 12 and few complete education to school leaving age. A defining feature of Curriculum for Excellence is its focus on personalisation and the promise of skills for learning, work and life. Claims to achieve a balance between the accumulation of both knowledge and skills, with a particular focus on vocational skills (Scottish Government, 2010), should chime well with Gypsy/Traveller values and beliefs.   However, Priestley and Minty (2016) are critical of aspects of Curriculum for Excellence and suggest that while the ideology may offer a fresh perspective, the enactment of the curriculum may be the problem. While the organisational structures of 'the Experiences and Outcomes' appear to be based on learning processes and skills, they also suggest an audit approach, 'arguably encouraging a culture of strategic compliance' (p.41). The authors view this as, 'the difference between radical enactment of Curriculum for Excellence as something new and fresh, and a more tokenistic approach, which seeks to maintain and justify existing practices under the umbrella of the new curriculum' (ibid).

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[4] The Equality and Human Rights Commission Technical guidance for schools in Scotland outlines the requirements of the Equality Act 2010 for schools in relation to the provision of education and access to benefits, facilities or services, both educational and non-educational.

2.2.7   The Gypsy/Traveller child misrecognised as a failure

Similar tensions exist beyond Scotland. Apple (2001) suggests that many curricula have been subject in recent years to 'a subtle shift in emphasis … from student needs to student performance, and from what the school does for the student to what the student does for the school' (p. 413). This rise of neoliberal ideologies has impacted on school priorities. According to Keddie et al. (2011), increased accountability and compliance attached to funding have impacted on what counts as 'quality schooling'. He suggests that emphasis now lies on 'easily quantifiable academic measures, particularly in literacy and numeracy.' With this scenario, personalisation and relevance for individual children and communities gets lost in school-level concerns for success. Worryingly, performative schooling cultures have impacted negatively on social and equity outcomes and according to Keddie et al, 'school equity is concerned with improved academic standards over social or cultural justice' (2011, p.77).   Potter and McDougall (2017) warn that schools giving themselves over to the testing arena are at risk of producing learners who may 'misrecognise themselves as failures' and they describe learners, 'positioned as databots who must be ranked and scored' (p. 6).

Within this culture of extreme accountability, Gypsy/Traveller children also experience higher rates of exclusion. The community reports that it negatively targeted. In her work on the attainment gap in Scottish schools, McCluskey (2017) highlights the need to distinguish between the most common recorded reasons for disciplinary exclusion, which can be relatively minor, and the root causes. It has not been unusual to hear reports of staff bias and even racism—in any case, even where the Gypsy/Traveller pupil may not be actively excluded, they may fail to be included. With the lowest attainment and attendance of any minority ethnic group (Cemlyn et al., 2009, Wilkin et al 2009) the children of Gypsy/Traveller families can negatively affect school data, thereby impacting on school

reputations. The effects of this situation can be seen in the unwelcoming actions of many schools and local authorities resulting in Gypsy/Traveller families opting to home educate. D'Arcy (2014) takes issue with the overused option of elective home education by the community. He suggests that on one level children can drop out of school with ease and this might be viewed positively as a liberal aspect of the education system, which is sensitive to cultural mobility. However he also proposes an alternative discourse—one in which Gypsy/Traveller families are committed to education but experience discrimination and feel they have no choice but to home educate—even when they do not have the resources to support children at home. This challenges the view that home education is a free choice. Instead, the elective home education system enables schools to relinquish responsibility for nomadic children who may not contribute positively to the data, which is part of the neoliberal culture of accountability. The challenge will be for a more inclusive approach, where schools find ways to recognise, value and account for the contribution of the Gypsy/Traveller child to the school community.

2.2.8   The Gypsy/Traveller child at the intersections between home and school cultures

Levinson writes that compromise may be necessary on the part of schools and communities in their expectations of the Gypsy/Traveller child. He adopts an equalities perspective and holds the view that communities need to be able to, 'retain their togetherness while accessing a wider range of opportunities' (2015, p. 1166). He also suggests that this would require a new level of accommodation of the child without assimilation into the values of mainstream decision makers. However, Levinson asserts that this will not be easily achieved and that there is concern from communities that, in their everyday encounters in the life of the school, Gypsy/Traveller children will be changed. They will experience, and need to respond to, the pressures to be accepted and fit in with school, while managing the pressures that come from

older family members with fixed cultural views. Levinson questions whether the young

people's choices may be, 'to continue forward alone, or to return to the other side' (ibid).

Much has been written about the differences between home and school cultures as sites of

learning (see D'Arcy (2014) with relevance to Gypsy/Travellers) but Bronfenbrenner's

seminal work (1979), offering a theory of human development, provides a useful lens to more

fully understand environmental influences on the Gypsy/Traveller child. Bronfenbrenner

contrasts four interrelated environments, which he describes as: settings where the person is

present such as home or school; places where these settings interconnect such as the

interaction between home and school; settings where the person is not present such as

government policy or technology; and the overarching cultural context in which a child exists

such as the economic, social and cultural climate of the time (1986). Bronfenbrenner defines

development in terms of 'a person's evolving conception of the ecological environment, and

his [or her] relation to it, as well as the person's growing capacity to discover, sustain, or alter

its properties' (p.9). This view suggests that Gypsy/Traveller children are not passively

responding to their cultural environment but can be creatively and actively involved in their

own developmental processes. Bronfenbrenner expressed concern that often each

environment was viewed in isolation and observed, 'Seldom is attention paid to a person's

behaviour in more than one setting or the ways in which the relation between settings can

affect what happens within them' (1979, p.18). Plowman (2016) also takes issue with default

understandings of context in this way in a study examining digital technologies in children's

everyday lives. From a research perspective she suggests there may be a need to reconsider

the terminology of context as boundaries (between contexts) become less distinct.   This

observation becomes even more relevant later in this research when I suggest that digital

media offers a fluid context for aspects of the participating children's identity development.

It is also the case that, with the Gypsy/Traveller child, there is often a firm boundary demarcating the different contexts of home and school. More worryingly, the child can be isolated in trying to make sense of the places where these settings interconnect. As much of the literature seeks to understand the Gypsy/Traveller child from an ethnographic perspective, positioned within their home culture, there is an absence of intersectional understandings of the impact of geography, politics, culture, and economics on children's lives. Decision makers rarely consider the potential of the integration of home culture into the curriculum, the educational impacts of nomadism or, at a political level, whether society can accept that successful educational outcomes can take a different form for children from nomadic traditions, such as Gypsy/Travellers.

The socially constructed child of 'the new social studies of Childhood' (James and Prout, 1997) described at the beginning of this section is believed to have her own legitimate voice and the field is typically interested in uncovering her agency, usually in relation to her experiences of childhood (Kraftl & Horton, 2018). However, the substantial part of the review to this point has offered a range of reasons why the Gypsy/Traveller child does not fit with common constructions of the child and overly-simplified understandings of childhood are not helpful. Moving forward, I refer to a small but growing 'new wave' critique of the literature that has emerged and that warns the field of childhood studies against complacency, highlighting the need to continue to reposition itself in light of changing societal demands (Spyrou, Rosen and Cook, 2018). A more sophisticated understanding of the Gypsy/Traveller child commands such a repositioning of the field. The new wave I describe has emerged from across several disciplines including human geography, sociology and education studies. The following section discusses how the concerns of the 'new wave' may have value to a framing of the contemporary Gypsy/Traveller child.

2.2.9 Decentring the Gypsy/Traveller child

In the majority of the literature, with the exception of the 'new wave' critique, the singular, culturally, socially and historically embedded child who can demonstrate creativity and active engagement in the here and now has been favoured (Cook, 2002; Oswell, 2013). A specific focus of the 'new wave' critics' discomfort is the unquestioned centring of the 'constructed, agentive, knowing child' in the literature to the point that it 'regularly enfolds back onto itself, often reappearing as the solution to the problem it poses' (Spyrou, Rosen, & Cook, 2018, p.1). Spyrou et al. suggest that this agentic child may be the main obstacle to moving forward and that the reason the agent child is overused by some writers is that, by fetishising the child's agency, disassociation with the psychological, biological or structural ways of knowing from the past can be guaranteed.

The 'new wave' critics dispense with the idea that the child should be the primary object of analysis in a research setting. Kraftl and Horton (2018) present the case for both 'decentering and then recentring' the child in the field of childhood studies (p.107). The authors acknowledge that, for some, this runs against the very idea of childhood studies. A central premise is that childhood is not limited to a human social construction but that childhood experiences also include non-human materialities—this does not preclude 'the social' but suggests childhood should be conceived as 'more than social' (Kraftl, 2013). Non-human technologies and artefacts that are embedded in social relations can range from the desks, mobile phones or toys of everyday life to physical manifestations of poverty and inequality (Hall, 1985; Katz, 2003; Kraftl, 2006). The need to recognise sociomaterial relations, such as artefacts, technologies, and urban infrastructures, is also highlighted by Youkhana, who suggests that the commonly used intersectionality approach needs to go beyond the established analytical categories and how they multiply processes of inequality (2015).

The 'new wave' suggests new positions that claim to extend the theoretical and ethical premises of childhood studies (Kraftl and Horton, 2018). In a recent editorial for a special edition of Children and Society, Stryker et al. (2019) pose questions about the potential value of increased attention to materiality or the interactions between natural and cultural or human and non-human forces in Childhood Studies. Four themes emerged through the papers of contributing editors including: the relational, the historical, the political and the inclusive. As one of the contributors, Thomas questioned the potential value of increasing attention towards materiality, and proposed the need to more seriously understand how children relate with and constitute our material worlds. The suggestion has been that, by doing this, society might be capable of much more (2019). In particular, Thomas promoted children's important roles in tackling global issues, highlighting their valuable contribution. To illustrate this point, Thomas draws on Young's position on democracy as, 'a means of collective problem-solving which depends, for its legitimacy and wisdom, on the expression and criticism of the diverse opinions of all the members of the society' (2000, p.6). Spyrou expanded on this position quoting Hultman and Lenz Taguchi, who state, 'Placing children within this larger relational field of both human and non-human forces we begin to explore their *becomings* as necessarily and inevitably interdependent 'on other bodies and matter'' (2010, p. 525). Stryker (2019) writes that while children's subjectivities can be produced out of this intra-activity they need not resort to romantic claims about authenticity. Similar to others, Stryker also promotes the view that children are capable of developing generative relationships between and with others, rather than the view that they act on or are acted upon.

Developing the theme of interdependence with non-human as well as human forces, Stryker questions what then becomes of the central ideas of childhood such as 'child-centredness',

'children's voices', and 'children's perspectives' and asks for a more relational and ontological understanding (2019). He argues, 'If children's ontologies are not pregiven but unfold out of their intra-actions with other human and non-human entities, then nothing is by definition children's (or anyone's) own' (ibid., p. 219). While Stryker's argument can be viewed as extreme by some it offers this thesis a useful flexibility for describing how the Gypsy/Traveller child might be repositioned in relation to the materialist debates discussed previously. Binary distinctions such as how Gypsy/Traveller children are perceived as children or adults or as members of school or home cultures can be avoided. It is possible that these distinctions have been prohibitive in the past and more flexible understandings of Gypsy/Traveller childhood may open new possibilities for practice. However, while Stryker asks for a more critical engagement with the 'messiness' and 'complexity' of children's lives and suggests pursuing other ways of knowing (ibid. p. 302), I am mindful that these may be challenging to implement.

In this section the specific focus was to discuss how the Gypsy/Traveller child can be understood through the lens of childhood studies. I explored earlier discourses around childhood and I discussed how some of these played out in relation to families, culture and the education sector. I also drew attention to how childhood can be subtly constructed and reproduced in line with an overarching neoliberal government agenda and the consequences that this can have on Gypsy/Traveller experiences of schooling. I also drew attention to curriculum discourses to illustrate how Gypsy/Traveller children can be excluded from inclusion agendas. Despite these well-rehearsed discourses it is clear that there is a need for alternative positions if inclusion is to be achievable for the Gypsy/Traveller child. I conclude by proposing the 'new wave' in Childhood Studies, described by Kraftl (2019), Stryker et al.

(2019) and Spyrou et al. (2018), as a useful lens for decentring the child to produce new ways of knowing while also maintaining central ideas such as children's voices and agency.

2.3   Inclusion and belonging in school spaces

The architecture of a school can look and feel like a factory or like a home.

If we want children to feel like factory workers our schools should look and

feel like factories. (Eisner, 2002)

The previous section began and ended with two developments in the Childhood Studies literature. The first turn, with its emphasis on socio-cultural constructions of childhood, helped explain some of the complex background to the Gypsy/Traveller child's experiences of exclusion when they are unable to conform to the norms of the education sector's neoliberal projections of where society needs to be and how citizens fit into the model. Accordingly, the emphasis was on factors such as family, culture and curriculum as they were seen to impact on children's experiences. The socio-cultural approach makes an assumption that the child is at the centre of a world where she has some potential to construct her own experiences. However, the section ended with a summary of new wave thinking in Childhood Studies, suggesting that children may need to be decentred and recentred within a wide range of human and non-human aspects to allow new ways of thinking about childhood across different disciplines. This latter position introduces a theme based around human and non-human intra-actions that runs through each of the literature review sections and, by extension, the entire thesis.

In this next section of the review I turn attention towards the factors that might affect how children experience inclusion in education. More specifically, I am interested in how we might understand and act on the child's perceptions of their own experiences of inclusion.

These interests raise questions about how the child's perceptions may become valuable entities within a wider arena of human and non-human aspects of a research discussion. As the previous section suggests, there are multiple factors described in the literature that contribute to the exclusion of Gypsies and Travellers - including the political and social and, I suggest, also the material.

To understand the exclusion better, I begin by sharing the widely held belief that the majority of families sever relations with the education system because they do not feel that their children are valued and included in schools. From an educational perspective I take the view that the term 'included' means not only being able to access school but also how schools can actively prevent the discrimination, disadvantage, and exclusion that can affect many children such as Gypsies and Travellers (Ainscow, Dyson, & Booth, 2009). While the literature abounds with a variety of definitions of inclusion, I align with Ainscow et al. who focus on the ideas of presence, participation and achievement. For these authors, inclusion and exclusion are linked together such that the former involves the active combating of the latter and inclusion is seen as a never-ending process.

Florian and Linklater (2010) provide a useful historical overview of inclusion as it relates to education. Historically, the term was used in the context of including children from separate or specialist school provision into the mainstream, usually by offering individualised learning programmes to meet their special needs. However, the term has more recently acquired a more universal use, and it is more broadly applied; for example, 'inclusive pedagogy', recognises and responds positively to the many differences between learners in learning and teaching situations. It rejects the idea that ability is fixed and that, given the correct support, a child's ability can improve. Teachers are required to move away from deterministic

practices based on the false assumption that we can predict future 'potential' from earlier performance (Florian & Black-Hawkins, 2011). The suggestion is that pedagogy should avoid categories that mark children out as being different as they can increase exclusion through labelling and stigmatisation (Hart, Dixon, Drummond, & McIntyre, 2004). Rather than offering something different, an inclusive approach to teaching and learning should involve the provision of a rich learning environment, offering learning opportunities that are available to everyone so that all are able to participate in school life (Florian and Linklater, 2010).

It is no surprise that, following years of exclusion by the majority cultures in society, many Gypsy/Traveller children can feel excluded both socially and pedagogically within the school setting (Kiddle, 1999). Gould suggests that an important prerequisite is that to succeed in schooling, it is necessary for children to feel a sense of belonging and comfort within the school (2017). For the remainder of this section I discuss the concept of belonging as a more helpful, alternative term for reflecting on Gypsy/Travellers' inclusion in schools. I am guided by Antonsich (2010) who proposes, '...belonging is not activated as a discursive resource for drawing boundaries of social inclusion ⁄ exclusion, but as a personal, intimate, existential dimension that narrates and is narrated by the Self' (p.647).

2.3.1   An introduction to the concept of belonging

Belonging is considered to be a relatively new theoretical term (Youkhana, 2015) although the processes, practices and theories of belonging have become a subject of interest across many disciplines (Bansel, 2018). The use of belonging as a discursive resource can be seen in political science (Yuval-Davis, 2006, 2011), race relations (Garbutt, 2011) sociology (e.g., (Savage, Longhurst, & Bagnall, 2010), social geography (e.g., Antonsich, 2010; Wright,

2015; Taylor, 2009); psychology and health (Resnick et al., 1997); philosophy and cultural studies (e.g., Probyn, 1996), and youth studies (e.g., Bauer, Loomis, & Akkari, 2013). Much less discussion has focussed on how belonging operates and might be theorised in the field of education (Bansel, 2018).

In the following section I look at some of the growing literature on the concept of belonging within the social sciences. Firstly, I provide a background to how belonging has been understood from both social and political perspectives. I begin with an expansion of the work of Yuval-Davis (2006, 2011), who essentially suggests that belonging is always political. She proposes that to understand how people belong requires three levels of political analysis: through social location, identities and emotional attachments and by considering levels of judgement and value. I summarise each of these to provide context for my use of the term. For Yuval-Davis each level can offer an important way of understanding the different ways that belonging can be constructed within community settings such as schools.

2.3.2 Belonging is political

Yuval-Davis suggests the first level of analysis for belonging is social location. Viewed this way, it is usually hierarchical and described within categories such as age, gender, race, class and ability. However, Yuval-Davis also suggests that social location is also affected by the social and historical context in which it is played out. Power and influence are central to social location and these are affected by how the intersection of social locations and contexts come together. For example, the concept of school is likely to be experienced differently by a young, female Gypsy/Traveller from a family with low confidence in their use of written English compared with a pupil from a family where there is a tradition of high achievement in academic education. On the other hand, belonging within the delivery of traditional trades

such as gardening will cut across race and class and a young Gypsy/Traveller pupil may excel and experience belonging where others may not.

Yuval-Davis relates the second level of analysis to identities and emotional attachments. She describes identities as the stories that people tell themselves and others about who they are and are not. Within the Gypsy/Traveller community there can be contradictions such as young women and girls' narratives of empowerment, which counter the stereotyped portrayal of oppression where they are all victims without agency, choice, or voice (Cressy, 2018). As well as belonging to social, racial or cultural groupings, identity stories or narratives can also be about individual attributes, such as educational ability or how individuals look or dress. A shared identity is a defining feature of being a member of a travelling community. Identity narratives can be individual or collective and, as in the case of the travelling communities, they can be passed through generations (Derrington, 2016). Importantly, narratives are not stable and, similar to social location, they can be challenged and affected by historical and social contexts. Identity narratives can draw on past traditions as a way to explain a present way of being. However, according to Yuval-Davis, "...above all, [narratives] function as a projection of a future trajectory'. To some extent, we will see that the communities in this study deviate from Yuval-Davis's position. Group identity narratives can often be fixed in the past with less willingness to change and reflect historical context. As a result, young people within communities can feel tension aligning their individual contemporary stories with the collective narratives held by the wider group.

The final aspect of belonging described by Yuval-Davis (2011) relates to how the social belonging and identity narratives described above are judged and valued. She suggests that it is the attitudes and ideologies relating to how and where identity boundaries are drawn and

maintained that shift discussions of identity into the realm of politics of belonging. This implies that it is not just about who does or does not belong but about the processes that make belonging possible and able to be performed and experienced. It is also therefore about who holds power and how power is exercised. The politics of belonging therefore always involves both physical and symbolic boundaries that separate individuals in the world, maintain and reproduce these boundaries, and are open to contestation, challenge and resistance (ibid.).

2.3.3 Belonging in education

Yuval-Davis describes belonging as it is expressed across society and her political perspective provides a useful backdrop. There are also an increasing number of studies focussing on the construct of belonging in relation to its utility within educational settings. Within the school education system, boundaries can be seen as symbolic but they have immense impact on the educational experiences of children outwith the normal sedentary population. To them, even these symbolic boundaries around everyday school practices can appear inflexible (Youkhana, 2015).

Many studies on belonging have been based in the field of psychology where the focus has often related to the need for relationships and powerful attachments to allow belonging to be experienced. From a psychological perspective belonging can be aligned with motivation theories and it is common to look at the types of relationships that encourage a sense of belonging. Within the field of education a common interest for studies of belonging has been to interrogate the role of the teacher. Anderman and Freeman (2004) emphasised the importance of a teacher's ability to provide classroom environments where both motivation and mutual respect exist between children and teachers. The authors also claimed that

belonging had an increasingly central role to play in understanding motivational processes to participate in school contexts and they provided evidence through children's self-reports that without teacher intervention there was a decline in levels of belonging, particularly as children grew older (beyond middle school). Anderman's earlier study (2003), beginning in 1999 and gathering data from 618 children across 7 schools in Kentucky, found that students reported a declining sense of belonging from the spring of sixth grade (similar to the stage of participants in this study) to a similar time the following year. This unpredictable result suggested that, while their period of time at the school increased, children's sense of belonging decreased. Children also reported a greater sense of school belonging when they perceived their learning activities as interesting, important, and useful. In their study, Anderman and Freeman (2004) concluded that sense of belonging necessarily incorporated academic performance and motivation along with perceptions of the social context of schooling.

Within the psychological field there have also been a range of studies focussing on the importance of belonging to children's health and wellbeing in schools (Haslam, Jetten, Postmes, & Haslam, 2009; Holt-Lunstad, Smith, & Layton, 2010). Of particular relevance to this work is Allen and Bowles' study (2012), which is based on the educational experiences of young people in Australia and how belonging or not belonging has been seen to affect their general sense of wellbeing. The key findings suggest that this type of belonging is affected by a range of factors. The authors cite the importance of the development of trusting and fair relationships between staff and children and their families as well as shared high expectations. Extending the psychological perspective the research draws on an earlier study by Baumester and Leary (1995) in reiterating how humans are motivated by the need to form attachments and, they too, draw on Bronfenbrenner's construct *The Ecology of Human*

Development (1979). This was referenced earlier in this chapter, and drew attention to the importance of context. Bronfenbrenner proposed a system of interdependent environments that influence a child' s experience and development, beginning with the child's need for relationships, initially with family and extending to friends, schools and community groups and wider organisations.

In the main, the majority of studies that make theoretical connections with belonging in educational settings focus on socio-cultural positions (Anderman, 2003; Bansel, 2018; Isci Pembeci, 2019; Osterman, 2000)—many, with the aim of seeking to understand issues relating to social justice and racial perspectives. We have seen that many of these studies have placed emphasis on the need for children to form strong social relationships with both peers and teachers to achieve this. Faircloth's study (2009) offers a departure as, whilst it recognises the importance of teachers and peer relations, its focus is also to combine social justice and curriculum. It draws attention to the experiences of individual children in a project, which examined relationships between adolescents' belonging and opportunities to integrate their sense of identity within English assignments. In her analysis, Faircloth indicated that the model of belonging which reflected student voice, culture and identity and allowed individuals to exercise agency was better than one based solely on social relationships. She draws on the related area of theory and research into identity, which highlights the notion that adolescents are intensely involved in processes of identity development (in Erikson, 1968) and that these processes can affect their reaction to any context. Faircloth provides a shift away from the emotional attachment perspective and points out that the three sociocultural dimensions of belonging (voice, culture and identity) are more significant to her participants' classroom belonging than relationships with teachers and peers. Speaking of the young people, Faircloth says, "Their sense of self, of their own

voice, and their connection to class seemed to enlarge as a result of being able to 'speak' their identity." She echoes the work of Williams (2006) by making a connection between identity development and language suggesting that the two cannot be separated, although for Williams it was necessary to enable students to express their identities through writing as a way of exploring and making sense of themselves in the world.

An additional finding from Faircloth's study was the importance that the children placed not just on relationships with teachers and peers but also on the processes of interacting with them. Listening was flagged up as a necessary way of accessing other people's ideas and enjoyment was increased when there were opportunities to learn from and about one another. The question of who is listening, and how, has been linked to the issue of voice, which has become prominent in discussions of young people's participation in schools. McLeod (2018) draws attention to the dynamic character of voice stating that considerations of voice should not only relate to politics and ethics but to voice as a communicative practice that invokes self/speaker and others/listeners. Couldry (2009) writes of the necessity of voice being viewed as both speaking and listening as a way of engaging different perspectives. He stresses the importance of individuals' abilities to modify their positions as part of a communicative practice. I develop an argument for the importance of the speaker–listener relationship to young people's experiences of belonging in schools in the next section when I discuss a dialogic approach.

Whilst acknowledging the benefits of belonging, particularly to health and wellbeing and education, te Riele draws attention to some of the counterproductive impacts (2018). When belonging is described in terms of a family-like or home-like environment young people may be drawn to particular settings or to making particular decisions while closing off other

options. te Riele illustrates this point by describing a young person who had sabotaged his work towards the end of a school year and it was believed the reason was his fear of success, which might lead to progression to another location and leaving the safety of the current class. Alternatively, the perceived criticism of others can have an effect when educational success is not viewed as desirable. Certainly, within the Gypsy/Traveller community it is acknowledged that many families do not encourage their children to excel academically beyond the basic grounding offered by primary school. te Riele describes the possible effect of one position on the other saying, "… feelings of being an 'insider' at the micro level may work to maintain exclusion at the macro level"(ibid).

2.3.4 A sociomaterial framing of belonging

More recently a number of studies have offered alternative approaches to how belonging can be understood—many are rooted in spatial and materialist theories. In this section I summarise the theoretical and empirical literature that provides a foundation for a sociomaterial lens on this work. Antonsich (2010) writes from the perspective of a geographer and is critical of what he sees as an over-emphasis on belonging as attachment to the social collective resulting in overlooking emotional and spatial connectedness to places and spaces. A sense of belonging, he proposes, arises from an individual's attachment to a familiar locality, territory, geographic place or symbolic space that gives one a feeling of being 'attached to and rooted' and where one feels comfortable, secure and at home (p. 647). He describes this personal, intimate and existential sense of self and place attachment as a relationship of 'place-belongingness'(ibid.). Drawing on a sense of place, Antonsich addresses the interrelationships between the 'here' and 'there' of belonging. Each symbolises opposite ends of a continuum between places of belonging and not belonging. According to Antonsich the close proximity of 'here' suggests a place of familiarity, comfort and security. 'Here' can also suggest inclusion in the space of the majority group, while 'there' suggests remaining

'outside' or in a place where, as a minority, belonging is never experienced. Antonsich argues that belonging should be analysed both as a personal feeling of being 'at home' in a place and as a discursive resource that can both construct and resist forms of socio-spatial inclusion ⁄ exclusion. Drawing on Antonsich, an overarching question for this is how communities of belonging can be positioned in relation to our understandings of communities of identity.

Although primarily based in migration studies, Youkhana (2015) extends the concept of belonging to consider the complex relations that individuals have, not just with other people, but also with objects, artefacts, and changing social, political, and cultural landscapes, thus mirroring both the material conditions and the underlying power relations. Importantly for this study, Youkhana suggests that by focussing on what is performed as belonging, we can better understand which instruments are used in processes of "othering" (in Spivak, 1985), how these processes are sustained and she asks how new processes of belonging might be produced. Youkhana (2015) suggests that belonging should not only be understood in terms of social, political and territorial boundaries but should also reflect its colloquial meaning of 'a circumstance connected with a person or thing … [that] comes into being between people and things, and between people and people' (p. 16). In this way, belonging is 'a sociomaterial resource that arises by means of multiple situated appropriation processes and that describes multiple attachments that can be social, imagined, and sensual material in nature' (ibid.).

Rather than 'place-belongingness' (Antonsich, 2010), Baroutsis and Mills (2018) adopt the term 'spaces of belonging' in the development of an analytical framework that combines the social and the material in a school setting. While the idea of spaces of belonging initially suggests a materialist ontology, the authors also draw together some of the psychological,

social, and pedagogic aspects along with an awareness of the material concerns inherent within the practices of school communities. They propose a three-part construct, which comprises relational, pedagogical and material spaces of belonging. I draw on these three spaces in more detail when analysing the data in relation to belonging and describe this process in Chapter 4.

Unlike the mainstream schools studied in this thesis, Baroutsis and Mills' empirical study (2018) was based in an alternative school setting in Australia, therefore the environment would have many more informal characteristics than the mainstream schools in this study. In their context the authors described relational spaces as those that were associated with a family and they provided care, supportive relationships, and acceptance of the young people. Pedagogical spaces were characterised by environments that enabled young people to be supported and guided through meaningful learning experiences that are felt to be relevant and chosen by the young people themselves. The study found that with positive relational spaces young people's opportunities within the pedagogical spaces were also enhanced. Material spaces provided safe environments for learning and development. McClanahan (2018) echoes these sentiments to some extent but she also brings the concept of belonging back to children's agency, stating the need for practices and procedures that offer a comfortable space where students can feel safe and have their voices heard, enabling them to contribute in some way to their learning and environment.

In this section I have discussed the possible shifts in thinking offered by spaces and pedagogies of belonging. I have also recognised Baroutsis' and Mills' framework as a useful construct for reflection on the multiple sites that can impact on learners' sense of belonging in schools—their conclusion suggests the need for the creation of a space that combines both

material and symbolic spaces. Youkhana's more theoretical position has been useful to reflect on the underlying political conditions that may prevent belonging as well as how spaces of belonging might be imagined and produced.

Following the first two sections of this review, addressing the constructs of childhood and belonging, the theme of inter-relationships between the human and material has emerged, illustrating the value of noticing the close relationships that can become apparent between the children in the study and a range of significant things, concepts and people within the school setting. In the next section I introduce digital media to the discussion with a view to how they might be understood as aspects of the inter-relationships in school spaces, and particularly how they might support children's sense of belonging.

2.4   Inclusive models of mobile device use in school spaces

2.4.1   Introduction

This final section of the review builds on the previous two sections on Gypsy/Traveller childhood and belonging. I review this literature with a specific focus on understanding what types of digital practices might contribute positively to Gypsy/Traveller children's experiences of more inclusive school spaces. I am also mindful of the need for research strategies that may produce new ways of knowing in line with the central ideas in childhood. I integrate this need with the knowledge that belonging can be generated through multiple contexts. Antonsich (2010) suggested that to move forward, it might be necessary to look at all the possible ways that belonging can be articulated. His terms 'here' and 'there', which describe the binaries of belonging and not-belonging suggest that we can come to know what 'here' means in in multiple ways. Relevant to this section my study illustrates that 'here'

could present multiple opportunities for the roles of digital media in providing a space of comfort and familiarity, for there is no reason to suggest that belonging could not be imagined in a digital realm.

The section begins with a brief overview of technologies in education by way of setting the scene for the use of digital media. Following the context-setting sections I limit the discussion to digital media use in school education and outline some of the recent challenges to progress. I share several frameworks based on empirical studies that have sought to explain the specific characteristics of mobile technologies within educational contexts. As the research interest is based around the experiences of Gypsy/Traveller children, who are marginalised from schools as a result of the constraints of the formal school practices, I place particular emphasis on the possibility of creative, digital pedagogies that might offer a familiarity for children in line with Antonsich's conception of 'here' as a place of belonging.

My approach in this section of the review mimics the structures I used in the previous sections on childhood and belonging. In this way, I begin by discussing the socio-cultural approaches present in the literature, I then develop the discussion by exploring the potential of alternative ways of framing and understanding children's use of digital media, particularly with reference to critical and creative approaches. As in previous sections, I draw particular attention towards sociomaterial understandings. I am interested to know more about the various human and non-human elements that are involved in children's digital media production and, ultimately, how these relate to their experiences of belonging in school spaces. As the section focuses on digital production and editing, I have encountered many terms used to describe different types of technologies and their uses. I begin with a clarification of how some of these terms are used in this study.

2.4.2   Terms relating to texts, media and technologies

Mobile devices are one of many technologies that are used in classrooms. They are a part of what media scholars would call *delivery technologies*. Jenkins makes clear the distinction between delivery technologies (CDs, computers, mobile devices) which he suggests become obsolete and get replaced and media (painting, song, film) which he believes evolves (2006).

I occasionally use the term *tablet device* to describe specifically the hardware used by the children in this study. In general, the terms mobile devices or digital media are often used interchangeably and can be used to describe netbooks, laptops, smartphones and tablets. In this study the participants were each partnered with iPads as their use had been adopted by both participating schools. An important feature of digital media, such as iPads, in education is coined by the phrase *mobile learning* — also described as '*ubiquitous learning*' due to its capacity to provide learning any time and in any place.

I also align with Bruce and Levin's justification for using the term *'media'*, rather than alternatives such as '*technology*', '*tool*' or '*application*', as a way of shifting the focus from the features of technology towards the learner. The writers claim that '*media*' suggests 'the mediational function of technologies, which link the pupil to other learners, teachers, other technologies, ideas, and the physical world' (1997). However, I use the general term '*technologies*' when I am referring to the physical or technical aspects of media or devices. Many scholars use the term '*digital text*' to describe the images produced through the digital mediation process. The grammar of '*the text*' is a central concern in the research field of multimodality with many scholars taking interest in its design and technical properties (Jewitt, Bezemer, & O'Halloran, 2016; Kress, 2010). My research interest lies specifically

with digital visual media production processes and the explanations offered by the media producers (Leander & Frank, 2006) and, in the main, I refer to them simply as digital images.

2.4.3 Three critiques of digital technology use in schools

Digital technologies have had a presence in schools for decades now yet there is still uncertainty over how they should be used in educational settings and the extents to which they are useful. In his turn of the century book, Cuban investigated the use of ICT in schools (2001). His aim was to challenge the belief, '…if technology were introduced to the classroom, it would be used; and if it were used, it would transform schooling' (p.13). Cuban was one of the first of many researchers to find that progress was hindered by deeply ingrained traditional school practices that did not recognise the potential offered by the new technologies. It appeared that there was a belief that technologies would be able to drive progress but there was limited recognition that the continuation of traditional, instructional teaching practices would not align with the technologies that the pedagogies required (ibid.).

A related theme that troubled educators was the uncertainty over how the success of technologies integration should be judged. Livingstone distinguished between three critiques of technologies in schools allowing her to ask: what is going on, how can it be explained and how could it be otherwise (2012). In her 'analytical critique', Livingstone demanded a 'sceptical analysis' of the claims for technologies—particularly grand claims for the transformation of education, knowledge and childhood. At the time of her writing there had been limited evidence of how ICT could support learning. Livingstone called for greater scrutiny and the need for stronger evidence of alternative, more creative pedagogic developments. A particular challenge was the absence of definitions of technology-related

'soft skills' and knowledge of how they could support formal education. Without these, Livingstone felt it would be difficult to assess the contribution of ICTs.

Livingstone's 'explanatory critique' drew attention to competing theories, particularly the polarisation of the debate between technological versus social determinism—or what is technology doing to society versus whose interests does it serve. Another aspect was the confusion over how technology could be used in pedagogy, whether as tools to support existing approaches or to inspire a more fundamental shift in which the relationship between learning and society, teachers and children's knowledge would need to be reconsidered. Or as Livingstone asked, '…should one hope they will enable alternative, student-centred, peer-based, variable critical reflections on ICT and creative forms of knowing?'.

In her third 'ideology critique' Livingstone asked how things could be different as a result of technologies, and referred to Warschauer who argued that technology should be understood in relation to the underlying unequal power relationships that exist in society (2004). In line with Warschauer, she questioned whether technological changes could be empowering or whether they would continue to reinforce the views of those who are currently in power. While adopting a generally critical standpoint, Livingstone also acknowledged some of the recent positive shifts towards a more 'child-oriented digital creativity'. While Livingstone's three critiques were originally intended to analyse the raft of new technologies at the time, the same critical lenses can be used currently to understand the effectiveness of digital media in schools. We are almost a decade ahead, digital media has progressed in unimaginable ways, yet Livingstone's critiques still seem relevant and necessary.

2.4.4   New equipment and poor uptake

In a report commissioned by NESTA[5], Luckin et al., (2012) were critical of the continuous quest for new equipment and suggested that better use should be made of what is already available, emphasising that it is not only innovation in materials but also practice that will guarantee improvements in learning. The report highlighted the ubiquitous nature of technology, stating that digital tools should not be used in isolation for a single learning activity but should instead be used in conjunction with other resources for a variety of purposes. The report also called for more inclusive tools and inclusive ways of using them— particularly those that supported collaboration and enquiry with creative potential to unlock new types of learning. In effect the report was one of the first to turn the debate on its head by changing priorities to identify how progressive learning practices can make the most out of available technologies rather than looking for technology to transform learning.

In essence, the main arguments were against the instrumental and reductionist expectations on the application of technologies to classroom settings described as 'technological determinism' (Selwyn, 2011). Instead, Livingstone (2012) and Luckin et al. (2012) were proposing a socially positioned standpoint over a technological one. Bayne also recognised the potential limitations of binary thinking and urged a move beyond thinking about how education acts on technology or alternatively how technology best acts on education. Instead, she acknowledged the wider issues at stake and the co-constitutive nature of both education and technology, which she described as, 'entangled in cultural, material, political and economic assemblages of great complexity.'(Bayne, 2015, p. 19). While Bayne's view will need to be recognised by curriculum developers and politicians, at the classroom level, it is hard to imagine how more complex understandings might be absorbed into the classroom project.

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[5] National Endowment for Science, Technology and the Arts

2.4.5   Comparing technology use in school with informal environments

Education structures are believed to be a significant prohibitive factor for technology integration (Selwyn, Potter, & Cranmer, 2009) and a general consensus exists that technology can be put to educational use more effectively when not constrained by formal education settings and when it connects to children's lives and culture.   According to Potter and McDougall, instead of technology being designed to connect with lived cultures, it is instead serving the purposes of neoliberal education systems (2017). Many have drawn comparisons with such restrictive educational use and how young people use technology out of school settings (Sandberg, Maris, & de Geus, 2011). These differences were also a recurrent theme in Livingstone's work (2012), where she claimed that technology was used predominantly to improve only basic curriculum skills such as reading, writing and maths — a position, which results in effectiveness being judged on aptitude testing alone (Smith & Curtin, 1998). In a meta-analysis examining findings from 122 peer-reviewed academic papers, Chauhan (2017) found that informal environments had a higher impact on the learning effectiveness of elementary students as compared to the classroom and computer laboratory.

Selwyn et al.'s study (2009) addressing attitudes to, and uses of, ICT in school and at home drew particular attention to the voices of children. The study involved over 600 children and the authors concluded that, at the time, there seemed to be little enthusiasm or excitement amongst primary school children about ICT use within formal education. They also noted that creative and collaborative uses were not prevalent either inside or outside school, 'with passive consumption rather than active production the dominant mode of engagement' (p.929). The study recognised the need for ICT provision that more closely met the needs, values and experiences of young people.

The intersection between technology use in formal education and the lived experiences of children and young people was investigated by Erstad and Silseth through the concept of *futuremaking* (2019). Their study sought to understand how young people take advantage of resources in contemporary societies that are made available through digital technology, and how such resources become part of their identity development over time. The concept of *futuremaking* brought into view young people's past, present and future orientations, both within their communities and beyond, and how these played out in their technology uses. For example, one participant in the study, while aspiring to become an accountant, was not disinterested in school Maths, yet was highly motivated in self-initiated technology-based maths practices in a local community centre, where he developed skills and competencies through a research-based approach. Central to Erstad and Silseth's research was the concept of *learning lives,* suggesting a focus on students in motion across contexts of learning (Erstad & Silseth, 2019). Children's *learning lives* includes their knowledge practices, learning identities, and any transformative practices that they may be involved in across both school and everyday life with digital media embedded as parts of these practices (ibid). Consideration of *learning lives* is also useful to this study given the pronounced influence that home learning practices such as traditional skills have on Gypsy/Traveller children and their identities in school.

The constraints imposed in schools' spatial management of children are also in tension with the concept of mobile device use in education. Studying the embodied act of movement offered by digital media was central to the MonCoin (my corner) project, which aimed to engage at-risk youths with their civic environments using digital tools in the hope that they would become more engaged with their education (Bennett, Wells, & Rank, 2009). The young people thrived on the sense of agency granted through the project, which stemmed

from the movement afforded by both the curriculum and the technology. The increased

mobility provided to these students was in marked contrast to their typical experience of

school (Castro, 2019).

Much can be learned from studying the lives that children and young people lead out of

school. It is helpful to reflect that their future aspirations for life and learning, and the ways

they choose to move and socialise, may not align with how they are expected to make use of

technologies within schools. This raises the question of why many of the strategies relating

to informal uses of technologies have not been absorbed into school practices more

effectively. However, I also caution that all children and young people such as

Gypsy/Travellers will not have the same levels of access and freedom to use technologies out

of school (Scadding & Sweeney, 2018). For some, school settings may be the only place

where they can explore the opportunities technologies might offer their cultural, economic

and political lives. Subsequently, it is even more urgent that the digital pedagogies offered to

these children are not restricted by rigid curricula and school testing but that they are relevant

and meaningful to their lives.

2.4.6   Technology use and pedagogic frameworks

While technology is recognised as having potential to offer different types of learning

experiences, there is also a danger that without teachers' understanding and application of

appropriate learning theory, the use of technology as a transformative device in education

may not be sustainable or may be ineffective. Pachler et al. (2010) suggested:

A narrow pedagogical analysis of mobile media, in our view, is an insufficient analytical frame, as is a narrow focus on the technological dimension of the recent trend towards 'mobilisation' through small and portable media. We believe that a broader, socio-cultural view is necessary.

In this section I discuss several frameworks, based on common learning theories, that have been designed to support pedagogies. In the main, most frameworks have evolved from socio-cultural beliefs and they have attempted to overcome traditional forms of school learning, replacing them with learner-centred pedagogies. Although based in a higher education setting, Bruce and Levin's framework (1997) was significant in that it was one of the first to attempt to move away from a behaviourist model, which can still be seen to be present and hinder technology use in classrooms to this day. At the time of this work—over twenty years ago—the authors were already concerned about the limitations of a techno-centric model. They developed a way of classifying uses of educational technologies based on a four-part division suggested by Dewey's original constructivist model for pupil learning. Based on the four impulses of the child—*inquiry, communication, construction and expression*— the framework aimed to match tools, applications and techniques with constructivist learning approaches. The foundation of Dewey's work (1958, 1998) was based on the child's natural impulses to find out things, to use language, to enter into the social world, to make things and to express feelings and ideas. Bruce and Levin's study demonstrated the absence of *expression* and creative practices in the field, instead noticing that the most commonly used classifications were *inquiry*, followed by *communication.* This suggested something of the direction and limited use of technologies in the classroom at that time, although the lack of studies in the literature to focus on creativity and expression still exists today with some exceptions (Potter, 2012).

As mobile device use increased, studies regarding the processes of learning and how learners interact via mobile devices began to appear in the research literature (Danaher, Gururajan, & Hafeez-Baig, 2009; Park, 2011; Parsons, Ryu, & Cranshaw, 2007; Traxler, 2009). Danaher et al. (2009) were interested in the implications of device use for social relations and developed a framework based on three key principles: engagement, presence and flexibility. They drew attention specifically to the concept of 'presence', which they defined as the 'simultaneous awareness and locatedness of self and others . . . encompassing the emotional element of being human'(p. 26). The framework suggested three different types of interaction associated with presence in the classroom: cognitive (student-content), social (peer) and teaching (student-teacher)—each suggesting the different implications for mobile devices in each of the interaction types.

In the main, the majority of constructivist theorists recognised the centrality of social interaction in how mobile learning could be defined and understood: Pachler et al, for instance, suggested, 'Instead of an emphasis on the transfer of content and information, we regard it as important to foreground processes of knowledge creation through conversation' (2010, p.5). The authors aimed to achieve this through the construct of the 'mobile complex', which took the form of interrelationships between socio-cultural structures, cultural practices and the agency of learners (see figure 3) and they proposed using a lens based on the 'appropriation of mobile cultural resources for learning' through which to view and analyse learning using mobile devices (2010, p. 9).
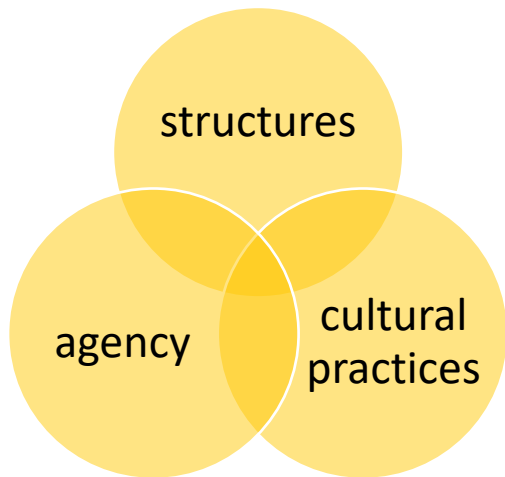
Figure 3 The mobile complex (Pachler et al., 2010)

Pachler et al. defined 'appropriation' as, 'a generic term for all processes of the internalisation of the pre-given world of cultural products' (2010, p. 2). Sharples described appropriation within mobile learning differently. His view looked at the direct influence of only one aspect on the other—as a dialectic process between the user and the device:

> *When faced with a new tool people examine both the possibilities and the*
>
> *constraints it offers. This leads to a process in which the users adjust the 'fit'*
>
> *of their tools to their activities. Sometimes tools will cause their users to*
>
> *change their own behaviour to accommodate a feature or shortcoming in the*
>
> *tool; sometimes users will shape the tool to suit their specific requirements.*
>
> *Doing either of these things may initiate further changes as the users begin*
>
> *to exploit the technology, hence the dialectical nature of the process.*
>
> (Sharples, 2005, p. 5)

Interestingly, Pachler et al.'s mobile complex recognised other non-human aspects of the learning environment, although it was firmly rooted in the socio-cultural tradition where they

regarded learners' agency as central to the system. The authors claimed that agency allowed learners to deal with and impact on the socio-cultural structures and practices that made up the mobile complex. The term agency dominates much of the socio-cultural literature on learning and the term is often contested in its definition and use. Here, I subscribe to Little's view that given agency over their own learning, learners can assume responsibility for the purpose, content, rhythm and the strategies they use in learning as well as for monitoring the progress and assessing its outcomes (Little, 2007).

Other writers have viewed agency as only part of a much wider set of desirable elements necessary to learning and teaching using mobile technology. Kearney et al. placed the learners' experience and agency at the centre of their research but their specific interest was more concerned with pedagogy. In developing a pedagogical framework they sought to overcome all forms of technological determinism and looked at only those aspects of technology that might be distinctive within a pedagogic setting. Similar to Pachler et al., they drew on Lave and Wenger (1991) to propose the situated nature of mobile learning and particularly that the relationship between the learner and learning tools (in this case, mobile technologies) was reciprocal. In this way the tools and learner can also be seen to be in conversation as each is affected and modified by the nature of their use (Lave & Wenger, 1991; Vygotsky, 1978; Wertsch, 1993).

Drawing on the principles of situated learning, Kearney et al.'s model (2012) proposed three main constructs characterising the pedagogy of mobile learning—authenticity, personalisation and collaboration. These resonate with the cultural needs of Gypsy/Traveller children where their learning lives centre around real-life, skills-based, collaborative

endeavours. The authors extend the model by offering three aspects of authenticity: task, factual and process which they describe in the following way:

> *Task authenticity refers to the extent to which tasks are realistic and offer problems encountered by real world practitioners. Factual authenticity refers to how particular details of a task (such as characters, instruments etc.) are similar to the real world, while a process level of authenticity refers to how learner practices are similar to those practices carried out in the community or 'real-world' of practice (ibid).*

In relation to this study one interpretation would suggest that aspects of Gypsy/Traveller lives or culture might be mimicked within the school in attempts to offer authentic learning contexts through the use of digital media. However, such an approach may create cultural stereotypes and make assumptions about the types of skills or activities that are valued either by the culture or the individual children. A more useful interpretation might be to explore digital media use as part of identity-making processes, offering children the agency to select, represent and comment on aspects of their lives and culture that they care about in an authentic way.

A second feature of Kearney et al's model is collaboration. Given that the model is developed from a socio-cultural perspective, collaboration for the authors, develops from the concept of scaffolding, where learning is supported by engagement and support from more able peers or adults. Here, the theories of Vygotsky (1978) become important with an emphasis on social interaction, conversation and dialogue. Perhaps the most influential aspect of Kearney's model to this research is the third construct, personalisation, which the authors claim to be the cornerstone of mobile learning. Regarding this, the framework draws on both motivational theory (Pintrich and Schunk, 1996) as well as socio-cultural theory (Vygotsky, 1978).   They

suggest that by using digital media, learner experiences could be personalised, enabling them to have choice and agency over their learning as well as the ability to self-regulate and customise content, tools and learning styles. These descriptions also chime with Pachler et al.'s (2010) ideas around appropriation described earlier. Kearney et al. position agency and customisation as sub-themes of personalisation and they draw on Traxler, suggesting that flexible, autonomous, often individually tailored activities lead to a strong sense of ownership of one's learning (2007) .
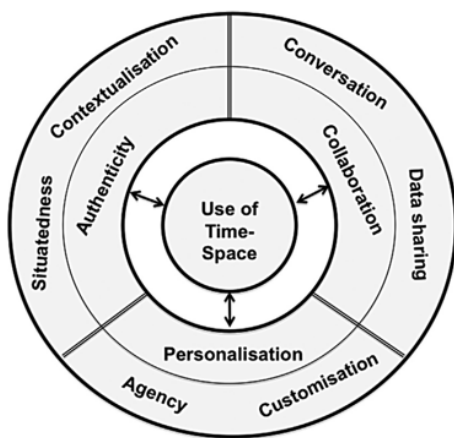
Figure 4, Kearney et al.'s revised model (2012)

A later addition, and perhaps the more progressive feature of Kearney et al.'s revised model at the time (see Figure 4), was the authors' realisation of the need to include a time-space element. A central principle of mobile learning is that children can generate their own learning contexts at any time and in any place without the limitations of the formal school environment with its fixed spaces bounded by walls and its inflexible time slots within the school day and across terms.   Using mobile devices, 'space' offers a variety of alternatives including 'virtual' or non-geographical spaces, although in the context of this study virtual learning spaces are not explored because access to the internet was not possible.
Aligning the integration of mobile technologies with pedagogic models confirmed that the field is guided by socio-cultural approaches. The learner is commonly recognised as a

knowing subject with the potential to have agency over the tools, learning context and content and this drives much of the approach. There has been suggestion, and indeed these theories lend themselves, to a conversational process where the learner is in dialogue with the tools (digital media) and other people (teachers, children) as part of a meaning-making process where they are able to construct their own worlds. The models offer educators opportunities to reflect on how the digital media can be active in the pedagogic processes.

2.4.7 Fairer models of digital media use

I have described key frameworks that discussed the utility of digital media within the existing structures, discourses and pedagogies in schools. While these authors laid the foundations for some of the design and analysis sections of this thesis, I recognise that little has changed since over the past decade, even though the technology has moved on.

The central concern for this work, however, has been whether there is a possibility that the integration of digital media can influence how education can become fairer for children like those from Gypsy/Traveller communities so that they may feel that they belong and are included within school systems. Selwyn (2006, 2014), shared his ongoing frustrations that, amidst an abundance of technology in schools, and claims for their supposed 'transformatory' effects, there remains longstanding tensions with issues of inequality and inclusion. His claim mirrors the discussion in earlier sections about the changes that are needed to impact on the effectiveness of technologies on school learning.

Selwyn explains some of the tension as resulting from an absence of a sociology that takes a critical view of education while also including technology (2014). Even though there is now a substantial academic literature around the technical, pedagogic and psychological aspects of

technology and education, he contests that most are a-political and a-social. He distinguishes between two strands of the current literature that are prevalent, those that promote the learning potential and pedagogic possibilities (such as those that have been addressed in the previous section), and those that relate to the uses of tools and applications. These issues were also echoed in Livingstone's explanatory critique of technologies where she discusses the polarisation of the debate between technological versus social determinism (2012). It appears that there is a need for the integration of each of social, political and technologically innovative concerns to allow practices that forefront equality and inclusion.

Unfortunately, where there has been evidence of innovation for the sake of inclusion, digital media appears to have been used to reconfigure pre-existing learning activities (Castro, 2019). Adopting digital media in this way leaves much of its inclusive potential untapped (Cook, Warwick, Vrikki, Major, & Wegerif, 2019). There is also evidence that innovation for inclusion is not in any way widespread but is only happening through special projects and among a minority of cases. This picture is further complicated by Livingstone's view that it is only publicly funded institutions, such as schools and community venues, that have the capacity to increase fairness. If this is the case, the picture is bleak as we have heard of the limiting effects of the formal structures of the school and the traditional curriculum (Livingstone, 2012). In other situations, approaches are reliant on family resources and, when this is the case, there is a danger of engendering new types of inequalities (ibid.).

2.4.8   Innovative practice—sustaining or disrupting?

A significant issue for this study has been that while there is general agreement that innovations in formal education's approaches to inclusion are necessary, it appears that little is known about what this may look like. A recent systematic review of the literature set out to understand the nature of innovative mobile learning pedagogies and the extent to which they had been disruptive to traditional school structures and practices. The review included fifty-seven papers (Burden et al, 2019) and found a similar lack of innovation to match the technological potential as described 10 years previously (Livingstone, 2012; Potter & McDougall, 2017). The study defined *innovative* as 'new ideas or practices that are impactful and valuable to individuals or communities' (Kearney, Burden, & Schuck, 2019, p. 143). The study adopted two terms to describe a continuum of innovation: sustaining and disruptive. The former serves to modify existing pedagogies and innovations (Christensen, Horn, & Johnson, 2011; Cranmer & Lewin, 2017; Kearney, Burke, & Schuck, 2019) and the latter creates new practices, which are likely to be disruptive in nature, causing a change in paradigms, behaviours, and goals (Burden, Kearney, & Schuck, 2019). In the review, content and thematic analysis showed only low to medium degrees of innovation in most studies, with only three articles showing radically innovative, disruptive mobile learning practices. Four criteria for innovation were identified: the nature of the task, its context, the relationship between teacher and student, and student agency. Similiar to previous surveys, only four of the papers were creative or situated within visual arts with the majority (20) based in science subjects. Studies with levels of disruption were rare.

2.4.9   Creative and critical approaches

The practices of innovation and creativity are often associated with art and design and where creativity has appeared in the technologies and education literature it is usually in connection with participative approaches that offer greater agency to learners (Marsh, 2010). The voices

of young people being valued through participatory and creative processes is developed through the work of Jenkins who was an advocate of arts-based approaches to media production—in the main, because he believed that creativity should be an integral part of participatory practices and that process as well as product should be valued. He argued that every child deserved the right to the creative process and that creativity could change the way children saw themselves and others (2007).

Governments and educators recognise that Gypsy/Traveller children's traditional literacy such as reading and writing is often limited through interrupted learning and that children are known to identify as failures in education (Scottish Government, 2018). There is therefore a strong case for the use of creative and visual languages to combat exclusion and promote participation. The multimedia that has become integral to digital device use relies to a greater extent on visual elements and incorporates a range of media such as text, graphics, sound, film and animation. Multimedia is also considered a form of literacy in itself. According to Mitra (2000), multimedia empowers children by enabling them to communicate to their strengths. Mitra is a proponent of the view that because written text is the dominant medium for communication in education there are social consequences for young people who do not excel in reading and writing and they can quickly develop low self-esteem. When communicating through creative and visual forms Gypsy/Traveller children can have the same opportunities as those with more developed academic attainment in literacy.

The use of visual languages in schools has huge potential for children's communication, however, it is usually dominated by the traditional art lesson which can narrow art's critical and creative potential. Quoting Efland, Stankievtz suggested that normative school art did not encourage 'images and objects that could communicate understanding of the individual' s

lifeworld, social and cultural landscape' (2004, p.90). Stankievtz went on to say that, 'school

art, as a visual language, is as limited in its potential functions as the language of a primary

school reading series' (p.91). However, it is possible that in using digital media along with a

visual art-based approach children do not need to conform to the expectations of a limiting

school art language. Instead they are able to develop their own visual forms of

communication (Clark 2010).

Similar to other art-making technologies such as pencil, paint or sculpture, visual

communication through digital media should be viewed as a process rather than a product.

Art education theorists such as Corwin (2001), Eisner (1992) and Efland (2004) have made

connections between the brain's cognitive processes and art-making activities. Eisner draws

on the work of Langer (1957) who argues that works of art represent the artist's ability to

create a structure of forms that are, in their relationships, analogues of the forms of feeling

humans experience. For Langer, art provides a means through which feelings can come to be

known. Central to the belief that art experiences support cognition and learning is the view

that understanding is deepened by participating in the physical act of making. The material

processes offer a more direct, first-hand experience of the world rather than reading from text

books, which can be seen to be decontextualised.   This way of perceiving, of the 'putting

together of elements', can be defined as 'thinking through looking' (Perkins, 1993) or 'visual

thinking (Arnheim, 1970, pp. 13–14). Noddings & Shore (1998) asserted that the decisions

made concerning what to keep and what to change throughout the making process involve

decisions of increasing complexity and abstraction. Dorn (1999, p. 130) links this to 'thought

in action', which describes the process of conceptualising ideas during the period of making

rather than having an end product or creation in mind from when the creative act begins.

According to Eisner (2002), editing software becomes a way for children to examine the

'parts' separate from and aligned with the 'whole'. By removing, changing and creating parts children are enabled to reflect and think through the medium. It can be argued that digital media creates opportunities to extend the processes of 'thought in action' offering an infinite number of visual iterations within the layers of a making space.

In referring to the potential of technology from an art perspective Eisner states:

> *It seems to me that the computer has a particularly promising role to play in providing students with opportunities to learn how to think in new ways. [...] New possibilities for matters of representation can stimulate our imaginative capacities and can generate forms of experience that would otherwise not exist (2002, p.211).*

Eisner likened the potential of a wide range of different materials whose different affordance and constraints contributed to the ways that we think and suggested that curricula should be designed to take account of the materials students could work with, such a technologies. He asked what were the cognitive demands that the technologies made upon the children who used them and proposed, 'Getting smart in any domain requires, at the very least, learning to think within a medium' (2002).

Eisner believed that the entire curriculum could learn from art pedagogy and proposed five lessons, which had the potential to be realised through children's digital editing processes and which emphasised the integration of critical and creative thinking:

1. *Making judgements*

The arts teach students to act and to judge in the absence of rule, to rely on, feel, to pay attention to nuance, to act and appraise the consequences of one's choices and to revise and then to make other choices.

Learning to pay attention to the way in which form is configured is a mode of thought that can be applied to all things made, theoretical or practical.

2. Flexible purposing

This process of shifting aims while doing the work at hand is what Dewey called "flexible purposing " (1938). Flexible purposing is opportunistic; it capitalizes on the emergent features appearing within a field of relationships.

3. Form and content is most often inextricable

How something is said is part and parcel of what is said. The message is in the form-content relationship, a relationship that is most vivid in the arts. Getting it right means creating a form whose content is right for some purpose.

4. Not everything knowable can be articulated in propositional form.

The limits of our cognition are not defined by the limits of our language. We have a long philosophic tradition in the West that promotes the view that knowing anything requires some formulation of what we know in words; we need to have warrants for our assertions.

5. The relationship between thinking and the material

In the arts in order for a work to be created we must think within the constraints and affordances of the medium we elect to use. Each material imposes its own distinctive demands and to use it well we have to learn to think within it.

Selected edited sections taken from Eisner (2002, pp 5-8)

Eisner's lessons added new depth to how children's creative activities using digital media could be understood and supported. The iterative process and the interconnections between the child and the media all involve sophisticated creative and critical awareness that encompasses thought and action. Described in Eisner's terms, digital media hold enormous potential to support a range of higher order skills development across the range of curriculum activities.

Loveless and Taylor (2001) proposed that when using technologies children should be creators and collaborators and not just consumers and collectors of information. They described an iterative dialogic process when making an art work as a state where meaning and its representation emerge as the artist produces and the artwork responds. Loveless and Taylor appealed for more recognition of the value of visual literacy in meaning-making processes and suggested the uniqueness of technologies in relation to art-making. They drew attention to the *provisionality* of technologies, which they claimed allowed children to explore ideas, edit, rub things out, and change things without 'spoiling' their work and committing to final decisions. (2000, p.70). Provisionality was also a focus of Wegerif's principles for conceptual understanding, which he suggested characterised dialogic conceptual learning (Phillipson and Wegerif, 2018).

Potter (2012) adopted the concept of *curation* to understand learners' engagements with media and media production in making sense of their own identities. In an empirical study he looked at how young people involved in their own video productions were 'collecting, distributing, assembling, disassembling, and moving media artefacts and content across different stages' (Potter, 2012, p. 31). Potter identified the need for a balance between creative and critical perspectives. He noted, 'Watching, making, and learning to critique to

improve, refine and understand are important'. While the concept of provisionality was seen as an enabling factor by Loveless in allowing producers to continually make and change their decisions at each stage of the making process, Potter also addressed the need to consider the reception of children's work beyond production. He noted the need for young people to also be able to consider how to filter and take account of what others thought and said about their productions in the knowledge that their media texts would be seen and judged after they were created (2012).

In some situations audience awareness can also have a detrimental effect on young people's creative processes. Castro found that often the young people he worked with in a civic engagement project using digital media were overly preoccupied with the audience for their work. It appeared that they were trying to make "good-looking" images rather than reflecting on the civic challenges (2019). The project found that, if the young people felt disempowered by the media, they withdrew from the critical challenges of meaningful change within their neighbourhoods. Consequently, the programme was revised and, after gaining confidence in photographic and design skills, participants were more inclined to engage in civic discussions. The programme highlighted that, while mobile media is a powerful tool for creativity and expression, participants may still need instruction on skills development which can also be empowering. Without the abilities necessary to create and manipulate images children's exclusion may even be emphasised.

2.4.10 Explaining thinking and art making through dialogue

Creative uses of digital media offer a generative methodology which can be invaluable to working with children in research and, understandably, most of the literature on these approaches, including Eisner's work, takes the view that the child holds an uncontested

position at the centre of the meaning-making process. However, the context within which children make meaning can be complex and there is a need for attentiveness to the materialities that surround meaning-making processes. Oswell suggests that, in this way, agency needs to be viewed as 'always in-between and interstitial' where 'the capacity to do and to make a difference is necessarily dispensed across arrangements' (2013, p.70) and not only with the agential child.

Much of what Eisner, Taylor and others promoted as benefits from arts-based approaches are based on the notion of a conversation between the child and the material processes of art making. While the ideas of conversations and dialogue arose in other sections of this review there has been limited focus specifically on digital art making as a dialogic process even though dialogic pedagogy has become increasingly aligned with classroom-based digital technologies (Cook et al., 2019).

In recent school pedagogy, dialogue has been valued as offering an intermediary between collective and individual thinking and much research has been dedicated to identifying forms of dialogue that are most appropriate for promoting higher order thinking (Littleton & Mercer, 2013). In relation to classroom settings, Alexander (2018) proposed the characteristics for optimal dialogue as: 1) collective, with participants reaching shared understanding of a task; 2) reciprocal, with ideas shared among participants; 3) supportive, with participants encouraging each other to contribute and valuing all contributions; 4) cumulative, guiding participants towards extending and establishing links within their understanding; and 5) purposeful, that is, directed towards specific goals. Whilst these characteristics are useful in relation to thinking, I suggest there is a much wider potential for

the use of dialogue in research setting such as this one, particularly in how relations between children, other people, the digital media and the material world are mediated.

In education, the common use of the word dialogue is usually limited to 'a conversation' and can be contrasted with the term *dialogism*, which is traced back to the Russian philosopher Mikhail Bakhtin who used the term more generally to present philosophical insights about the language of communication. Bakhtin's dialogism is more easily understood in a conceptual way as '*in-between-ness*', referring to the social space between people (White, 2016a). In Bakhtin's view it is only in the social space between people that meaning can be revealed—not in the heads of individuals. Ideas are not passed from one person to another, instead they are grounded in real experience. Accordingly, meaning is never complete – it is always in process. White relates dialogism to the everyday in saying, 'Meaning can thus be encountered through the everyday struggles with language in all its many forms, as it is shared with the 'other' (2016, p.20).

Two of Bakhtin's terms —polyphony and heteroglossia—are useful for extending how the processes in digital art making can be thought to contribute to children's understandings of their own belonging. These terms offer the research a micro level of detail when reflecting on where and how children's meaning making takes place. Heteroglossia can be understood as 'different-languagedness' and polyphony can be understood as 'many-voicedness' (Skidmore 2016, p.25). Heteroglossia for Bakhtin is the diversity of speech types (1981). Here, diversity is not contained to geographical variations in speech but rather to linguistic variations within social settings. For example, in relation to schools there is a specific language around education and curriculum subjects, which may include specific vocabulary. There is also a typical social interaction order in classrooms where teachers can control the choice of subject

discussed and select which children speak, to whom and in which order. In Bakhtin's sense, the language of the classroom is seen as socio-ideological (Skidmore, 2016, p. 27). The pattern is very different from children's informal language use where words, phrases and style of interaction reflect their socio-cultural traditions. Bakhtin (1986) suggests that linguistic diversity should be central to living language. Skidmore highlights the implications for school education saying that the languages that receive approval are often selective and may not represent the reality of diverse cultures or the language used out with the classroom (2016).

Whereas with heteroglossia the focus is with shared language practices of groups or communities, polyphony is focussed on the voices of individuals. Skidmore (2016, p.34) describes polyphony as:

> *The unique voices of individual speakers, and how they interact with one another in social settings across, crossing, intersecting, converging and dividing, sometimes perhaps combining in harmony for a longer or shorter interval of time, but never being wholly reducible one to another.*

For Bakhtin interdependence was the basis of any communicative act. He emphasised the importance of 'the listener' as active in the communication process—she is part of an ongoing chain of statements and responses—a continuous cycle where one is dependent on the other. Rather than hearing a passive response from the listener, a speaker expects an 'actively responsive understanding' (1986, p.69). A dialogic approach would expect any statements to presuppose earlier statements and anticipate future responses such as agreement, sympathy or objection. Bakhtin suggest that this may extend to the need to, 'relinquish the floor to the other or make room for the other's active responsive understanding' (1986, p.71). Importantly, meaning does not exist prior to dialogue but is

constructed from within it. Other aspects of the context of the communicative act can also be in dialogue, such as social and cultural aspects.

2.4.11 Dialogism in relation to the socio-cultural tradition in education

Extending his concern about how dialogism is narrowly interpreted as a conversation in education, Wegerif (2008, p. 359) argues, 'Lack of careful conceptual analysis has allowed Bakhtin's distinctive dialogic voice to be appropriated within a modernist interpretative framework.' Wegerif suggests that many theories of children's cognitive processing used in school education evolve from Piaget and Vygotsky and that these overlook the potential of dialogic relationships. Vygotsky (1978), along with Bruner (1969) are recognised for initiating thinking around the social constructivist paradigm, which still dominates the design of much of school education (Skidmore 2016, p.16). With Vygotsky's position, the focus is on the child as central to her own meaning-making processes and she takes a monological stance.

Dialogic theory as applied to children's meaning-making offers an alternative understanding that emphasises the situated nature of concepts within the context of dialogues. Thinking processes are, 'embodied in real communities of people who dialogue together as part of doing things together' (Phillipson & Wegerif, 2017). As well as making meaning through dialogue, children are also engaged in the construction of difference, which involves identifying with the space of dialogue itself (Wegerif, 2010). Through the dialogic process children are able to develop their intellectual freedom, which Wegerif defines as 'a capacity to question and to be able to think for themselves' (ibid., p. 340).

Phillipson and Wegerif (2017) simplify many of Bakhtin's ideas in their studies on dialogic education. They propose five key principles, which can help characterise dialogic conceptual learning:

- Multiple perspectives - dialogic needs to be understood in contrast to monologic thinking where there is one true accepted meaning.

- Provisionality where there is never certainty about when truth is arrived at.

- Creative switching - many concepts require a creative leap in order for people to see things in new ways that they have not seen before.

- Making distinctions - understanding when one voice takes one perspective and another voice takes another.

- Making connections - goes against the belief that children should only be taught what they are already interested in.

2.4.12 Material-dialogic relations and technologies

The predominant focus for dialogic pedagogy has usually been the human voice, however, this preoccupation excludes the important role that material objects can play (Hetherington & Wegerif, 2018). Heatherington and Wegerif adopt the term 'material-dialogic relations' where the 'voices' of materials in an interaction are included in dialogic analysis (2018). And while Bakhtin's writing was never directly to include the material, the possibility of a material-dialogic framing is also hinted at when he writes, 'I hear voices in everything and dialogic relations between them' (1986, p.165).

The scope of the material in this study includes the things and spaces of schools, but also the digital media that are a central part of the research approach. Wegerif references the sociomaterial along with technology in earlier writing when he describes the ambivalent

ontological nature of computers as objects that can be programmed to interact as if they were subjects (2004). When technology is considered in this way, Bakhtin's dialogism offers an additional way to understand the iterative and interdependent nature of the interaction between participants and digital media as well as the nature of any social and material interactions that are initiated through the media.

In her book '*The Materiality of Learning*' (2009), Sørensen is critical of the humanist approach in much education and questions a blindness towards the material in education. She proposes that, in relation to materials, humans as users or creators should not be above the materials that they use but among them. She suggests, 'These materials may be used by humans but they may also use the humans and influence and change the educational practice, which then is no longer particularly human; instead it is socio-material' (ibid. p.2). This changes questions from whether technologies meet human aims to seeking understanding of new relationships and arrangements that can be created between the social and the material. Sørensen asks, '…what knowledge comes about, what kinds of pupils and teachers are created, and what learning is achieved' (Sørensen, 2009, p.2).

2.5 A critical framework

Together the literature themes have offered important insights into how the Gypsy/Traveller child can be understood within the school environment. By looking through more recent lenses on childhood, the decentring and recentring of the child moved the focus away from the dominant human subject constructing her own truth. Decentring has created room for a broader range of factors to come into play in the research arena. The studies on belonging mirrored the discussion on childhood by offering a shift in emphasis from human relationality

to also consider what relationships when other aspects of the material world were involved. Finally, the search for inclusive and creative approaches to the use of technologies evolved into consideration of the potential value of dialogism as a way to focus on the detail of where and how meaning is created. Similar to previous sections, this has also raised questions about the extent to which aspects of the material world, including digital media, could contribute to the dialogic process and influence educational practices.

In view of all that has been referenced so far, these studies combined—childhood, belonging and technologies—support the notion that the human subject and aspects of the material world of school should each be noticed in research settings. As a result, this section has produced an overarching theoretical interest in the inter-relationships between human and non-human actors and I expand on this in some detail in the next chapter.

The two diagrams below illustrate the shift in developing a conceptual framework for the study. Figure 5 illustrates the beginning position, which saw the child at the centre of her meaning-making processes. In this model she would use a digital device as a mediation tool to make sense of her own belonging in school spaces. Figure 6 shows how, in line with the materialist studies in the review, the child has been decentred and recentred in a space that also includes school practices and material things, including digital media—all are active and implicated in creating a sense of belonging. As a result, the data gathering and interpreting processes can shift focus to include all of the human and material things that are at play to understand spaces of belonging – material, relational and pedagogic.

The revised critical framework suggested that two levels of analytical thinking were possible: dialogism might sit at a micro level, allowing questions to be asked relating to the detail of

children's meaning-making processes, such as who and what aspects of the research setting were at play and what effects they were having. At a meso level the focus could become more abstract by asking questions about the emerging themes surrounding belonging in relation to the wider context of the child's relational, pedagogic and material experiences.
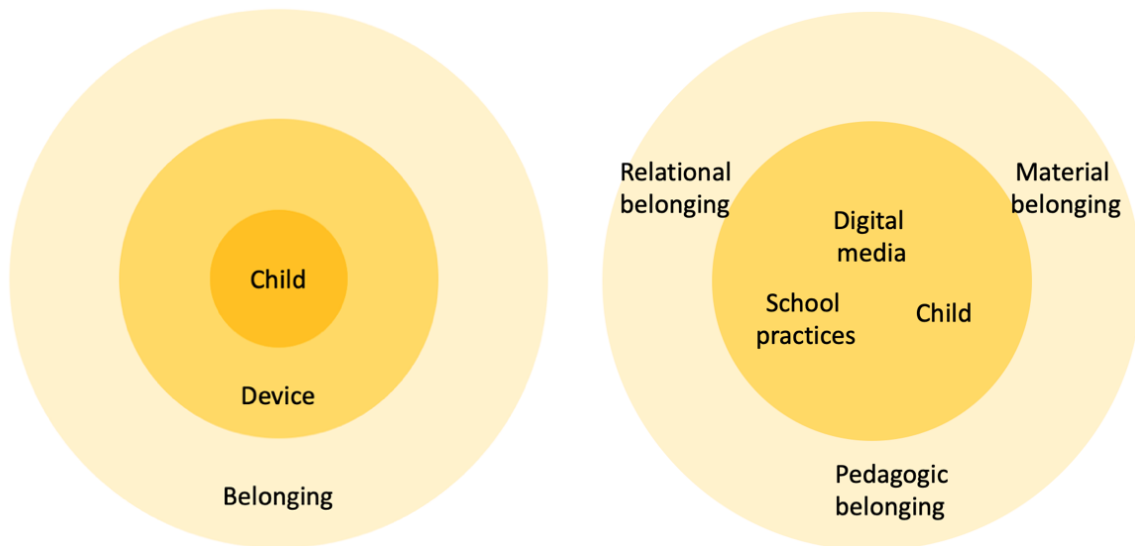
Figure 5 The study viewed through a constructivist lens

Figure 6 The study viewed through a sociomaterialist lens

3 Methodology

3.1 Learning from, and being troubled by, qualitative research

This study has taken the form of a qualitative case study, which is a well-established

approach in educational research. I describe the nature of this specific case in the next

chapter but in the section that follows I discuss how I have understood the qualitative

paradigm in relation to educational research and I reflect on how I have been challenged in

trying to align with a paradigm that would support my developing view that both children and

the school environment can have agency in the research setting.

This thesis adopts a qualitative stance while recognising that qualitative research is not a

homogenised approach but a range of different methods and positions, each influenced by

different paradigms (Denzin & Lincoln, 2018b). Divergent ideas about the nature of the

social world and how it can be understood vary between paradigms and conflicting

philosophies have resulted in disagreement within the field over which methodological

approaches should be endorsed within education (Hammersley, 2013). Added to this,

definitions of what constitutes qualitative research are continually being redefined

(Cresswell, 2007). For example, over the years, and in each subsequent edition of the classic

text, the Handbook of Qualitative Research (for example Denzin and Lincoln, 2005, 2017),

definitions have evolved and changed in line with new developments (Cresswell, 2007).

Indeed, in the most recent version, the authors state that they are now reluctant to offer any

definitive definition (Denzin and Lincoln, 2017).

Qualitative research is usually grounded in a philosophical position, which is broadly

`interpretivist' and, for the purposes of this research, suggests that the social world of the

child can be interpreted, understood, experienced or produced (Mason 1996). Hammersley (2013) suggests that a good way to judge the relative strengths of a qualitative approach is to make direct comparisons with quantitative methods although some challenge the usefulness of this exercise as 'uninformative' (Silverman 2006). Hammersley defends his position stating that there is a usefulness in the differentiation of 'knowing what is qualitative as opposed to quantitative research' (2013, p.9). In seeking clarification on these differences, Hammersley outlines a number of arguments where qualitative research shows strengths in responding to the limitations of the quantitative approaches. He suggests that qualitative approaches address: the importance of studying the real world rather than only what happens in research conditions; the need to observe what actually happens rather than to rely solely upon formal interviews or questionnaires; the need to allow people to speak in their own terms in interviews to understand their distinctive perspectives; and an understanding of the complex, context-sensitive character of social life (Hammersley, 2013).

In the following section I will relate some of the perceived strengths of the approach in relation to how I have designed the methods used in this thesis. However, it is useful at this stage to also flag up the fact that qualitative research has not escaped criticism. For example, and relevant to my work, (Silverman, 2010) argues that qualitative research can be so focussed on the interpretation of participants that it can overlook broader contextual factors. Also, where participants' perspectives are used, their success can be limited by researchers' interpretations; according to Neuman, (2006) researchers are positioned subjects, and personal experience and knowledge influence their observations and conclusions.

Reflecting on my own position, I am mindful of coming to the research with a number of years' experience working with Gypsy/Traveller children and their families. I am aware that through my experience I am critical of the school system in how it responds to the children's

needs. It would be remiss not to suggest that this will affect my observations. I have also been trained in art and design and am proficient using a wide range of creative packages both in my university-based work and in my own art practice. Being in this position I am aware that I may not recognise the challenges that some teachers may have in doing similar activities when they may be less skilled.

3.2   Enabling participants to speak in their own terms

Hammersley (2015) suggests that a benefit of qualitative research as enabling people to speak in their own terms and of enabling an understanding of their distinctive perspectives. In this research the participants' unique perspectives came from the fact that they were children who attended schools and came from Gypsy/Traveller families. There is a strong body of research on childhood that shares the view that children and young people are capable of being experts in the telling of their own experiences (Thomson, 2008). Previously, much research was informed by adults' constructs of childhood and children's capabilities (Marr & Malone, 2007). There had also been a nervousness in the research community about the authenticity of children's views although, as early as 1996, Alderson and Goodey (1996) had stated that the main complications do not arise from children's inabilities or misperceptions, but from the positions ascribed to them. Qualitative research has continually evolved in recognition of the need for methods that recognise children's potential roles in research processes.

The construct of 'voice' became popular in research, policy and professional life as a response to a range of underrepresented perspectives (such as those of children and marginalised communities) being undervalued and the subsequent realisation that dominant forms of knowledge needed to make room for more diverse views. (Denzin & Lincoln, 2005). For the purposes of my research it is helpful to unpack the different meanings associated with

voice in the research setting. Brizman (1989) describes three senses: firstly, a literal sense where voice represents the speech and perspective of the speaker, secondly, a metaphorical sense where voice spans qualities such as inflection, tone and feelings conveyed and thirdly, a political sense where voice represents the right to speak and to be represented. Each of these senses offers some value to the design of this study, however, in this study due to the marginalised nature of the community, there is an increased focus on the third sense —voice as a political right.

As well as considering the potential roles of the children's voices, it was also necessary to be clear about to what ends the young peoples' voices can be used in educational settings, given that children will focus their ideas on their school experience. Thiessen's typology of orientations to the study of student experience allows some clarification. The three distinct but interrelated areas are: how children participate in and make sense of life in school, who children are and how they develop in school, and how children are actively involved in shaping their own learning opportunities and in the improvement of what happens in schools (Thiessen, 2007, p. 7). The overarching focus of my research straddles these three orientations but it also proposes another area: to involve children in developing new knowledge specifically about the processes through which their voices will be most clearly heard.

3.3 A cyclical approach

My aim as a professional was to become more familiar with the pedagogic environment and I expected to use an exploratory approach to generate new knowledge that might be shared through future work. Newman suggests that exploratory research rarely yields definitive answers. He describes necessary characteristics of researchers of this approach as being

creative, open-minded and flexible, as well as being able to take advantage of serendipity (Neuman, 2014, p. 38). Ironically, while I can subscribe to these characteristics, I have nevertheless identified the need for basic principles to guide the selection and application of methods. I found that Cresswell's definition of qualitative research provided a useful reference. He suggests:

> *Qualitative research begins with assumptions, a worldview, the possible use of a*
> *theoretical lens, and the study of research problems inquiring into the meaning*
> *individuals or groups ascribe to a social or human problem. To study this problem,*
> *qualitative researchers use an emerging qualitative approach to enquiry, the*
> *collection of detail in a natural setting sensitive to the people and places under*
> *study, and data analysis that is inductive and establishes patterns or themes. The*
> *final written report or presentation includes the voices of participants, the*
> *reflexivity of the researcher, and a complex description and interpretation of the*
> *problem, and it extends the literature or signals a call for action.*

> (Cresswell, 2007, p.37)

While Cresswell's approach provided the systematic clarity I sought, it also suggested that each stage of the research would follow seamlessly on from the previous in a coherent way. In the course of this work my research processes followed a much less predictable route as I moved backwards and forwards between approaches. Neuman uses the metaphor of the path to explain this phenomenon:

> *A nonlinear research path requires us to make successive passes through the*
> *steps. We move forward, backward, and sideways before advancing again. It*
> *is more of a spiral than a straight staircase. We move upward but slowly and*

indirectly. With each cycle or repetition, we may collect new data and gain

new insights. (Neuman, 2014, p. 171)

Neuman, however, also suggests that those researchers used to a direct linear path may become impatient with the cyclical approach of much qualitative research. It can appear inefficient, chaotic and without rigour (ibid). According to Neuman, its strengths include effectiveness in creating an understanding of an entire setting, grasping subtle meanings and integrating divergent pieces of information. By unpacking some of these descriptions and definitions of the nature of qualitative inquiry I also came to realise the inherent complexity associated with my task.

3.4   Changing philosophical assumptions

Following Cresswell, I believed that any philosophical assumptions should be first formed by focussing on the Gypsy/Traveller children, the intersectionality of their ethnicity, age, how they have been problematised and constructed as 'outsiders' to the education system, and their identity as members of families who regularly experience overt racism based on 'assumptions of identity, ways and means of living and just 'being'' (Clark, 2018, p. 145). Given these perspectives, it may make sense to adopt a critical theoretical view to underpin the study. Critical theorists can seek to critique normalised structures, such as schools, and their claims for democracy and social justice. They often explore questions of racism and oppression, such as those experienced by Gypsy/Traveller children and their families (Denzin & Lincoln, 2018a). However, several authors have suggested that mobile children's negative learning experiences are caused by schools' lack of knowledge of the contextual factors that are at play (Bhopal, 2004; Derrington & Kendall, 2008; Lloyd & McCluskey, 2008) and there are known challenges in accessing children's experiences. I therefore prioritised an approach

that might generate this kind of knowledge, communicated by the children themselves. I began by subscribing to a constructivist paradigm where participants would be involved in meaning-making processes to construct and make sense of the realities of their school experiences. A constructivist reality is socially and experientially based and dependent for its form and content on the persons who experience it (Guba 1990). Aligning with a constructivist position has usefully provided direction and I had expected it to clarify many decisions in the research design and gain coherence across the project from epistemological decisions to data gathering as well as those concerning validity.

I subscribed to Lather's view that 'better methods and richer descriptions can get closer to the truth' (Lather, 2013) therefore I planned to use participatory visual methods (described in 4.5) to act as a conduit to a more collaborative production of knowledge and a reflexivity that would recognise my presence as a researcher, which I also realised would always 'incite a form of social control which will impact on how the interviewee responds' (Hammersley & Atkinson, 1986, p. 110). However, I was aware of the limitations of my planned collaborative discussions and perhaps the impossibility of being completely reflexive in how I would represent the children's truths.

I was reassured by Lather's work (2013), which questions the overall role and purpose of the qualitative research approach, suggesting that many aspects have become inadequate for some contemporary contexts. She traces the development of qualitative research in a schema classified into four stages. Her descriptions of the third stage points to the use of postmodern theories showing concerns for validity, voice and reflexivity— the things that had been preoccupying me. However, it was Lather's account of how the work of many qualitative researchers dealing with these issues had been stalled that chimed with my own experience. She stated that these researchers had had to defend not just their methodology but also the

associated epistemologies. According to Lather (2013), this has been as a result of unhelpful comparisons with the scientific model that had required qualitative research to become disciplined 'via standards and rubrics' more commonly associated with scientific measures of accountability and that to an extent qualitative research in education had been 'tamed'.

I felt the limitations to stating a single ontological position. My approach was qualitative, had broadly subscribed to constructivist theories and adopted a humanist position—in this, I had made an underlying assumption that there is a knowing human subject—the Gypsy/Traveller child, who I would place at the centre of the research. However, in reviewing each of the sections of the literature, and developing a critical framework, I discovered a tension in holding onto a single, constructivist ontological position, particularly in how it would play out in the research methods when analysing the research data. In reviewing the literature I had come to see the benefit in bringing the material things in the study to the forefront and into dialogue with the human subject at the centre of the research. I expand on this in sections 3.5 and 3.6.

The fourth stage in Lather's schema supported this realisation of the impossibility of the task, where I deliberated over how the work fitted with what was expected in terms of epistemology and appropriate methods. I appeared unable to subscribe to a singular paradigm. Lather refers to Deleuze's concept of 'becoming' where researchers who, weary of defending qualitative research and eager to get on with their work again 'imagine and accomplish an inquiry that might produce different knowledge and produce knowledge differently' (2013, p.635). She suggests, 'this inquiry cannot be tidily described in textbooks or handbooks. There is no methodological instrumentality to be unproblematically learned' (ibid.). I have been challenged in identifying aa singular route that supports the overall aims

of my project, as well as my personal position. In this, I have heeded Lather's view and accepted that the thesis would be produced with a degree of uncertainty.

3.5   Theorising the material and spatial in the research setting

As I suggested above, and in response to the studies in the literature review, the critical framework (see figure 2.5) adopts a model that decentres the child to create space for connections to be made with the material aspects of school spaces. In this created space humans and non-humans come into play to contribute to understandings of the nature of the children's belonging. An overarching theoretical interest becomes the inter-relationships between the human and non-human actors.

This approach does not privilege the 'knowing' or intentional human subject, who is usually viewed as an entity separate from the material. Sociomaterial theory offers an alternative understanding where knowledge and learning change 'from a representational idiom, mapping and understanding a world that is out there, to a view that the world is doing things, full of agency.' (Fenwick, Edwards, Sawchuck, 2011, p.3). However, perhaps unlike other sociomaterial studies, the human subject in this thesis—the decentred then recentred child— is still considered as predominantly knowing and intentional, at least temporarily. In this situation it is not *either or* but rather both.

The focus on the material runs through the research. Firstly, the things in the material world of school practices are viewed as vibrant and capable of having an effect on the children (Bennett, 2010) and secondly, the spaces of the school, which are the subject of enquiry in relation to children's belonging form part of a material world. There is a growing body of literature that recognises the relevance of looking at education through a spatial lens. Spatial

thinking originated within the discipline of geography but is now considered to be transdisciplinary (Soja, 1989). Spatial theories are part of the materialist cannon and provide an alternative to the dominant method of understanding the social sciences through time and history.

3.6 Lefebvre's and Soja's theories of space

The first important discussions of space with relevance to the discipline of education emerged through the work of the French philosopher Henri Lefebvre. His theory (1991) views 'space' as a social construct, suggesting that it should be described in relation to the way that humans experience it. Lefebvre's starting point is that previously the word 'space' had a strictly physical and geometrical meaning and evoked the idea of an empty area. As the driving interest in space in this thesis relates to the construct of the school, in this context it would suggest that when architects approach the task of school building it is simply to provide a background or a container in which learning will take place. This view would not recognise the power that the building might exert over what went on inside (Gulson & Symes, 2007).

Lefebvre proposes three interrelated processes of spatialisation to support how space can be produced and understood. He describes a triad between *representations of spaces*, *representational space* and *spatial practice* (Lefebvre 1991). According to Lefebvre *spatial practices* (perceived) are physical spaces around us. They include the production and reproduction of the material conditions for our society and they are based in particular locations where the everyday flows and movements in people and things can be seen. He wrote that a society can be revealed through how it uses its space. For the individual this perceived space is the outcome of choices made within and outside buildings. Viewing the

Gypsy/Traveller child in relation to spatial practices would raise questions about the nature of transitions between the structures of schooling, which may be designed to support a neoliberal agenda, and the cultural spaces of home. The second of Lefebvre's concepts (although there is no hierarchy) is *representations of space* (conceived). These are mental or theoretical spaces. Spaces such as these can be seen in images, books, and maps and are intended to represent and make sense of space. They offer the idea that space is a given system and can be contested or legitimised through spatial practices. When ideas of space transform into physical forms such as drawings or timetables, Lefebvre describes these as, 'representations that will not vanish in the symbolic or imaginary realms'(ibid, p.42). The third concept *spaces of representation* (lived) are often considered as a combination of the first two spaces —mental and physical. They are the spaces where we actively live and in which all of our social relations take place.

The American writer Edward Soja developed and reappropriated Lefebvre's trialectics of spaciality through the concept of Third space (1989). He writes:

> *Everything comes together in Third space: subjectivity and objectivity, the*
> *abstract and the concrete, the real and the imagined, the knowable and the*
> *unimaginable, the repetitive and the differential, structure and agency, mind*
> *and body, consciousness and the unconscious, the disciplined and the*
> *transdisciplinary, everyday life and unending history.* (p.56)

However Soja poses that to proceed further, Third space needs an additional theme. He calls this a critical strategy of *'thirding-as-Othering.* The strategy recognises the reductionist terms that frustrated Lefebvre such as subject-object, natural-social and how he sought to offer a third possibility, that was not just an 'in-between', while still recognising the original pairing. According to Soja this *thirding-as-Othering* was the most important step in shifting from the

closed logic of 'either/or' to the open logic of 'both/also'. Soja's interpretation of Third space builds on Lefebvre's and describes it in two ways: it retains the multiple meanings that are associated with social space and it is distinguishable from physical (first) and mental (second) spaces in being 'a transcending composite of all spaces' (1989, p.62).

First space - the physical school environment, as compared with home

Second space - the imagined environment. How school is perceived.

Third space - combines first and second spaces to produce a fluid space, which is both real and imagined
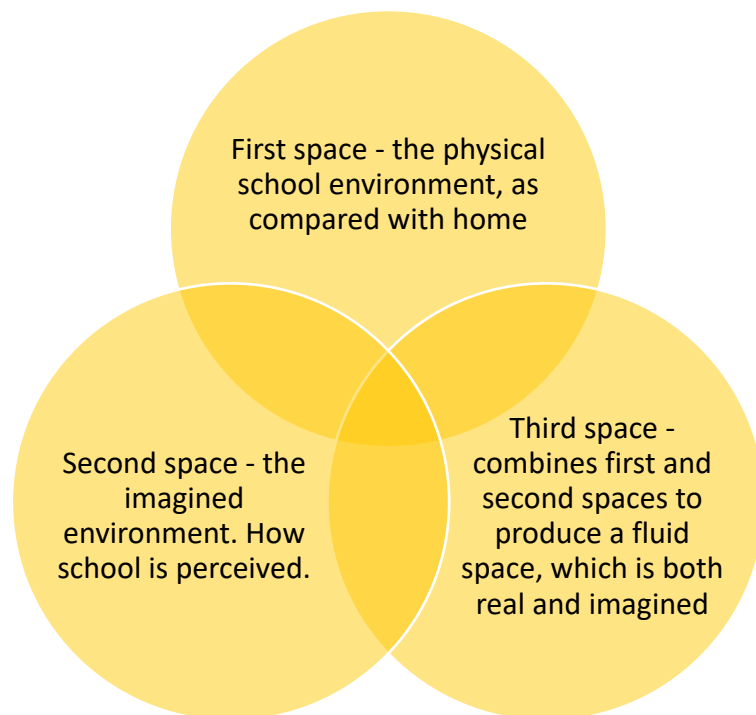
Figure 7 Soja's model as it applies to the school environment

Soja's model has some utility in beginning to think about the potentially multiple identities of Gypsy/Traveller children. In a study exploring education and identity Levinson (2014) gathered data from two Gypsy/Traveller communities, in which he drew on spatial theories to ask questions about hybrid and multiple identities. He suggested that multiple identities were possible (Bhabha, 2012; Gilroy, 2007) and were needed for economic reasons when the Gypsies in his study had to interact with non-Gypsies. Levinson warned that while children can be comfortable with multiple identities, the travelling communities can be disapproving. Seeking a third space offers a zone where cultural tensions and polarities are removed (Bhaba

1994, Soja 1996) although Levinson warns, 'is not necessarily a comfortable place to inhabit: it can be No Man's Land'. He suggests that hybrids can be empowered following border crossing but may not be the same individual that set out (Levinson, 2014).

Spatiality can offer a methodological process for challenging the view that education space is a neutral container to which Gypsy/Traveller children go to learn—albeit with varying degrees of effectiveness. The approach can recognise and problematise the taken-for-granted aspects of the physical school environment and its practices. It can also raise awareness of how schools are perceived by the Gypsy/Traveller children in relation to their culture and how exclusion can be experienced and represented. The specific potential of Third Space will be to offer new ways of thinking that explore imagined and real spaces between the school and the children's realities that result in new relationships and practices.

4 The research methods

4.1 Introduction

In this chapter I describe the research process and the methods I have used. My primary method was based on the principles of participatory, arts-based research therefore I begin by describing this approach and introducing its benefits when working with children from the Gypsy/Traveller communities. I also describe my own role as a researcher in the setting. I then describe the research design, including a justification for the case-study approach. I describe the participants and the research setting and the participation protocols I adopted. Finally, I provide a description and rationale for how the data was obtained and analysed, including epistemological issues that arose. I complete the chapter with a discussion on the ethical procedures used.

4.2 Using a participatory approach

Changes in qualitative research over the past few decades have seen traditional forms of data such as interviews, focus groups and observations commonly complemented with visual, virtual, textual, acoustic and other data producing methods (Flick, 2014). Image-based methodologies, in particular, are seen to foster an increased sense of participation (Mannay, 2013). By creating visual forms, participants are able to depict what can be difficult to express in words—particularly when they have experience of not being listened to and, according to Guillemin and Drew (2010), participatory visual approaches have the capacity to be empowering, giving voice to those who may not otherwise be heard. Gubrium and Harper (2016) ask what is meant when the term 'participatory' is used in association with visual and digital methods of qualitative inquiry. Before considering this, it is first useful to unpack the term 'participatory'.

A range of terms are used to describe the active participation of community members in the co-construction of knowledge in a research setting, such as community-based participative research (CBPR) (Wallerstein, Duran, Oetzel, & Minkler, 2017), collaborative anthropology (Lassiter 2005) and participatory action research (PAR) the term used by Gubrium and Harper (2016). The term participatory suggests methodologies or techniques used where the participant has greater status in knowledge production as well as a role in determining why and how research outcomes are produced and received by audiences (ibid). The increasing shift towards this approach is viewed positively as it is seen to offer equality in voice and status to previously excluded stakeholders (House, 2002). The reality of implementing a comprehensive participatory approach, however, has been recognised as challenging and would require participants' involvement in the entire research process from research question development and design through to public dissemination. Participation therefore often 'remains a way of talking about rather than doing' research (Cooke & Kothari, 2001, p. 32) quoted in Gubrium and Harper (2013).

Even with the disclaimer described above, the study remains close to the values associated with the participatory research approach. However, the limitations on the scope of the study and a realistic view on the extent to which children can really trigger 'action' in the school setting have resulted in me adopting the position of participatory facilitator where I have collaborated with participants in identifying issues within the setting and worked together to produce new knowledge as well as selecting creative forms for participant-led data production. Within the scope of this description participants were active in the research and the research aimed to 'produce research results with participants rather than collecting data from them' (Mannay, 2016, p.12).

4.3   The strengths and limitations of participatory visual research methods

In my study the child participants initially used photography to capture their experiences of the school environment before manipulating the images using digital art and editing techniques. The editing process provided a range of tools to explore and represent the meanings that they associated with their environment and it allowed them to define and change their own categories of meaning rather than me pre-empting the process. The children took on a range of roles from deciding what to capture through the lens to creator and editor of their own truths. In her seminal series of talks in 1957 Susanne Langer stated that the art-making process provides, 'not feelings and emotions the artist has, but feelings which the artist knows…' (Eisner, 2008, p. 91). Hogan and Pink suggest that art making is not solely a route through which interior processes come to the surface but, more importantly, it offers ways of understanding interiority 'through an anthropological paradigm that views inner states as being in progress, rather than ever static' (2012, p. 233). I am attracted to the use of visual capturing and editing processes as they offer time and a space for participants to enter into dialogue with both themselves and others. By capturing image layers, the knowledge that is produced can be continually reviewed and modified in response to the changing perceptions and environment.

While the digital, visual research methods have clear strengths, they can also be challenged on a range of different levels. There has been criticism of studies where participants are the producers of research data, which then goes on to be interpreted by the researcher (Gauntlett & Holzwarth, 2006; Rose, 2007). Rose's critical visual methodology invites researchers to consider what knowledges are being deployed in, and whose knowledges are excluded from, the representation in visual participative research methods. According to Gauntlett and Holzwarth (2006, p.86), the interpretation should come from the participant who created the

visual images and the researcher can only speculate about the inherent meanings. However, there are certain challenges when working with children and while there has been scrutiny of participatory methods used with certain groups of children there has been less theoretical development and learning (Tisdall et al 2014).

I attempted to mitigate against some of these concerns by using an approach similar to photo elicitation in the data analysis. Although photo elicitation is more broadly understood to use found photos as the focus of research discussion, the images can be produced by participants, as in my research. Collier & Collier (1986) have described the benefits of photo elicitation in interviews as spontaneously meeting the aims of an open-ended interview. Qualities of photo elicitation have been variously described as promoting collaboration between interviewer and interviewee, non-directivity of the discourse and a higher level of engagement with interview themes by interviewees (Lapenta, 2011). However, where images are able to broker a high level of engagement, what is happening is that one person is sharing a sensory experience (looking, feeling) with another (Pink, 2011). This, again, raises questions about the impossibility of the researcher accurately representing and communicating children's experiences. Additionally, there can be controversy about how ideas represented in images are translated into written forms for research purposes.

There can be much scepticism around the use of visual methods and data and Pauwels (2011) suggests that to add rigour it is necessary to provide a wide range of contextual details. The positions of both interviewer and interviewee on the project need to be apparent and extensive verbal accounts should usually accompanying the visual data. According to Pauwels (2011), these requirements are part of a broader call for reflexivity, which entails recognition that all knowledge is incomplete and in progress. Particularly in visual research, reflexivity makes real the idea that the two cultures of researcher and the researched come

together in a place where beliefs, preferences, cultural backgrounds and experiences are exposed.

Pillow's view (2003) is that reflexivity is not so much about finding methods or about how researchers can represent people better but rather whether we can be accountable to people's struggles for self-representation. This matter is particularly pertinent for my research given the community's struggle to be heard in political forums. According to Pillow, this type of research is 'uncomfortable', it is often not successful but it is the reality of doing engaged qualitative research (ibid).

4.4 The research design

An important role for research design is to "translate the epistemological principles into pragmatic decisions and explain the choices the researcher makes" (Prosser & Schwarz, 1998, p. 118). In this exploratory case study a central epistemological principle was to facilitate the voices of the child participants within the research arena, which would also include other aspects of the material and non-material environment.

4.4.1 A case-study approach

A case-study approach was adopted to allow a deeper insight into the effects of digital media and the material environment on two specific groups of children's experiences. Cresswell (2007) differentiates between ethnographic and case studies suggesting, 'the entire culture-sharing group in ethnography may be considered a case, but the intent in ethnography is to determine how the culture works rather than to understand an issue or problem using the case as a specific illustration' (p. 73). Merriam et al. (2016) differentiates the approach from others saying that a case study is 'different from other types of qualitative research in that case studies are intensive descriptions and analysis of a single unit such as an individual

program, event, group intervention, or community' (p.19). In this study, the case refers to the series of interventions with two groups of children within two primary school settings who were observed as they participated in a series of digital, visual activities. The case is two groups of children from two schools for two reasons. Firstly, Gypsy and Traveller children's attendance at school is frequently interrupted due to family travelling patterns. Although the design of the study lends itself to rich accounts coming from fewer children I was also concerned that the number of participants may become too low. Secondly, when I set out to include another school I believed that a different setting would provide a broader range of accounts. By involving a rural school and an urban school I hoped to engage with a broader range of issues. I did not, however, attempt to draw comparisons in interpreting the children's experiences based on the characteristics of the two settings.

4.4.2 The setting and the participants

The rural school was set in an agricultural area. The school population fluctuated at around 80 and there were times when a large number of the children were from Scottish or Irish Gypsy/ Traveller communities. All families were seasonally nomadic and left the school in late Spring returning in the Autumn. Travelling patterns within these periods were based on availability of seasonal work for adults and, for some, returning to Ireland for family events.

The Headteacher's policy was to create a welcoming family atmosphere within the school. At the school entrance a photo gallery contained images of the school children as well as older siblings, cousins and friends from over the years. The display remained unchanged as children came and went year after year. The school staff went to great lengths to include the families in school events although uptake was unpredictable. Staff reported that some local

non-Traveller families had avoided enrolling their children in the school as it had gained a reputation as a Travellers' school.

The urban school was set on the outskirts of a city and was within walking distance of a local authority-managed Travellers' site. The school role was around 250 children. At the time of the research there were four Scottish Gypsy/Traveller families attending the school—two families were housed and two lived on the local site. The school was based in an area of high deprivation and the majority of children were in receipt of free school meals. The children from the Gypsy/Traveller families were also in this category.

The following chart describes the Gypsy/Traveller children participants. To preserve the anonymity of the children all names are pseudonyms. The codes were used for easy reference during the research process and differentiate between the two schools U (urban) and R (rural), gender M (boy) F (girl).

Participant	Age	Gender	Ethnicity	School
Molly (UF1)	11	Female	Gypsy/Traveller	urban
Sam (UM1)	11	Male	Gypsy/Traveller	urban
Greg (UM2)	10	Male	Gypsy/Traveller	urban
Jack (RM1)	10	Male	Irish Traveller	rural
Sarah (UF2)	10	Female	Gypsy/Traveller	urban
Amy (RF1)	10	Female	Irish Traveller	rural
Lara (UF3)	8	Female	Gypsy/Traveller	urban
Lexi (RF2)	9	Female	Irish Traveller	rural
Alex (RM2)	10	Male	Irish Traveller	rural

Figure 8 Participants by age, gender, ethnicity and school setting

4.4.3 Pupil participation protocols and levels

Participation protocols were followed from the initial research visit. Children were identified by the Headteacher as being Gypsy/Traveller and in Primary 5 class or above. Each child was invited to meet me in a communal area where I explained the purpose and details of the project. If the children agreed that they would like to attend they were invited to bring a friend who could be selected from the Traveller or non-Traveller children in the class.

It is common for Traveller families to prefer oral communication rather than written, therefore, where children agreed to participate, parents were contacted by the Headteacher by phone and an opportunity was also offered to meet me to find out more about the research in the event that the children opted to participate in the sessions. Only one family took up the offer to meet me. The person had no concerns about the child's involvement or the use of the data in the research. Her concern was mainly to meet me and understand more about my character.

Parents and carers received a written project description but agreement to participation was mainly supported through a conversation with the Headteacher at the end of the school day. Both children and families were introduced to a tick box form which outlined the various ways that the children's work could be used. The information was read aloud by the Headteacher who also completed the forms when needed (Appendix 11). When they chose to participate, children had the opportunity to opt in and out during the sessions using a two-sided card saying, "I'm in" or "I'm back in class". These allowed me to keep track of children's movements as well as enabling children to leave without having to speak to me and provide a reason.

The following table illustrates the participation levels of the Gypsy/Traveller children and their friends at each school. All children from both schools took part in the first two phases and were still attending at the end of the programmes. The Gypsy/Traveller children in the rural school had moved out of the area with their families by the time of the third phase. I offered to complete the sessions with the non-Gypsy/Traveller children but the Headteacher was reluctant due to a large school event. In the urban school one of the three attending Gypsy/Traveller children did not attend the final sessions at the third phase but her non-Gypsy/Traveller friend did.   I included the collaborative work that all children produced in this data set.

Project phase and no. of sessions	School	No. participants beginning	No. participants at end	Participant data used
Phase1 Introduction and noticing in the school 2 sessions per school	School 1(Urban)	3 G/T children 3 non-G/T children[	3 G/T children 3 non-G/T children	3 G/T children
	School 2 (Rural)	3 G/T children 3 non-G/T children	3 G/T children 3 non-G/T children	3 G/T children
Phase 2 Editing the school space 3 sessions per school	School 1(Urban)	3 G/T children 3 non-G/T children	3 G/T children 3 non-G/T children	3 G/T children
	School 2 (Rural)	3 G/T children 3 non-G/T children	3 G/T children 3 non-G/T children	3 G/T children
Phase 3 Social task generating spaces of belonging 3 sessions	School 1 (Urban)	3 G/T children 3 non-G/T children	2 G/T children 3 non-G/T children	2 G/T children 3 non-G/T children (working collaboratively in groups)

Figure 9 Participation levels by children at each phase and location

4.5   Summary and rationale for how the data was obtained and analysed

The children's activities were based on a series of three interventions with the intention that each would elicit data in response to the research questions. The table below (Figure 16) illustrates the activities as part of the three-staged research process and in relation to the research questions, the thematic analysis and the visual analytical methods used at each stage. I used thematic analysis to understand the children's experiences of belonging as well as a visual analytical approach, given the predominantly visual nature of the main data items. In the following sections I describe the features of the three activities and the two analytical approaches.

Research question	Activity	Thematic analysis	Visual analysis
1. What does it mean for the children of Gypsy/Traveller cultures to belong in school spaces?	Responding to what is noticeable in the school during a school tour. Capturing images of objects and spaces	Thematic analysis – Abduction, drawing on the data and relating to theories of belonging (Baroutsis and Mills, 2018)	Visual site of analysis: the image (primary texts) (Rose, 2007; Gubrium and Harper, 2013)
2. How do critical, creative and digital processes combine to support Gypsy/Traveller children's meaning-making about belonging?	Selecting images of noticeable objects and digitally editing them to improve them	Thematic analysis and dialogic interpretation (Wegerif and Mansour, 2011; Wegerif, 2010 Bakhtin, 1986)	Visual site of analysis: production (producer texts) (Rose, 2007; Gubrium and Harper, 2013)
3. To what extent can Gypsy/Traveller children generate their own meaningful, digital space of belonging?	Generating designs that represent ideas that are relevant and meaningful to own lives or interests	Spaciality (Soja, 1989) Dialogic (Bakhtin, 1981, 1986)	Visual site of analysis: production (producer and audience texts) (Rose, 2007)

Figure 10 Research questions, research activities and analytical methods

4.5.1   The activities

Activity 1

The children's first activity was to participate in school tours. They were asked to walk freely around the school and grounds using tablet devices to capture objects that they noticed.

I accompanied the children on their tours and recorded interesting details of their actions and reactions. At times I also engaged them in conversations in situ to understand their actions and behaviours more fully and to prevent the meanings from being lost or forgotten. Following their tours the children discussed the things and places that they noticed, what they liked or disliked, or what made them feel comfortable or uncomfortable. In this activity the main research focus was the children's critical engagement with the school.

Wang's (2004) 'SHOWED' model of questioning is frequently used for discussion as part of a photovoice approach. The questions offered an initial guide, which I was able to modify for the specifics of the research setting (Gubrium and Harper, 2013, p.72) and in recognition of the age and abilities of the children.

Wangs' model was as follows:

- What do you See here
- What is really Happening here?
- How does this relate to Our lives?
- Why does this concern, situation or strength exist?
- How can we become Empowered through our new understanding?
- What can we Do?

The revised model became:

- What do you notice here?
- What is really happening here?
- Why did you take this photograph?
- Is there something you like or don't like about this photo?
- How does this relate to how you belong in the school?

Activity 2

In the second activity the children were asked to reflect on their photographs from the photo tours and think about how the subject matter made them feel. I purposely reintroduced some of the children's vocabulary of belonging into the discussion. The children were then invited to use the digital media editing tools to change or improve the selected images in some way to make them feel more comfortable in the school. During the editing stage I discussed with the children their processes of media production. I was interested in how they used the media as part of a visual 'thinking-in-action' process to produce meaning. I was also interested in the various aspects of the material and non-material environment that contributed to the meaning-making process. These 'producer texts' (Rose, 2007) could also be interrogated as 'primary texts' as they would continually evolve through a process of editing and each iteration used visual symbols and elements to describe the school environment in a different way. The research focus during this activity was on the dialogic processes involving the child, the device and other material and non-material aspects of the learning environment.

Activity 3

For the final activity the focus was on 'audience texts', which brought attention to the reception of ideas. The activity was planned collaboratively between the children and myself. We began by reviewing the previous sessions and reflected on their experiences of using the digital media. The children suggested that the devices were useful because they had helped them to look better, see, think, get ideas, draw, make things and change their minds. We also revisited their thoughts on belonging and feeling comfortable within the school. I asked the children how they might now put the digital media to use to share their ideas with others. The children decided that they would like to use digital media to make something to help others

who did not feel that they belonged. The children chose to work together in small groups of two or three.

During these collaborative activities I was particularly interested in:

- How the children responded to and made sense of the activities

- Level and type of engagement with the editing tools and relationship to their individual and collaborative creative processing

- What aspects of dialogic activity were employed and which human and material aspects were involved

- Extent to which children were invested in (cared about) the material, pedagogic and social aspects of the school and their own belonging.

4.5.2 Visual analysis

The design of the activities was also informed by Rose (2007) who describes three sites for the analysis of visual images (the image itself, the site of its production and the social context around it) (see Figure 10). By maintaining an awareness of the three sites for analysis I was able to differentiate between the usefulness of the images to the different stages of the research. For example, in Activity 1 my focus was on the primarily on the images as primary texts. I was interested in the children's framing of the subject matter and the meanings that they associated with their selections. In Activity 2, and following Rose's 'site of production' I was more interested in the how the image was made and the creative and critical processes behind its production. Each of the activities allowed me different ways to understand the overlap between the children's digital making processes and the development of their ideas about belonging.
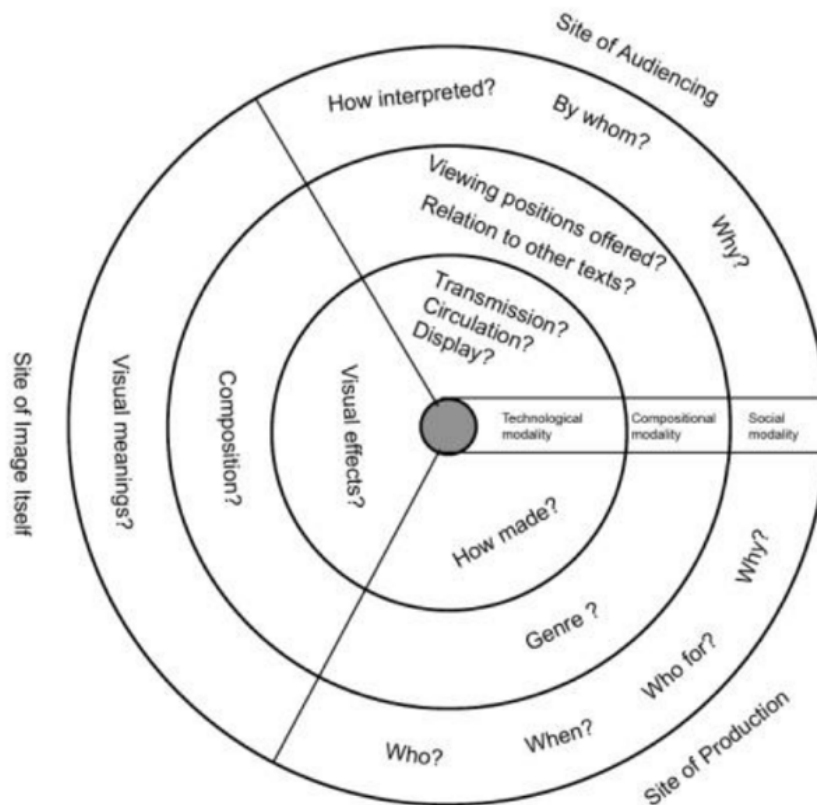
Figure 11 Sites, modalities and methods for interpreting visual materials,(Rose, 2007, p.30)

Rose's construct is extended in the work of Gubrium and Harper (2013) whose interest is more specifically on the analysis of data in participatory research. They describe the sites as texts in the following way:

- Primary texts: images, videos, descriptions that answer the "what" questions of how participants define problems or what they value. These were used predominantly in the first research question relating to how belonging was experienced.

- Producer texts: answer the "how" questions of the processes of participants media production and allowed the analysis to reflect on the nature of any dialogic activity that was present.

- Audience texts: answer the "why", "when", and "for whom" questions and are concerned with reception of ideas and performance. This data set responded to kinds of spaces that children generated in task oriented activities.

4.5.3   Thematic analysis

The study adopted a predominantly thematic analytical approach. Thematic analysis is used increasingly as a flexible tool in qualitative research analysis (Herzog et al 2019.) Thematic coding is at the heart of the analytic process. Researchers develop labels and categories and apply them to potentially relevant data. This categorization can be done inductively, aiming to generate new theory emerging from the data analysed (bottom-up), or deductively, testing theory (top-down) (Clarke & Braun, 2014). Abduction is a relatively new term that can describe a derivate of the process and it provides the researcher with added flexibility. It represents the combination of deductive and inductive modes of enquiry and theorising (Denzin, 1978). I drew on an abductive approach in this study as I sought a reflexivity that acknowledged my own position as a teacher/ researcher bringing my theoretical and lived knowledge and imagination to the interpretation (Peirce, 1979).

I began the analysis by viewing around 90 photographs and videos taken by the children during the activities alongside transcriptions of the accompanying discussions with their friends and myself. Reflexive writing and journaling throughout the coding process is thought to help researchers examine how their thoughts and ideas evolve and what their emerging impressions can be as they engage more deeply with the data. It is also useful for establishing an audit trail (Cutcliffe & McKenna, 1999). As a first stage of the analytical process I therefore created a journaling system using mind mapping — these systems supported my predominantly visual thinking style. The hand drawn map (Figure 12) is an example of the first stage of an inductive process where I began to make connections between data items as they were evolving. Initial codes began to emerge in relation to the children's Gypsy/Traveller identity. These were: Gypsy/Traveller social gatherings (in the dinner hall), supporting family (play support), love of nature (garden design). The illustration shows how I

questioned whether the children were actively integrating aspects of their own culture into the school day or whether they were seeking safe or familiar spaces in response to negative school experiences. This, in turn, led me to question whether the children were simply seeking familiarity.
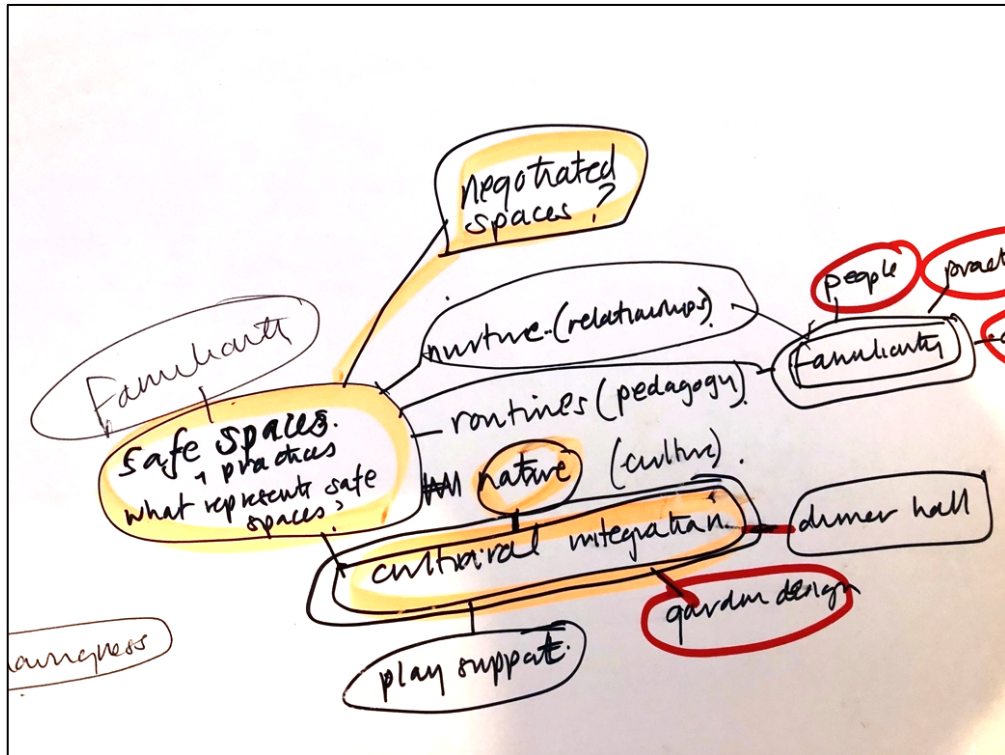
Figure 12 Example of a hand drawn mind map making connections between empirical data items

As a second stage, and in line with an abductive approach, I have begun to make sense of the emerging themes in relation to the literature (Baroutsis and Mills, 2018) on the far right, where I organise the familiar aspects into a triad of people, practices and objects. The two systems —inductive and deductive—ran in parallel through the initial stages of the abductive research process. The use of colour in the hand-drawn map is not relevant as I have used it to plot a route through my own thinking and, at this stage of the analysis, my thoughts were continually evolving.

According to Braun & Clarke (2006) a theme is dependent on whether it captures something important in relation to the overall research questions and, once identified, themes become the significant concepts that link the data together. After reviewing the transcriptions of the children's accounts of their experiences, I combined all of the data items including my mapping notes and transcriptions from exit interviews with each of the class teachers. I arranged the data on a grid organised on the vertical axis by each object and the children's associated words, actions and screen-based activity. On the horizontal axis I created relational, material, pedagogic categories as organisers for my reflection on places, spaces, relationships and interconnections between the three categories. At a later stage I also added a digital category in recognition that digital space could accommodate aspects of each and all of the other categories (see Figure 13 for a snapshot as well as Appendix 11.4). The data items such as the children's words and actions are colour-coded and three columns were added to show the connection to creative, dialogic and spatial themes in the literature.

The colour-coding connects data items horizontally across the grid with emerging themes and ideas relating to the specific object. For example, Alex's statement, "I hate that thing. It's the reason my mammy gets me out of bed", is initially coded orange as 'resists rules and control'. His conversations with a friend where she suggests that there might be a fire is coded in blue and relates to the theme of 'acceptance', which is developed in many of the scenarios. A dialogic interpretation labels this extract as 'multiple voices', referring not only to the dialogue between Alex and his friend but also their acceptance and ability to hear and respond to the voice of authority that is the school within the space of dialogue. The final column relates the data event to a 'here/there' spatial interpretation, as Alex is able to negotiate his experience of being in the presence of the bell in relation to both his home culture and his school identities.

		Relational	Material	pedagogic	Digital	Pupil	Themes/Creative and cognitive	Dialogic	Spatial
the bell		The sound of the bell irritated.Tried to ignore it.				Initial behaviour	Avoidance Discomfort		
Words		*I hate that thing. It's the reason my mammy gets me out of bed.* *It's my bed, I love it [laughs at himself] and it's cold and I'm tired and I just want to stay in.* *But there might be a fire*	*It's my ears isn't it? It's the noise. Just the noise. All day long. Ring, ring, ring!* *Well I don't like it but we know we need it cos it tells us to line up and go places.*	Traveller learning is intergenerational.Not timetabled -not a clockwatching culture. but purposeful and situated in real life. Not seen as offensive to be late.		Words	Resists rules and control Cultural discord Acceptance/ Reasoning	Negotiates authority Authoritative voice Multiple voices	Here/there Digital space for identity devlopment
Actions		*Observes others for 5 minutes before starting. Progresses to accept support from others. Finally seeks approval for design. Appears proud.*	Covers ears with hands to block out sound of bell.		Becomes absorbed in the digital space. Ignores distractions.	Actions			Iterative engagement with tools in creative making space
Screen Activity		*I cant do this. This is rubbish* *I was worried that I couldn't do it but I actually enjoyed the colouring and rubbing* *Collaborative reasoning over shared screen*	*It doesn't work. Aah...let me go back in. Let me back (in reference to the screen).*	Initially frustrated engagement with tools Progression to mastery of basic tools. Unsupported It gives you any colour you want and you can just keep changing your mind	Frustration with device Initial reluctance then moves to experiement with tools. Results in redesign of bell and as part of process engages with the issues. Involves iterative painting and erasing. Uses tools fluidly.	Screen Activity	Initially tool dependent engagement Visual, creative engagement Iterative thinking and creating Experiments Makes judgements	Iteratively reformulating Creative and critical provisionality Multiple voices	Shares space, collaborative activity and negotiates purpose

Figure 13: Extract from analysis grid

The grid described above produced a large number of coding labels. In the next stage I interrogated each of the objects and reduced the number of labels to look for patterns and themes across the data sets. Figure 14 shows a snapshot of this process with the staff room door. Here, I have reduced the labels to six and placed them beside three of the relevant themes that were beginning to appear across the data sets. As a final stage, I mapped each of the objects to the more dominant themes (Figure 15). In this section of the data analysis, which related to question 1, you can see how I was able to identify a pattern of negative effects of the objects on the children (in the red boxes) as well as patterns of behaviour and coping strategies (in the blue boxes). Figure 15 also shows how the data can be loosely mapped on to Baroutsis and Mills' spaces of belonging although I found it useful to repurpose the relational, pedagogic and material categories in response to the data in my own study.
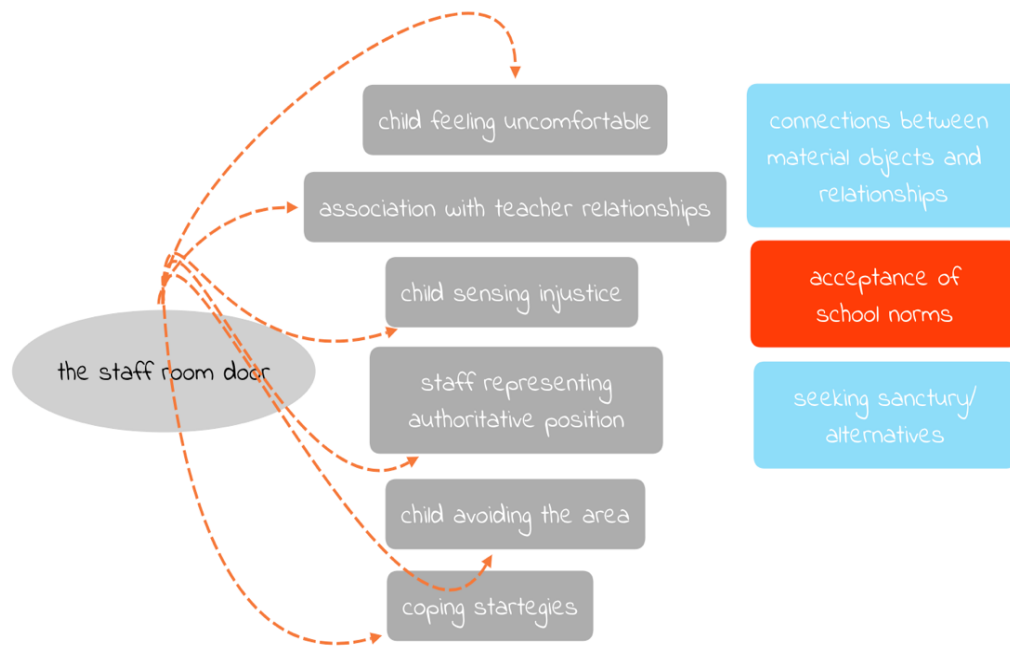
Figure 14: Snapshot of data labelling and related themes for the staff room door
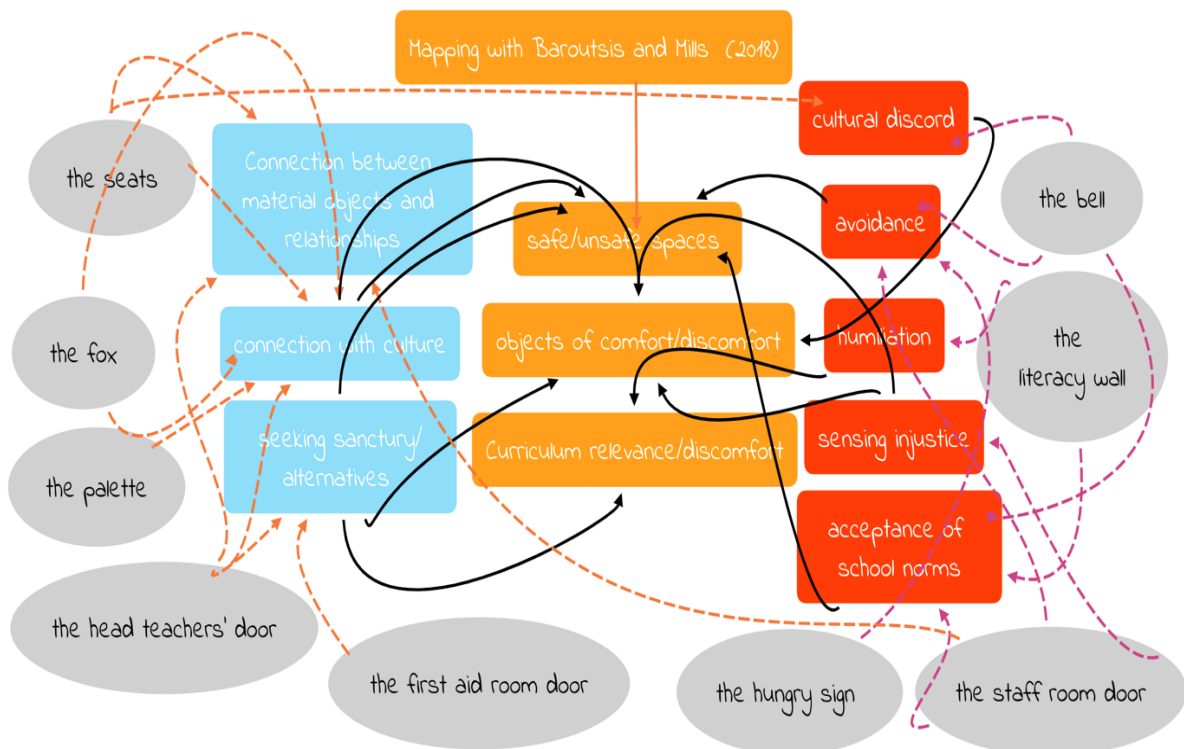
Figure 15 Reduction of codes into themes across the data set for research question 1.

4.5.4 Summary and rationale for how the data has been presented

From the outset this study has raised my concern about maintaining ontological and epistemological coherence when the research process I've subscribed to gives equal status to both human subjects and material objects. To remain true to this position I have adopted several strategies for presenting the data. Firstly, the narrative develops through a series of vignettes based primarily on material objects, for example, 'the coat peg' or 'the lava lamp'—these are themed within the overarching structure which has been defined by the key research findings. The narrative around the object vignettes is then illuminated as much as possible with the participants' direct quotes, which describe their personal experiences of the objects and any broader associations they make. Given that this is a participatory project it was important to allow the participants to speak as directly as possible for themselves. The data also includes my own observation notes that documented participants' words, actions, behaviours and screen-based activities. The observation notes were taken in real time situations as well as from video recordings of sessions. At the end of each stage I shared the research data with a member of staff (usually the Headteacher or class teacher). I have included some of their responses where it enriches understanding of the data.

4.5.5 Researcher involvement

It was my intention not to guide but to stand back from activities after ensuring that the task was understood by the children. For each task I provided a basic technical introduction including:

- Introduction to camera feature on device (framing, zooming in and out)

- Introduction to *Pixlar* app (adding a layer, adding a photo, cropping, duplicating, drawing, erasing)

- Introduction to *Explain everything* app

Beyond the introductory sessions children were aware that I was available for help. I considered that the degree of support needed would also inform the study and initially recorded my observations of children's levels of independence. Following the first session I made a decision to omit this information as I felt it was a distraction and did not add anything to the main aims of the research.

During data gathering activities and discussions I was mindful of 'my own position, my personal histories, and how I recorded within the limitations of the technology' (Harper, 2012, p.4) and I was aware of the need for transparency. It was relevant to reflect on my own knowledge base that I brought to the study. For years I had been reading about developments in the literature and I had contributed to national policy around the education of nomadic communities in my role within a government-funded knowledge exchange centre. To this end, I was aware of the dangers of pre-empting the study with societal stereotypes relating to nomadic cultures or ethnicity as it was highly likely that challenges experienced by the children would not be due only to cultural or ethnic issues but to multiple factors. I mitigated against these issues by ensuring that the study did not set out to analyse specifically in terms of ethnicity. Ethnicity would however, be discussed if it developed as a conceptual theme arising from the data.

In my current role I had been supporting the staff in both schools to develop new practices. I was familiar with both schools and I knew some of the children. I was therefore a familiar face around the schools and I was aware that children may be unsure of me in the role of researcher. I aimed to be as transparent as the situation would allow and was open with the children about my own challenges as a researcher and their role in this work. I used language familiar to participative processes and described myself as a partner in the project with the

children. To achieve a degree of informality I would bring snacks and drinks to sessions. The children also knew that they were free to come and go and they called me by my first name. It was important to separate prior knowledge from the observations and data in the research. I tried to ensure that insider information did not influence how I worked with the children although I was aware that established relationships would affect their behaviour.

It was also necessary to continually remind myself that I was a privileged, technologically competent researcher (Selwyn 2012). Selwyn suggests that as academics we are immersed in digital technology and our lives are rich in economic, cultural and social capitals. As a trained artist I use the most recent digital media in my personal work and this is likely to seep into my professional practice. My most direct experience of children and young people's use of technology is through my own children who have only known lives where technology was freely available to them along with a supportive adult who encouraged their creative development. Selwyn notes that academics have trouble distancing themselves from their technological privilege to 'make the familiar strange'. (2012) This is particularly relevant in my own case when it is something I have become passionately absorbed in.

4.5.6   Epistemological issues

Epistemological questions arose, particularly where image elicitation was used during interviews, and it was necessary to be clear about whose knowledge was represented and for whom the images are being made (Lapenta 2011). In this form of data production there is also a need to consider how much assistance, guidance and interaction participants receive in the creative process, and what are the effects of the researchers' presence. Mannay (2013) asks whether this is a threat, a benefit or simply an inescapable facet of social science research, where meanings are always negotiated, revised and co-constructed.

Mannay also suggests that, particularly with visual data, it is necessary to explore and be aware of the ways in which data also gains its meaning through the processes in which it is produced. Where the researcher is involved, their presence is typically thought to be intrusive while others such as peers or family members are not viewed in this way. Backed by

While Mannay's study focussed on the interactions of family members and their real or imagined presence in visual data, this study dealt with similar issues with other children and continually having a presence in the data. Mannay suggests that, 'rather than trying to exclude 'intrusive voices', perhaps it would be more useful to examine the ways in which they can act to further our understandings".

4.5.7 Ethical procedures

The ethical approach conformed to The British Educational Research Association's (BERA) Ethical Guidelines for Educational Research and University of Edinburgh ethical standards. The best interests of the child were my primary consideration and I ensured that the knowledge I shared was appropriate to the children's capacity to understand and that activities were meaningful and cognisant of structural inequalities in relation to race that exist for this group within society. For example, I involved the senior management team in initial discussions with children to validate the importance of the children's roles in the research and to confirm that their views would be listened to and acted on, where possible.

The procedures of the study, particularly the implications of a participatory approach, were discussed and approved with school staff prior to the research beginning. In recognition that many Gypsy/Traveller families value their privacy and can take time to develop relationships with an unknown individual such as a researcher, I relied initially on the headteachers at each school as trusted gatekeepers who would manage communication with families. I provided

research descriptions in various formats and headteachers shared the information, usually verbally, recognising any family literacy difficulties. I encouraged families to meet with me at any time if they wanted to discuss the work (see 4.4.3 for detail of pupil participation protocols).

The research was conducted in line with the United Nations Convention on the Rights of the Child (UNCRC) with particular reference to article 13 (freedom of expression) which states that every child must be free to express their thoughts and opinions and to access all kinds of information, as long as it is within the law. I explained to the children that the entire research process was designed to create a safe space where they should be able to speak freely. I also asked the headteachers to make their approval of this position clear to the children. Given my knowledge of the Gypsy/Traveller community, I was mindful of UNCRC article 5, which states that parents' rights to raise their children as they wish should be respected, however consideration must be given to children's evolving capacity to make their own decisions. With children from the Gypsy/Traveller community there needs to be a balance between the rights to not be discriminated against, the best interests of the child, and the extent to which the children's views align with their parents and carers. Article 5 endorsed the importance to the project of creating a space where children could believe that they could speak freely about their school and cultural lives and develop their ideas and opinions without judgement. It became clear that finding ways for the beliefs and values of parents, school staff and children to co-exist would present a challenge. Following several meetings with staff it was agreed to let parents know that children would be encouraged to speak freely about their lives and culture in the broadest sense. Each of the parents agreed that they would be happy for children to express their opinions within the confines of the programme with the exception of one parent who asked to be notified if there were issues that were in tension with her Gypsy/Traveller culture. The Headteacher suggested that she felt confident in her knowledge

of the family within their culture to know whether issues arising may merit being shared with the parent.

While I was familiar with the two schools from previous work, I revisited them three times prior to the main research activities to familiarise myself with the participating children and to reflect on any specific ethical issues that may arise. As an integral aspect of the participative approach I was transparent with the children about the aims and nature of the research project, particularly my own role within it. I had several conversations with senior staff about the degree of informality that could be achieved in the workshop sessions (see 4.5.5. for a description of researcher involvement). Processes for day-to-day consent from the children were established in advance of the research starting and I actively involved them in deciding the most appropriate approaches. They were able to select from several methods for communicating their willingness to opt in or out at any stage. Methods included a happy/sad face card and "I'm in" / "I'm out" cards, but, as familiarity grew, we used a thumbs up or down system when I entered their classrooms and this could be used at any time during sessions. The children understood that from my own perspective their ability to opt out without explanation was a condition of their participation. Sam used the opportunity to opt out during two sessions. His attention span could be limited and he appeared to take comfort from the fact that he could leave and re-enter without detailed explanation. On one occasion Jack refused to join the group. I later discovered that he was having trouble dealing with issues outside of school at that time. I made time to have a catch-up session with him on his own at another time.

Due to the central location of activities within the school additional children would move freely in and out of the group. Data from group interactions were only used when all

children were consenting. Children's anonymity has been protected in all data entries. Pseudonyms were used and locations of schools have not been disclosed. I also made explicit to the children that I may need to share information with their class teacher if there were issues that raised concern in relation to their wellbeing. Children and families were given opportunities to view the images that I planned to use and I made families aware when physical features of the school might suggest its location.

As described previously, I introduced my purpose as a researcher and I explained to the children the reasons why I was involving them in my work. Their trust in the wider value of the research, beyond my own personal interests, was enhanced through the headteachers who assured them of the importance of their views to the school. Ongoing review and interpretation of data by the children was an integral part of the participative design and the children were able to be involved in discussions about potential impact of the data and how it should be shared within the school community. However, we were also realistic about the extent to which the children's suggestions for change might be realised within the school in the short term. One of the headteachers told the group that she was willing to make any changes that were reasonable and that would help with their enjoyment of school. Sensitivities about dissemination of information beyond the initial research context were discussed. The children were aware that the research was part of my ongoing work in a Government funded organisation. In a discussion they made it clear that while they were happy to show their work in school spaces, they did not want any other Gypsy/Travellers knowing who they were or what they thought. I explained how their ideas would be published mainly for other educators like myself and gave assurances that they would always remain anonymous and that no members of the community would be able to identify them. A wide range of ethical considerations ran through the design of the study and all decisions

during practical sessions and the interpretation and analysis. Describing some of them in this specific discussion about ethics should not detract from their continual presence in all aspects of the participative approach used in the study.

5 What does it mean for the children of Gypsy/Traveller cultures to belong in school spaces?

5.1 Introduction

The overarching purpose of this study was to understand what could be learned when children from Gypsy/Traveller communities used digital media to make sense of how they experienced belonging in school environments. This chapter focusses specifically on responding to the first of three research questions: What does it mean for the children of Gypsy/Traveller cultures to belong in school spaces?

As well as the main question, supplementary questions evolved from a pilot study to inform the work. In the pilot study it became apparent to me that before entering into conversations about belonging in school spaces with the children, they would first need to be able to consciously notice the school environment and be able to reflect on the things it contained. I was therefore also informed by the following questions: How do children define the value of what they notice in school spaces; to what extent do they accept or challenge what they notice; and do their responses to their experiences reflect any aspects of their culture.

As I have described in Chapter 4, the research took an abductive approach, which aligned with the exploratory nature of the research aims. This approach contains aspects of inductive and deductive research methods. In this way both the emerging data and the literature are able to continually influence the research process. I was able to move between inductive and thematic analysis to support my interpretation of what I believed was happening in the research setting. In line with the approach I often returned to the literature to gain more insight into the debates surrounding inclusion and belonging, allowing an ongoing

exploration of the various material, relational and pedagogic associations that may be at play in the children's experiences of school. As I began to interpret what I saw, I also added literature on childhood studies to understand more about how the participants may be differently constructed as children by those within and those out with their cultures.

The data in this chapter included digital photos taken by participants in each of the two participating primary school settings. The specific analytical interest in the image is related to the first of Rose's three sites of interpretation—the site of production, which draws attention to the context in which the image was made and why (2001). In this regard I am interested in why the children selected particular objects and spaces and how they framed the things that they noticed. The site of the image and audience become the focus for analysis in subsequent chapters.

Production	Image	Audience
• Why the image was made	• visual effects • composition • visual meanings	• combination of modes to enhance communication • social identities and practices of audiences

Figure 16 Table highlighting the visual analytical focus for the first data chapter

5.2 Background to noticing the school

5.2.1 Children's views prior to the research activities

I visited the two case schools three times prior to the main research activities to familiarise myself with the participating children and their friends, to offer the children an opportunity to get to know more about me and the study, and to trial some of the tablet-based approaches. The sessions were informal and I designed activities which were conversational, fun and predominantly visual. The initial focus for me was to gain some background knowledge of the participating children's general attitudes to school and what they commonly noticed.

In the first session the children discussed what they liked most, what they would change and how their current school compared with other schools and places. In the main, children were positive about their current schools but I saw limited evidence of any critical engagement. For example, Alex said, "I like school. I just like everything about it". Connections were often made with friends and teacher relationships. "P6 has been much better - I love getting the Art Specialist" or "I like sitting with the wee ones in primary 2 …that's my favourite thing." Several children expressed some concerns about school practices, "I don't like it starting early". "I hate the queues- it's always queuing". One response from Alex, a boy from the urban school setting, suggested a family-held view on the pressure of homework, "I would change school to give less homework. I'm drawing how much I hate my homework jotter. We do enough work at school and don't need to do more. I'm not trying to be mean but my brother gets so much homework - like loads and loads - so it's not just me who's thinking this. We've all got to help him".
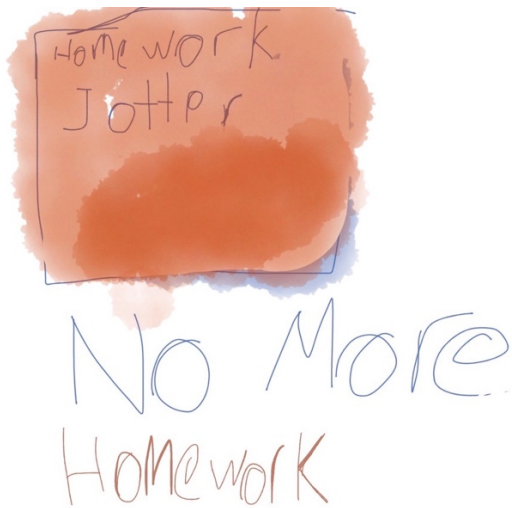
Figure 17: No more homework, Alex, 10, Urban school

I asked the children which spaces in the school they felt more comfortable in. I consciously introduced the word 'spaces' as an alternative to rooms, places or areas and we discussed what might constitute a 'space' in the school. In the main, the participants suggested physical spaces that were delineated and had clear names such as the playground, the assembly area, the dinner hall, the Headteachers' office, the classroom and the playground.

I introduced the purpose of the research and shared how I would like to know more about the specific things that the children liked or disliked in school spaces and how these things made them feel. I invited the children to reflect on why it might be helpful for teachers to know this information and we discussed the best methods for communicating their thoughts. The participants in the urban school suggested taking photographs of the school and in the rural school the children asked if they could make videos. In both schools we agreed to take their tablet devices on tours of the school. In the urban school the children discussed becoming 'Improving School Detectives'. There were no limits other than those already imposed by the school such as teachers' areas or areas where health and safety may be a concern. The

final agreed brief for the tours was: Take photos or videos of things you notice in the school and think about the reasons why you've noticed them.

5.2.2   What it meant for the children to notice

To familiarise the children with the language of noticing, I facilitated discussions about what it meant to notice and what made things noticeable. Responses included, "You look better" and "It's like pointing something out".   I asked the children to think of a time when they had noticed something and most were able to give examples based on their own experiences outside of school. One child said, "When you're lying back in the bath and you're looking up you notice wee things and you didn't even know they were there…like you know… like wee marks on the roof and stuff." Another child's suggestion was based on his everyday life with his family, "If you're sitting in the van you see things at the side of the motorway".

There was a difference between how the children responded to the concept of 'noticing' in the abstract (what does it mean to notice?) and their reflections on their own experiences of a time when they had noticed (describe a time when you noticed something). In the latter the children were able to draw on their own lifeworlds. When asked if it was important to notice most of the children were aware of the potential to miss things and responses included, "Well you can be so busy with your own stuff that you can miss everything that's going on all around you", and "Yeh, my mum says I go through life with my eyes half shut".

I accompanied the participants on their photo and video tours and made judgements as I went about my levels of intervention, reflecting on how it may affect the children's meanings (Mannay 2013). I prepared a series of simple questions to prompt further responses where I

felt that they would be useful. These varied depending on the child and the object under consideration:

- Can you describe what you've noticed?

- Do you often notice it or just today?

- How does it make you feel?

- Does it remind you of anything or anyone?

Without exception, all participants engaged with the activity and each noticed a range of aspects of the school environment—from a lift door to the serving hatch in a dinner hall. The way that the children noticed varied—some were so excited about the task and the freedom to go anywhere that they sped rapidly away, randomly taking photographs. Others walked deliberately beside me and offered a narrative that explained some of their thinking as they were making choices about what to photograph. For some, our discussions took place at the end of the tour or, in one case, during a subsequent visit. Each of these types of accounts provided rich data for the research.

5.2.3   Noticing the familiar through the device

In some cases familiar things appeared to be given a new focus when observed through the tablet devices as when Amy, a 10-year-old girl from the rural school, photographed a welcome display at the main school door. As Amy focussed her device on the display she expressed surprise as she noticed various members of her family and some older friends and cousins. The display showed members of the school community taken over a period of ten years. Amy put the device on the table and spent time looking at each of the framed photos in turn. It seemed that she had not consciously noticed the characters yet she had probably passed the display several times each day when she attended the school.

There were several other occasions when the device appeared to make children look more critically at the school environment. As Libby, a 9 year old girl from the rural school, passed a large rusty, metal container in the far corner of the playground she said, 'It's just horrible. I wouldn't go anywhere near that in the playground". When I asked her if she had noticed it before she replied that she thought she had, but had maybe just ignored it. Another pupil, Alex, said that he noticed the greenhouse was in a poor state. Again, when prompted he said that he hadn't noticed it before that day. I observed a pattern in the rural school where the children appeared to feel more empowered to notice and comment more critically on the outdoor areas than they did in the school interior when they looked through the devices. Inside the school they seemed to be more accepting of the norms of the material objects and social practices. This raised questions about whether the children felt more of a sense of belonging in the grounds outside of the school building even though this area was still technically part of the school.

5.2.4   Preliminary discussions and children's languages of belonging

Before beginning the main research activities I gathered a baseline record of the children's understandings of what the term belonging meant to them. This happened in naturally occurring groups—usually 4 or 5 children— so children were influenced by the flow of the conversation and by each other. In line with the recent literature (Antonsich, 2010; Faircloth, 2009a; Youkhana, 2015), responses fell fairly firmly into two main positions, firstly, being included in human relationships and secondly, being comfortable in a place.   The extracts from the first data set below give examples of how children viewed belonging as being dependent on human relations:

> *You can belong to a gang, can't you?*

> *It's like being part of a gang. But gangs can be bad.*

If you belong to it [the group/gang] then you don't feel left out.

They include you.

Sometimes I don't feel like I belong in the playground because it's like different groups. I belong when I'm playing at home…my cousin is there.

The second data set illustrated how belonging was also connected to place or other aspects of the material world:

I feel cosy and I definitely should belong in my bedroom. I've got loads of pink…and silver and all my jewellery is hanging up. And I've got proper fur cushions on the bed. I love it in there. I just lie back and watch my telly.

In my bedroom that's where I belong cos it's me, isn't it. I used to have my wee sister but now it's just my place. And it's got just my things in it. And nobody tells me what to do in it. It's just me.

Well, I think I belong everywhere in my house…like it's mine …and I can go wherever I want cause I belong in there.

As a follow-on I tried to tease out the children's understandings of the concept of belonging, particularly the language they associated with it. I took note of each child's language choices to allow me to integrate their own terms during the practical sessions and discussions. The following list provides a response from each of the children in reference to the idea of belonging:

To be a part of something

Feel comfy

Comfortable

Something makes you feel good

Being comfortable, being a part

Feel at home

Be in the middle

Be a member

Being liked

One child did not see themselves as the subject of belonging:

To own something…when it belongs to you

When asked if they felt they belonged in the classroom one child's response showed concern for being included in a friendship group. However, when probed it became apparent that it was a writing activity that had the power over how the pupil felt included rather than the social aspect:

Libbi: Well I sometime think I do but sometimes I don't.

Me: Why is that?

Libbi:Well I'm not in the group with my friends.

Me: What about feeling comfortable?

Libbi:I think Alex doesn't feel comfortable

Me: Why is that?

Libbi:He doesn't like what we do much.

Me: And do you feel comfortable.

Libbi:Sometime yes, sometimes no.

Me: When not?

Libbi: Mostly when we've all got to write. I kind of do other stuff.

5.3 Noticeable objects and spaces

This section presents the main data set from the children's video and photo tours of the school in response to the question: What do you notice about the school and why do you think you notice it? By focussing initially on 'what' questions I aimed to uncover the things, spaces and issues that participants defined as either valuable or problematic in relation to their experiences of school. Once recorded, these things were able to be interrogated in relation to the children's ideas about belonging.

Initially, I planned to be mindful of how the children's observations aligned with the key aspects of belonging—relational, material or pedagogic—as defined by Baroutsis and Mills (2018). However, in using an abductive approach to interpret the data I also anticipated the emergence of a range of sub themes following the children's own reflections. I describe the sub themes and how they relate to the main themes in the discussion in 5.4. The following section describes the children's experiences in relation to the things that were noticed.

5.3.1 Safe and unsafe spaces

The First Aid room door

A number of doors were noticed and were photographed in the majority of children's tours. This may not have been surprising given that the tours began in the corridor areas of the schools. The first transcript below comes from a conversation with Jack, a 10 year old boy, from the urban school. It begins by illustrating Jack's positive interest in the First Aid Room door. However, as the conversation developed around his image it became clear that Jack's

noticing of the door had multiple associations for him beyond the surface of the door, including the welcoming space that the room behind offered, his time spent with his friend as well as his relationship with his school class. The following excerpt comes from part of the dialogue between Jack and myself as we discuss the photos he has taken using his tablet device.

> *Jack: That's the First Aid Room. It's great in there, there's a bed! You get to lie on it if you're not well. The teacher lets me take Joe sometimes…he's always ill.*
>
> *Me: How does it feel to be in there then?*
>
> *Jack: Good.*
>
> *Me: In what way?*
>
> *Jack: I don't know. It's just good cause you get away from the class and you're sitting in a wee room and having a wee chat with Joe for a while.*
>
> *Me: Do you not get to sit and have wee chats in other places?*
>
> *Jack: Nah, it's not as good. There's too much going on.*
>
> *Me: What kind of thing?*
>
> *Jack: Well, the teacher's always going on and everybody's moving and speaking.*
>
> *Me: And what are you doing?*
>
> *Jack: I'm just sitting with Joe.*

Initially, Jack's interest was in the materiality of the door. He was keen to get a close-up photo of the first aid sign - a white cross on a green background. Without looking inside the room, the door was enough to evoke his memories of having been inside. He referred to the bed as a novelty object not usually found in a school, "It's great in there, there's a bed! " and

I observed him watching me for a reaction to this. Very quickly, the narrative progressed to Jack's relationships. First, with Joe —he described his own role as a companion for Joe, "It's just good cause you get away from the class and you're sitting in a wee room and having a wee chat with Joe for a while." I could almost imagine the pair of them sitting chatting in their quiet little sanctuary. In the second part of the excerpt there was a sense that the room's stillness contrasted strongly with the everyday lifeworld of the school and that Jack enjoyed time away from the class activity. His description of the teacher and children moving around suggested he found the backdrop of the classroom uncomfortable. This interpretation was supported by the class teacher in the follow-up interview when she said, "The classroom just gets too much for him sometimes and he knows himself. He needs to take himself away from it for a while".

The waiting space and the Headteacher's room

Jack appeared to be intrigued by photographing different doors, which he made the subject of his photos several times. I noticed that he spent a lot of time outside the Headteacher's office door. He took a shot from each side tilting the device at different angles. He also photographed the two small seats directly across from the door where children were expected to wait before seeing the Headteacher.

Figure 18 Seat outside the Headteacher's door, Jack

Jack's images combined to create a collage of the entire area. The following excerpt was taken from my conversation with Jack as we stood beside the door looking at it. It illustrates Jack's enthusiasm and pleasure in his relationship with the Headteacher.

> *Jack: This is Mrs McGregor's door. I love to go in and see Mrs McGregor. I go in there at lunchtimes when I'm not in the lunch room.*
>
> *Me: How do you feel about this door then?*
>
> *Jack: Fine, aye it's good.*
>
> *Me: How do you feel when you see it?*
>
> *Jack: Well I love it 'cause I love going in there. Sometimes you've got to wait here [nods to the small chairs]. We just get on with our work. She [the Headteacher} does her work and I do my work.*
>
> *Me: Do you feel comfortable in the room?*
>
> *Jack: Well aye, I feel comfortable cos it's like Mrs McGregor.*

Jack was not able to articulate the reason for liking the space behind the door but his description suggested the nature of the atmosphere inside. He appeared to make a positive association between the area outside the room, including the door and the waiting seats, and the Headteacher. This may have related to his anticipation of being allowed inside as he waited. The scene he described inside the room would be more typical of a calm office environment with colleagues working side-by-side and could be viewed unusual for a

relationship between a pupil and Headteacher where they regularly shared a space working on their separate projects.

When I shared Jack's photo and response with the Headteacher she laughed warmly and described how Jack had been coming to her room almost daily over the past months due to the level of disruption that he had been causing in his class. According to the Headteacher, Jack had been frustrated with the class routines, had not developed a good relationship with his new class teacher and the older he became the less he connected with the class curriculum. The Headteacher shared her good knowledge of Jack's culture saying she thought that Jack was more of a man than a boy, that he thrived on responsibility and was not motivated by the class work. She reported that she had recently created a personalised curricular plan with opportunities for Jack to take on citizenship tasks such as working with staff members to organise events to raise funds for a charity. He was also able to spend time at a nearby stable helping staff and learning to ride. One task in which he excelled involved taking budgeting responsibility for sourcing and buying equipment for a new area of the school for early years play. Each of these activities afforded Jack the level of independence and responsibility that he would receive within his community. Identity narratives such as these can be individual or collective and, as in the case of some travelling communities, they can be passed through generations (Derrington, 2016) . The Headteacher also appeared to have good insight into the values that are known to be important to the culture. She told me that Jack felt a great sense of injustice if it occurred and that this was typical of his community.

The Headteacher described how Jack had recently been doing much better and I felt that she had a great warmth and respect for him. She certainly demonstrated that she took a genuine

interest in his life and had good knowledge of his cultural background. It was clear that Jack felt a sense of belonging in her room—most likely due to the nature of his relationship with her, which he had come to rely on. He illustrated this when he said, "*Well aye, I feel comfortable cos it's like Mrs McGregor*". The positive impact of Jack's relationship with Mrs McGregor is supported by findings from Faircloth's study with adolescents. Faircloth commented on the importance that the children placed, not just on relationships with teachers, but also on the processes of interacting with them. The necessity of listening was flagged up as a way of accessing other people's ideas and these opportunities to learn from and about one another fed into a sense of belonging in classrooms (Faircloth, 2009).

The sensory room

A door also became a focus for Sam, an 11 year old Gypsy/Traveller boy from the urban school. Initially Sam walked past the brown wooden door before stopping suddenly in his tracks. He turned round, pointed at the door and suggested that we go inside. When we entered the room was in darkness. Sam put the overhead light on and I could see a plastic covered cube at the far end with two small arch-shaped entrances. A lava lamp stood unlit at the opposite corner. Sam walked quickly and efficiently around the room switching on wall sockets to illuminate the interior of the cube and the lava lamp and making adjustments to their positions. He then switched off the overhead light to produce a gently lit ambience. It was clear that Sam was familiar with this routine. This was the school Sensory Room typically used by very young children and some members of the nurture programme. It had a warm homely feel. Spaces of belonging often have features similar to a home and within them it is important that children are able to change and affect the environments to suit their individual preferences so that they can experience positive feelings (McGregor 2003, Baroutsis and Mills 2018).

Sam took many images of the room and the lamp from various different angles before standing in silence and casting his eyes around the room. I asked Sam how the space made him feel as we stood there but he was reluctant to talk.

Figure 19 The sensory room by Sam

Figure 20 The lava lamp by Sam

The following week when we were reviewing his images together I asked Sam whether this space made him feel comfortable. He replied saying, "It's just the peace and quiet". I asked about the lights and how he felt about them. Sam sat quietly for a minute and flicked between the images as though assessing the effects of the lights but he was reluctant to share any thoughts. The following week when I asked him if he would like to improve or change one of the images with the digital editing tools he refused, saying that he liked them the way they were.

I sensed that Sam valued this space in a way similar to how Jack valued the First Aid Room. Sam, however, was much more intimate with, and in control of, the setting. He appeared to have agency in the space and could create the conditions that he knew would have a positive effect on him. The calm that he achieved was negotiated between himself and the material environment depending on his mood. While he seemed to seek out solitude and calm on the day I witnessed the room with him, the teacher reported that he would also go with a friend

sometimes and jump around to let off steam. It seemed that the room could accommodate his moods.

For each of the children the places described here represented safe spaces where they could expect an atmosphere, an environment or a relational experience that would make them feel comfortable. I describe in 5.3.4 how the counter side of this may be that the children were leaving behind spaces where they may have felt unsafe.

5.3.2   Objects of comfort and discomfort

The seats

Almost all participants' noticed and photographed seats, chairs and benches.   One possible reason was that the children were attracted to the seats as they mainly represented social events in their school day. Amy photographed a green bench in the playground and through our conversations I discovered that this was where she met her cousins at break times. The cousins were in different classes and they came together at the bench to share food and catch up with each other's news. When I asked why she felt comfortable there, she responded saying that she liked to meet her family. She also photographed the lunch seats and tables and explained that her whole family, "old ones and wee ones", had lunch together every day, adding, "we help the wee ones". The practice of maintaining family links and remaining within her culture seemed important.

Social spaces such as seats were noticed usually noticed positively. One child photographed a small coloured two-seat sofa in the library and described how the older ones were able to share picture books with the wee ones. One exception was with Jack's photograph of a reading area in the school. The area was in a deep corner of a stairwell and it was clear that

staff were aiming to offer children a variety of spaces conductive to sharing reading in small groups. I expected a positive response from Jack given that he liked the outdoors and the area was covered in images of flowers and woodland and the seats were designed to look like logs. Jack's response was surprising.

> *Me: Tell me about this area then?*
>
> *Jack: Aye, it's where you go to read if you want.*
>
> *Me: And do you feel comfortable coming here?*
>
> *Jack: I never go here.*
>
> *Me: Why not?*
>
> *Jack: Everybody is passing. Oh and these are just pictures…it's not real.*

Figure 21 The playground seat by Molly

Figure 22 The plastic seat by Sarah

Figure 23 The reading area seats by Jack

While staff had made an effort to provide a social corner for reading that closely resembled nature, Jack had not interpreted it in this way. It appeared that Jack's attitudes and values

meant he saw the manufactured images on synthetic fabrics differently to what the teachers had planned. Belonging often arises from connectedness and interactions are not confined only to humans but to non-human objects too (Halse 2018). The intended socio-cultural space is not aligned with Jack. He did not enjoy the exposure to others passing and he was unable to see a connection with the physical environment.

The staff room door

The teachers' staff room door appeared to produce an instant feeling of discomfort in Sam. As he approached the door he increased his pace and sped past it. Only when he was about four metres beyond it, did he stop, turn round and quickly take a photograph. He made no effort to focus the shot. I noticed his behaviour and reflected that it was unusual because he had been methodical and considered in approaching other objects until this point. He had been taking pleasure in zooming to enlarge each of the other objects on his screen. When I caught up I asked about what he had photographed but Sam was reluctant to discuss the image with me.   The following excerpt comes from our conversation. Sam began by joking about the teachers before becoming more reflective. For Sam, the door to the teachers' staff room appeared to symbolise a boundary between the teachers' world and his world.

> *Me: So, have you been inside there?*
>
> *Sam: No, never. They get a break too you know. [Sam smiles].*
>
> *Me: They get a break?*
>
> *Sam: Aye, they need a coffee [laughs]… they say they need a break too.*
>
> *Me: So what do you think about them…the teachers?*

> Sam: [Pauses to think] Well some are really nice…like you know Mrs
>
> Patterson…she's really good isn't she? [pauses for me to answer] Like, she's
>
> fair…she doesn't give you into trouble when it's not you.
>
> Me: And do you think some other teachers do that?
>
> Sam: Aye. They're not nice.
>
> Me: What do they do?
>
> Sam: I don't know…it's just not fair.

The headteacher provided additional context and told me that Mrs Patterson was the Nurture

teacher in the school. She had built a good relationship with Sam. However, his relationship

with his own class teacher was fragile. The headteacher confided that the class teacher felt as

though he had too much to deal with to give Sam the attention he needed. It seemed that

when there was disruption in the classroom Sam frequently got the blame and was sent out of

class. Sam reported the injustice in being blamed for things that were not his fault. In the

literature relationships with teachers appear to play a central role in belonging. In Faircloth's

study each participant reported their relationship with their teacher as central to their

engagement with school learning (2009). However, and relevant to Sam's case, according to

Yuval-Davis (2011) belonging is also about who holds power and how power is exercised.

She suggests that belonging always involves both physical and symbolic boundaries that

separate individuals and that the boundaries are continually maintained and reproduced. The

immediate effect that the door has had on Sam was to symbolise a boundary between him and

the teacher on the other side. In doing so he has also been reminded of different types of

teacher relationships. Positive relationships have clearly been established with some teachers

and, for example, Sam shared part of a conversation he has had with a teacher where he's

been told jokingly how much teachers need their break. This conversation suggested an

informality where boundaries between the teacher and Sam were not apparent and Sam was comfortable describing it. However, in his statement, "…she's fair…she doesn't give you into trouble when it's not you.", Sam suggested that he felt he had experienced unwarranted blame in the past from a teacher in a position of power.

In my follow-up discussion the Headteacher remarked that the class teacher, "doesn't get the Travellers". According to the headteacher, she makes no concessions for the Gypsy/Traveller children's behaviour when it can appear to be more adult that the other children. The Headteacher described how Sam speaks to the teachers as though he were equal "and it doesn't go down well with Mr Smith". Identifying how children can feel excluded in day-to-day processes and practices of schools such as in pupil-teacher relationship is key to understanding belonging. In the situation described by Sam, his agency has been reduced. Youdell proposes, "such cumulative effects coagulate to limit 'who' a student can be, or even if s/he can be a student at all" (2006, p. 13). She adds that social and educational inequalities pivot around identity categories and that there is a need to better understand the processes through which they become entangled with social and educational exclusions.

The bell

The school bell was noticed and experienced uncomfortably by Alex, a 10 year old boy from the rural school. On his photo tour Alex was walking past the bell as it rang and he quickly turned round, pointed his device in the direction of the bell and took a quick snap. As the bell continued to ring he shouted, "I hate that thing. It's the reason my mammy gets me out of bed." Alex went on to do an impersonation of his mother in a strong accent and saying, "Come on you, get up! Everybody's late again". When I asked how it made him feel his association continued to be what happened prior to the bell ringing when he was still at home.

He said, "It's my bed, I love it [he laughs at himself] and it's cold and I'm tired and I just want to stay in." When asked how it made him feel, Alex replied, "It's my ears isn't it? It's the noise. Just the noise. All day long. Ring, ring, ring!" Alex was one of a group of children who attended the school seasonally. For eight months of the year he was absent as he travelled with his family to work across Scotland, England and Ireland. Specific timekeeping rituals are not part of the culture of many Gypsy/Traveller families, so for Alex there was a marked difference between home and school with regard to timekeeping. Although it is not the intention of this study to draw comparisons between mobile and non-mobile children, it may be true to say that many children who continually attend school may not even notice the bell in this way as they are so used to it and have accepted it as a school norm since they began in primary one. For Alex the bell appeared to jar – even with his own sensibility.
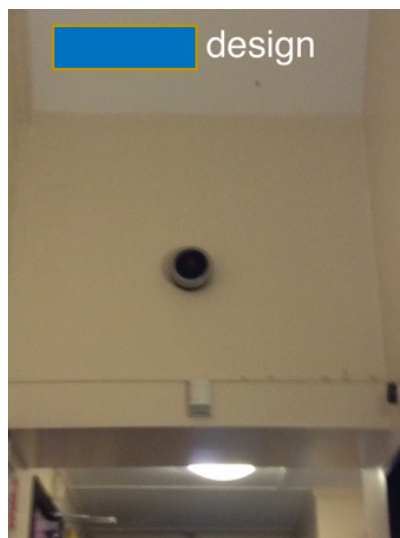
Figure 24 The school bell by Alex

Interestingly, Amy who was also part of the same Gypsy/Traveller community, overheard Alex expressing his feelings about the bell and attempted to reasons with him, saying, "Well I don't like it but we know we need it 'cause it tells us to line up and go places. How else would we know?" While she came from the same culture, Amy appeared to have accepted

the bell as an acknowledged part of the school culture and had considered its utility in pupil management. Amy's relationship with the bell symbolised an acceptance of the school routines or perhaps even compliance.

The bell appeared to produce discomfort in a different way for Jack who attended the urban school. During his photo tour Jack and I were walking along a corridor when the bell rang to signal the lunch break. Unlike Alex, Jack chose to ignore the bell completely. The following excerpt illustrates how Jack presents his discomfort:

Me: Jack, that's the bell. We should probably head back to your class now.

Jack: No, it's ok, I don't need to.

Me: But you'll need to have lunch with the others. I can meet you afterwards.

Jack ignored me and diverted himself by trying to take a photograph of a poster he had just noticed on the wall.

Me: Jack?

Jack: I don't like the lunch time bell.

Me: Can you tell me why?

Jack: No, I just don't like it and I don't like lunch.

Me: Do you not feel comfortable going to lunch then?

Jack: No.

In a follow up discussion with Jack's teacher I discovered that Jack had difficulty coping with his temper when he was in the lunch room. There had been a bullying incident between a non-Traveller and a Traveller child and, according to the teacher, the catering staff had not dealt well with the incident and had wrongly accused Jack of starting an argument and banned him from the room. The teacher reported that although she had intervened Jack felt a sense of injustice at what had happened and he believed that he was being victimised. As a consequence, he became agitated each day as lunch approached and refused to go back to the lunch room. In Jack's case, it was not the bell that caused his discomfort but the association he made between the bell and the lunch room and the staff. The bell represented something that he was attempting to avoid.

While the main focus of discomfort or comfort in each of the scenarios described begins with the child's noticing of an object, it was rarely the object that caused the discomfort. Instead, it was the associations that the child created between the objects and a range of relational experiences.

5.3.3   Curriculum relevance and discomfort

For Gypsy/Traveller children, participation in schooling can be fragmented, resulting in an inability to connect with the school system's anticipated ability levels at the age-related targets. Low literacy levels are a particular barrier and teachers often describe how this often hinders Gypsy/Traveller children's engagement with wider curriculum subjects, where they may have strengths. The normative curriculum content can also serve to exclude Gypsy/Traveller children, particularly when it lacks relevance to families' culture or lifestyle.

The similes wall

The following transcript illustrates how a typical classroom practice such as a literacy wall display has had a negative impact on Greg whose written literacy level fell well below the norm for his age and stage.   Greg is a 9 year old Gypsy/Traveller boy from the urban school. On his tour Greg guided me into his classroom and wandered around taking occasional photos of random objects. After a couple of minutes he turned and pointed towards a wall display at the back of the room.

> *Greg:* *Now that's a thing I don't like.*
>
> *Me:* *Oh right, what is it you're noticing?*
>
> *Greg:* *I can't remember what it is again.*
>
> *Me:*   *Is it where you learn phonics?*
>
> *Greg:* *Nah, it's another word like that.*

We walked towards the wall together. He filmed the approach on the video. When he reached the wall he seemed to change his mind and his mood appeared to change. He turned away from the wall and stopped filming.

> *Greg:* *Right, let's go!*
>
> *Me:* *What is it you don't like about this wall then?*
>
> *Greg:* *I don't even know what it is.*

The wall display, which Greg had noticed, looked like a typical primary classroom display area. It was covered in red frieze paper and framed by a curved-edged contrasting blue border. The display was titled 'Literacy working wall'. Within the display there were two cut-out characters in superhero costumes —one was surrounded by letters that spelled

'similes', the other 'metaphors'. I tried to engage Greg in a discussion by acting as though I

knew very little about the ideas represented in the display. I read out the title.

> Me: Similes and metaphors?
>
> Greg: Aye similes, that's it. I don't like doing similes because I can't
>
>   do similes. Similes are not for me! Let's go!
>
> Me: How do you feel about the wall?
>
> Greg: I don't know… I just hate these things because they make me
>
>   feel daft. Let's go!

Figure 25 The similes wall by Greg

Greg experienced a feeling of exclusion from the pedagogic reality that the wall represents.

At first glance the wall appears to have been designed with the symbols of inclusivity for its

assumed audience of typical 10-11 year old children (decorative framing, bright colours,

superhero characters) but Greg's reaction to the wall suggested that he did not expect it to be

able to include him and had perhaps given up trying. Skidmore describes the dangers of the

'linguistic norms' of the classroom saying that languages are selective and don't represent the diversity of children's needs (2016). The wall was communicating through multiple media (words, phrases, grammar rules, images), however it was a language that Greg did not understand. Similar to Sam, Greg avoided confronting his discomfort by leading me and our conversation away from the wall.

The 'hungry' sign

In stark contrast to Greg, who appeared to be accepting of his exclusion from the literacy practice, Molly managed her low literacy ability by shifting between what she seemed to think were the norms of acceptable language and her own culture. This description illustrates how she drew on her dramatic talents and well-honed communication skills to hide her perceived inability. Her performance was triggered by a poster on a wall that she noticed on her tour. The poster was positioned on a wall outside the dinner hall and contained an illustration of a child with arrows indicating circular hand movements on her stomach to represent the British Sign Language action for the word, 'hungry'. As she approached Molly shouted, "Stop! There's a new thing there [she focussed her iPad on the poster] and it's called hungry." She repeated the word several times, "Hungry....hungry….hungry". Molly seems to enjoy repeating the word as though she is reading it. Looking at her, it was as though she had had a breakthrough moment and learned to read for the first time.

The process of video recording the poster and pretending to read its meaning had an unexpected effect on Molly. It sparked a higher level of participation in noticing other things in the environment. Molly began to behave differently. She adopted an accent and demeanour I had not witnessed before—like a television reporter or a tour guide. She began to gesture towards random objects, providing descriptions as though she was taking a group

on a tour of the school. As she progressed on the tour she became aware of her audience —

Jack and myself— frequently turning to make sure we were still engaged in her performance.

It was as though the tablet device had control over her. Molly paused at a low white shelf

full of large, picture books. She focused her lens on the comic strip annual, *Oor Wullie*. I

asked her what she noticed about the books and she replied that she liked books. I ask if she

preferred the large picture books to a set of novels on an adjacent shelf. She responded saying

that she didn't particularly like the big books but that she just liked all books.

Figure 26 The book shelf by Molly

Molly then led us into a classroom, which turned out to be her own. Children were milling

around, involved in different activities and many noticed us as we entered. Some came over

to look at the tablet screen or to get into the shot. Molly appeared to enjoy the attention and continued past them to focus her lens on various areas of the room. Aware of her growing audience she went deeper into character and adopted an exaggerated version of a BBC presenter's voice. She performed saying, "This - is - the - nice - people - working. I'll show you everything that my class has. We have - iPads - and - we have - paper." She circled the room picking out objects.

Molly's tour is affected by her awareness of 'the listener', initially her friend and myself, then the whole class of children. Molly's increased confidence resulted in improved communication. At one point I ask her about a box on the ground containing books divided by large laminated letters that act as an alphabetical indexing system. The following extract illustrates her attempt to maintain her presenter role. It appeared that she was satisfied performing the words regardless of the sense they were making:

> Me: What are these letters for? [I point to the letters]

> Molly: We…e…ell, the l…l…letters…(stalling)… I don't know what they
> are…they're supposed to look like stuff…you know …they're all about…well
> it's supposed to be a wee free thing…you know?

At another point in the tour Molly dropped her accent as when she pointed to a set of cards for children to evaluate books that have been read. She said, "These…are the things… you're supposed to write…'oot aboot'…the books". She quickly switches back to her performing voice and points to a comfortable chair saying, "Now this is nice because you can sit in here with your books. And it's nice because you can be reading". Molly is moving between speech types – from social dialect or living language, characteristic of her culture, to an authoritative adoption of a different genre in her role as a presenter. Bakhtin proposes that each of us uses

multiple voices to speak, drawing on our past, present and imagined futures (White, 2016b). In this way we are answerable to multiple voices, our own and others that can shape our experience.

Greg's discomfort with the literacy wall is apparent in his reaction as he closes down the conversation, leads me away and in the way that his mood shifts to hopelessness. Conversely, the comfort that Molly experiences through a simple wall sign is also apparent and leads to a pronounced series of positive behaviours. The children have experienced an aspect of the curriculum in ways that have affected how they feel that they are included in the school space.

5.4   Chapter discussion

5.4.1   Introduction

A central aim for this chapter was to understand what it meant to belong in school spaces for the children of Gypsy/Traveller families based on the knowledge that many felt so excluded from schools that they failed to take up the offer to continue with their education following the primary school stage. My proposal was that elements of the school environment may be overlooked in how they affect children's experiences of inclusion or belonging.

The result of the study confirmed much of what had been reported in the literature, specifically that Gypsy/Traveller children can experience both comfort and discomfort in school spaces. The extent to which these experiences relate to a sense of belonging is discussed in this following section.

5.4.2   Connections between the material and relational aspects of belonging

As described above, Baroutsis and Mills identified three key spaces of belonging: the relational, material and pedagogical, and, to an extent, the overarching themes in this work can be seen to map onto these categories. However, as I suggest in the previous section, the data rarely fitted discreetly within one section and this may be because the relational spaces seemed to intersect with the pedagogic and the material in the children's interpretations. A good example of the connection between the material and relational is presented through Jack's positive encounter with the First Aid Room door. Using his camera he appraised the door's physical features, taking close-up shots of the First Aid sign. The door produced a strong and positive association with Jack's experience of the room. But it was Jack's warm description of social time spent in the room with his friend that was prominent. While it was the physicality of the door that became noticeable – for Jack, it was the associated connections with the space behind the door that were important. The connection with the same door can also be extended to a negative connection with the pedagogic environment in the classroom that Jack was seeking to escape from. This was also consistent with Sam's description of the sensory room. Both children provided vivid descriptions of their experiences of the material environment and through these descriptions their relational and pedagogic experiences were implicated, however subtly. Similar associations between material and relational encounters were reported in the study by Baroutsis and Mills (2008). This observation offers a useful foundation for this study so that when the focus is on the material it is important to reflect on the ways in which aspects of the social are woven through material encounters.

5.4.3   Children's reactions to experiences of discomfort

My supposition was that the material aspects of the school environment had the potential to affect how children experienced belonging. The study began by seeking to understand the kinds of things that children noticed and how they reacted. Brown's (2001) distinction between the *things* and the *objects* in our lives suggest that we can look through objects like a window on our lives to see what they disclose about us but he suggests that *things* become noticeable to us in a different way, particularly when they are not working or causing us concern.

A wide range of material *things* in the school environment appeared to cause discomfort and provoked negative reactions in the children, including the staff room door, the school bell, a wall display and a seating area. In the next chapter we also see that a window ledge, a reading box and several indoor and outdoor areas caused a degree of discomfort. In their discomfort I observed a range of different reactions. Greg's first reaction to the literacy wall was avoidance but his discomfort was clear and I could sense the humiliation he felt when he was with other children. In our tour I felt that Greg was avoiding the literacy area to save himself from further humiliation in front of me. In a follow-up discussion the teacher shared with me that Greg had refused to take part in a recent literacy assessment and that she thought he was very anxious about his ability but perhaps also ashamed. While Molly presented in a much more positive way than Greg, I sensed that her performance as a guide offered her a route to avoid humiliation too. She was clearly a proud person and I noticed on her tour how she was not willing to share that she was unable to read. Her dramatic ability offered a mechanism that distracted me and other listeners from her literacy concerns. Baroutsis and Mills (2018) identified pedagogic spaces of belonging as serving to include young people who may feel marginalised. The spaces they described were characterised as offering the

young people choice, learning that was meaningful and the feeling that they could be active participants within the learning space. They also needed to feel that they were safe and that they could be guided through their learning. Neither Molly nor Greg appeared to be supported in this way and as a result had employed avoidance and distraction tactics to hide their humiliation.

Yuval-Davis, suggests the most important level of analysis for belonging is usually social location, which is typically hierarchical and can relate to a wide range of factors. In Greg's case, his social location within the group is very low and it relates to his ethnicity and education ability. Yuval Davies also suggests that social location can be affected by the social and historical context in which it is played out. The authoritative power and influence of the curriculum and the pressure for everyone to reach age-related attainment levels are central to the social and historical context in this traditional pedagogic space. It is likely that belonging is affected by how the intersection of social locations and contexts come together. In this case Greg is experiencing the wall in a different context from the other children because he is a young boy from a traditional Gypsy/Traveller family who travel for work, resulting in his learning being regularly interrupted which, in turn, has caused his literacy ability to be approximately that of a child 4 years younger. As a result, Greg cannot experience belonging within this context because he has become socially dislocated. Additionally, the pressure that the teacher is under to produce children that attain at nationally agreed levels contributes to how Greg is excluded and turns him into a learner who may 'misrecognise himself as a failure' (Potter and Fielding, 2017, p.6).

5.4.4 Children seeking sanctuary

Two unexpected results gradually became apparent in the research. Firstly, most of the children appeared to accept their experiences of discomfort or feeling that they did not belong, whether it was to a group, a place or an object such as an aspect of the curriculum. Secondly, without making their feelings known, several of the children had become adept at developing their own strategies to cope with their discomfort. At a face-to-face social level, I have already described how Greg and Molly used avoidance and distraction—both drew me away from the focus of my interest or my line of questioning by using distraction as a strategy. Before embarking on the research I was not aware of the extent to which children masked their discomfort in their experiences. Several boys avoided conversations and ignored a question, disengaging from a conversation or activity, walking to another location or causing distraction by changing the subject. It appeared that the children had developed their own individual coping strategies—Molly went to the extent of altering her own persona, turning herself into a different personality.

The children used a range of comforting strategies—some sought comfort in objects while others sought out comforting spaces. These actions are backed by Antonsich (2010) who is critical of what he sees as an over-emphasis on belonging as attachment to the social collective, resulting in overlooking emotional and spatial connectedness to places and spaces. This was certainly evident with Jack's attraction to a toy fox which was part of a display in the Nurture Room. The teacher described how Jack visited regularly and sat beside the fox, stroking it and rearranging the autumn leaves and cones that surrounded it. Jack was the boy who had felt a strong sense of injustice at how he had been treated by a staff member. The Nurture teacher described Jack's sense of calm and belonging when he was in the area with the fox. Although the display was intended for younger children he did not seem to mind.

Figure 27 The toy fox by Sam

Jack's attraction to the toy fox suggested that his sense of belonging was not reliant on his social relationships. Instead, his needs were able to be met out with relational encounters with his peer group or staff, both of which had cause him some discomfort.

Another good example can be found in Sam's` use of the Sensory Room in response to the frenetic classroom atmosphere. Sam regularly removed himself from the class and made use of light within the sensory space to create an atmosphere that offered him the respite that he required. The space offered the antithesis of the tensions he described in his relationship with his teacher, the structures of the class, and the noisy classroom environment, where he was known to struggle.

Similarly, Libby demonstrated her discomfort by photographing the busy dinner hall from outside through the window, refusing to go inside with me. In her own words, the space was described as, "mad, everyone is messing around". Libby's method of coping was to create a space where her family could be together. Each day, weather permitting, her siblings and other Traveller friends came together at an outside table. Here, Libby took on a maternal role

by making sure that everyone else's needs were met and by looking after the younger members of the group. Her behaviour was typical of Gypsy/Traveller culture, which promotes interdependence and is focussed on extended community and family needs rather than individual needs and gains (Jordan 2001, Levinson 2008). It was as though by creating a familiar family space Libby could keep away from the discomfort of the dinner hall.

A good way to describe the children's coping methods within the school spaces would be as sanctuary seeking. We have seen in the descriptions that children could both find and create their own sanctuaries. These could be withing trusting relationships, such as with the head teacher or siblings, with objects such as the fox or in spaces such as the sensory room.

5.4.5   Gypsy/Traveller culture and boundaries

Children's actions are implicated in constituting the particular sorts of subjects that they become in schools (Youdell, 2016). We saw how Libby frequently enacted a mothering role in the school setting and recognised that this would be typical behaviour for a Gypsy/Traveller girl of her age. During lunchtimes she helped to give out the food, she took responsibility for organising social arrangements at playtime and she volunteered to help in the early years classroom. She was protective—on her photo tour she noticed the young children's outside play area was unsightly and a potential health hazard. After noticing Libby spent time meticulously exploring every surface. She assessed its dangers from the perspective of young children and she imagined its potential if it were redesigned. The ways that children interpret what they see is culturally and historically specific and, in Libby's case, meanings were formed in the situated act of viewing (Youdell, 2016). Libby responded culturally to many material things in the school setting and this was evident in two obvious

ways: firstly in how she noticed things and secondly, in how she performed her own identity within the material world of the school.

Similarly, the things that Jack noticed were culturally and historically specific reflecting his family's interest in the natural world. Jack had photographed the fox toy and on his tour he noticed a builders' pallet in shrubland near the school on his outdoor tour (described in detail in 6.2. Jack's Headteacher described his need to be outdoors and his love of nature and manual tasks. Jack was only 10 years old yet he planned to leave school within 6 months to work in construction with his uncle. Many Gypsy/Traveller families believe that by contributing to the social and economic life of the community, young people will become confident and develop a strong sense of identity (Liegeois, 1987). The way that Jack noticed things in the school environment and the ways that he performed his identity related directly to his culture.

Both Jack and Libby appear to be conforming to cultural expectations in direct relation to things in the school environment. Additionally, they appear to be conforming to gender expectations associated with their culture. Casey (2014) raises questions about the gender-blindness that characterises much research regarding Gypsy/Travellers. He suggested that by underestimating gender factors, there is a tendency to give primacy to race and discrimination issues that on their own fail to reveal the added 'gender burden' that pertains to Gypsy/Travellers, in particular women. In the context of the school, the staff seemed to feel that they were being progressive by creating opportunities for the children to get involved in activities that reflected their home culture and to an extent the activities were enjoyable for the children. However, Stryker writes that 'while children's subjectivities can be produced out of this intra-activity they need not resort to romantic claims about authenticity' (2019,

p.318). Bronfenbrenner expressed concern that often each environment was viewed in isolation and observed, ''Seldom is attention paid to a person's behaviour in more than one setting or the ways in which the relation between settings can affect what happens within them'' (1979, p.18). In relation to the child, Bronfenbrenner's position is directed at the advantages of drawing on the connections between environments such as school and home to gain a more holistic understanding. Another way of understanding the observed behaviours of the children enacting their culture in the school spaces is to view them as limiting through taken-for-granted assumptions about their potential. Given opportunities to explore different ways of being in the school spaces, the children may have enacted different or multiple subjectivities.

In extending this view, Sam's use of the sensory room as a sanctuary and Libby's creation of the family social space could be viewed as maintaining boundaries between the school community and the Gypsy/Traveller children. Identities are narratives or stories that people tell themselves and others about who they are (and who they are not). Yuval-Davis (2006) writes of the crucial importance of identity narratives being understood as intersectional. Identities are never fixed, she suggests, but are fluid and rarely formed along a single axis. Where Libby is performing relationally and materially within the boundaries of her culture and the school space and Sam avoids relational encounters by creating a boundary in the material security of the sensory room the two children's behaviours are limiting the possibilities for other identities to be developed within the school space.

Antonsich suggests that when we begin to view children within the larger relational field of both human and non-human forces we are able to explore their *becomings* as necessarily and inevitably interdependent 'on other bodies and matter' (2010, p.525). This leads to questions

about children's subjectivity. In this regard, Spyrou argues, 'If children's ontologies are not pregiven but unfold out of their intra-actions with other human and non-human entities, then nothing is by definition children's (or anyone's) own'. This offers a useful flexibility for repositioning how we understand the Gypsy/Traveller child in the debates discussed above. Binary distinctions can be avoided and the children can be understood in relation to the different contexts of their school-based encounters. This can be done in the knowledge that their identities may shift in response to new spaces, objects and people.

5.4.6   Chapter conclusion

The results of the children's photo tours produced rich data that contributed to understanding the question: How do the children of Gypsy/Traveller cultures experience belonging in school? The data and its interpretation have confirmed that, in noticing and paying attention to certain objects in school spaces, the Gypsy/Traveller children experienced varying levels of discomfort. A key theme was that while the children seemed to be responding directly to the material environment, almost every reaction could be traced back to a relational encounter – usually with a staff member. The discomfort was evidenced in a series of reactions that appeared to be rooted in powerful emotions including feelings of humiliation, sensing injustice and experiencing cultural discord.

Almost every child demonstrated the use of strategies to manage or mask their discomfort. Key strategies included avoiding exposure to certain objects and spaces. Several individuals and groups of children sought sanctuary in spaces and objects that were relevant or familiar to their culture. Some of the children appeared to be adept at masking their discomfort and went to lengths to avoid confronting certain issues, often relating to their inability to cope with the curriculum. To avoid feelings of embarrassment, a strategy that was often repeated

was to create distractions and divert attention towards other things and spaces which offered more feelings of inclusion.

While short-term comfort was achieved by seeking sanctuary in culture-related activities or objects, the literature suggests that, in not confronting discomfort, children may be precluding other roles and identities. Identities are narratives or stories that people tell themselves and others about who they are (and who they are not). Yuval-Davis (2006) writes of the crucial importance of identity narratives being understood as intersectional. Where children are performing relationally and materially within the boundaries of their culture they may be limiting the possibilities for other identities to be developed within the school space.

Finally, the effects of the use of digital media in the activities described in this chapter are subtle but significant. The children's meanings were formed in the situated act of viewing using the digital tablet lens (Youdell, 2016). I observed how the photo and video tours brought a range of things to the pupils' awareness that may have ordinarily gone unnoticed. I was also able to see how some things were noticed through the lens of a Gypsy/Traveller identity while others were noticed simply from a child's perspective, a gendered perspective or from the perspective of a curious learner. I develop the discussion on the children's identity making processes using the digital media in the next chapter.

6 How do creative, critical and digital processes combine to support the Gypsy/Traveller children's meaning-making about belonging?

6.1 Introduction

This chapter responds to the second research question: How do creative, critical and digital processes combine to support the Gypsy/Traveller children's meaning-making about belonging? The visual analytical focus turned from the previous chapter's questions about production as a context in which the images were made and what they say about the children's experiences of belonging towards questions about image making processes and how children made meaning using the digital media (see figure 32).

Production	Image	Audience
• Why the image was made	• visual effects • composition • visual meanings	• combination of modes to enhance communication • social identities and practices of audiences

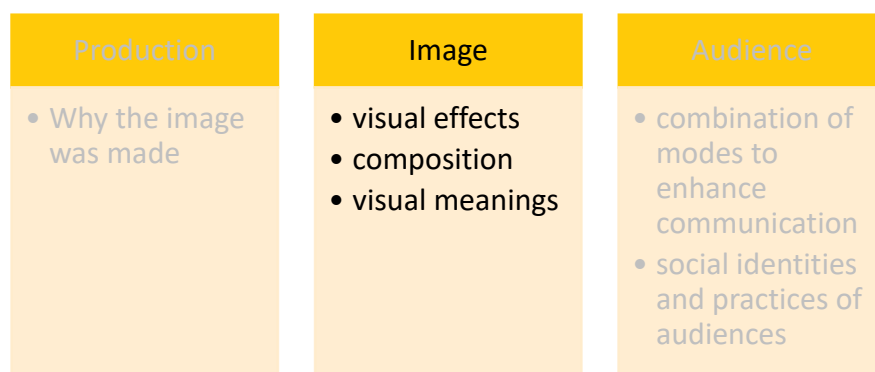*Figure 28 The visual analytical focus on the image*

Given the importance of both the use of visual methods to the analysis and the creative, art-based approach to the activities, I adopt an integrated approach to using visual research methods. Pauwels (2011) argues for more integration and analysis when using visual research methods, expressing the need for more accountability through appropriate and explicit use.

With this in mind I clarify my position on how I have integrated visual elements into the design of the study. The origin of the visual data and the subject of this part of the study was the elicited behaviour caused by the children's initial use of digital media in noticing the school environment. The method employed was the children's digital art production. From a research perspective, in this section I was less concerned with the children's final artworks and images and more with the representational choices the children made as part of their creative and meaning-making processes.

The thematic analytical focus (Figure 33) was to understand the creative and cognitive processes that the children applied when using digital media to make sense of the school world and how they directed, negotiated, staged, and edited on screen. Following Taylor, who made connections between the iterative art making process and dialogism (2000) and theories of dialogic pedagogy (Matusov & Wegerif, 2014; Shih, 2018; Vrikki et al., 2019; Wegerif, 2011), I had planned to draw on theories of dialogism based on the work of Bakhtin (1981, 1986) to frame the analysis in this section [see 2.4.10]. The theoretical focus (see Figure 45) was to understand the extent to which the children's creative and cognitive activity might be understood as dialogic events and how the social and material worlds interacted dialogically through the screen-based activity.
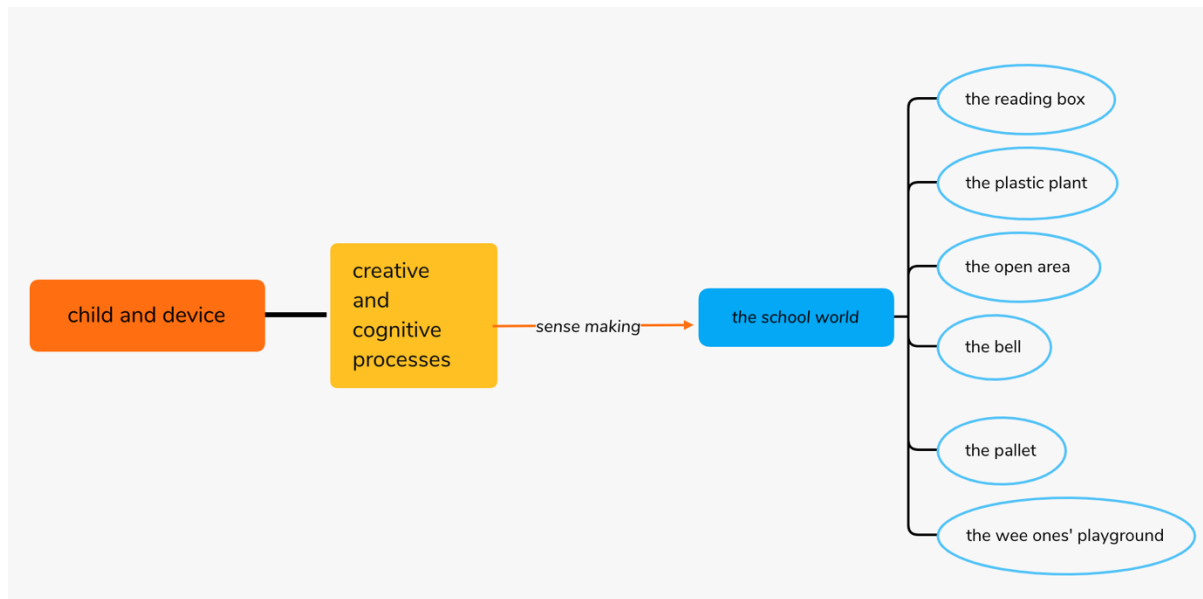
Figure 29 Analytical focus

6.2   Editing scenarios

The following section takes the form of a series of scenarios taken from the children's editing workshops. I present the data first through the scenarios before drawing on my own and the children's interpretations in the discussion.

Scenario 1 The bell and Alex

Alex had photographed the school bell in his photo tour and he shared his frustration with its constant ringing. He also shared similar frustration during the editing exercise. Although he was able to select and make use of several digital tools, such as the brush and colour pallet, the demands of thinking about how he might edit his image of the bell seemed to irritate him. The following extract comes from our initial conversation and illustrates his frustration:

> *Alex: It doesn't work. Aah...let me go back in. Let me back (in reference to the screen).*
>
> *Me: Try doing it a bit more slowly Alex. Use the arrow to go back a step.*

Alex accidentally shuts the programme down.

Alex: I'm not finished and it's done it again.

Me: Let's make a new start together and we can do it a step at a time.

Alex sighs impatiently.

Me: Which thing was it that you cared about and wanted to change.

Alex: What's the point 'cause it's not going to change anyway.

Me: Well, that's a good point. We can talk about that with the others.

We flip through Alex's folder of images.

Alex: There it is - there's the bell.

Me: Do you still want to use that one?

Alex: Yes

I offer Alex some support to place the image in the editing software app. We discuss position and size on the screen. I ask if he would like to zoom in closer but he says he wants it at a distance. He also says that he can't draw and starts to scribble heavily on the screen in frustration, saying, "I can't do this. This is rubbish." I remind Alex of the eraser tool. He finds it and he seems to enjoy revealing the original photo which is now the background layer. I ask him if he would like to create more layers of colour so that he can see the effect of removing more pixels with the eraser.

Reluctantly, Alex begins to explore the use of the paintbrush tool, using a range of different colours. He develops an iterative editing process where he paints a section then removes it

then paints again. He asks if he can get rid of the bell completely because he says he hates it. When I remind him that he can do what he chooses he seems to relax and begins to explore the colours more freely, experimenting with different spatial arrangements on the screen. For a while he completely ignores the original subject matter (the bell) and paints over it making it completely invisible. I observe that he begins to work more slowly and thoughtfully. After a while he uses the easer tool and starts to remove parts of the coloured pattern he has created to reveal the bell. He also uses the font tool and writes Alex's design. On reflection he is able to tell me that he has used his favourite colours and that they look good together. I ask why he has decided to reveal the bell now and he shares that he was concerned that there might be times when the bell really needed to ring so he has let it peep through. "Like at home time", he laughs. Overhearing this, another child in the group suggests that there might be a fire and they all agree that the bell would be needed then.

Figure 30 The bell by Alex
Figure 31 The bell edited by Alex

In the early part of the session Alex's engagement with the digital media was frustrated and he showed limited interest in engaging critically with the idea of the bell even though he had earlier described how he had been affected by it.   Initially, his use of the editing tools was limited and only came as a result of my prompting. However, as the session progressed he made a significant shift and began to engage more unselfconsciously. There was evidence of an iterative sequence of moves where he would add elements, observe the effects of the media then, in turn, would respond. My conversations with Alex directly after the event confirmed that there had been a shift in his attitude towards the bell during the editing. When I asked him how making the image affected how he felt about the school bell he joked with the others, and said, "It's fine now…I suppose I can live with it".

I was also interested to probe more about Alex's creative making processes. In a later session when the group was discussing the benefits of using the devices, Alex contributed to the discussion saying, " It gives you any colour you want and you can just keep changing your mind". He developed this line of thought saying, "I was worried that I couldn't do it but I actually enjoyed the colouring and rubbing".   Throughout his process Alex had been 'creatively switching' (Wegerif and Mansour, 2010). He had realised the temporary nature of his digital media and that there was no predetermined endpoint in what he produced.

The digital media had provided a platform for Alex to reflect on the bell (whether to leave it, accentuate it, redesign it). The involvement of the other children had also contributed to his position. His thinking had changed several times since he stood in the corridor and took the initial photo of the ringing bell.

Scenario 2 The Reading Box Red, Greg and Sally

The following data item was created at the beginning of the editing workshop by Greg, a 10 year old Gypsy/Traveller boy from the urban school. While the session was focussed on editing photographic images this data item was interesting in that Greg decided not to use his photographic images preferring to use the digital tools to create a freehand digital drawing.

Figure 32 Me and my friend with lollypops by Greg

The following extract is from his conversation with his cousin Sally who joined the workshop as a friend for one of the sessions.

> Greg: "This is me and my friend. They are two guys and they both hate the reading box red…and they are eating lollypops and his is a mint one and his is red and they get into trouble for saying they hate the reading box red and they got to stay in at lunch".

> Sally: That's not fair though 'cause you've got your right to speech so if you get punished then that's not right 'cause you've got your right to freedom of speech.

Greg: I don't like it but I've still got to do it.

Sally: Really, they could make it more fun.

In the image in Figure 32, Greg has used the digital pen in the same way that he would use non-digital tools such as coloured pencils or paints. The figures are enchanting but they appear childlike as Greg has not varied his brush sizes nor used the zoom function to allow him to create more detailed areas. His colour pallet is made up from the readymade choices on the app and he has made no attempt to mix colours. For Greg it appears that he is immersed in the process of creating an image that communicates something about his reactions to *The Reading Box Red*. He does not show any signs of having a preconception of how the image might look.

After completing his drawing Greg rejoins the main group for the editing activity. He chooses a photo of the reading scheme box that he has taken earlier (Figure 33). He selects a medium sized brush then a royal blue colour and paints over the box so that there is no trace of it left. When Sally asks why he does this he replies, *"I got rid of it"*. Sally moves over to sit beside Greg and get a closer look at his screen.

Sally: Just make it something different

Greg: Nah

Sally: Will I?

Greg: OK

Sally takes Greg's iPad and adds black and white shapes to resemble a container for video games. She writes 'GAMES R US' on the front producing a decorative effect by using a

different colour for each letter.   Greg looks at Sally's contribution and says, *" What does that say?"* Sally replies spelling the words out for Greg saying, "GAMES R US, you know …we just go to the box and play games…no cards." As Sally goes back to her seat to continue with her own work, two other children from the group gather round. A discussion ensues where it was unanimously agreed that the Reading Box Red, the class reading comprehension scheme, was boring and difficult and that digital games would be an improvement. Greg contributes to the discussion and seems proud that his initial idea has provoked this lively group discussion and that others are generally in agreement with him. Sally then returns to the discussion table. She has clearly been pondering the issue. Sally introduces the idea that there may be a problem because games could be broken.

Figure 33 The Reading Box Red by Greg

Figure 34 The Reading Box edited by Greg and Sally

This scenario is a good of example of a dialogic situation involving the social and material. It combines Bakhtin's heteroglossia (multi-voicedness) (1986) and Heatherington and Wegerif's 'material-dialogic relations' (2018). The vibrancy of the reading box produced a

negative reaction in Alex, which resulted in the social and material worlds coming together in dialogue. Sally's voice is supportive of Greg who, through his low literacy ability is unwilling to enter into dialogue with the issues presented by a reading scheme, which appears inaccessible to him. Sally mediates with the material effects of the box on behalf of Greg. She appears to have an understanding of the issues and in an earlier conversation she has demonstrated her sense of injustice about Greg's punishment. Sally uses the digital media to reposition the reading scheme, offering it a revised role that will be more accessible to Greg and keeping it in the dialogue. At a political level the dialogue is really about the nature of the curriculum, its reliance on predominantly word-based materials, based on formal language and the school's non-recognition of Greg's learning needs.

The 'voice' of the material (the reading box) is strengthened and made all the more real within the dialogue through its inclusion in the shared material-dialogic space. The photographic representation of the box is combined with the children's visual moves on the screen in an iterative dialogic process that is occupying the same plane. Through this process ideas and opinions are able to be explored.

Scenario 3: Jack, the mice, Connor and the pallet

The following scenario returns to Jack, a 10 year old Gypsy/Traveller boy. He is working with his friend (Connor) who is not a Gypsy/Traveller. Jack's images are of a fairly derelict area on the other side of the urban school periphery fence.

Figure 35 The area outside the school fence by Jack

Figure 36 The pallet by Jack

The first two images (35 and 36) show Jack's original photographs. When asked why he has chosen them Jack tells me that he likes this area and he often goes there at lunchtime with his friend Connor. I ask if he is allowed to go there and he laughs. When asked how he feels when he is there he replies:

> *"…because it's good at the bit beside the playing field…I like it there…you can get up to loads of stuff… I know everything that's there...like stuff that nobody else knows is there."*
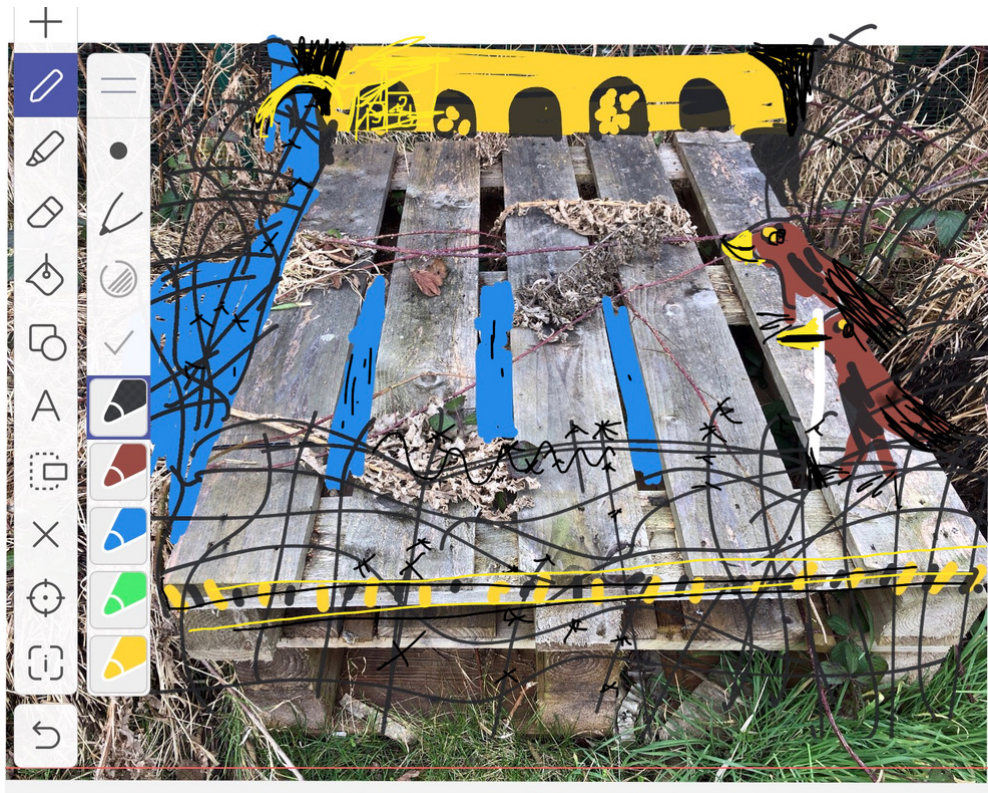
Figure 37 The pallet edited by Jack

By the time I return to Jack again he has zoomed in and cropped the original image to a
close-up of the pallet. I ask him to describe what he has done and he shares that he has
cropped because he needs people to see the detail close-up. This, he explains, is because it is
going to become a home for mice. Later when I return again he provides a detailed account
of his finished work.   He uses the blue paint tool to create a river that runs alongside the
pallet and then underneath. He explains that this is to stop other animals from getting through
to where the mice will live. He draws a protective barbed wire fence using a very fine black
line. He illustrates the potential dangers to the mice by placing two large brown birds on the
pallet as though sitting in wait for the mice. When asked how the mice will get out and in, he
replies, " They'll be ok, they'll just go under the pallet and the birds can't get through. Then
they'll go down a wee tunnel to get to a safe place". He also describes creating a yellow and
black striped 'keep in' barrier for the baby mice. Jack also describes how he has created five

small doors to represent the different families of mice that he wants to live side by side. He draws food piled up inside two of the doors.

In the final session I asked Jack to tell me about how his idea had developed from the beginning and how it had changed or got better while he was using the device. He explained:

> *I just liked the pallet…and then I started with the idea for a mouse house…so then …after one thing I kept getting another idea.*
>
> *Like… I started with the birds and then I rubbed them out totally but I couldn't get them better and then I drew them again but with brown. I saw a picture of birds like them and I copied them for mine…I was going to cut them out like we did last week but I didn't…and then I did the mouse tunnels but I couldn't see them right so I went round them with yellow…and then I thought about the food.*
>
> *I got an idea…like… about a river like a moat…and then I thought I need to put up barbed wire like for proper protection …see there…then I thought about the babies and created a safe place for them to play…and that's the barrier for them there.*

When I asked him how he got his ideas, Jack explained that he just kept thinking about the problems the mice might have. I had observed his concentration during the activity which lasted about 20 minutes. The Headteacher commented that this was an unusually long period of time for Jack to be absorbed in one activity as he was often distracted. His friend Connor had made several attempts to gain his attention saying, "Look Jack at this" and "Wow, how many Jacks can you make?" as he copied and pasted images of Jack onto his own screen.

Several times, Jack leaned back from the screen and said, 'There', as though confirming his satisfaction at the effects of what he was creating on his own screen.

The simple analysis of this scenario would suggest that Jack identified culturally with the themes of nature and animals. He was motivated in that he was able to select a place and an object that he identified with. The fact that the area was beyond the school boundary may also have been attractive as Jack often resisted some of the rigid school practices.

From a dialogic perspective Jack was able to shift perspective to that of the mice, allowing him to see things in new ways, a process which Phillipson and Wegerif describe as 'creative switching' (2019). Digital media enabled him to develop his ideas in dialogue with the screen. He skill level was limited — he selected colours without much consideration and only used the brush and the zoom feature to add detail—but that seemed unimportant.
The digital space allowed his imagination to develop in line with a continuous process of identifying issues and developing solutions. Jack he was able to immerse himself in an authentic learning space.

Scenario 4: The plastic plant, Amy, Carla, the curtains, and the colour picker
The following scenario illustrates how representations of nature in school are noticed as being in tension with home culture by Amy, a Gypsy/Traveller child. During a group editing session where the children were asked to select a thing or place that helped them feel that they did or did not belong in the school Amy chose a photo of a window ledge containing several natural plants and some artificial plants. She said that the plants made her feel '*not at home'*. The following transcript outlines the beginning of our conversation when Amy

begins to share her discomfort specifically over a dark green plastic plant that she has noticed.

Amy: These plants are very weird looking

Me: Do you not like plants

Amy: I do, but not these ones, they're very weird looking.

Me: Weird looking?

Amy: Well we have plants at the camp and they're not like that.

Figure 38 The plastic plants by Amy

Amy begins her edit by selecting basic drawing tools. Using the paintbrush, she chooses ready-made colours and creates a small pink flower with green leaves and a yellow centre. It stands upright beside the dark green artificial plant. As I pass she seems to be asking anyone who might be available to listen, "There, is that not nicer?" Her visual moves become more experimental as she mixes different shades of red. She selects the brightest red and says, " I think bright. Yes, I think bright flowers would be nicer". She transforms the dark plant by

covering it in blobs of the bright red colour she has mixed. When I sit beside her she says, "We don't have any flowers back at the camp just now but in the summer we've always got flowers in the field and they're nice".

Amy creates a second layer for her image and says, "This is the world's funniest thing I have ever heard of!" I notice that she is referring to the colour picker tool which, when selected, changes the paint brush tool to any colour pixel that the picker is rolling over on the screen. In doing this it magnifies the pixels which produce quite a visual impact. I had introduced this as a new tool earlier in the session as an option for the children to use. Amy scrolls across the screen with the picker tool, squealing out loud as each set of colour pixels is magnified when she rolls over. She stops when a bright blue appears. She sits back and thinks for a minute then has a conversation with her friend Carla about her work, "Are you using the colour picker, Carla? Look, I'll show you what it can do."

With Carla watching, Amy select the bright blue for her paint brush and edits the entire top half of the image creating a beautiful turquoise-coloured sky and eliminating the plastic plants and the edited flowers that she had taken such care over. I ask her what inspired her to take this action and she replies, "It's the curtains. That's the problem here." I ask what was wrong with them. "Well they are not really curtains, are they?" she replied. I ask if her edit has helped the situation and she replies, "Yip, I'm starting again with a big blue sky and I'll make real flowers this time. And I had to do something with that mad bright blue, didn't I! She laughs and Carla, a non-Traveller joins the conversation again:

> Carla: I don't like these curtains either, I'm glad you got rid of them.

> Amy: To be honest Carla, I've never really seen curtains like that.

Carla: We've got them in our house

Amy: Have you? Do you like them?

Carla: Nah, never really thought about it.
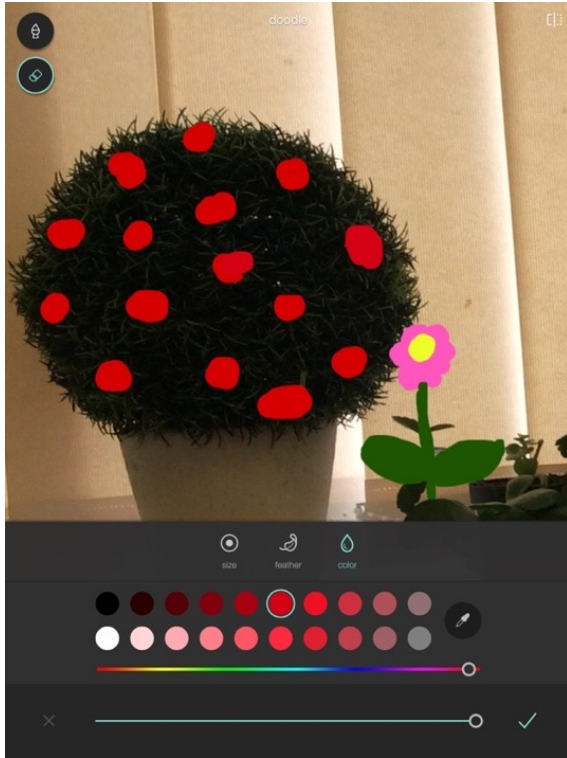
Figure 39 The plant edited by Amy
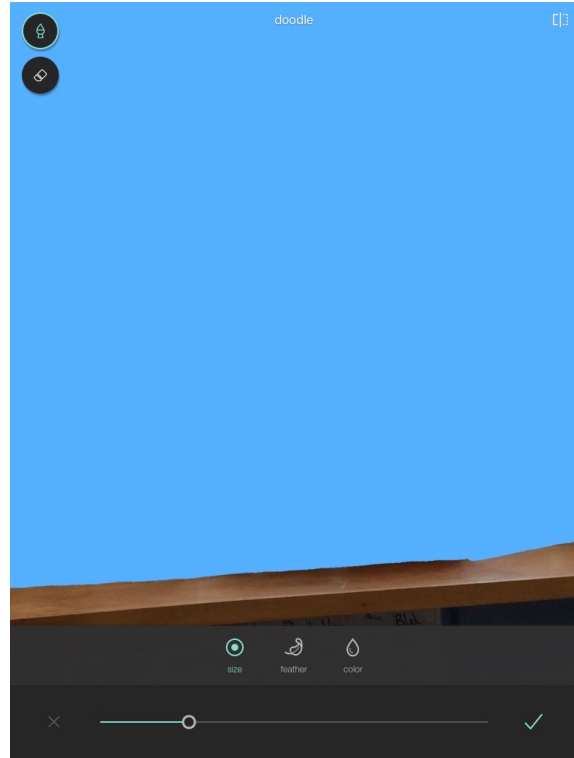
Figure 40 The vertical blinds edited by Amy

Amy's actions are driven by both her creative and critical reaction to the subject matter. She is one of the first children to be inspired by the material effects of a digital tool. The colour picker has had such an impact that she wants to use as much of the blue as possible. Interestingly, although it looks manufactured, the colour represents a small section of the natural word (the sky) taken from a small gap in the vertical blinds.   Amy's obliteration of the interior is a radical move. Running alongside Amy's creative response is her critical response to the school interior.

The blinds and the plastic plant appear to produce discomfort, which can probably be explained by her cultural perspective as a mobile Gypsy/Traveller girl who spends more than half of her year travelling with her family.

Amy's interaction with Carla provides insight into her perspective. The vertical blinds are not noticed by Carla as what is seen is culturally specific. In dialogic terms the girls' short conversation is made up of their individual *utterances*. Bakhtin describes *utterances* as the 'the language of life' (1986, p.63). They are the two-sided acts of dialogue that share meaning-making. Amy and Carla's short conversation shows how the two girls have experienced the blinds differently and are able to communicate and listen actively to the other's *utterance,* absorbing it into their own meanings. There is never a point when a resolution of views is necessary —there is no finality, it feels like the conversation would have the possibility of continuing in the same or in another direction.

Scenario 4: Libbi and the wee ones' playground

Libbi chooses to transform her image of the outside play area for the younger children. On her tour she continually talked about how she did not like it as it was dangerous, saying, "Well look, there's sharp edges on that and the wee ones can fall on the ground and somebody is always falling down the stairs". My follow-up conversation with the Headteacher revealed that Libbi volunteers regularly to go to this area to help with the wee ones. She has a younger sibling and a younger cousin at this stage in the school and takes pleasure in 'mothering' them.

Libbi identifies with the context culturally and personally. Within her family she is already taking a responsibility for looking after younger children, a practice common to young girls

from Gypsy/Traveller families, where at 9 she is no longer seen as a child herself. She assumes much of the responsibility that comes with a caring role in her concern about the safety of the young children.

Compared with other children in the study Libbi shows most interest in the site of the image (Rose, 2007). Although she has set herself an authentic task in improving the space she is immersed in the visual effects on the screen. Her choice of bright colours across the scene is appropriate in reflecting her subject. She has even reduced the fir trees to two-coloured symbolic representations. She finds creative ways to cover the entire picture plane in coloured blocks only leaving space for significant objects that she has felt did not need improvement.

Figure 41 The early years play area by Libbi
Figure 42 The play area edited by Libbi

Regarding the task Libbi's own analyses is based on her daily experience of the area and how it functions as a play area:

> *"This is the outside nursery. I've put yellow lines on steps and made the*
>
> *trees smoother. I wanted to make the nursery more bright. I remade the old*
>
> *pot …it was all old wood and jaggy and I made it bright blue. I've changed*
>
> *the sand to water 'cause it was all dirty."*

I followed up by asking Libby about the design of the space and how it would make the young children feel. In her response she demonstrates the provisionality of what she has created. Her ideas for the potential improvement of the space have been sparked through the task and appear to be endless.

I'm thinking…it's just got to be amazing. Bright and patterns and full of toys. They learn better when they are having fun.   Did you see the wee games I've put on the barrel? And there'll be lots of stuff to smell and feel. And there'll be outside painting too...like with sticks and leaves and things.

Scenario 5: The open area, the virtual class and Lara

Lara selects an image of the open area outside her classroom for the editing workshop and describes it as a place where she feels uncomfortable. I had noticed that Lara appeared to be disconnected from the group. When I ask her about places in the school where she feels comfortable she tells me that there is nowhere and that she doesn't like school much. While the others in the group are deliberating together over what they will edit, Lara begins the task quickly. When I ask her how she is managing and she says, *"It's just outside the classrooms upstairs and we get told to go there to do our Maths"*.
When I ask how she has changed the area she replies:

> *So, there isn't a teacher, there's just a robot thing. This is the cleaner (she*
> *points to a child who has accidentally been caught in the shot)...and the kids*
> *don't have to go to school…there's an electronic thing there* (points to a

large black smart board she has drawn with some basic maths on the screen and an electronic part on the side in grey and turquoise*) and it records their knowledge onto a phone.*
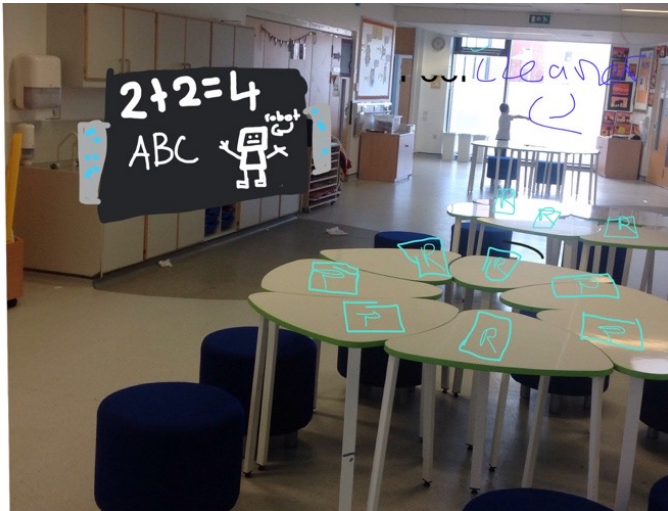
Figure 43 The open area by Lara

The dialogue continues:

Me: And what about the children learning?

*Lara: Well they leave their phone or something electronic to record what the teacher is saying (*she points to turquoise screens at places where children would normally be seated at the table.

M: And tell me about the teacher again?

*Lara: It's…like a screen and it explains you like a holographic and you listen to it and it records also the picture. (*She pauses to think*) Yeh, it tells you what to do and it shows it (pauses). Yeh, it records the teacher too.*

Me: And where will the children actually be?

Lara: I don't know...well, they'll be there (she points to the holographics)

and they'll be in their house being lazy".
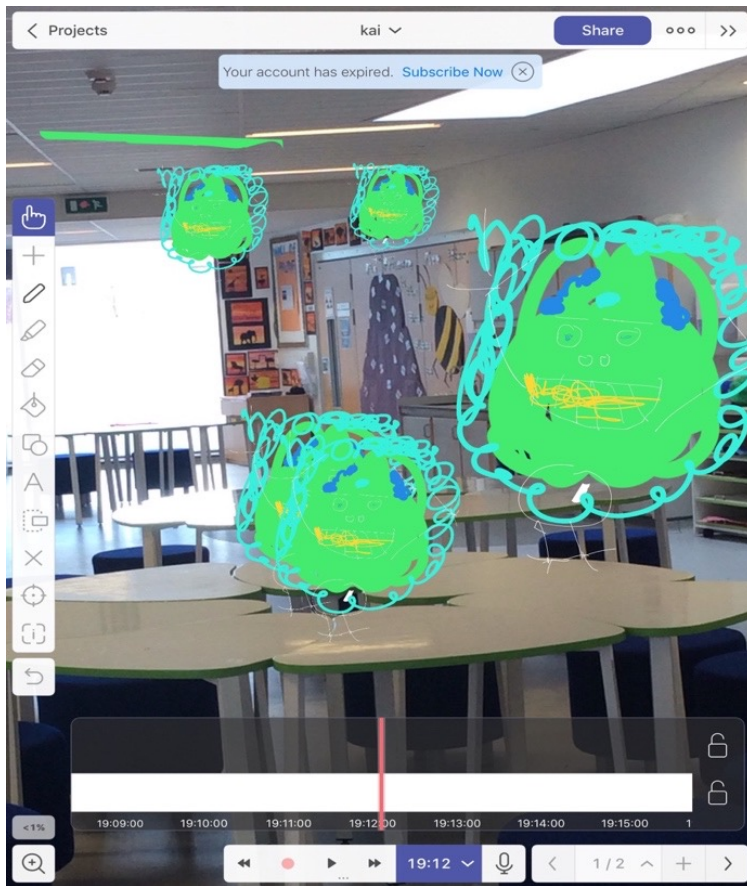
Figure 44 The holographics by Lara

Lara begins with a clear idea that has been developed by thinking critically about the space.

She is invested in finding a solution due to the discomfort that the environment provokes. Her

initial idea is to remove all human presence from the space (particularly herself) and replace

it with objects. Her initial idea is to work out a scheme where the teaching and learning

happens virtually. In the middle of her creative processes she comes upon a digital drawing

of a green blob with facial detail that she had created the previous week in a workshop where

the children experimented with the digital tools.   She uses the 'copy and paste' function and

after seeing 5 versions of the green blob placed on the screen she gets the idea for the

holographic.   The effect is achieved by chance but Lara exploits the opportunity and creates a meaningful narrative around the image to extend her initial idea.

White (2016) reminds us that the central idea in dialogism is to suspend certainty — a state where no single voice (this includes any internal or external voice in an individual) is allowed to take over or consume others. Bakhtin (1986) describes the two voices as *authoritative* discourse (which in the case of schools can represent the normative cultural practices that often go unchallenged) and *internally persuasive* discourse (which refer to the evolving ideas people bring to the discourses they are part of). Conceptually Lara is entering into a dialogue with the authoritative voice of school. She develops her ideas in the knowledge that the necessity to attend school does not change, it remains as part of the dialogic context. However, by using the tools, she is able to bring her own voice to the dialogue, which provides her with her own form of authority. Each voice—Lara's internally persuasive voice and the school system's material and authoritative voice—is able to contribute to a shared discourse.

The device may also have offered Lara a material space where she was able to extend her imagination and achieve her own sense of connectedness and possibly belonging. This position can be endorsed by Youkhana (2015) who takes issue with the overuse of naturalised concepts of belonging that focus on belonging achieved through collectives of cultures, ages, classes, ethnicities and even intersections of them. Her conceptual reflection on belonging is based on the colloquial meaning of the term: "a circumstance connected with a person or thing". She redefines the concept to stress the importance of things, and material culture in general, and stresses that the production of belonging should be about the constant appropriation and remaking of space. The device may function in two ways for Lara: firstly,

as a thing with which she can make a connection and secondly as a medium through which she can produce her own belonging through the appropriation of the school space.

6.3 Chapter discussion

The second research question explored how children's creative, critical and digital processes supported their meaning-making about belonging in school spaces. My proposal was that digital devices may provide spaces that would allow meaningful dialogue between the child and the material things in schools and I was interested to know what kinds of dialogic events might take place between the two.

To analyse the children's actions I used a simplified version of the chart in Figure 13 but focussed predominantly on children's words and screen-based actions. Each child's actions in response to a noticed thing were broken down into relational, material, pedagogic and digital interest. They were then interpreted in relation to the overarching themes, creative and cognitive activity and finally dialogic activity. The chart below illustrates Alex's engagement with the bell using his device.

	Relational	Material	pedagogic	Digital	Pupil	Themes/Creative and cognitive	Dialogic
the bell	The sound of the bell irritated.Tried to ignore it.				Initial behaviour	Avoidance Discomfort	
Words	*I hate that thing. It's the reason my mammy gets me out of bed.* *It's my bed, I love it [laughs at himself] and it's cold and I'm tired and I just want to stay in.* *But there might be a fire*	*It's my ears isn't it? It's the noise. Just the noise. All day long. Ring, ring, ring!* *Well I don't like it but we know we need it cos it tells us to line up and go places.*	Traveller learning is intergenerational.Not timetabled -not a clockwatching culture. but purposeful and situated in real life. Not seen as offensive to be late.		Words	Rules and control Cultural discord Frustration Acceptance	Negotiates authority Authoritative voice Multiple voices
Screen Activity	*I cant do this. This is rubbish* *I was worried that I couldn't do it but I actually enjoyed the colouring and rubbing* Collaborative reasoning over shared screen	*It doesn't work. Aah...let me go back in. Let me back (in reference to the screen).*	Initially frustrated engagement with tools Progression to mastery of basic tools. Unsupported It gives you any colour you want and you can just keep changing your mind	Frustration with device Initial reluctance then moves to experiement with tools. Results in redesign of bell and as part of process engages with the issues. Involves iterative painting and erasing. Uses tools fluidly.	Screen Activity	Initially tool dependent engagement Visual, creative engagement Iterative Creatively thinking Collaborates Experiments Problem solves Makes judgements	Iteratively reformulating Creative and critical provisionality Multiple voices

Figure 45 Category development for screen based activity

Alex's initial frustration sits within the relational column references and is based on his cultural attitudes towards timekeeping. The bell and its capacity to ring loudly also irritates him and sits within the materiality column. The initial irritation follows through to screen activity where he is also frustrated by the digital tools. The final two columns describe the creative and cognitive skills Alex has used and these are aligned with the dialogic activity. For example, the authoritative voice represents the school and its rules and multiple voicedness can be applied to the involvement of others in the activity as well as the dialogue between Alex and the device in the creative activity.

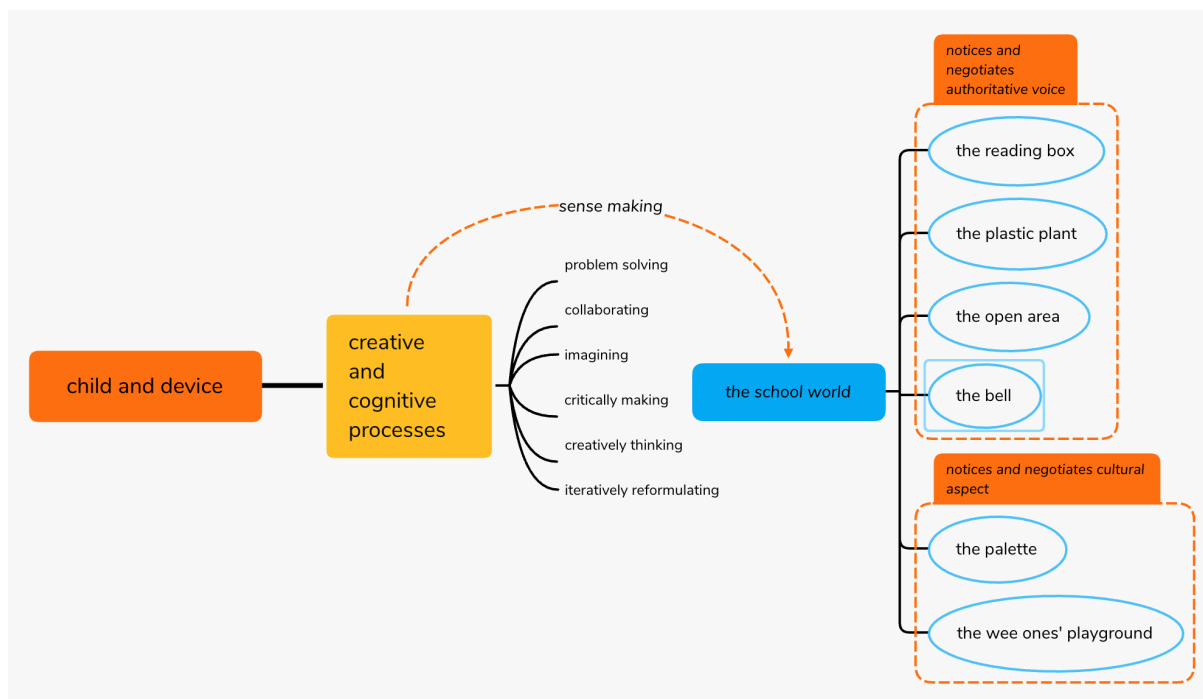*Figure 46 Analytical process including sense making processes in relation to objects*

The study confirmed that a distinctive feature of the creative and critical processes was that the material aspects of the school were able to brought into dialogue with the children on the screen (see Figure 46). By combining photographic representations with the children's visual moves on the screen two distinct voices entered the same plane.

There were many notable and distinct features that contributed to the digital meaning-making processes employed by the children. First, there was in the examples generated in the scenarios, the transformation of an image (representations of the *things* chosen by the child and with which they began to work) into something that had been edited in their journey towards meaning-making. The child may have started with a trigger *thing* or place where they have had an emotional reaction or viewpoint, perhaps a negative one, as in Alex's response to the bell. The key opportunity afforded to them by the digital device was to take and transform this starting point into an image of something they felt more connected to, or something they had manipulated from its original representation to an alternative where their own stories, rather than other narratives, such as the school's and its cultural practices, are prevalent. Making sense of the school world brough a range of creative and critical skills into play including problem solving, imagining and reformulating. Chapter 5 provided insight into the children's behaviours in trying to negotiate the material world of the school and its often authoritative voice from a Gypsy/Traveller perspective and similar negotiations were also present in the editing activities in this chapter (see Figure 45).

However, by using the devices the children were also able to engage in cultural practices that were in many ways a departure from their cultural norms and disrupted some of the identities held by themselves and, in some cases, how they were viewed by school. This position is supported by Weedon who suggests that alternative cultural practices can 'offer new forms of identity and agency and serve as ways of subverting and negotiating dominant forms of identity' (Weedon 2004, p.158).

For children who were frequently characterised by low literacy levels we saw in the girls' performances an ability to transcend deficit identities. The digitally-based activities offered

an inclusive form of communication as well as a platform for shared collaboration with peers. Carrington reminds us that 'the right, the opportunity, and the skills with which to participate and transform one's life path are the essence of social inclusion' (2007, p.113).

The interpretation of what is seen is culturally and historically specific (Mannay 2016) . It was therefore possible to consider the kinds of images that the children created through the device as a distinct form of artistic practice, which was entirely connected to the children who created each image. This occurred in a moment in time within the cultural context of the school using the affordances of the digital device.

This led to a second observation which was that the digital moves children make on screen, as they add, remove, copy, resize, redraw and, importantly, modify again and perhaps delete entirely, was a kind of ever-provisional, always imaginative, *storying* of the object or place, as they make it their own. Each change could be understood through a dialogic process of *utterances* coming from both the child and the device. Bakhtin describes *utterances* as the 'the language of life' (1986, p. 63). We saw in Amy's process in editing the window ledge how she brought her lifeworld to the dialogue through her utterance. The device's utterances were visual moves in the transformation of the image. Each move was an utterance that contributed to the two-sided act of dialogue that combined to create meaning. While the device is not human it performed as though it was listening actively and anticipating the other's *utterance*, extending the meaning-making process indefinitely.

As in any art and design practice, there was a clear link between the confidence in handling the digital media and the success of the newly rendered image. We saw in Alex's manipulation of the bell an initial frustration with the materials that inhibited his ability to

explore the meanings that he might make in relation to his own narratives. This view is confirmed in the literature suggesting that children also needed to balance critical expression and communication with visual technique and skills (Pariser, Castro, & Lalonde, 2016). The technological flexibility of the device allowed a deeper engagement with the representations they had created on the screen. Again, the sense that the images were provisional seemed to afford more freedom to take risks and allow ideas and expression to take precedence over aesthetic effects. The device's functionality as a memory bank and accessible storage facility also meant the children were less concerned about how images appeared at any moment on the screen. They were aware that they could return to their images and take them on further, and create newly invented narratives.

6.3.1   Chapter conclusion

When the children and the digital media came together in a range of creative, critical and digital processes, unique ways to explore and make sense of the material aspects of the school world became available. Creative and critical processes such as problem solving, imagining new possibilities and reformulating were able to be employed in digital formats to unpack many of the complicated emotional responses that the children were experiencing in the school material environment. Using digital, visual moves the children were able to both notice and then negotiate what could be perceived as the authoritative voice of the school, represented through its material things such as the bell, the plastic plant and the reading box.

The editing processes offered a significant level of individual and cultural agency for the children. Voices that might usually feel silenced were brought into play as part of a dialogic process on the screen. A significant observation was that there were no claims for absolutes—children also engaged in cultural practices that would not typically be associated

with Gypsy/Traveller identities and in combining with the devices some cultural identities may be have been changed or even subverted. Finally, it appeared that it was the ever provisional nature of the creative and digital meaning-making processes that offered the children the freedom to explore these new possibilities whether new educational alternatives, creative solutions or their own identities.

7 To what extent can Gypsy/Traveller children generate their own meaningful, digital space of belonging?

7.1 Introduction

I learned through the data in the previous chapters how the children noticed and experienced the material world of the school and that when using digital media they could be seen to understand belonging as a sense of comfort and familiarity and, conversely, sensed discomfort in things and spaces where they did not sense belonging. I also learned that, in using the media editing tools, the children were able to make sense of their experiences by making, thinking and rethinking critically and creatively. Often this could be viewed as part of a dialogic process where the children would interact with the material world via the visual moves on the device. In summary, these chapters described the digital media's potential in brokering the children's critical and creative thinking about the material world of the school.

For the final part of the study I sought to progress my understanding of the possibilities offered when the digital media and the Gypsy/Traveller child came together. At this stage in the research I was able to recognise the agency of the individual child while also acknowledging the utility of viewing the child in combination with other aspects of the educational context —human and material (Pachler et al., 2010). Influenced by Kearney et al.'s pedagogy of mobile learning (2012) I also sought to pursue authentic, personalised and collaborative learning situations, which might resonate with the cultural needs of the children and their families who are known to value real-life, skills-based, collaborative endeavours. I was interested to understand the extent to which the children may be able to generate learning spaces with these characteristics when they used digital media.

I set the children a brief asking them to use the media to create something that would help other children. This would be the first time the children used the media reflexively for a purpose as well as extending the focus beyond themselves to the needs of others. Creatively, I anticipated that they would build on their prior skills and experiences gained from the previous sessions (described in chapters 5 and 6), but that the brief may also motivate new ways to use the media.

The analytic focus was designed to build on the approaches of the previous chapters —the site of 'production' as in chapter 5 (the context behind what was created) and the site of the image as in chapter 6 (the children's creative making processes) (Rose 2007). However, in asking the children to use the media to create something useful, I was also able to expand the analysis to include Rose's third site—the site of the audience (see Figure 47). In Rose's original model the site of the audience relates to the place where meaning is created and understood. Fiske (1994) suggests that awareness of audience is the most important consideration as audiences can negotiate or even reject meanings within a particular context. Fiske believes that audiences bring their own ways of seeing and knowledges to their experience of any media.

The children would firstly be their own audience and critics for their own work but I also hoped that a wider awareness and anticipation of audience would encourage them to think more critically. Figure 51 illustrates the third site of the audience in relation to image and production. I was particularly interested to know:

- How well the children could make use of the different media and visual elements to represent and communicate ideas that were meaningful to themselves and others

- What kinds of dialogic events could be created through the media and the extent to which the audiences' social practices would be reflected in the designs

Production	Image	Audience
• Why the image was made	• visual effects • composition • visual meanings	• combination of modes to enhance communication • social identities and practices of audiences

Figure 47 Visual analytical focus on the site of the audience (based on Rose 2007)

Six children took part in the final activity, three non-Traveller and two Gypsy/Traveller children. The groups began by reviewing the previous sessions and reflected on how the digital media had supported them in making sense of their experience of belonging. I explained to the children that for the final activity they would be able to work either collaboratively or independently. Initially, they joked about playing video games and going on Facebook but soon asked questions indicating that they were looking for more direction on the brief:

So, are we to take photos and use the editing tools?

Do you want us to change something again?

Are we still to make the school better for us?

Two of the Gypsy/Traveller children appeared particularly challenged by the openness of the brief and became distracted. I introduced a new application, *Explain Everything*, with the aim of refocussing the children's attention through the media. The app was designed primarily for creating presentations and, although its interface was slightly more complicated than the previous one, it offered more flexibility and the capacity to combine different media,

including illustrations, photographic images, direct drawing on screen, text, video and sound. I modelled the use of several tools but, in the main, the children took their own lead to explore the app, working sometimes alone and often coming together to share discoveries. After some time I felt that the children were able to return to the brief.

7.2   Scenarios

This section describes two scenarios where the children respond to the brief by working together in two groups. Both groups decided that they would create digital designs to help other children who were afraid or felt left out. The first group addressed the notion of being left out because of low literacy and the second group explored the idea of being nervous about school camp trips.

Scenario 1: Designing a reading area: collaborating, creating and exploring

The children divided naturally into small groups with a child from a Gypsy/Traveller community in each of the groups. After a long period of discussion that revisited the idea of feeling comfortable in school, Molly stated, "*I think you're comfortable when you can read really well…some people can't*", The group agreed this was important and focussed on how they could create something to help people to read. For a while the children worked on their own coming up with occasional ideas. Eventually Molly shared an idea about creating a reading shed.   Molly seemed to have developed a clear idea of what she was trying to achieve. Her sense of purpose was based on her own experience of exclusion through her low literacy ability.

> *Molly: My shed is going to be a book. Just imagine opening a book.*

Becky: Would be good to get it done for Mrs McMillan…she likes that kind of thing

Me: How is the iPad going to help you?

Becky: I thought this was just supposed to be good fun but sure it's actually good for a purpose?

Molly: I thought she (in reference to me) said it was about how we were thinking.

Becky: Well we are.

Molly: In the shed I'm going to make shapes of colour. Inside there's going to be a cardboard robot and he'll be holding up a book.

Becky: Like a popular book?

Molly: Yeh, a popular book.

Me: How will they learn?

Molly: Well if you get stuck on a word he helps. And he has a dictionary. It will just be audio so you can understand it. Just like speaking to a person who knows.

Becky: Well mine will be a seashell and there will be audio inside it. You know how you can hear the sea. Well they say you can don't they? My mam says if you listen you can hear the sea that you've been to. I know what you can learn. It will all be a sciencey kind of thing.

Dan: I'm stuck for ideas

Molly: Ask us.

Becky: I think Dan is not giving anything away you know (Becky laughs).

Dan : (attempting to join in the activity) What theme are you going for? What about Roald Dahl? Or mechanics?

Becky: Dan sure you're always on Xbox?

Dan: I know…but. Will I just help you Molly?

Becky: I know, we'll all just do the same thing…then we'll get it done quicker (she laughs loudly)

Molly: Ok, do you all want to do my idea?
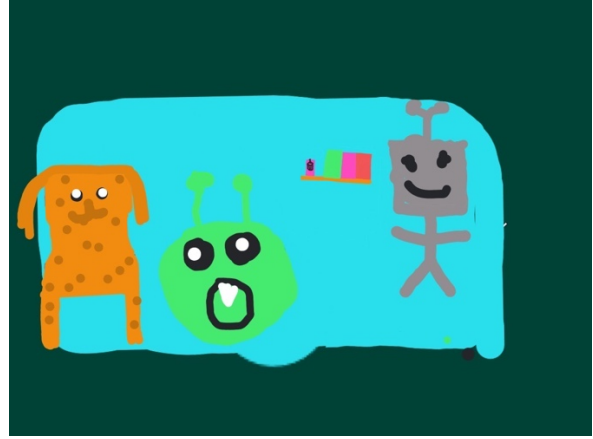
Figure 48 The book hut by Group 1

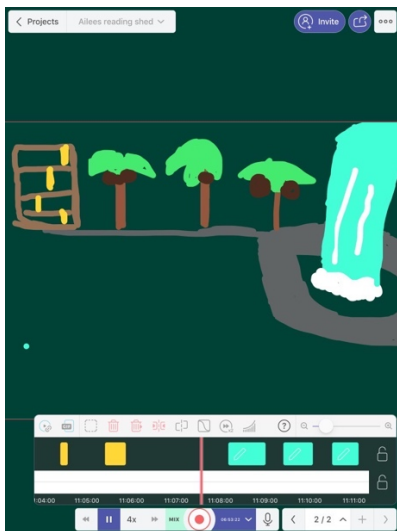*Figure 49 The exterior by Group 1*

Figure 50 The waterfall theme by Group 1

Figure 51 Inside the reading hut by Group 1

Molly's clarity and imagination had gained the attention of her friends. They had begun by working on their own devices but as the discussion unfolded they gravitated towards Molly's screen before ending up collaborating to produce the final design. The conversation was wide

ranging and the various children dipped in and out —sometimes starting parallel conversations then returning to the book shed theme. It seemed that they could sense the real need to develop her idea. Each took turns to add visual elements, for example, Becky was keen to include a waterfall and a river to reflect her interest in the sea and Dan created some chairs that were like children's book characters. However, it was Molly who took the lead role. Her ideas were less concerned with the aesthetic design and more with the design function—to help people to read. Inside the reading hut Molly created a row of iPads, and described their purpose, *"for looking up things like you get in the children's corner of the library"*.

The final image created by the three children showed a high level of awareness of the audience and incorporated a range of different perspectives that were designed to meet the audience's needs. The concept of a reading hut was imaginative, particularly when both the exterior and interior were considered equally as part of the design. All of the children contributed to the components, the sea theme, the waterfall, the rainbow exterior and each reflected an aspect of the children's own experience and I could see how these themes could be extended to other children. The children used a good range of simple shapes and symbols across the designs as well as a limited pallet of primary colours that would have engaged young children. The group drew on the editing techniques learned in previous sessions such as cropping and pasting and arranged and modified shapes, colours and positions as a collaborative process. An interesting aspect was their inclusion of cropped images of each other illustrating how they expected other children to use the space. Molly and Becky had more confidence. Although Dan was less independent and they joked with him about his Xbox use there was never any sense that he was left out and he was able to bring his own experience by designing chairs. When he needed support with the tools the others were

enthusiastic about helping him and I witnessed some of the caring and more adult roles return that I had seen in the playground groups of Gypsy/Travellers . Each of the children demonstrated creative, critical and technical strengths and weaknesses which moved in and out of play. At times a technical ability with the tools was needed and Dan was able to excel, at other times a critical understanding of the task and Molly could shine. Molly's literacy was compensated in many other ways and the range of media was particularly useful in compensating for any deficit she may have felt.

Scenario 2: Promoting the school camp: exploiting the media

Group 2, which included Lara, a Gypsy/Traveller child, suggested creating a design about the school camp because it was important to help others feel better. The children reflected on the anxiety that some people felt before arriving at camp and they wanted to create a presentation to reassure them that it was a place where you could be comfortable. Interestingly, Lara had not attended the school camp the previous year when all her class peers had. Instead, she had opted to stay at home. The teacher was unsure whether Lara's parents had not allowed her or whether Lara was nervous and had asked not to go.

The following excerpt comes from an initial conversation between the group and myself as they were at the early stages of developing their ideas. In the extract, it was clear that Tania, a non-Traveller girl, was taking the lead. Initially, Lara appeared to go along with Tania's suggestions. However we see later, as the activities develop, Lara's confidence grows and she begins to contribute in different ways.

> *Tania: Can we do videos?*

> *Me: Yes, of course, what were you thinking about?*

Tania: Well we've been speaking about (camp) and Lara says Travellers don't usually go to camp.

Lara: We were going to do an advert for (camp) 'cause loads of people get scared and we'll just show them there's nothing to worry about.

Me: That sounds interesting – what ideas did you have.

Tania: Well we've done the sense thing we did with you last week… you know, thinking about, like, sounds and smells and stuff.

Lara: And tastes.

Tania: Yes and what it feels like when you're in the bed. So we thought that would be good.

Me: Wow, these sound like great ideas. Have you thought about how the device could help in all of that?

Tania: Mmm, not really.

Lara: Well not yet

Tania: I know, we could do video interviews, you know like a travel show on TV….so, I say, "Now, here we are in (Camp) and I can guarantee you a good time'.

Becky: Do you want me to take the video?

Tania: Yes, that's a great idea and I'll be the Director.

Lara played an increasingly important part in the development of the ideas for the presentation. She was not hesitant to ask for more information about the things that

concerned her and these went on to inform the structure and content of the presentation. The following extract comes from a conversation initiated by Lara about the dormitories at the school camp and her reassurance from Becky's responses.

Lara: Do the teachers come in the dorm?

Sam: Not if we can help it [laughs]

Lara: What do you mean?

Becky: Well we don't really want them coming in

Lara: What if people are getting up to something?

Sam: If they do…I just jump all over them and their bed

Becky: Nobody needs to worry Lara, the teachers are in and out all the time, they're actually a pain! And, the dorm is lovely…everybody is usually so tired they just go to sleep quickly.

Lara: Do they?

Becky: Oh and do you know the great thing? You get your own wee locker beside your bed.

To create their videos the children wrote a brief script but the interviews were mainly improvised. They set up chairs in an outside area to stage and record the interviews. The following is an extract from one of the interviews where you can see that Lara's demeanour changes. She becomes more confident and illustrates this by taking on the role of reassuring the audience. She also begins to mimic Tania's confident television presenter style:

Tania: Welcome back to 'Camp Talks'. Today folks we are joined again by Lara. Well now Lara we know there are a lot of children nervous about the activities. What can you say to reassure all them Nervous Nellies?

Lara: Well, nothing to worry about really. It may seem a bit scary but there's nothing to worry about. I did everything, I didn't get hurt and I had the best fun.

Tania: So folks, if that can't make you feel reassured I don't know what will!

Lara: Well then that's all for today's episode. Thank you for watching 'Camp Talks' and we'll see you next time.

To bring everything together the group created a comprehensive guide to every aspect of camp life in the form of a multimedia presentation. There was a video interview to accompany each of the sections and Lara designed an icon to symbolise each. Her categories included: overall experience (a sunshine icon), food (burger icon), activities (a sailboat called 'Nervous Nellies' icon)', tuck and night time (a dollar bill icon), dormitories (a suitcase icon). Lara, who had initially been nervous and had never been to camp before had been instrumental to the development of the project. The whole group combined to create a song about the camp to a familiar soundtrack and the audience was invited to join in the chorus between each section.
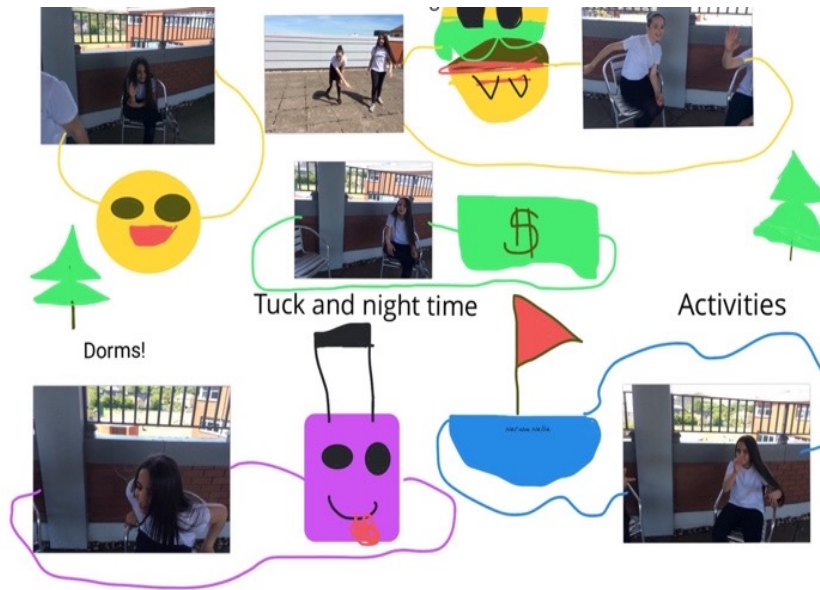
Figure 52 The school camp map by Group 2

The project culminated in a presentation to the other class members, the class teacher and the Headteacher. The Headteacher suggested that the presentation should be shared with parents too.
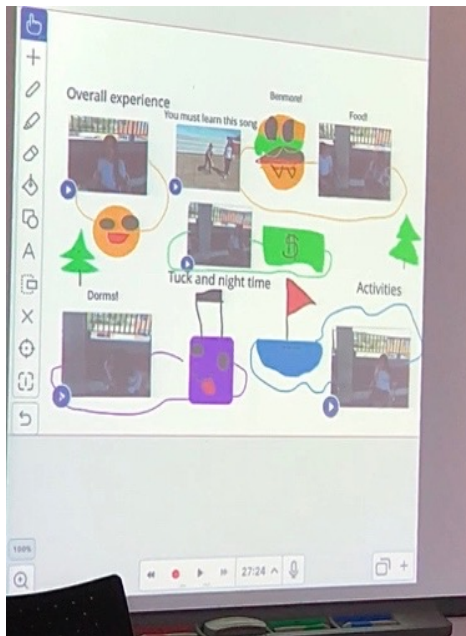
Figure 53 The presentation by Group 2

Figure 54 The interviews by Group 2

7.3   Chapter discussion

In Chapters 5 and 6, I explored the role of digital media in brokering access to the material world of the school and the possibilities they offered the participating children's sense making processes.   In this chapter I took a step further in understanding the possibilities offered when the media and the child combined with a sense of purpose. My focus for the practical activities was to build on the children's previous experiences of thinking critically and creatively while editing and to introduce the concept of audience, with the intention that the children would be able to make connections with real-life situations. In creating their designs I was interested in the extent to which the children would also exploit the media to communicate their ideas in ways that would impact their audiences. I was particularly interested to know:

- How well the children could make use of the different modes and digital, visual elements to represent and communicate their ideas about their chosen themes
- The extent to which social identities and practices of audiences were recognised in the children's design

From a visual analytical perspective the significant thing about the activities was that the children's digital processes were successfully governed by their own awareness of their audience. The children demonstrated that they understood and cared about the needs of the audience, initially by suggesting they could please a teacher: "Would be good to get it done for Mrs McMillan…she likes that kind of thing". However, as the activities progressed the children demonstrated that they were predominantly motivated by worried children, such as Gypsy/Travellers who were unfamiliar with school camp or who had low literacy levels, and this awareness provided a meaningful real-life context for their collaborative designs.

As in previous sessions, the children initially seemed to develop the design and media features to exploit the available technologies, such as with group 2 having fun mixing different modes on a single screen or where group 1 developed a good system for incorporating multiple design ideas. However, before long the groups were also able to consider how the media possibilities would enhance the audiences' experience. Videos were resized when the group realised that they could create a video route map to represent the entire experience of going to camp. Colourful, culturally-appropriate icons were designed digitally to symbolise each stage in the route map and to enhance the navigation. Minimal amounts of text were used to enhance the design using catchy slogans. The incorporation of a song reflected the spirit of a school camp where singing and entertainment were, and continue to be, integral parts of the experience. The children's media use aligns with Sharples (2005) who suggests that when faced with new tools people examine both the possibilities and the constraints it offers, leading to a process in which the users adjust the 'fit' of their tools to their activities. Sometimes tools caused changes in the children's images and often the children adjusted their use of the tools to meet their design requirements. Sharples suggests that doing either of these things may initiate further changes as the users begin to exploit the technology.

Group 1 exploited the digital and visual possibilities by including the use of three separate screen layers showing the exterior and two interior views of the reading shed design. A restrained pallet of simple blocks of colour in the creation of the shed and the interior elements reflected a simple picture book style. The incorporation of children's own bodies into the design offered a sophisticated design solution, illustrating how the shed could be used.

The children's interaction with the media could be described as *synergistic* (Beauchamp and Harper, 2010), suggesting open problem-solving in their creation of a product bringing together the identification of the context, appropriate materials, analysis and reflection. I observed these qualities in both groups' collaborative activity. There was a sophisticated and shared understanding of the context and identification of how the problem could be approached.

The creative process was focussed around the use of the media where all children collaborated to create the presentation. Each would go off and create an element and bring it back to one child who took on the role of combining inputs on the shared screen. Initial ideas were turned into graphic representations on the screen, which were then reviewed by all participants. I saw a pattern where this would either be the catalyst for a further idea (e.g. "right, let's do all the tuck now") or for a change in design or media use such as the illustration would be modified or the position on the screen would be rearranged to make more sense.

Similar to the children's individual artworks described in Chapter 7 these collaborative media referenced aspects of popular culture—in this case live video interviews, which are common to both television and YouTube. The video makers drew on this familiar format to surface issues that were of concern to some children by offering personal accounts designed to reassure. The style of the questioning mimicked real life scenarios and would have been recognisable to the majority of the anticipated audience of Primary 6 children—from both settled and Gypsy/Traveller cultures.

The performative nature of the videos as interviews offered a culturally familiar media use as well as offering a useful technique that anticipated the questions the audience may have had. The screen and its continuously expanding diagrams could also be viewed as a shared, safe place where individual children could play out their concerns in parallel with others. Anxieties could be aired and reassurances given, for example, when Sarah had concerns about behaviour in the dorms at night as no one in her family had been to school camp before. Molly's self-consciousness about her reading ability was never openly discussed, instead, illiteracy was seen as a universal topic, embraced by the group where it became a shared challenge to seek ways to mitigate its effects. Each child, regardless of their own ability brought their views, creative ideas and designs to the process. The many voices were able to share both ideas and processes through the device use.

7.3.1 Chapter conclusion

The predominant observation from the final activity was the effectiveness of the authentic, audience-related digital task in bringing together the children from the settled and Gypsy/Traveller communities in a shared and purposeful endeavour. There was a natural flow between individual and group design, which was facilitated by the media—each of the children had opportunity to develop independently and collaboratively and contributions were valued by peers.

In each of the two projects the digital media appeared to encourage a deeper sense of engagement with the use of specific modes for real-life purpose, including video, sound, text, voice, photographs and illustrations. The inclusive potential of the digital media was exploited through the new pupil-generated forms of learning rather than using the media to reconfigure pre-existing activities (Cook, Warwick, Vrikki, Major, & Wegerif, 2019).

Following Kearney et al. (2012), both the task and process offered the authenticity that would resonate with the skills-based, collaborative endeavours of Gypsy/Traveller life and culture, enabling the Gypsy/Traveller to see the purpose in their commitment to the shared tasks.

Unsurprisingly, the Gypsy/Traveller children took a lead role in their groups when discussing the experience of not belonging. Non-Gypsy/Traveller members of the groups appeared to empathise with the real-life issues that were being raised. The media offered a space to accommodate the different cultural perspectives (in relation to learning or going to camp). As in Bakhtin's 'polyphony', the voices of the individuals and their cultures are actively listened to and are sometimes combined but never 'wholly reducible to another' (Skidmore (2010, p.34). Importantly, as meaning does not exist prior to any specific dialogue (Bakhtin, 1986) the children were able to perform and change their identities within the context of each creative context, both as Gypsy/Travellers and as school pupils with agency who could critique authoritative school practices. In this way the barriers to inclusion were shared and understood from multiple perspectives.

The material aspects of the school environment were prominent as both subject and process in the final learning sessions. The children were dealing with issues that arose in their material lives as well as their perceptions of how the material practices could be understood and even changed. Sørensen suggests, 'These materials may be used by humans but they may also use the humans and influence and change the educational practice, which then is no longer particularly human; instead it is socio-material' (2009, p.2). In this way the digital media was able to accommodate human and non-human materialities in a shared space where each acted on the other to explore new ways of learning, new relationships and new knowledge about school practices.

8 Discussion: the characteristics of a digital space of belonging

8.1 Introduction

The purpose of this study was to understand what could be learned when children from Gypsy/Traveller communities used digital media to make sense of how they belonged in school environments. To address this aim I asked the following research questions:

1. What does it mean for the children of Gypsy/Traveller cultures to belong in school spaces?

2. How do critical, creative and digital processes combine to support Gypsy/Traveller children's meaning-making about belonging?

3. To what extent can Gypsy/Traveller children generate their own meaningful, digital space of belonging?

Each question formed the basis for an activity where the Gypsy/Traveller children were asked to use digital media to explore and make sense of their experiences of belonging in school spaces. The activities generated three data sets, which I have analysed in the discussion sections in each of chapters 5, 6 and 7. In this chapter I discuss the findings from these chapters and my interpretation of this work. The interpretation has evolved from both the data and the reviewed literature in line with my preference for an abductive approach.

I begin by explaining the unexpected shift in my own understanding of the coming together of the child and digital media, which I call *child/media* spaces. In many ways this discussion provides the context for the following sections. I draw on the metaphor of Third Space (Soja,

1989) as a theoretical basis for each of the most important characteristics I observed when child and media came together. These included:

– Belonging is not seen as a fixed state: it can be *here/there*

– Belonging can be explored and negotiated as a *provisional* digital editing space

– A space of belonging can be *shared* accommodating multiple human and material voices

8.2 The unique coming together of the child and the digital media

It is important that I emphasise my conception of the coming together of children and media as an unexpected shift in my understanding of the research subjects. My initial focus had been predominantly on the actions and experiences of the Gypsy/Traveller child using media in a school space but I recognised that to focus predominantly on the 'knowing' child would limit how I viewed the potential of the media activities—a view supported by the recent 'new wave' critics in Childhood Studies who dispense with the idea that the child should be the primary object of analysis in a research setting (Kraftl and Horton, 2019). I expanded my focus to examine the media and the child as one unit. This was not to say that the child was less important but to understand the unknown effects that the media might have. By '*decentring*' the child to acknowledge the media then '*recentring*' (ibid., p.107) as part of an active unit, I was acknowledging that children's experiences also include non-human materialities. The coming together of child and media did not preclude 'the social' but suggested that children's experiences should be conceived as 'more than social' (Kraftl 2013). Each of the three activities confirmed that all aspects of digital media as non-human technologies could be embedded in the children's social relations. (ibid.).

The study brought attention to a creative and critical interdependence of the child and the media that was always in flux—each could be seen to contribute or dominate to varying degrees in different situations, and the degree was constantly shifting. I came to describe the interplay between the child and the digital media as *child/media* space. I observed that the children's moves on the digital screen were only one side of the sociomaterial relationship — a view that corroborates the ideas of Heatherington and Wegerif (2018) who adopt the term 'material-dialogic relations' where the 'voices' of materials in an interaction are included in the analysis. I also observed in the activities that, through the interplay with the media, the children found new types of spaces that allowed them to confront aspects of the school environment and question how they identified within these spaces. This observation was consistent with Wegerif (2007) who suggested that, as well as making meaning through dialogue, children are also engaged in the construction of difference, which involves identifying with the space of dialogue itself. The *child/media* space appeared to be part of a unique, combined space where the child and the media were able to play out different experiences, emotions and identities.

The remainder of this discussion is dedicated to what I observed in these spaces of dialogue between the child and the media. The activities in each of the three data chapters showed that it was possible for digital media to have beneficial roles in addressing unequal power relations in schools, with each chapter suggesting a distinctive characteristic. In summary, in Chapter 5 the space allowed the *things* in the school environment to come to the attention of the children and to offer an opportunity to reflect on what it meant to belong – I use the term *here/there* to describe this particular way of understanding how children could move in and out of belonging. In Chapter 6 the value of *provisionality* was highlighted as an essential attribute of creative and critical sense making, and in Chapter 7 it was the *shared aspect of*

space that enabled different human and non-human materialities to contribute to the generation of experiences of belonging.

Figure 55 illustrates how the conceptions of the three spaces appeared between the combined *child/media* and the school world. H*ere/there* is shown as fluid and sits on a continuum between the child/media and the school world. It suggest that the child/media can think critically to renegotiate experiences of belonging in relation to the things of the school world. In this way the child's identity can be fluid and never fixed. Provisional editing space brokers meaning making processes between the child/media and the school world using iterative processes such as problem solving, editing and imagining. Finally, shared space is based on dialogic processes and accommodates all of the human and non-human materialities of the school space such as people, languages and things, enabling the child to explore her own identity. The diagram also shows how at times in the research the child/media found comfort/discomfort in certain objects and had to negotiate both the authoritative voice of the school as well as aspects of the Gypsy/Traveller culture.
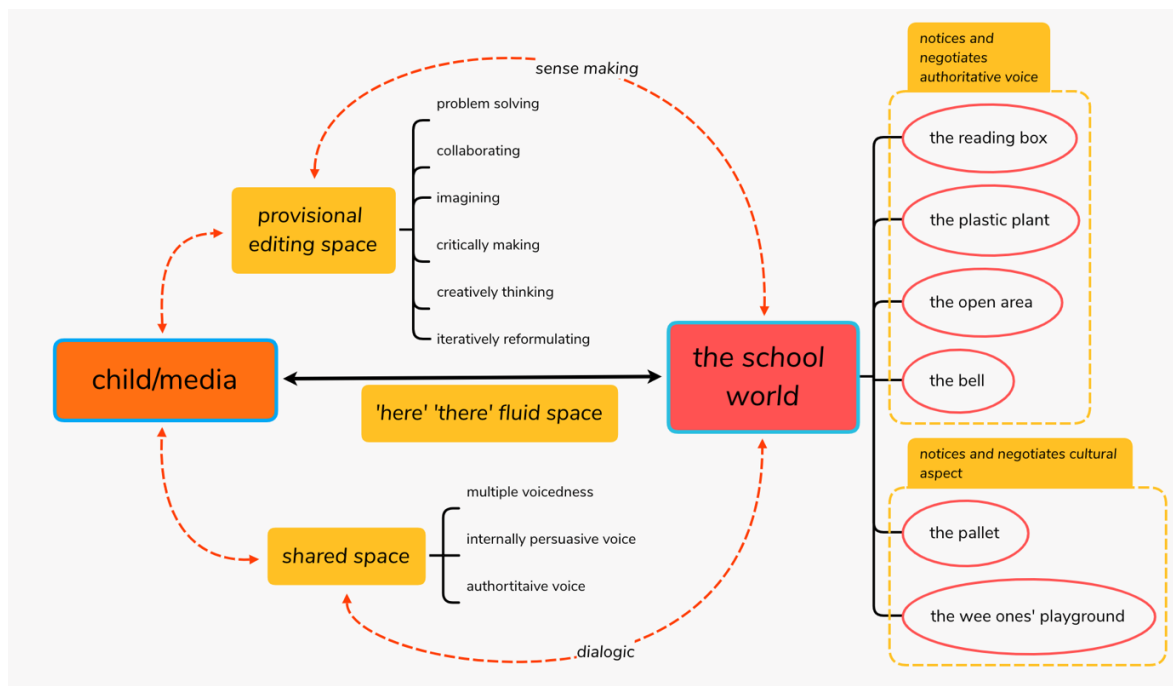
Figure 55 Three characteristics of child/media space: here/there, provisional, shared

8.3   The characteristics of a digital space of belonging

I draw on the metaphor of Third Space to describe and more fully understand the character and attributes of the spaces I describe above. Soja's concept of Third Space, based on Lefebvre, offers a useful starting point.

> *Thirdspace, as I have been defining it, retains the multiple meanings Lefebvre persistently ascribed to social space. It is both a space that is distinguishable from other spaces (physical and mental, or First space and Second space) and a transcending composite of all spaces.*
>
> (Soja, 1996, p. 62)

The Third Space lens enabled me to accommodate both the physical and mental aspects of the children's experiences (for more detail see 3.5). The school environment with its material things would constitute the character of a First Space—the social material space that the children encountered every school day, often with rigid routines and normative practices. This physical space was brought into dialogue through the photographic representations created by the children. These were also the spaces that initially became noticeable and from which, in Chapter 5, I saw evidence of the children feeling excluded. Soja's Second Space or mental space might accurately constitute the children's perceptions of school and how they, and their families, imagined their belonging or exclusion. In *taking part* (Sørensen, 2009) in the activities I had designed the digital media produced representations of what was in the mind of the child, perhaps including imaginings and ideas about what school could become. Finally, Third Space created through the *child/media* space was not only an 'in-between' but a composite space that retained all of the meanings associated with the first two spaces (see Figure 56). Importantly, I observed how it could also be a fluid space—it could move between elements of the material, the imagined and the symbolic (Soja 1996). In my model,

I imagined Third Space to be a composite of here/there, provisional and shared. In the rest of this discussion I extend the Third Space metaphor and draw on the observations from each of the data chapters 5, 6 and 7 to reflect more on the nature of the spaces that were created through the *child/media* space.
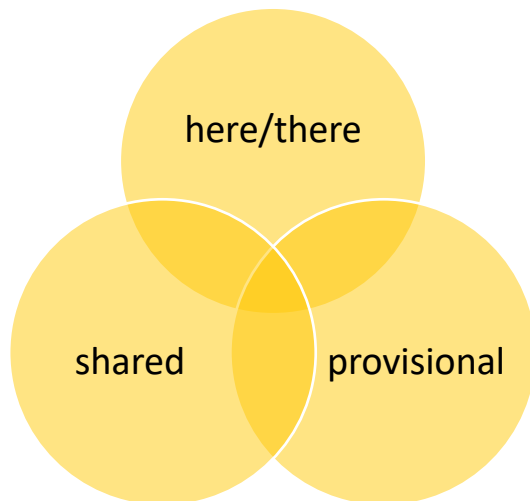
Figure 56 The characteristics of 'child/media' space: a digital space of belonging

8.3.1   Belonging is not seen as a fixed state: it can be *here/there*

Chapter 5 was focussed specifically on responding to the first of the three research questions: What does it mean for the children of Gypsy/Traveller cultures to belong in school? The data was generated through photo and video tours of the school where the children were asked to record things that they noticed. The images formed the basis of the children's reflections and discussions with me.

Regarding the use of digital media in the first activity, and the space that was created by the *child/media* space, when the child and media came together, the act of looking appeared to be enhanced, allowing the children to notice aspects of the school environment that had previously remained unnoticed. Through the media process of selecting angles, framing and zooming, the children had opportunity to reflect on their own experience and possibly their

relationship with the object of interest. I am aware that this observation should be interpreted with caution as the design of the activity may also have caused the children's noticing behaviour . The question would need to be asked whether other, perhaps non-digital, media may have achieved similar results. However, there were certainly elements of the coming together of the digital media and the child —the *child/media* space— that created the conditions for noticing in this way.

Once representational images of school were captured on screen most children were able to contest their own views about the nature of their experience of belonging. Even in the process of taking the photographs some would change their minds about whether the object merited inclusion. Their actions suggested that any object could produce multiple associations relating to the extent to which they were comfortable or uncomfortable. It seemed important that the children had ways of understanding their own position at their disposal. Antonsich uses the terms 'here' and 'there' to symbolise opposite ends of a continuum between spaces of belonging and not belonging. According to Antonsich the close proximity of 'here' suggests that we belong, whereas we do not belong 'there'. He suggests that much is to be learned from interrogating what the terms actually mean to us. I witnessed in the children a valuable process of meaning-making as they reflected on the extent to which an object made them experience belonging. My observations and follow-on conversations confirmed the view that when the children sensed a lack of belonging it was usually related to experiences of discomfort in school due to a range of normative social and material practices that were unfamiliar to the children and their culture. The opposite was true in some cases where children experienced a feeling of belonging in spaces that could be analysed as offering a personal, intimate feeling of being 'at home'. This finding aligns with Antonsich (2010) who suggests that belonging should be constructed both as a personal response, such as through a

space of familiarity and comfort, as well as more politically as a discursive resource that recognises forms of socio-spatial inclusion and exclusion present in the politics of belonging. There were many examples of children recognising exclusion, for example, particularly in pedagogic incidents where their literacy needs were overlooked. The *here/there* continuum offered a way to understand that the boundaries need not be fixed in relation to a single factor such as ethnicity. Instead, the child/media space might create opportunities to surface other identities that would allow them to move from *there* and closer to *here*.

A further observation was consistent with Baroutsis and Mills' study (2018), which classified spaces where discomfort or belonging could occur as any one of relational, material or pedagogic matters. However, the results differed in that the children's discomfort rarely fitted neatly within a single category; most were affected by at least two aspects. A useful insight was that the majority of negative material associations could usually be directly related to a relational encounter within the school. Interestingly, I saw this association with human relationships in both the negative and the positive experiences of the children. For example, a door provided a negative association with an event and a teacher who was perceived to have handled the event unfairly, whilst a different door was associated with a safe space produced through a positive relationship with another child. The child/media space accommodated the images of these iconic objects, such as doors, placing aspects of the material world on a platform for reflection.

Surprisingly, I noticed that the children had a higher awareness of how the school made them feel than either the school staff or myself had imagined. A possible explanation for our lack of awareness may be that the children had learned to become adept at accepting school norms and masking their discomfort—both for their own emotional protection and to maintain their

dignity in front of others. This was evidenced when reactions that appeared to be rooted in powerful emotions, including feelings of humiliation, sensing injustice and experiencing cultural discord, were turned into avoidance of situations and sanctuary-seeking strategies.

The children often sought sanctuary in places and objects that were familiar to their own culture. One of the questions that emerged from these observations was the extent to which a cultural familiarity was needed or indeed helpful. In the first activity one child took a range of photos of only places where she congregated with other members of her community and she suggested that these places gave them comfort. Conversations with teachers confirmed that the children, "would tend to keep themselves to themselves". te Riele (2018) usefully draws attention to some of the counterproductive impacts of this type of behaviour when young people may be drawn to particular settings or to making particular decisions while closing off other options. She suggests '… feelings of being an "insider" at the micro level may work to maintain exclusion at the macro level' (ibid.). This view chimes with much of what was witnessed through the study and can be summarised through Antonsich's position that belonging should not be used as a discursive practice for understanding boundaries of social inclusion or exclusion but rather as 'a personal, intimate, existential dimension that narrates and is narrated by the Self'(Antonsich 2010, p.647).

The child/media space supported the children's personal narration, which in turn, allowed a sense of agency over their experiences. It was possible that, similar to some cultural objects, the digital media could also offer a sanctuary, in itself, offering distraction as a method of coping with discomfort. When the *child/media* space was put to use exploring the 'here' and 'there' continuum, belonging was increasingly conceptualised as a process (becoming) rather than a status (being) (Antonsich, 2010)—in experiencing belonging in this way, as a process,

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might help children to feel more positive when they felt excluded. What was important was not that the device offered a 'here' space but rather that it created a fluid space where 'here' could be questioned, understood and even negotiated. Additionally, through the *child/media* space the children were able to hold aspects of their culture close to their focus while also letting them move away to make way for other opportunities that may not have a cultural basis.

Heatherington and Wegerif's term 'material-dialogic relations' describes the 'voices' of materials when they are in interaction with other aspects of the social world (2018). We have seen that, not only was the child/media space part of a material world in itself, but importantly, it could also provide a platform to make other material voices feel more real by bringing them towards the child on the *here/there* continuum. Through the processes of taking photographs and manipulating representations of the material world the children were able to enter into dialogue with things at a distance on the continuum. As Bakhtin wrote, 'I hear voices in everything and dialogic relations between them' (1986, p.165). Importantly, the child/media space gave the children agency to hear the voices of objects while maintaining their own.

8.3.2   Belonging can be explored and negotiated in a *provisional* digital editing space

The second research question asked how the critical, creative and digital processes combined to support Gypsy/Traveller children's meaning-making about belonging. A key observation was that it became possible to see the potential of digital media as a critical and creative research tool, but only when used in an exploratory way, and particularly when the children were in participatory researcher roles. Forms of meaning making were facilitated through the many media options—from the moment images were captured on screen, opinions were

asserted, challenged, changed and reformed. However, my research interpretations could be seen to progress along similar lines to Hogan and Pink (2012) who suggested that art-making in research should not only be a route to bring interior processes to the surface but also a way to understand interiority as an inner state that is always in progress, rather than ever static. For example, in creating an image of the bell, one child began by reflecting on his acceptance of the schools' fixed routines in relation to his family life (see 5.3.2), but through further reflection, he experienced shifting emotions from frustration and discomfort to humour and, eventually, a sense of community with school peers.

Digital, visual editing offered a valuable alternative to more word-reliant processes for surfacing children's views. The visual was central to the process and aligned with Eisner's assertion (2002) that the limits of our cognition are not defined by the limits of our language. The data in Chapter 6 confirmed that, the child/media space became a virtual editing platform offering multiple ways to combine critical and creative skills. While I observed the children's commitment to the critical tasks I also witnessed their absorbtion in the effects of visual tools and techniques that were available to them. This aligned with Jenkins' advocacy for arts-based approaches (2007) and was particularly noticeable as a participatory practice where the children began to value their own work more and also view themselves more positively through the creative processes.

Generally speaking, the children explored and became adept at working within the media very quickly with Alex being the only exception—initially showing frustration, then concern, then pride in his work. It is common for children to be self-conscious about their efforts in school art lessons—a common mantra is, "I can't draw", or they are often fazed by the notion of a blank sheet of paper, not knowing how to begin. In the research editing sessions any

hesitation appeared to be momentary. One explanation could be that the children never

began with a blank screen—usually their ready-made photographic images formed the first

layer of their designs. The children were used to school art, which has gained criticism over

the years with many suggesting it had developed its own exclusionary language (Stankievtz

2004). Clark (2010) suggests that by using digital media children do not need to conform to

the expectations of a limiting school art language. Instead they are able to develop their own

visual forms of communication and we saw this with each of the children's edits. It is very

likely that the key enabling factor with visual editing was the *provisionality* of the digital

media that allowed the children to continually make and change their decisions at each stage

of the making process without 'spoiling' their work. There was no finality to using the

individual tools and I saw how bold moves were made, such as obliterating an object by

masking it with colour, or how radical changes were made using the drawing tools. The

children seemed to find security in the knowledge that everything could be provisional.

The children's motivation to participate may have been due to the sense of provisionality in

the way that the activities were presented. There was no need to commit, expected outcomes

were never shared, planning was led by children and was short-term. All aspects could be

changed at any time, ideas and concerns were constantly shifting on screen and I emphasised

how this was an important aspect of the creative process. The children responded

positively—at first, they appeared to explore what this meant, testing if there were any

boundaries by changing their use of space, time or subject matter but very quickly the ethos

was accepted as the norm. They were also able to experiment individually and

collaboratively. They moved in and out of peer relationships, shifting focus to another child

at any time. Although based in a school, many features of this learning setting more closely

resembled an informal environment, which is known to impact positively on learning

effectiveness (Chauhan (2017). The open-ended use of the media was closer to Livingstone's alternative conception of a more learner-centred use involving creativity and fun. Not only was the approach pleasurable but Livingstone suggests that these are the soft skills necessary for the 21st century (2016) a view backed by Selwyn et al.'s study (2009) that recognised the need for ICT provision that more closely met the needs, values and experiences of young people and called for active production over passive consumption.

Provisionality was also a focus for Phillipson and Wegerif (2017), who suggested that it characterised dialogic conceptual learning. The authors proposed that the provisionality of computers could be used to create a flexible support, 'allowing dialogues to be objectified as a shared area for reflection just distant enough from participants to allow for critical reflection while close enough to be manipulated and learnt from.' The study's results lent support to Phillipson and Wegerif's position but they also suggested an extension of it. The child/media space appeared to be not only a 'support' for the children's dialogues but also a contributing element of the dialogues in its own right. The sociomaterial dialogue between the child and the media can be somewhat explained through Eisner's theories on cognition in art. Although Eisner's work did not refer to digital art, the processes are similar and certainly transferable, suggesting that to use any material well we have to learn to think within it (2002). He and others have made connections between the brain's cognitive processes and art making (Eisner 1992, Efland 2004, Corwin 2000). Dorn (1999, p.130) linked this connection to 'thought in action', which describes the process of conceptualising ideas during the period of making rather than having an end product or creation in mind from when the creative act begins. Central to the belief that art experiences support cognition and learning is the view that understanding is deepened by participating in the physical act of making. It would be wrong to assume that the media or the material aspects that they represent are passive in this

process but rather that they contribute as part of an iterative cycle of human and material moves. In other words, the child's meaning-making develops in response to the materials on the screen, and so on, as part of a sociomaterial dialogue. It can be argued that the child/media space creates opportunities to extend the processes of 'thought in action' offering an infinite number of visual iterations within the layers of a making space.

A final observation is that the ever-provisional nature of the creative and digital meaning-making space offered the children the freedom to experiment with their own identities. Chapters 5 and 6 illustrated how the children found sanctuary in aspects of their Gypsy/Traveller culture but that they were also seen to change or even subvert their identities – sometimes to mask discomfort. A good example is where several of the children experienced discomfort as a result of their perceived literacy ability. Gypsy/Travellers commonly self-identify as failures within the school system, however, the media space appeared to offer potential for changing this view. Multimedia empowers children by enabling them to communicate to their strengths. The provisional space offered a significant level of individual and cultural agency for the Gypsy/Travellers children. They engaged in cultural practices that they would not typically be associated with such as in Amy's school tour. As part of the child/media space she moved between her own cultural language and a version of popular culture with agility. She was no longer identified as a failure but performed with new flair and confidence. In other situations the passive voice of the Gypsy/Traveller child was replaced with a confidence that contested the authoritative voice of the school. When communicating through creative and visual forms the children had the same opportunities as those with higher academic attainment in literacy. Voices that were usually silent were brought into play as part of a dialogic process in the child/media space

and the provisionality of the media again created a safe space for the children to negotiate and identify within their own and other cultures.

8.3.3   A space of belonging can be *shared* accommodating multiple human and material voices

The third research question was to understand to what extent the Gypsy/Traveller children could generate their own meaningful, digital space of belonging? In the previous sections where I discuss experiences of belonging and processes of meaning making there have already been powerful descriptions of the space that was generated when the child and media came together and I used the term child/media space to describe it.

The predominant observation from the final activity was that the coming together of the children and the digital media generated a multifaceted space where ideas, differences, materials and techniques from multiple children were each accommodated. At its simplest, the children from the settled and Gypsy/Traveller communities could each be seen to generate creative relationships in the development of their digital designs. This was the first time where the child/media space was shown to take its form with more than one material human presence. Previously dialogue had been between one child and on device.

While certain elements were created individually, each child seemed to be motivated by the shared goal—to create a digital design to meet the needs of an identified audience. Interestingly, it was the shared real-life concerns of the Gypsy/Traveller members of the groups, which drove the design although these children were in the minority. The groups of children demonstrated an awareness of self and others. Gypsy/Traveller social identities in school such as low literacy and cultural practices such as non-attendance at camp were

recognised as worrying issues that needed to be addressed in the design and the recognition was viewed as a shared challenge and not one only specific to the Gypsy/Traveller children. In this way the barriers to inclusion were shared and addressed collaboratively thereby enhancing the Gypsy/Traveller sense of belonging within the groups.   The children's motivation to work together in what were authentic concerns are also in line with Kearney et al.'s proposed model for a pedagogy of mobile learning (2012) that promotes collaboration, personalisation and authenticity. The authors differentiate between factual authenticity, which requires real-life problems in the tasks, and process authenticity, which enables learners to undertake practices that are similar to those carried out in the real-world. The child/media space appeared to offer both task and process authenticity. The children engaged in a task which was genuinely of concern and proposed design solutions that were genuinely applicable in the real world. Using the available media they were also able to draw on creative art processes similar to professional designers undertaking real life tasks such as making judgements, flexible purposing, imagining, experimenting, modifying and evaluating critically.

I also observed how an increasing number of modes including video, sound, text, voice, photographs and illustrations came to share the creative space. In each of the two group projects the apps appeared to encourage the experimental use of these multiple modes. Media were unconsciously selected and positioned side by side to enhance the design brief. The children worked beyond the boundaries of any specific medium. Screens were manipulated and elements resized to ensure that all media could be accommodated. Drawings were incorporated into videos and audio became a visual symbol.

Bakhtin's concept of heteroglossia (1986) suggested that multiple voices can be present in any work at the same moment. For Bakhtin, voices can take the forms of different languages, genres, cultures and points of view and his concern was that each should be able to coexist with the other. In the making of the school camp presentation a variety of languages were able to coexist within the shared space between the child and the media. There was the visual language with its symbolic format reflecting the children's home or popular culture, the television-styled interview videos that reflected a particular genre, the children's distinct and different personal interests and points of view such as the sea and literacy, as well as the languages of art and music. In relation to heteroglossia, Bakhtin also makes an important point about the nature of *living language* which can be compared with school language. The shared space enabled children to perform through their own living languages, which reflected their culture and their everyday lives. Herro (2015) supported this position when he stressed the importance of context and culture if innovative digital media learning initiatives were to be able to flourish within schools.

An unexpected observation was how the shared space could also host the children's parallel conversations during the activities such as with Carla being side-tracked to discuss how she felt about curtains in the home. These conversations revealed much about the children's culture and lives simultaneous to the main subject, sometimes merging but often not. In this way all aspect of the children's voices could be accommodated within the shared space. The space offered a security where living languages could exist, allowing the children a newfound agency to move freely in and out of modes, genres and identities.

8.4   Summary

In this chapter I have discussed the main issues and findings to emerge from the study. I began by describing a shift in my own understanding of the 'knowing' child, which was overtaken with the concept of the child and digital media coming together. I used the term *child/media* spaces for this coming together. I suggested several contributing factors to the success of the spaces, not least the predominantly exploratory, digital, visual, critical approaches that were made available. I suggested that, combined, they offered a powerful way of unlocking and surfacing the children's lived experience of school.

Several distinct characteristics were found to be central to an understanding of *child/media* spaces—and I proposed that these offer a useful language: *here/there* space, provisional space and shared space. The child/media space provided a platform for playing out different experiences, emotions and identities, particularly in response to the unequal power relations that the children encountered in some aspects of school life. I suggested that the *child/media* space was part physical and part mental, combining elements of each; similar to Soja's Third Space, it could also be fluid, allowing children to experience belonging by moving between elements of the material, the imagined and the symbolic (1996).

9 Conclusion

9.1 Introduction

I began this study by stating that a crisis and an opportunity were the initial catalysts for my research interest. At the heart of the crisis was the knowledge that many Gypsy/Traveller children were attending school without ever feeling a sense of belonging and, for some, the school material environment played a significantly negative role in how they experienced education. The opportunity I described was based in frequent discourses in the school education literature and suggested that there is untapped potential for the use of digital media in schools, particularly if it went beyond instrumentalist and reductionist understandings of their uses.

The aim of this study was therefore to understand the ways in which small groups of Gypsy/Traveller children could use digital media to develop their own critical curiosity about their school environment, with the aim of empowering them to have agency over how they might belong. The study asked the following questions:

1. What does it mean for the children of Gypsy/Traveller cultures to belong in school spaces?
2. How do critical, creative and digital processes combine to support Gypsy/Traveller children's meaning-making about belonging?
3. How can children generate their own meaningful digital spaces of belonging?

9.2 Summary of findings

Firstly, the data and its interpretation confirmed that, in noticing and paying attention to the school environment, each of the Gypsy/Traveller children experienced some level of

discomfort that came from the material, relational and pedagogic aspects of school. A key theme was that while the children seemed to be responding directly to the material environment, almost every negative reaction could be traced back to a relational encounter. Discomfort presented as powerful emotions, including feelings of humiliation, sensing injustice and experiencing cultural discord. Almost every child demonstrated the use of strategies to mask their discomfort including avoiding exposure to certain objects and spaces and seeking sanctuary in safe spaces. Although a sense of belonging could be seen to arise from these safe spaces, a significant observation was that in attaching themselves to communities of identity (specifically other children from the same culture as themselves) and not confronting discomfort, children were precluding other possible roles and identities.

Secondly, the research has shown that digital media provided a creative platform for children to notice, interrogate and make sense of their discomfort. Previous literature had criticized predominantly instrumentalist approaches that foregrounded the technological affordances over the child's interests (Livingstone 2012, Selwyn, 2011). Commonly, it had limiting effect when it was used in education for technical efficiency or to enhance existing pedagogic practice. The study has argued that the participative approach, which I designed around the development of creative and critical skills, enabled a powerful way of unlocking and surfacing the children's lived experience of school, allowing them to enact meaning-making and identity-making processes. The approach also had the potential to disrupt children's previously held identities (often as failures) within the school space. As members of the school community they found new ways to assume agency over many aspects of the school environment and as learners they experienced success and were viewed in a more positive light by themselves and by others.

Finally, the vignettes in my study showed that a unique space of belonging could be generated when the children and digital media came together using exploratory and creative approaches. I used the term *child/media* space to describe what I viewed as the combination of human and non-human materialities in the school space. The data from each of the research activities suggested three particular characteristics that were central to the child's success in experiencing belonging.
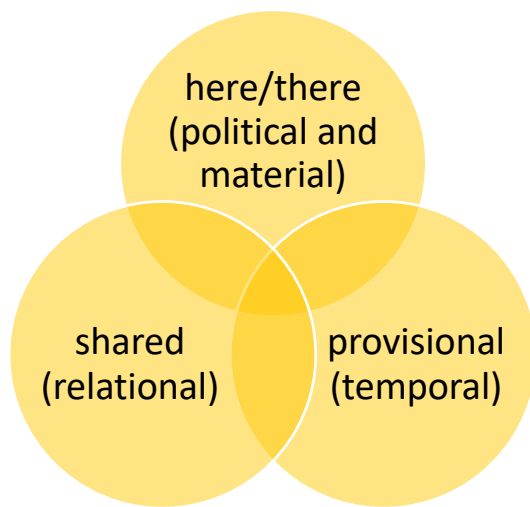
Figure 57 The characteristics of 'child/media' space: a digital space of belonging

I drew on the metaphor of Third Space as a theoretical basis for understanding each of the characteristics of the combined *child/media* space. Through the space I believed that belonging could be experienced in the following ways:

- Belonging is not seen as a fixed state: it can be *here/there*

- Belonging can be explored and negotiated as a *provisional* digital editing space

- A space of belonging can be *shared* accommodating multiple human and material voices

The term *here/there* acknowledged that belonging was political. Additionally, it was a fluid construct and from the child's perspective was enacted in multiple ways. 'Here' represented the place where belonging could be experienced and 'there' represented a place where a child experienced discomfort or an absence of attachment. The media had the capacity to offer a platform where ideas and experiences of 'here' and 'there' could be questioned, understood and negotiated. It subscribed to the idea that belonging and, by extension, children's identities were always *becoming* and never fixed.

Provisional space recognised children's motivation in understanding the temporal nature of the creative and critical processes that were made possible through digital media. Provisionality was also central to the dialogic process where the digital tools emphasised the iterative nature of critical thinking and idea development. There should not be pressure for children to find resolution. Ideas could remain in flux. Additionally, provisionality allowed the children to feel that they could experiment with identities and test ideas without being judged, which in turn increased their sense of liberation.

Finally, *shared space* recognised the relational aspect of the digital media space. It brought together the multiple modes, voices, creative ideas and criticisms that could come into play in a *child/media* space. It enhanced the notion that many physical and imagined aspects could be valued within the same space. It also recognised the inclusive nature of collaboration and dialogue as fundamental learning processes. In sharing the space, multiple points of view existed together without any being excluded.

Together, the three concepts *here/there*, *shared* and *provisional* could inform a space of belonging. Unlike Third Space, where first and second spaces mark a boundary and

distinguish between the material and imagined, each of the concepts shared aspects of imagined and physical spaces.   They each offered an important dimension for reflecting on the conditions that Gypsy/Traveller children may need, in order that they feel a valued part of the school. The three concepts also reflected the political, relational and temporal uncertainties that the children could experience—and which may be the reason for their feelings of exclusion. We have seen evidence of each of these features in the case scenarios. From a political perspective Gypsy/travellers are rarely recognised as a minority ethnic group in schools' social or material practices. Schools rigid temporal arrangements are known to be in tension with nomadic lifestyles and where children feel excluded there have been clear links to negative relational encounters.

The model recognises the past failure of strategies to include the children in the school system—these have usually been based on an assumption of the 'knowing child'. In proposing the *child/media* space, I am suggesting that a sociomaterial lens offers a resource to consider the unpredictability that can make education possible. It also recognises that not just the human child can act, because non-humans also act on, and with, the child in education spaces (Fenwick, Edwards & Sawchuk, 2011), The *child/media* space is not presented as a formula – it is intended to recognise the characteristics of an environment that can be inclusive to Gypsy/Traveller children and their culture. Mainly, it asks questions of current practices based on the findings of this research and proposes new ways for digital media to have a role in the children's belonging.

9.3 Implications of the study

The research suggested that providing opportunities to use digital media as part of Gypsy/Traveller children's everyday school experience is desirable as it can create a significant positive shift in how school environments are experienced. The approach used in the research was, however, reliant on the design of activities that were predominantly creative with a focus on the use of visual elements and, as a researcher and teacher of art, I was confident in designing and supporting the children throughout the study. However, the transferral of the approach, will necessitate new practices, which are likely to be disruptive in nature, causing a change in paradigms, behaviours, and goals.   Due consideration should therefore be given to the confidence and ability of non-specialist classroom teachers to manage similar initiatives. This finding has implications for school leaders who would be required to ensure that staff can access their development needs in delivering planned creative and visual opportunities for learning.

At the heart of this approach is a different way of integrating the use of digital media into the everyday practices of school. It will also require teachers to recognise children's capacities to contribute to change making and to be effective it will also require shifts in behaviours and educational practices, including for teaching staff to relinquish their position of power. Conducive, creative and participative environments are more commonly found in community-based settings such as after-school or youth clubs. Schools may be able to learn from these practices. The current education system and the Scottish curriculum provide limited incentives for teachers to expand their ambition regarding creating more democratic spaces for learning. The barriers presented through hierarchical school infrastructures mean that any departure from the norm may always be challenging to implement.

Many aspects of the study showed that, although there were some commonalities in the children's social and learning behaviour that may have related to their culture, overall the children from Gypsy/Traveller families did not perform as members of a homogenous group, defined by a single cultural identity. Rather, these children were observed demonstrating multiple identities that constantly shifted, even within the space of a single activity. This is not to say that Gypsy/Traveller identities were lost—they were still seen to be a fundamental aspect of their being, albeit differently for each child. School leaders will be helped by ensuring that teachers are confident in their knowledge of Gypsy/Traveller culture, to the extent that it will enable them to recognise how children form their identities within schools and the barriers some face in doing so. Additionally, rather than providing tokenistic representations of the Gypsy/Traveller culture in the school environment, as some schools do, it will be more important to provide authentic learning opportunities where children can enact and shift between their multiple identities as successful learners in school spaces.

In the short term, the most significant implications are for my own professional work, particularly in delivering training and producing resources for educators or when contributing to national policy on education and equalities. The study has allowed me to bring more definition to the descriptions of change and the practical approaches that are needed for Gypsy/Traveller education. The interdisciplinary nature of the research—bringing childhood studies, digital media and belonging together—has offered new ways to frame, with more criticality, the live issues within the educational theory and policy debates.

I can envisage two main ways that the research can have an immediate impact on this work. Firstly, the study theorises the use of digital media in terms of the three concepts I have outlined as contributing to a *child/media* space. This model offers a simple language which

will help support professional engagement with the complexity of the field. To improve Gypsy/Traveller children's experiences, policy makers and school leaders will need to understand the issues that surround children's identity making and the related roles of inclusive pedagogies. They will also benefit from the knowledge that an ever-provisional approach benefits professionals as well as learners and that accommodating uncertainty is a valuable aspect of professional practice. The model also provides a framework for theoretical engagement with digital media not so much as a technology but rather as an inclusive methodology.

The second way for this research to impact my work relates to the practical implementations of using digital media in school settings with Gypsy/Traveller children. I currently manage a development programme where specialist teachers are using tablet devices to support the literacy of Gypsy/Traveller families in sixteen local authorities in Scotland. The learning from this study relating to the visual and creative uses of digital media to achieve inclusive pedagogies are immediately transferable and will inform case studies, teachers' guides, family information and training.

With all that has been described above, I believe that there will be positive and imminent implications arising from the study for Gypsy/Traveller children and families. As the process has demonstrated, the benefits are widespread, showing that the creative and collaborative uses of digital media on authentic tasks can mitigate against the negative rhetoric that exists around technologies in school, namely that they offer only unexciting and passive experiences. When used in participative and consultative settings, there is the possibility that Gypsy/Traveller children and families can also have a much stronger voice in decision-making about their own learning lives. Finally, the study findings are easily applicable

beyond Gypsy/Traveller children, as they encourage transferable activities not specific to the communities alone. I believe that the creative digital approaches used throughout the study would disrupt exclusionary practices for any children who feel marginalised from education.

9.4   Policy and legal implications

Although legally described as a minority ethnic group, it is only in recent years that Gypsy/Travellers have been recognised in national census data as having formal minority ethnic status. While the children from other minority ethnic groups have their attainment levels monitored and reported through the schools' SEEMIS[6] system, this has not been happening for Gypsy/Travellers. This point is not to be confused with the preoccupation with academic attainment data gathering, which may not reflect the learning lives that some Gypsy/Traveller children wish to lead. However, without forms of educational accountability at national level there has been no pressure on schools to have similar expectations for Gypsy/Traveller children as other children.

The United Nations Convention on the Rights of the Child (UNCRC) sets out the specific rights that all children have to help fulfil their potential, including rights relating to education, leisure and play, fair and equal treatment and the right to be heard[7]. Scotland is to become the first devolved nation in the world to incorporate directly the UNCRC into domestic law.[8]

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[6] SEEMiS is an Education Management Information System (MIS). As the standard MIS within Scottish Education, all local student data is processed and managed by SEEMiS software.

[7] https://www.unicef.org.uk/rights-respecting-schools/wp-content/uploads/sites/4/2017/01/Summary-of-the-UNCRC.pdf

[8] https://www.gov.scot/news/landmark-for-childrens-rights/
https://www.parliament.scot/bills-and-laws/bills/united-nations-convention-on-the-rights-of-the-child-incorporation-scotland-bill

The UNCRC, under Sections 28 and 29, states that all children have rights to an education with a view to achieving this right progressively and on the basis of equal opportunity and education must develop every child's personality, talents and abilities to the full. However, the extent to which Gypsy/Traveller children benefit from their entitlement to education is unknown—in the main due to absence of monitoring, but also because parents and children have limited voice in the system.

The UNCRC has highlighted the voices of children at the centre of decision-making processes. While under Section 5, parents' rights to raise their children as they wish should be respected, the Convention also states that consideration must be given to children's evolving capacity to make their own decisions. Children's decisions and wishes should be considered whether they align with their parents or not. Additionally, Article 12 states that all children have the right to express their views, feelings and wishes in all matters affecting them, and to have their views considered and taken seriously and Article 13 states that children should be able to speak freely and not constrained to do so, whether that be because of their ethnicity, community, pressure from parents, carers or those who work with them.

This study recommends that digital, visual methods, such as those used in this research, can be used to illuminate Gypsy/Traveller children's experiences, wishes and achievements in relation to school education. These should be monitored and reported along with all other children in the Scottish national data, recognising their minority ethnic status. The recent bill for the inclusion of the UNCRC into Scottish law makes real the fact that changes are now necessary in the way that Gypsy/Traveller children are served by the education system. The *child/media* spaces created through the research activities can play a major role. They can be used to ensure that Gypsy/Traveller children have the capacities to form their own opinions

about their educational needs in different educational contexts as they change in relation to their identity formation. The visual, creative and digital methods can ensure that communication barriers are removed and that children can perform with the highest expectations. Living languages and multimedia should be a central part of the learning and assessment processes to ensure children's talents, creativity and abilities are captured. In doing this, children will become more visible and this in turn will result in more effective support for their learning. Drawing on the principles of *child/media* spaces, inclusive and supportive learning environments can be made possible by all those in authority. Finally, on a policy level, exploratory creative and critical approaches should be engrained in national curriculum materials for all digital media education.

9.5 Future research

The study suggests further research in several areas. The voices of teachers have not been included in this study. Adding this additional element would allow an assessment of the skills and experience that teachers believe are needed to work in the ways described here. It would also lead to an understanding of teachers' attitudes to the kinds of approaches described. As the research was carried out with small groups of children outwith normal classroom settings, there would also be a benefit to exploring the approach including its effectiveness in a whole-class environment. This would include consideration of how authentic, creative digital media tasks could be planned, supported and evaluated on a larger scale.

Secondly, there is a need for Gypsy/Traveller parents to experience belonging in schools and to be present in educational policy and research. Families rarely participate in schools' parental forums or inform decision-making. As a result, school staff have limited knowledge of Gypsy/Traveller lives and their expectations for education. An additional problem is that

educational researchers have limited knowledge of the research and participative processes that Gypsy/Traveller families may respond positively to. The methods described as a digital space of belonging in this study can be beneficial, not only for children but for designing ways to include families as well. Importantly, there is also a danger that children may be conflicted between home and school cultures when families have no connection with their educational developments. Greater inclusion needs to be promoted through participative project where parents, children and educators can communicate and be listened to equally.

9.6   Final thoughts

Inclusion in schooling is a basic human right. It is certainly the task of the educators, not only to include all children, but to ensure that they belong as valued participants in the school system and that they have all the decision-making powers needed to make choices about their own education. The case study described here will contribute to the literature on the educational marginalisation and disempowerment felt by Gypsy/Traveller children and young people. It will offer valuable insights into the direct experiences of the children through their own and my own reflections and it will offer a language that can be used by education staff to reflect on their practices.

The concept of a *child/media* space has provided a new way to think about the roles of digital media and marginalised children such as Gypsy/Travellers. The study has demonstrated that, for the children, a sense of belonging was continually being constructed and that identities were never fixed. The creative and critical approaches were driven by children's, and not technological, concerns and they showed the unique potential of digital media in enabling children to explore many of the issues that result in their discomfort. The focus on what it

means to belong has made inclusion a more accessible concept and it offers more leverage for broadening the discussion into the multiple realms of digital media use in school experience.

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Appendices

1. Initial pupil agreement form

2. Initial parent agreement form

3. Parent information sheet

4. The National Framework for Digital Literacies in Initial Teacher Education

5. Analytical themes and sub-themes

6. Examples taken from concept coding spreadsheets

Appendix 1: Initial pupil agreement form

'Editing the school' project   Date_____

My name is [   ]

☐ I would like to take part in the research project today.

☐ I am happy to talk about what I do, make and think today.

☐ I am happy for Maureen to take photos or videos of what I
   make.

☐ I am happy for Maureen to take photos or videos of me when
   I am taking part in the research

☐ I know that I can tell Maureen, the teacher or other adults if
   I want to stop doing something

Appendix 2: Initial parent agreement form

THE UNIVERSITY
of EDINBURGH

Experience edited: mobile pupils and the school environment

Name of parent or caregiver:

Name of young person:

Age of young person:

_____

The statements on this consent form relate to your child's involvement in the above project.

Please let us know which of the statements below are acceptable to you.

☐ The teacher/researcher has explained what will be involved in the project and I consent to my child taking part.

☐ I have asked my child if they are happy to be involved in the project, and my child would like to take part.

☐ I understand that my child's name or address will not be used.

☐ I give permission for images to be used for educational purposes such as in publications or the STEP website.

☐ I give permission for video recordings to be used for educational purposes such as on the STEP website.

☐ I give permission for information to be used for educational purposes such as in publications or the STEP website.

Signed ....Date.....................

Appendix 3: Parent information sheet

Experience edited: mobile pupils and the school environment Information

I work at STEP, the Scottish Traveller Education Programme, and I am interested in finding out what young Travellers think about the school environment.

I am planning to run creative workshops with young people from Traveller families to find out what they enjoy and don't enjoy about their school surroundings. The young people will get an opportunity to use iPads to draw and describe their ideas. We are also keen to know how they would change things to make them better. We would like to ask for permission for your child to become involved in our research. We will make sure that your child knows the project is optional and can stop at any time.

Your child's artwork will be used in our research to illustrate their ideas but we will not use their names. We would like to take photographs of the young people getting involved in the activities. However, we won't record them if you would prefer we don't.

If you would like more information or questions about the project, please contact me.

Many thanks for getting involved.

Maureen Finn

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Appendix 4: The National Framework for Digital Literacies in Initial Teacher Education

1. Digital Skills Development

ITE staff, student teachers and their learners in classrooms become skilled in using digital tools for:

• Capturing, creating, editing and combining images, text, sound, animation, video, data and code (direct link with Computing Science strand)

• Collaborating in pairs and larger groups, both synchronously and asynchronously

• Searching, researching, synthesising and presenting information

• Collecting, visualising, analysing and interpreting data

They should be familiar with:

• Exploring and choosing a range of digital tools and resources which can support learning including commercial and open source solutions (e.g. Open educational resources)

2. Pedagogy in the digital domain

ITE staff and student should become skilled in using digital tools when:

• Planning for learning, both individually and collaboratively

• Curating, remixing and/or creating learning resources

• Devising and enacting effective teaching & assessment strategies

• Nurturing effective learning cultures

• Ensuring accessibility and inclusion

3. Computing Science

ITE staff, student teachers, and their learners in classrooms should develop competence and confidence with these three interrelated aspects of computing science, as detailed in the Curriculum for Excellence Technologies Curriculum:

• Understanding the world through computational thinking (e.g. being able to spot where information processing is used in everyday life)

• Understanding tools and languages (e.g. being able to read and debug simple programs in blocks-based language and understanding how digital systems work)

• Designing, building and testing digital solutions. (e.g. coding in a block-based programming language)

4. Digital Safety and Resilience

ITE staff and students should be knowledgeable about how to use digital tools for:

• Educating for positive behaviour, cyber resilience and safety online including an understanding of

rights with respect to data usage

• The development of effective strategies and awareness of support organisations

• Engaging with young people, parents and guardians about how to promote positive online behaviour

5. Research Informed Practice

ITE staff and students should demonstrate that they are:

• Engaging with main theoretical perspectives and research in the digital learning domain

• Critically aware of the impact that digital tools, spaces and cultures impact can have on childhood

and society

• Critically aware of how digital learning and teaching can adapt to meet the needs of learners

6. Career-Long Professional Learning

ITE staff and students should participate with digital technologies in:

• Connecting with other professionals

• Seeking informal and formal professional learning opportunities

• Collaborating with other ITE students and staff

Appendix 5: Analytical themes and sub-themes

How do mobile pupils experience (belonging in) school spaces?

discomfort would often arise from noticing a non-human aspect such as a thing

Discomfort could frequently be traced to culture and identity and provoked a range of coping reactions

Positive influences came from people, things and places.

the bell

the literacy wall

The staff room door

the hungry sign

seats

The fox

The head teachers' door

the first aid room door

negative association with person, thing or event

Avoidance

Humiliation

sensing injustice

safe spaces

objects of discomfort

Curriculum discomfort

Social spaces

acceptance

cultural discord

Cultural harmony

Sanctuary seeking

Appendix 6: Examples taken from concept coding spreadsheets

	Relational	Material	Pedagogic	Digital	Pupil	Concepts
the door	Although material, the door elicited a relational response. J's dialogue shows that he respects rules associated with staff areas. It is not the door that is described but the room and the occupants.	For three of the participants on separate tours the staff room door was one of the first things to be a noticeable object. Some explanation may relate to starting point but the door's inclusion was rarely questioned.		As he rushes past, it seems that this is a part of the school that he is aware that he may be excluded from. The door is representative of the institutional divide between pupils and staff.	Behaviour	Acceptance of institutional norms v positive interaction certain objects were more noticeable
	Like, she's fair... she doesn't give you into trouble when it's not you. R is suggesting that there are times when he feels that he is dealt with unfairly.	M: Have you been inside? R: No, never. And that's the place where the teachers go too. [points to another door] They sit outside sometimes when the weather is good. They get a break too you know. M: They get a break? R: Aye, they need a coffee [laughs] they say they need a break too. Points to the staffroom door but rushes past. Photographs while on the move. I have to catch up with him and slow him down to have conversation.			Words Actions	Fair treatment Acceptance of routines Discomfort Embodied actions
		INTERVIEW - This one's not interesting - can we find something else?		R doesn't take time to notice or to focus the device. . He snaps a shot while on the move.	Screen	embodied actions
the lift	Respects rules associated with staff areas.				Behaviour	
		Sometimes I get scared of lifts. I'll take a picture though. M: Do you want to go in today? R: No M: It would be allowed because we're working on a special project. R ignores question and photographs as he walks then walks away leaving me standing at the lift			Words Actions	Avoidance and discomfort Disinterest
		R selects the lift as his first image to edit.	Curiosity leads to experimentation which then leads to critical engagement. He enters a dialogue with the images. He is unsure iof what the effects will produce and responds with further actions.	He crops the image which acts to create a more powerful impact. He then plays with the effects, changes the colour to a fluorescent pink glow. He reflects that this makes the lift look as though it has come from outer space. After a while he appears to become familiar with the tools and enjoys trying out several different effects.	Screen	imaginative references non-school culture experimental dialogue/critical engagement tools use

	Relational	Material	Pedagogic	Digital	Pupil		Concepts	Tech/high level themes
the clothes peg	Pupil photographs and name labelling are common in all schools for practical reasons. But when pupils feel undervalued they take on a special significance. In another school two girls who travelled for 8 months of the year took delight in seeing images of their siblings at the entrance to the school - even those who were beyond school age.	Stops at cloakroom. Moves several coats and bags to the side to reveal his own photo beneath a coat peg. R stops and tries to zoom in on his name and photo to take a photo. R seems to be taking pride in his peg. He stands back and looks at it. Then when finished he says, "There", and nods his head and gives a quick smile of satisfaction. It is nor clear whether the emotion is based on the peg assemblage or on the satisfaction from his photography.			Behaviour		Identity and respect Embodied activity	Control over self representation
			I don't use this. I keep my coat in my bag all the time .			Words		
						Actions		
				Manipulates device - zoom in nad out until the focus is on the ebst	Screen			Creative control
the fox	Teacher: Are you showing which toy you love R? Sure it's the fox? R replies, "Aye, I just like cuddling it." He then takes yet another photo and rearranges it in the plastic tub. He places a pile of autumn leaves around it then photographs it again.	R leads me through a classroom door labelled with the word Nurture. R: I'll show you through that window – that's where I go sometimes – its Nurture He thinks for a few seconds before leading me through door. He turns round and gives me a big smile saying, "I like it here".			Behaviour		Caring Safety Nature	CULTURAL DIALOGUE
			I like the nurture room because its calm and theres no noise.			Words		Calm
						Actions		
		R walks over to a set of elevated plastic tubs on a steel frame. He focuses, then zooms in on one object and takes several images. He steps back, adjusts the view then focusses again. The object of R's attention is a toy fox.	You know they make a den for the wee ones? And the mother won't let anybody come near. She'll fight to the death.	Again Rab is scene setting. He seems to have an idea of how the fox should appear in the frame. He appears to be seeking a more authentic view with the leaves but there is also a sense that he cares fior the fox and understands its needs so creates a warm den with the leaves before taking a close up	Screen		Caring about the shot and how fox is portrayed. Photographing with affection Nature and family culture	hyper reality/ enhanced reality/imagination
the gardening tools					Behaviour			

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