Datafication: from Doppelganger to Praxis
A teacher’s story

A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy (PhD) in the Faculty of Humanities

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List of abbreviations

ADHD Attention Deficit Hyperactivity Disorder
CoEL Characteristics of Effective Learning
CPAR Critical Participatory Action Research
DM Development Matters
ECE Early Childhood Education
ELG Early Learning Goal
EPPE The Effective Provision of Preschool Education
EYFS Early Years Foundation Stage
EYFSP Early Years Foundation Stage Profile
FDA Foucauldian Discourse Analysis
FSP Foundation Stage Profile
GLD Good Level of Development
GRT Gypsy Roma Traveller
ITMP in the moment planning
NTE new to English
OFSTED Office for Standards in Education, Children’s Services and Skills
PAR Participatory action research
PE Participatory evaluation
RBA Reception Baseline Assessment
RECE Reconceptualizing Early Childhood Education
SEBD Social, Emotional and Behavioural Difficulties
SEN Special Educational Needs
TACTYC Tutors of Advanced Courses for Teachers of Young Children
UK United Kingdom
ZPD Zone of Proximal Development
Abstract

This thesis documents my story as a teacher. It begins with an account of the end of my teaching career, narrating the story of my suspension from practice, based on an accusation of falsifying data. This constitutes the start of a fascination with datafication, which continues throughout the thesis. The exploration of datafication begins with the conceptualisation of datafication as a doppelganger or second self. The use of the doppelganger as a thinking-tool enables me to experiment with fighting against datafication in the form of the data-doppelganger.

Following on from this critique of the existing system through the conceptualisation of the data-doppelganger, I return to the field in an attempt to resist the dominant discourse of datafication. An ethnographic participatory action research project provides me with an opportunity to move to a more active phase of the research, where I attempt to work with others to develop new ways of assessing children in early years.

As my thinking develops following the research project, I produce myself not as a coherent subject but as a divided self, a new subjectivity which to me, makes sense of the conflicted world in which I find myself. This acceptance of the divided subject constitutes a resolution to the conflict I encounter within myself and enables me to engage in active resistance to datafication. My final paper, which provides an analysis of a Roma child’s development from a Roma perspective, embodies this resistance. In it, I link thought and action in praxis to produce an alternative child subject, a subject not seen through the lens of datafication, but viewed through a Romani lens. In this way, the thesis tells the story of my experience of datafication, a journey from encounters with the doppelganger to a final act of praxis.
Declaration

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Acknowledgements

This PhD has taken almost 6 years to complete. It would not have been possible without the support and encouragement I have received from a number of key people.

Firstly, I would like to thank my husband Stefan for his relentless belief in me. He has facilitated this research through countless cooking of dinners, washing up, cleaning, shopping and childcare. He has on many occasions sacrificed his own career for the pursuit of my dream to achieve a PhD. He has always believed in me and encouraged me to carry on, even when doing a PhD while working full time and raising a family seemed ridiculous. Finally, he has listened to my ideas, read my work and offered thoughtful suggestions which have then become a part of my writing. As a musician, he has always seen the parallels between creating an album and writing a thesis. He understands the creative process more than anyone else close to me.

Secondly, I would like to thank my main supervisor, Erica Burman. Erica has become more than a supervisor as we have developed our relationship over the past 6 years and I now count her as one of my friends. Erica’s honest, critical appraisal of my writing, her extensive knowledge and her belief in me have given me the courage to try to do things differently, to reimagine what participatory action research could be and to write a thesis which reflects my creativity.

Finally, I would like to thank Juice Vamosi for his extensive work with me. He has welcomed me into his family, trusted me as a gadzo woman and shared with me his deep insight into Romani life. As a co-author, his contribution has been an essential part of our writing, enabling me to see things differently and destabilise long established ideas of the child and childhood. Juice’s enthusiasm has been infectious. I have been inspired by his activism and commitment to the Roma people and hope to continue working with him in the future.
Author profile

Mandy Pierlejewski is currently a senior lecturer in early childhood education at Leeds Beckett University. She has been course leader for the BA (Honours) Primary Education 3-7 (Early Years) degree for the past 6 years. Prior to this, Mandy worked at a number of other higher education Institutions as a lecturer in education. Prior to working in higher education, Mandy spent 14 years as a primary school teacher, focusing on early years. She was also an advanced skills teacher, working with colleagues in other schools to develop their early years provision.

Publications


Pendant 1
The Fall
1.1. The fall

“You are suspended for gross misconduct with immediate effect”. I stared at the words in disbelief before leaving school for the final time. The crime I was accused of was “falsifying data”. I had completed weeks of written assessments of the five-year-olds in my reception class, compared these to the expected level statements for the end of the early years phase and had compiled a set of preliminary results. When looking at my results however, I felt that the data did not tally with my knowledge of the children. I was an experienced teacher and had completed such assessments many times before. I felt that I knew the children and was uneasy with the lack of coherence between the results and the individuals. I asked myself which assessments held more validity, my own intuitive teacher assessment or the data generated by formal observations. I decided to trust my professional knowledge and altered the results to align them with my judgement. This was considered misconduct by the school and led to the end of my teaching career. I was convicted by my data, an act which led to a desire to explore the concept of datafication and the possibility of resistance.

This abrupt end to my teaching career had a profound impact on my subjectivity. Prior to this, I had narrated myself as a successful early years teacher. I defined this by the fact that I had attempted to take a child-centred approach to teaching. I had planned opportunities for children to learn through play and tried to keep formal teaching to a minimum. At my previous school, my department had been validated by the Office for Standards in Education, Children's Services and Skills (Ofsted) as “outstanding” - an epithet which to me, sealed my status as a “successful teacher”.

The move from a construction of the self as “successful teacher” to “failed teacher” was swift and brutal. Like the cynical teachers described in Allen’s (2017) work, I felt that I was staring into an abyss of meaninglessness. The endorsement on which my subjectivity had previously depended was removed. The link between external validation
and my own professional evaluation of my practice was broken, leaving me unsure about who I was as a teacher. I had experienced the “terrors of performativity” (Ball, 2003) and felt that my teacher’s soul was damaged. My response to this ontological crisis was a drive to conceptualise my own experience of teacher subjectivity and to tell my teacher’s story. I sought, through writing, to make sense of my conflicted subjectivity. I began this process by completing a master’s degree. I responded in writing to the experience, producing three papers which explored conflict and subjectivity. In my first paper (Pierlejewski, 2015a), I reconstructed my professional fall in Foucauldian terms, examining the technologies of power used to produce subjectivity. The second assignment (Pierlejewski, 2015b) was a portfolio evaluating pupil achievement using a phenomenological lens. I examined the process of producing the data which was later deemed to be false, concluding that the system of high stakes testing was incongruent with the principles of the Early Years Foundation Stage (EYFS), producing conflict within the sector. My final master’s dissertation (Pierlejewski, 2016), entitled Mapping Conflict, examined the reception baseline assessment (RBA). A Foucauldian discourse analysis of policy documents and social media posts indicated that the RBA was a site of conflict. I concluded that the locus of the conflict was between validity in terms of the desire for authentic data and ethics in terms of the needs of the child.

As well as locating conflict within the school, the sector and the system, I also found conflict within my own subjectivity. Finding myself constructed as a failed teacher was rather like seeing the doppelganger, or another version of myself, for the first time. Even prior to the suspension, I had begun to question the coherence of my teacher identity as I changed my practice in response to the pressure to produce good data. I found myself communicating this pressure to the children, moving away from play based pedagogy to more direct teaching. My practice felt inauthentic as it was not aligned to my beliefs about early years education. In the doppelganger genre, seeing the doppelganger signifies the disintegration
of the fabric of reality (Dolar, 1991). The subject begins to question their own subjectivity and the idea of a coherent self is no longer viable. This conceptualisation resonated with me as I began to narrate myself as having two main subjectivities- the data teacher, delivering effective teaching as part of the deliverology chain and the intuitive teacher, attempting to resist the regulatory power of datafication by focusing on the moment by moment needs of the child.

A second impact of the suspension was that I became aware of the power of data. My misunderstanding of the school’s approach to data generation led to the loss of my teaching career. Data not only had the power to define how I saw my pupils, but also to fundamentally change my life. Data became monstrous to me, personified in my mind as a dark destructive force. To understand the extent of its power, I needed to see it in personified terms. The data-doppelganger of Williamson’s (2014) work provided the perfect analogy. Defined as a “ghostly double”, the doppelganger is sinister and disturbing, while strangely familiar. The exploration of the data-doppelganger became an obsession for me. It was a method of exploring the educational system which had led to my professional fall and became a dominant theme in my teacher’s story.

A final outcome of my experience was the need for hope. I might describe myself as one of Allen’s “romantic educators” who retained some belief in education, the student and the school (Allen, 2017p82). I retained a hope that education could be benign, that resistance to datafication was possible, that change could happen. Perhaps the fact that I left the profession before being completely ground down by it enabled me to nurture this sense of hope. Hope has led me to look for examples of teachers and schools who resist the dominant discourse. It led to my desire for change, to my adoption of the critical paradigm and ultimately to my decision to engage in praxis through participatory action research. I wanted to do more than simply expose political violence through my research: I wanted to make a difference.
From these three responses to my professional fall, 3 research questions emerged which I went on to investigate over a 6-year period. The fascination with the power of data led me to ask how datafication manifests itself in early years practice. The exploration of my own teacher subjectivity led me to ask how datafication impacts on subjectivity. Focusing on both the child and the teacher and the need for hope led me to focus on enacting change, asking how early years teachers can resist datafication.

My three research questions therefore emerged as:

1. How does datafication manifest itself in early years?
2. How does datafication impact on subjectivity?
3. How can early years teachers resist datafication?

1.2. Foucault’s influence

Immediately after resigning from my teaching post, I entered a new career path in higher education and began a Masters’ degree. As part of this degree, I was introduced to the work of Michel Foucault and have continued to read and use his work ever since. I read *Discipline and Punish* (Foucault, 1977), arguably Foucault's most accessible work, as an introductory text. The technologies of power discussed in this book resonated with me as I had felt regulated and controlled in my former role. I joined the social theories of learning research group at the University of Manchester, participating in the Foucault strand. Together, we analysed *The History of Sexuality Volume 1: The Will to Knowledge* (Foucault, 1978), which gave me an understanding of discourse. The influence of these publications can be seen in my early papers (see pendants 2 and 3), in which I explore power, discourse and governmentality. My later papers (pendants 4, 7 and 8) explore concepts of subjectivity, truth and ethics, influenced by reading from Foucault's lectures (Foucault, 1984; Foucault, 1994a; Foucault, 1994b), while continuing to develop the theme of power.
1.2.1. Power

For Foucault, power was always a focus. He does not see power as a top-down force, oppressing individuals, but as something which exists between people in their relationships with each other and the social body. Foucault was interested in what he called the “capillary” form of power. The power which is exercised within the social body rather than upon it from above. Foucault describes it in an interview entitled *Prison Talk* thus:

“power reaches into the very grain of individuals, touches their bodies and inserts itself into their actions and attitudes, their discourses, learning processes and everyday lives” (Foucault, 1980a p39).

We exist within a dense network of power relations, which influence our lives in every way.

Foucault saw power as a productive force rather than a purely repressive one. In *Truth and Power*, Foucault describes it as a “productive network which runs through the whole social body” (Foucault, 1994b p120). He discusses power as a producer of discourse, knowledge and pleasure. It also produces subjectivity as regimes of truth determine which kinds of subjectivities can and cannot be produced. Technologies of power, such as normalisation, surveillance and examination produce particular kinds of subjects (Foucault, 1977).

Power, for Foucault, is very closely related to knowledge. The mechanisms of power produce certain kinds of knowledge. This knowledge, this knowing of people, then acts to regulate their existence so that power produces knowledge and knowledge produces power. For Foucault, knowledge and power were inextricably linked and were referred to as “power/knowledge” in some texts (Foucault, 1980a).

Power is a theme which is present throughout my work. The machinations of power to regulate my behaviour and produce subjectivity are noted at the very beginning of the study and are embodied in my three research questions. My first question, “how does datafication manifest itself in early years?” focuses on the power of the discourse of datafication to produce
certain types of practice. My second question, “how does datafication impact on subjectivity?” explores the power of this discourse to produce subjectivity and the final question “how can early years teachers resist datafication?” looks at the possibility of resistance. My subsequent papers explore these questions in detail focusing on discourse, disciplinary power, subjectivity and ethics.

1.2.2. Discourse
Discourse, for Foucault, is the way we talk and think about a particular subject and how this generates power. When a topic is put into discourse, the language used to discuss it defines what it means in societal practices. Foucault explores the discourse of sex in *The History of Sexuality Volume 1* (Foucault, 1978). This text tracks the emergence of discourses about sex, changes to discourse and the effect of these discourses on experience. He examines the relationship between discourse, power and experience in terms of pleasure. Discourses about sex generate power because they insert themselves into every aspect of our lives. Discourses determine what can be said and what cannot be said, what is subversive, transgressing limits of acceptable speech, and what is permitted. The impact of these discursive practices in terms of sex, act to change the very experience of sex. Discourse is thus linked to pleasure because it defines boundaries, making certain practices illicit and in doing so, multiplying disparate sexualities. This link between discourse, power and experience can be seen in many other fields including education.

My first paper, *Documenting discursive dissonance: a conceptual synthesis of the discourses of play, child-centredness and school readiness* (see pendant 2) was written not long after I had studied *The History of Sexuality Volume 1* (Foucault, 1978). Although I define this paper as a conceptual synthesis, it is essentially a Foucauldian discourse analysis. I briefly explain my approach in the methodology section but do not go into detail. I suspect that this paper embodied my growing but as yet unconscious understanding of discourse. The influence of *The History of Sexuality* can be seen in the structure of the paper. I examine the
conditions of possibility which led to the emergence of discourses, the
construction of the child subject in each discourse and the theoretical
underpinnings or key knowledge generated and underpinning the
discourses. My interest in what is said and why it is being discussed, how
this generates power and the links between discourse, power and practice
echo Foucault’s description of his approach in the introductory chapter We
“Other Victorians”.

My interest in discourse did not end with this first discourse analysis. I
continue to explore the discourse of datafication in *Constructing deficit
data-doppelgangers: the impact of datafication on children with English as
an additional language* (Pierlejewski, 2019b) (see pendant 3), focusing on
governmentality and the regulation of the child subject. I then develop this
further in my third paper, *The data-doppelganger and the cyborg-self:
theorising the datafication of education* (Pierlejewski, 2019c) (see pendant 4)
exploring the impact of the discourse of datafication on both child and
teacher subjectivity.

My fourth paper, *Resisting datafication through in the moment planning*
(see pendant 6) does not mention Foucault at all. This is a significant
omission, as the paper forms another exploration of the discourse of
datafication as well as examining more marginal discourses of child-led
learning and assessment. I did in fact use Foucauldian discourse analysis
to analyse the data from my study but moved away from this when I began
writing with a co-author. Foucauldian discourse analysis is embodied in
this work in terms of the focus on discourse and resistance but is not
explicitly discussed. My penultimate paper, “I feel like two different
teachers”: *the split self of teacher subjectivity* (Pierlejewski, 2021) (see
pendant 7), focuses on subjectivity. It explicitly explores the role of
discourse in producing subjectivity, concluding that in order to function
within multiple discursive systems, teachers must adopt a bi-discoursal
self. My final paper, *A Romani Analysis of English Preschool Education*
(Pierlejewski & Vamosi, 2021) (See pendant 8) makes no reference to
Foucault as it uses sociocultural theory as its main conceptual framework.
Discourse, however, is implicitly present in the discussions of the impact of culture on child subjectivity. Culture is created through and creates discourse and is central in producing subjectivity.

1.2.3. Disciplinary power
In addition to the exploration of the operation of power through discourse, Foucault also examines other forms of power/knowledge through his work. An example, which I have used in some of my work, is disciplinary power. This is the power to regulate and govern individuals which is developed in *Discipline and Punish* (Foucault, 1977), amongst other texts. I studied this text as part of my second year in the social theories of learning group and wrote *Constructing Deficit Data-Doppelgangers* (Pierlejewski, 2019b) (see pendant 3) as an assessment for this module. This paper uses Foucault’s work extensively and explicitly to explore the regulation of preschool children. I focus on a child from a marginalised group—bilingual children, examining how the techniques of power, outlined in *Discipline and Punish*, can be seen to operate within the current early years sector. This paper can almost be seen as an exercise in applying Foucault’s ideas to practice. It gave me a grounding in Foucauldian theory which I build on in subsequent papers. The key techniques of power which I examined in *Constructing Deficit Doppelgangers* were as follows:

- Hierarchical observation, by which teachers observe the child to produce knowledge of the child which is then used to rank each individual within the class. A vast body of evidence is collected through observation and this data is then used to make normalising judgements.
- Normalising judgements, which involved comparing children to a norm in order to determine who is normal and abnormal
- The examination combines both hierarchical observation and normalising judgements in a process which makes each child into a case to be studied. The examination “introduces individuality into a field of documentation” (Foucault, 1977 p189) as every detail about the child must be known and recorded.
1.2.4. Datafication
I describe these practices as aspects of datafication. Datafication is defined by Bradbury and Roberts-Holmes as a disciplinary technology which produces subjectivity and changes practice through the increased prominence and significance of data. It is “something that happens to people, values and cultures as well as practices” (Bradbury, & Roberts-Holmes, 2017 p7). Laney (2001, in Bradbury and Roberts-Holmes 2017) identifies three areas of datafication which have emerged in the recent move to a more technology-driven world; the increased volume of data, a greater variety of data and an increase in the velocity with which data is produced and processed.

Hierarchical observation is a key part of datafication as it is the surveillance which results in the generation of data. Data consist of comparisons with norms which act as normalising judgements. As the examination “introduces individuality into a field of documentation”, datafication is a means by which the subject is captured and fixed in a “whole mass of documents” (Foucault, 1977 p189). The notion of datafication and its impact on practice and subjectivity are explored on all of my papers with the exception of the book chapter A Romani Analysis of English preschool education (Pierlejewski & Vamosi, 2021) (see pendant 8).

1.2.5. Subjectivity
In Discipline and Punish (Foucault, 1977), Foucault explores the power of disciplinary techniques to produce the subject. Power here, is working as a creative and productive force to determine who we feel we are. Discourses work to produce a kind of matrix, within which the subject can be produced, with certain subjectivities valorised and others disallowed. This notion of subjectivity is explored in my paper The data-doppelganger and the cyborg-self (Pierlejewski, 2019c) (see pendant 4), in which I explore the impact of datafication on child subjectivity. It is also a theme of my penultimate paper, I feel like two different teachers (Pierlejewski, 2021) (see pendant 7), which focuses on the production of multiple teacher
subjectivities. Building on Foucault’s work, I use Butler’s notion of “subjection” (Butler, 1997) as the process by which the subject is produced by discourses which we do not choose, but which both initiate and sustain agency. Paradoxically, subjectivity is not possible without discourse as it produces both compliance and resistance to power.

1.2.6. Ethics

Foucault’s later work focuses more on the ethics of the self; the means by which the self governs the self in a hermeneutics of subjectivity (Foucault, 1994a). By this he means that the self is both the subject and the object of government as the self acts upon itself to regulate the subject. He moves away slightly from regulation from outside the subject to the regulation that exists within the subject. An aspect of the ethics of the self is parrhesia, which can be translated as “truth telling” or “fearless speech” (Foucault, 2001). Parrhesia acts to both critique power and also to narrate the self differently. Ball explores this notion, describing it as a double refusal as the subject rejects both the powerful discourses which seek to produce it and the notion of an intelligible self (Ball, 2017). My attempts to reject the idea of a coherent self and embrace multiple subjectivities are documented in pendant 7 I feel like two different teachers. This can be seen as an ethics of the self. Parrhesia is also a function of the final paper A Romani Analysis of English preschool education (Pierlejewski & Vamosi, 2021) (see pendant 8) in which my co-author Gyula Vamosi, engages in fearless speech, revealing the marginalised and often hidden discourses of the Romani people. Together, we attempt to challenge and destabilise the dominant discourse of the minority world child subject.

This activist stance of destabilising dominant discourses, of attempting to do things differently, is motivated by a desire for social justice. Foucault discussed his own role in terms of social justice in his debate with Chomsky. When asked for his thoughts about democracy, he defined his approach to politics saying:

It seems to me that the real political task in a society such as ours is to criticize the workings of institutions, which appear to be both neutral and
independent; to criticize and attack them in such a manner that the political violence which has always exercised itself obscurely through them will be unmasked, so that one can fight against them.

(Chomsky & Foucault, 2006, p. 41)

The motivation for all of my writing has been to unmask the political violence I see within the education system in order to fight against it. From the first paper which explored the locus of the tension I experienced as a teacher, to the final paper, which seeks to give voice to marginalised discourses and challenge assumptions, I have attempted to reveal the obscure workings of power and in so doing, change the system.

1.2.7. Foucault’s approach to writing

In addition to using Foucault’s ideas about governmentality, I have also been influenced by him in terms of the approach to writing. Foucault was interested in the order of things. The patterns and rules with which people attempt to create order were a constant theme in his work. O’Farrell argues that the idea of practice as praxis, theory and practice as one, makes it possible to treat all cultural activities on the same level (O’Farrell, 2005). Disciplines which are usually kept discrete and separate can be brought together when examining a particular practice. An example of this is the bringing together of public execution, military schools and the design for prisons in Discipline and Punish (Foucault, 1977). The practice explored in this book is discipline and Foucault draws from a very broad range of often obscure sources to support his discussion. Allen also takes this approach in his text The Cynical Educator (2017), where he draws on historical sources such as the writings of the Marquis de Sade and the work of Nietzsche to shed light on current educational policy and practice. In some of my own writing, I have taken a similar approach to my choice of sources. In The data-doppelganger and the cyborg-self (Pierlejewski, 2019c) (see pendant 4) for example, I explore the formation of the child subject. I draw from such diverse sources as psychoanalytic theory, gothic literature and film. I feel like two different teachers (Pierlejewski, 2021) (see pendant 7) is another example of a paper in which I draw from
diverse sources, using a book about the debate between Einstein and Bergson, Bergson’s theories about time, Einstein’s theory of general relativity and psychoanalysis as useful tools for analysing educational practice. I find that the use of these sources provide a unique lens through which to examine concepts, generating fresh and original contributions to knowledge.

1.3 Walking

Throughout the construction of this thesis, I have used walking as a method for developing creative thoughts. Margaret Atwood wrote, in an article for The Guardian Review, “slow walking leads to rumination, which leads to poetry” (Atwood, 2020). The link between walking and writing is long established, but for me, this was a new discovery. The commencement of my PhD studies coincided with a move out of the city to a village in Yorkshire. I had lived the whole of my life in cities and had never experienced life outside the urban environment until this time. I discovered that I could be in the open countryside within minutes of leaving my house and have spent the subsequent years exploring the local area. During the second year of study, I began spending some of my allocated study time going on walks. I discovered that, like many others, walking helped me to think. Walking became an integral part of the writing process as I found it stimulated ideas, facilitated the writing process and became a refuge during uncertain times.

Like Atwood, many other poets have found that walking leads to rumination which leads to poetry. Wordsworth is probably the most well-known if these. Solnit notes that for Wordsworth, walking was his means of composition (Solnit, 2001). Villagers would observe that the poet was often seen walking along, muttering to himself before stopping to write, then carrying on. This method of composing while walking is embodied in Wordsworth’s poetry, whose iambic pentameter echoes the rhythm of the walk. My method of writing was similar to Wordsworth’s. I would often read at home before walking and thinking about what I had read. I would write
sections of my work in my head while walking and then stop to write them down. In this way, thinking, walking and writing happened simultaneously. Walking became a way of thinking and knowing or as Ingold puts it, “thinking in movement” (Ingold, 2015 p49). The wandering pathways of the ground became a part of the wandering pathways of the mind. Although the feet walk along one path however, the mind’s journey encompasses many pathways. My mind meandered, creating associations and moving around time like the multiple threads of a cord. This meandering enabled me to see new connections. It also enabled me to connect my academic and non-academic thinking so that the literature I was reading, the culture I was participating in and my thoughts about life joined together to make the complex cords of the study.

Solnit’s comprehensive history of walking examines the link between walking and thinking which many from Rousseau to Atwood have noted (Solnit, 2001). She argues that going for a walk or ramble is a kind of doing nothing. It is an idle pursuit, which produces “nothing but thoughts, experiences and arrivals” (p5). This idleness, however, leaves space for thinking, a space which is lacking in the contemporary world. The process of walking, the bodily movement of putting one foot in front of the other, creates a rhythm. This rhythm, notes Solnit, “generates a kind of rhythm of thinking” (p5). For me, this rhythm induces a trance-like state, rather akin to meditation. The repetition of steps, the lack of distractions and the focus on the internal help me lose myself in thoughts, which in turn leads to creativity. Many of my most creative ideas were conceived during walks.

1.4. The organisation of the thesis

1.4.1. Overview

This thesis has been written in journal format in line with the University of Manchester’s guidance on journal format theses (see Appendix A). Papers included in the study have been written over a six year period and represent the development of thought over that period. I chose to submit in journal format because I was already involved in writing and publishing
from the second year of my doctoral studies onwards. As an academic at another university, I was expected to publish work and was given time to research as part of my employment contract.

In order to answer my research questions, I needed to focus on conceptualising and theorising the current system, as well as investigating, through a research project, how practice could be changed. Writing conceptual papers as I was preparing to conduct research allowed me to distil my thoughts and develop new ways of thinking which were then linked to practice in the research project. The papers reveal my developing thinking chronologically, starting with a focus on datafication and subjectivity and moving towards changes to practice. The inclusion of work written over a six year period means that the development of my writing and academic skills is evident. Earlier papers reveal limitations which are addressed in later works. I have deliberately chosen to include all papers in their original formats to enable the reader to see this academic and literary journey. Commentaries will deconstruct the papers from the perspective of a more experienced writer. What is represented in this thesis is part of a conceptual narrative which began with the event related above and will continue after the thesis is written. It is not a study which has a beginning and an end as such, but rather a section of thought development over a period of time. It is part of the story of myself as a teacher.

1.4.1. A Life of Lines

The process of assembling the papers into a coherent piece of work has been something of a challenge. I began by attempting to think of each chapter as a whole and planning a sequence for these stand-alone sections. I saw each chapter as a block which would be juxtaposed with another to create a structure. As I worked on this however, I began to feel that this was not producing a coherent whole but rather a sequence of unrelated bits. I did not conceptualise my thesis in this way. I wanted to weave my writing around the already written papers and thought in terms of threads and tangles more than blocks. The work of Tim Ingold (2015)
helped me to reconceptualise my thesis in a way which reflected my own ideas about its creation.

Ingold’s thesis is that social life is a meshwork of lines rather than an assemblage of blobs (Ingold, 2015). Blobs have an interior and exterior, they occupy a particular space, they can expand and contract. They cannot, however, join with other blobs without losing their particularity and forming a new, larger blob. Ingold describes the concept of the assemblage (Deleuze & Guattari, 1987) as an “aggregate of discrete individuals” (Ingold, 2015 p7). Although blobs in the assemblage may partially run into each other, what Ingold feels is missing, is the movement: blobs are static. Although they have mass and volume, they do not have the movement of lines. As an alternative, Ingold conceptualises all living things as collections of lines. The line allows beings to cling to each other. It allows connection without the loss of individuality. Social life, for Ingold is the tangling of everything with everything else.

The idea of the line appealed to me as a conceptualisation of my thesis. I did not see my thesis as an object, a thing without connection to my life; my past, present and future. I saw it more as a line, as moving through time and space rather like a path. The idea of assembling the thesis in clear self-contained sections felt like an “aggregate of discrete blobs”. While sections may partially run into each other, they lacked the movement I felt was present in the story I was narrating.

Building on the concept of the life of lines, Ingold moves on to discuss the knot. Lines are not connected to other lines by their juxtaposition but through entanglement. For Ingold, knots are “the fundamental principle of coherence” (Ingold, 2015 p14). It is the way threads or strings are kept in place and depends on the tension, the pulling apart, to give it cohesion. Knots represent social life as they are the means by which the cord of social life is intertwined. The concept of the knot, says Ingold, can be applied to forms of knowledge as well as material things and for me, the knot came to represent my papers. Each paper resulted from a deep concentration of thought. An entanglement of life experience, reading,
imagination and intersubjectivity. Later in the book, Ingold describes concentration as “like a solid knot in the grain of consciousness” (Ingold, 2015 p149) and this felt like the process which had given life to the papers. I began to visualise my thesis as a cord formed from multiple strands, a cord held together by knots along its length.

1.4.3. The Khipu

Ingold lists the many functions of knots in a range of crafts from sailing to basket making (Ingold, 2015). Knots, however, have also been used by some cultures as a means of communication. A specific example of this is the Andean Khipu, a communication system developed by Andean people in which fibre type, thread colour, objects woven into the structure, weave direction and knots were used as symbols. Hyland, an anthropologist specialising in khipus, hypothesises that these collections of cords constitute a logosyllabic language that could be used for narrative as well as accounting purposes (Hyland, 2017). In her examples, a number of pendant cords were attached to a top cord in sections (see figure 1). This writing system of twisted and knotted cords helped me to conceptualise

![Figure 1. A model of khipu knots](image)

*Figure 1. A model of khipu knots*

pendant cords were attached to a top cord in sections (see figure 1). This writing system of twisted and knotted cords helped me to conceptualise
my thesis further. Rather than appropriating the communication system of a marginalised group, I have used the khipu as a useful metaphor to help me conceptualise the structure of my thesis. The top cord is the thesis as a whole, the method of tying the many strands of the study together. Each chapter is a pendant on the top cord and is referred to throughout as a pendant. These contain specific moments of entanglement where thoughts are concentrated in a knot. The twisted threads are the multiple strands which make up the thesis, threads such as the doppelganger, datafication and subjectivity. As a whole, the khipu tells a story of datafication.

In order to weave each of the individual pendants, I designed a system for analysis. Prior to writing, I assembled all of my notes relating to the paper which constituted the main body of the pendant. These were arranged in chronological order to enable me to re-engage with the thought processes which led to the creation of the papers. As I re-read my notes, I relived the experience of writing the papers and could track the development of my ideas. From this, I was able to write a section at the beginning of each paper-based pendant explaining how the paper was constructed. This was followed by a justification for its inclusion in the thesis. Following on from this, I analysed the paper itself, examining the development of key strands such as the doppelganger and the teacher subject and tracking threads. This was presented at the end of each pendant in an analysis section.

1.5 An overview of the thesis

1.5.1. Pendant 1: The fall
In pendant 1- The Fall, I narrate the events which led to my interest in datafication. I establish the rationale for the study as well as the theoretical underpinning for the structure and organisation of the thesis. I outline the influence of Foucault on my work, establishing it as the conceptual framework for the thesis. I discuss my approach to writing, examining the use of walking as an aid to creative thinking. I then discuss Ingold’s Life of Lines (2015) and explain how this theory has led me to think of the thesis as a cord. I go on to explore Andean khipus as a semiotic system,
conceptualising my thesis as a khipu or series of knotted threads. I go on to outline the structure of the study, giving a summary of each pendant.

1.5.2. Pendant 2: Documenting discursive dissonance
The second pendant includes my first paper *Documenting discursive dissonance: a conceptual synthesis of the discourses of play, child-centredness and school readiness*. This unpublished paper was written as a literature review as part of a professional doctorate in education. I transferred from this degree to a PhD shortly after writing the paper. The purpose of the paper, which I wrote in the first year of my doctoral studies, was to explore the tension I had experienced as an early years teacher. I use Foucauldian discourse analysis to examine the current statutory guidance for early years settings, identifying three dominant discourses: play, child-centred learning and school readiness. I then go on to examine literature relating to each discourse in terms of the conditions of possibility which led to the emergence of each discourse, the construction of the child and the theoretical underpinnings. I find a dissonance between the school readiness discourse and the other dominant discourses.

The paper served as a review of the existing literature relating to my interest in early years education. It also helped me to locate my particular interest in datafication, which led to a subsequent focus on the topic. The process of writing this paper also helped me to untangle and make sense of my experience as an early years teacher. I began to see that the tension I had felt was not unique to me but had resulted from conflicting powerful discourses present in the current education system.

1.5.3. Pendant 3: Constructing deficit data-doppelgangers
Pendant 3 explores and includes my first published paper, *Constructing Deficit Data-Doppelgangers: The Impact of Datafication on Children with English as an Additional Language* (Pierlejewski, 2019b). This was also written towards the end of my first year of doctoral studies, directly after the preceding literature review. It was published in 2019, following some revisions in the peer review process. In it, I reflect on my experience in school during my final year of teaching. I consider the impact of
datafication on children, with a particular focus on marginalised children such as bilinguals. The paper is confessional in many ways, as I consider the shortcomings of my practice and the impact this had on the children I taught. I focus on a case study made form a number of children, a process which makes the reflection all the more personal. The paper also, however, has a social justice agenda, as I attempt to reveal the political violence I see in the current system.

This paper is the first of three papers on the data-doppelganger. In this work I introduce the reader to the character of the data-doppelganger originally developed by Williamson (2014). The data-doppelganger is the version of the child created through the vast quantities of data collected about them. The data version of the child is then used as a proxy for the real child. Decisions are made based on this data-child and the real embodied child becomes less important. The paper seeks to answer the first research question: “how does datafication manifest itself in the early years?”. I argue that in a process of educational triage (Gillborn & Youdell, 2000), data-doppelgangers which do not serve the needs of the teacher are classed as “no hopers” with the focus of attention instead going to those who may meet the expected level.

1.5.4.Pendant 4: The data-doppelganger and the cyborg-self
Pendant 4 focuses on the second of my published doppelganger papers: *The Data-doppelganger and the Cyborg-self: Theorising the datafication of Education* (Pierlejewski, 2019c). This was written in the second year of my doctoral studies and was published a year later in 2019. It builds on the previous paper, developing a theory based around the notion of the doppelganger. I drew from a wide range of influence for this paper, looking at the doppelganger genre in literature, film, popular culture, psychoanalysis and academic literature. I used a story- *William Wilson* by Edgar Allen Poe (Poe, 2009) to explain the notion of the doppelganger in psychoanalytic thinking. I related the character of doppelganger to the three parts of the psyche proposed by Freud and explored in depth by Dolar in his (1991) exploration of the Uncanny. I then related this to the
data-doppelganger, using a publication by Ofsted (2017) as an object of research to explore datafication in early years policy and practice. I developed a novel approach to analysis in this paper, inspired by Burman’s child as method (2018), in which I used the three parts of the psyche to interrogate the role of data in producing subjects.

My motivation for writing this paper was a desire to reveal the political violence I had witnessed as a teacher. I was becoming aware of the impact of datafication on my own and others’ subjectivity and felt a degree of anger at the current system. This anger was transformed into energy which I concentrated on theorising what I could see. The depth of thinking which resulted in this paper felt like “a solid knot in the grain of consciousness” (Ingold, 2015 p149). The focus on my concentration was to answer the first two research questions:

1. How does datafication manifest itself in early years?
2. How does datafication impact on subjectivity?

I found that datafication created data-doppelgangers of both children and teachers. These doppelgangers were then used to judge the teacher, the children and the school. I found that pedagogy was impacted by datafication as play was suppressed as dangerous and unpredictable. Child subjectivity was altered in the datafied world as data held a mirror up to the child, repositioning it as a normalised pupil and finally, teacher subjectivity was impacted as data functioned to regulate practice.

The paper had a profound impact on me as a writer. I realised that I could take knowledge from one field and apply it to another in a creative fashion, something I had not done before. I drew on my interest in English Literature, which I had studied as an undergraduate, and applied it, along with my interest in psychoanalysis, to education. I felt that this was the most creative paper I had written to date and as a unique theorisation of education, constituted a significant contribution to knowledge.
1.5.5. Pendant 5: The design of the research project

In Pendant 5, I outline the methodology for the research project entitled *How can community collaboration improve the assessment of Roma children who are new to English in early years?* The pendant tells the story of the design and creation of the project. It begins with the rationale for the research, examining a pilot study which I completed in the first year of my PhD work. It goes on to analyse the choice of threads which make up the pendant, looking at the selection of field, participants and methods. It also examines the choice of weave in terms of the approach to methodology. Following on from this, the pendant focuses on the process of weaving, documenting the data collection process and reflecting on the effectiveness of the project. The final part of the pendant focuses on the reading of the pendant in terms of data analysis.

1.5.6. Pendant 6: Resisting datafication

Pendant 6 includes an unpublished paper entitled *Resisting datafication through the implementation of ‘in the moment planning’*. This paper was co-written with the head of my research school, Kate Rhodes, who wrote about 20% of the paper. I began this paper in 2019, while finishing my ethnographic work with the school. It began as a paper about school readiness but evolved into an account of our attempts to “do things differently” in terms of early years pedagogy. The paper explores the implementation of *in the moment planning* (ITMP) (Ephgrave, 2018), an approach to teaching in which practitioners do not plan activities for children based on learning objectives but rather let the children lead the play. Practitioners then look for teachable moments in which they can support the child to develop their thinking. It focuses on the third research question: how can early years teachers resist datafication?

Our key findings were that the focus on the process of learning, rather than the outcomes, led to higher levels of involvement in both children and staff. We felt that this enabled teachers to resist datafication although it did not remove datafication altogether. Rather, we proposed, it led to a balance between what we called child-led pedagogy and data-led
pedagogy. The paper also proposes two approaches to assessment: data-led assessment and intuitive assessment. These emerge from discourses of data-led pedagogy and child-led pedagogy. Data-led assessment is focused on collecting data to match a child against a set of pre-determined standards. Intuitive assessment, on the other hand, focuses on gathering information about the child from every interaction with them, their families and communities.

1.5.7. Pendant 7: I feel like two different teachers
The following paper which makes up pendant 7 is entitled “I feel like two different teachers”: the split self of teacher subjectivity (Pierlejewski, 2021). It focuses on research question 2: how does datafication impact on teacher subjectivity? I began this paper in 2019, shortly after completing the previous article. I had wanted to focus on the concept of time and how this was manifested in the ITMP approach. As I worked on the paper, however, my thinking shifted towards teacher subjectivity and although the exploration of time remained, the conceptualisation of teacher subjectivity became the main theme. I completed the paper in 2020 and it was published the following year.

My early reading on the concept of time, led to a fascination with a book about the debate between Einstein and Bergson about the nature of time (Canales, 2015). As a result, I mobilised Canales’ account as a lens through which to understand the conflicted nature of the teacher self. I also drew extensively on my previous doppelganger papers, utilising the doppelganger as method approach developed in the Data-doppelganger and the Cyborg-self (Pierlejewski, 2019c). From these influences, I theorised teacher subjectivity as a divided self, with the teacher acting as both physicist, focusing on measurement, and philosopher, focusing on experience. The discourse of teacher as physicist revealed the regulatory function of time as a technology of power; the non-statutory guidance Development Matters (Early Education, 2012) becoming a geometry of child development; and the joy of data seen in the pleasure derived from creating and analysing data. The discourse of teacher as philosopher
rejected measurement as a function of the teacher. Reality for the teacher as philosopher could not be measured as this would change its very nature.

My key finding in this paper was that the teacher is a contested self. Teachers exist within the two dominant discourses as what Gee (2015) calls a “bi-Discoursal” subject. This finding had a profound effect on my own subjectivity. Throughout the project, I had hoped to find that it was possible to resist datafication and become a coherent self, rejecting the teacher as physicist in favour of the child-centred teacher as philosopher. This would have given me the hope that I could condemn datafication as inherently “bad” and make sense of my experience of “the fall”. This was not possible however, and my final acceptance of myself as a bi-discoursal teacher enabled me to make sense of the fall in a different way. I concluded that the care of the self depended on the acceptance of the divided subject.

1.5.8. Pendant 8: A Romani analysis

The final paper included in this thesis, Pendant 8, constitutes a book chapter written in collaboration with Roma activist, Gyula (Juice) Vamosi. It was written in late 2020 and published in 2021. The chapter is entitled A Romani analysis of English preschool education and constitutes the third chapter in Childhoods in More Just World: An International Handbook (Kinard & Cannella, 2021). All of the key children with whom I worked were from the Roma community. Although I had not set out to specifically work with this most marginalised of groups, the school had asked for my help with Roma children as one of their key targets was to improve educational outcomes for this ethnic group. In the chapter, Vamosi analyses a small selection of my field notes which compromise a case study of a Roma child. I found that the Roma voice was largely missing from educational literature and in fact from academic literature in general. Vamosi’s perspective was unique as he related the case study child’s development to Romani values and expectations, giving a perspective that is highly underrepresented in the literature of Roma education. This
constituted a major contribution to knowledge as it is one of very few publications in which a Roma author has given a specifically Romani analysis. In response to Vamosi’s analysis, I gave an academic reply, relating his evaluation to current educational thinking and my own experience in practice.

The chapter proposes that in order for education to be relevant to members of the Roma community, intercultural understanding is needed. Without it, teachers and practitioners can develop serious misconceptions and errors. This intercultural understanding requires the development over time, of meaningful relationships between school and community and must go further than simply celebrating International Roma day or reading Roma stories. Although implicit, this paper explores the third research question: how can early years teachers resist datafication? Promoting intercultural understanding and using a knowledge of Roma culture to analyse child learning and development is a part of intuitive assessment. It resists datafication as it rejects evaluations of the child’s behaviour which relate to the standardised norms. It is a new form of assessment which takes the perspective of Roma people, rather than measuring development against mainstream normative expectations. The act of assessing in this way, privileging the marginalised discourse embodied in Pachiv (the unspoken laws of the Roma) can be interpreted as praxis as it combined theory and the action of constructing an alternative version of the child.

1.5.9. Pendant 9: The Khipu

Pendant 9 focuses on evaluating the research as a whole. Returning to the khipu metaphor, it is the reading of the khipu itself, examining the story told in the weave. It examines the impact of the thesis in terms of the theoretical story, the methodological story and the practical story. The pendant begins with an analysis of the theoretical story, tracing the development of the doppelganger metaphor through the thesis. It then examines the development of the theme of datafication. This could be seen to move from a thorough analysis of datafication as a technology of
power in the first three papers to an examination of resistance to datafication in the final three papers. The theoretical story ends with an analysis of the thesis presented through the lens of Foucault’s care of the self, in which I conceptualise the thesis as a meditation.

The subsequent parts of the final pendant focus on the methodological and practical stories. I continue to examine the thesis through a lens of self-care, focusing on its contribution to knowledge as an account of Foucauldian praxis. I identify the impact of the research project in school as well as the impact of the published journal articles. The sustained and lasting impact of the actions is noted, particularly relating to the permanent change in pedagogy and the relationship developed between the cultural liaison worker, Juice, and the school community. It ends with an identification of limitations and a note about changes to the educational landscape since the project began.

1.6 Conclusion

This pendant has introduced the teacher’s story, outlining its emergence in practice and its subsequent development through the thesis. It has established the conceptual framework, in the form of Foucault’s work, as well as the structural framework, in the form of Ingold’s work on lines and the metaphor or the khipu. The next pendant continues the story as I start to write myself as a subject. It narrates my personal struggle to situate myself within the conflicting discourses.
Pendant 2: Documenting Discursive Dissonance
2.1. The process of construction

Prior to writing this paper, I had completed a Master’s degree. The final dissertation, focusing on the conflict between validity and ethics in the reception baseline assessment, had been submitted just weeks before I started work on this literature review (Pierlejewski, 2016). The paper, can therefore be seen as a continuation of a thought process which began in my preceding work.

The focus of this work was the conflict which I had experienced as a teacher. During my final year of teaching, I located this conflict on a personal level, seeing it as existing between myself and the senior leadership team at the school. As I worked on my master’s papers however, I began to see the conflict as existing beyond the micro level, locating it within the macro system of early years education. Within that system, I could see that certain discourses were incongruent. My identification of this in terms of validity and ethics in my Master’s dissertation (Pierlejewski, 2016) can be seen as the early development of my interest in datafication and child-centred education, themes which pervade my whole thesis.

An evaluation of the evolving paper reveals an initial focus on reception (preschool) teacher identity. In my early notes, I explicitly relate this to my experience of being suspended saying: “This personal experience of being judged by my data had a deep meaning for me. It had impacted on my professional and personal identity and had led to my choice to leave the profession” (see appendix B). The process of exploring my own subjectivity, which had begun with the suspension was a key focus of this work from the beginning. This quote from my notes also reveals my early interest in datafication, as I narrated myself as being “judged by my data”. As I continued to work on the paper however, I moved away from teacher identity to focus on discourse. My searches for literature on reception teacher identity had not been fruitful. My conclusion that there was
insufficient literature focusing on reception teacher identity reveals a lack of understanding of the conflict I had experienced. I felt that it was a conflict specific to reception teachers rather than seeing it as a product of the current educational system. The focus on discourse however, enabled me to locate the nexus of conflict. Policy and research literature both revealed dissonant discourses which appeared incompatible. The power of these discourses to produce subjectivity, from which identity emerges, is a theme which I explored later in my work, but which is introduced in this paper.

2.2. The justification for inclusion

This paper was the first which I submitted for publication. It was rejected on the grounds of a lack of contribution to original knowledge, which I think is justified. As a literature review, it did not make any particularly original claims. The experience of journal submission and peer review however, was very useful, as it gave me an understanding of the process. I felt more confident as a result, to submit my second paper and had a deeper knowledge of the requirements of journal article submission.

Although this paper may not have been suitable for publication, it does mark the starting point of my interest in discourse and its role in the production of the subject. As an initial literature review, it gave me a broad understanding of the main discourses which constitute early years knowledge. I built on this literature review in subsequent papers, which all included their own shorter reviews of literature. As the initial paper, it establishes the beginning of the process of creating the thesis. The threads which are introduced in this paper, such as discourse, datafication and teacher subjectivity are present throughout my later work.

The theme of the doppelganger, or the divided self, also has its beginnings in this paper. Although I had not yet read Williamson’s work on the data-doppelganger (Williamson, 2014), I was beginning to be aware of the impact of conflicting discourses on subjectivity. I make reference to a “cognitive dissonance” felt by teachers as a result of “discursive
dissonance”. This notion of “dissonance” which I locate within the teacher as well as within discourse, is later developed as the doppelganger.

The following unpublished article was written in 2017 and comprises my first paper.
2.3. Title. Documenting discursive dissonance: a conceptual synthesis of the discourses of play, child-centredness and school readiness

2.4. Abstract

In this paper, I attempt to gain an understanding of the tensions articulated by reception teachers in England. To do this, I use Foucauldian discourse analysis to identify three prominent discourses of play, child-centredness and school readiness in a key policy document. I then analyse the literature of early years, identifying how the child is discursively constructed, how theory is used and the conditions of possibility that have led to the emergence of these discourses. This conceptual synthesis reveals a discursive dissonance, which appears to have developed following the rise in prominence of the school readiness paradigm. This discourse is not congruent with child-centredness or to a lesser extent play and the three do not exist happily together in the early years curriculum in England. I suggest that this discursive dissonance is leading to a cognitive dissonance in teachers, who attempt to reconcile very different approaches to pedagogy in their reception classrooms. Only a change in policy can realign discourses, leading to a coherent approach to teaching and learning.

Keywords: early years; play; child-centred; school readiness; literature review

2.5. Introduction

This paper began with an interest in tensions articulated by reception (preschool) teachers in England. As a teacher educator and former teacher, I was aware of friction within the sector, located specifically within the teaching of 4-5 year olds. Children of this age are mainly taught full time, in classes within primary schools in England, although they have their own early years curriculum. Although I had located tensions in some of my reading, an initial exploration of literature revealed the subject of reception teacher identity to be an under-researched area. There is a
wealth of literature about the identity of early years workers, but most of this is located outside the primary school. The identity of the primary school teacher is also a well-researched area, but does not explore the unique nature of the reception teacher in school. To gain an understanding of this tension, I moved away from identity literature, deciding instead to focus on the main discourses relating to early years pedagogy, in the hope of locating the nexus of the tension.

In order to identify the most privileged discourses relating to early years teaching, I chose a policy document – the Statutory Framework for the Early Years Foundation Stage (Department for Education, 2014c), which I felt would reveal these discourses. This document outlines the statutory requirements relating to the teaching of 0-5 years olds in England. Following a Foucauldian discourse analysis of this policy document, I explore how they are constructed in the research literature.

This study will begin with an evaluation of the methodological approach to the literature search. Following this, the Statutory Framework will be analysed to identify how the dominant discourses have been identified and represented. A review of the research literature will follow, comprising a synthesis of the concept of early years pedagogy identified through the main discourses associated with it. Finally, the key findings of the literature review will be evaluated in relation to the identity of the reception teacher.

2.6. Methodology

For this literature review, I take the approach of a conceptual synthesis, using Nutley et al’s (2002) definition of a conceptual synthesis as a guide. In their work, they define a conceptual synthesis as a literature review which identifies a number of ways of seeing a particular concept. I use this approach to identify ways of seeing the key discourses identified in the Statutory Framework. I review the main literature relating to each discourse, synthesising the knowledge presented through exploring the following questions:

- How is the child constructed in each discourse?
• How is theory used to create each discourse?
• What were the conditions of possibility that led to the emergence of each discourse?

In order to answer these questions, a range of literature must be searched. My paper will not provide a complete search of all the literature published in the relevant fields. Instead, my approach is to summarise key ideas, theoretical underpinnings and debates for each discourse. The primary approach to the research will be a network search, starting with a small number of key texts.

I use Foucauldian discourse analysis to identify the dominant discourses present in the policy document. Foucauldian discourse analysis focuses on how language is used to create reality. Foucault described language as systematically forming the objects of which we speak (1972). The act of speaking or writing about something reflects all our preconceived ideas about the object, but more than that, it constructs our understanding of what that object is.

In order to identify discourses, I use elements of Parker’s method (1994). I identify the constructions of the subjects within the text, looking in particular, at how the child and adult are constructed. I then map the different versions of the social world, which emerge from these constructions and define them in terms of dominant discourses.

2.7 Analysis of the Statutory Framework

2.7.1. Play

One of the most prominent discourses in the Statutory Framework for EYFS (Department for Education, 2014c) is that children learn through play. The type of play that is privileged in this document is adult-led play, which is presented as better preparation for school. The balance of adult-led and child-led play is to move towards adult-led as the child matures. This indicates that adult-led play is more ‘school-like’. It is valued more highly than child-led play, as the adult can intervene and retain control over the play.
2.7.2. Child-centredness
Very closely linked to the concept of play, is child-centredness. Good practice is constructed as starting with the child and planning forwards to meet their unique needs. Developmental milestones indicate a nativist discourse in which the child emerges given the right environment. The increased focus on adult-mediation however, marginalises this discourse as it locates learning within the teacher rather than the child.

2.7.3. School readiness
In contrast to child-centred ideology, a discourse of school readiness asserts that the purpose of the Early Years Foundation Stage is to prepare children for school in terms of a set of skills and dispositions. This discourse, introduced by Tickell (2011) and built into the 2012 EYFS (Department for Education, 2012), changed the focus of EYFS itself as the phase became a preparatory stage, rather than a key stage in itself. Prior to this, the discourse of school readiness was more marginalised. The phase was seen as valuable in itself, not as a preparation for school. This discourse is not congruent with the discourse of child-centredness as it is teacher-led rather than child-led. School readiness requires the child to be attuned to the curriculum rather than the curriculum being attuned to the child.

In summary, the balance between these three discourses has changed recently with school readiness emerging as a new dominant discourse and child-centredness becoming slightly more marginalised. A discursive dissonance begins to emerge between the discourse of school readiness and that of child-centred learning.

2.8. Conceptual synthesis
The discourses of play, child-centredness and school readiness are centrally located in the Statutory Framework document (Department for Education, 2014c). This position is reflected in the research literature surrounding early years education. There is a substantive body of work focusing on these discourses which I systematically review, exploring how
the child is constructed in each discourse, how theory is used and identifying the conditions of possibility for the emergence of each discourse. In the process of synthesising such a vast body of literature, it is necessary to simplify complex ideas, which can lead to a loss of relevant detail. There are dangers of such a process, as details can be lost, but through using the device of examining early years pedagogy in terms of three dominant discourses, I hope to sustain a level of complexity while generating clarity. In order to structure my analysis, I examine the three key questions in turn.

2.8.1. How is the child constructed in each discourse?

The three discourses identified in the Statutory Framework construct the child in very different ways. Although there are many nuanced constructions of the child found in the literature of early years education, I will group together those which support a child-centred view of the child, ideas which focus on play and those which construct a school ready child.

2.8.2. The child-centred construction of the child

A nativist construction of the child is central to this discourse, in which the child is seen as a constructor of their own learning. The knowledge which will develop is located within the child and with careful facilitating and minimal adult intervention, this knowledge will emerge (Walkerdine, 1998). Children are presented as knowing what they need and if provided with a suitable learning environment, will access their own needs accordingly. The nativist view sees the child biologically maturing along a fixed trajectory, identified through developmental psychology. Learning must be preceded by development so that children learn when they are ready. Children are seen as innocent, intrinsically motivated and possessing agency (Bennett et al., 1997; Bruce, 2015; Grieshaber & McArdle, 2010; Walkerdine, 1998). This view of the child has been central to early years pedagogy for many years and is deeply entrenched (Basford & Bath, 2014; Bennett et al., 1997; Grieshaber, 2008). There are however, many debates around these assumptions, some of which I explore.
2.8.2.1. Children as innocent

Much of the literature cites Rousseau and Froebel as the originators of the idea that children are innocent (Burman, 2017; Hall & Abbott, 1991; Wood, 2013). This view of the child was a response to the dogma of original sin, which constructed the child as inherently sinful. Froebel saw the purpose of education as unfolding the ‘divine essence of man’ (Froebel, 1887 p4). This romanticised view of the child has endured and was harnessed by the progressive movement as part of child-centred ideology. There are however, intense debates about the ‘innocence’ of the child. The ‘dark play’ of children is the focus of several studies (Grieshaber & McArdle, 2010; Holland, 2003; Sutton-Smith, 1997). This term was introduced by Sutton-Smith to refer to play which was seen as subversive. It identifies a different construction of the child, in which children do not conform to adult ideas of ‘innocence’.

Without intervention from the adult, children reproduce the discourses they observe around them. This is illustrated powerfully in Walkerdine’s account of two nursery-aged boys framing their female teacher as a sex object: ‘Miss Baxter, knickers, show your knickers’ (Walkerdine, 1993 p209). The children in this account are seen to use their power to abuse others and reproduce sexist discourses. Rather than reprimand the boys for their behaviour, the teacher rejects the idea that the child can be sexual and sexist and frames their behaviour as ‘silly’. Her construction of the child as innocent prevents her from challenging their prejudiced views.

2.8.2.2. Children as possessing agency

In the discourse of child-centredness, a certain type of play- ‘free play’ is privileged (Jarvis et al., 2014). It is intrinsically motivated, voluntary and instigated by children. The role of the adult is marginalised in this kind of play and it is not deliberately used as a tool for learning. One of the key features of free play is that children have agency. Wood (2014) explores the nature of agency in free play, finding agency to be negotiated and relative. Children learn to negotiate relationships, roles and their world
through free play. They are able to be subversive, to create their own rules and to explore the roles of their culture.

Power relations exist in the classroom setting which diminish children’s agency, however. Although the child can choose what to play with, the provision is controlled by adults. These power relations are also a feature of play, indicating that some children have more agency than others. Wood (2014) found that children made choices about relationships based on gender, ethnicity, social class and ability/disability. In contrast to these more negative findings, Wood also identifies the different ways in which ‘children exercise agency through their choices, revealing their funds of knowledge, individual dispositions, willingness to disrupt the rules of the setting and ability to manage events and peers’ (Wood, 2014, p10).

Related to the idea of the child with agency, is the concept of the teacher as facilitator. In this ideology, the teacher is unable to mediate play and therefore lacks agency. Burman (2017) identifies the deprofessionalising nature of the discourse as practitioners are unable to be responsible for a child’s learning. If the learning unfolds, and the role of the practitioner is simply to observe and monitor, teachers are unable to intervene.

2.8.3. The construction of the child in discourses of play

Interactionist constructions of the child underpin many discourses of learning through play. The social interactionist view of the child acknowledges biological maturation but sees this as mediated by social interaction. Children develop in particular ways, in particular cultures, through relationships with others. Vygotsky’s belief that all learning is social is the basis for this view of childhood. In interactionist pedagogy, the role of the adult is much more prominent, with children co-constructing knowledge with their teachers and peers. Learning is active, and rather than being preceded by development as in the nativist view, it leads to development. This understanding of learning is the basis for many modern approaches to play and is particularly embodied in the Reggio Emilia approach to education (Grieshaber, 2008; Neaum, 2016). The nature of
the interactionist child will be explored with key debates identified in the following section.

2.8.3.1. Children as participants in culture
Rogoff sees children as inextricably bound to their culture. She rejects the idea that there are normative ways of developing and instead suggests that learning and development are dependent on the culture of the child (Rogoff, 2003). From this point of view, the child’s culture must be considered when planning learning opportunities in a school setting. Expectations must relate to each child’s culture and learning must be located within this culture. Provided the environment is culturally meaningful to the child, this can lead to what Rogoff calls a ‘transformation of participation’ (Rogoff, 2003 p271). This transformation is in effect learning and is located not in the individual brain of the child, but in the social interactions of the child with its culture. The issues with this approach are that one particular culture is privileged in English education—this being white, middle class culture (Burman, 2017b). This disadvantages many children who do not belong to this culture and struggle to make sense of this world. Another issue is that the developmental norms, against which children are judged, are culturally based. They are presented as being independent of culture, but in fact reproduce the developmental expectations of white, middle class children. Again, this can lead to significant disadvantage (Bradbury, 2011).

2.8.3.2. Children as co-constructors
Children are seen as co-constructors of learning when viewed through an interactionist or sociocultural lens. Through social interaction with peers and adults, they co-construct meaning and knowledge. This model of learning is perhaps best illustrated in the Reggio Emilia approach, which is cited in literature as being a strong example (Neaum, 2016). This approach, which is more of a philosophy than a pedagogy, was developed in Italy and has been influential on a global scale. Neaum discusses the merits of this approach, which is premised on the idea of the child as ‘autonomously capable of making meaning from their daily lives and
experiences through mental acts involving planning, coordination of ideas and abstraction’ (Malaguzzi 1993a:75 in Neaum, 2016). An essential part of this philosophy is that learning is socially constructed. Adults and children engage in learning together, with children able to mediate their learning experiences and engage in the whole process of teaching/learning. Children are constructed as producers rather than consumers of knowledge. This philosophy is, by its nature, a product of Italian culture in Reggio Emilia. Attempts to reproduce it outside this culture run into problems as a result of the different understandings of early years education.

2.8.4. The construction of the school ready child
The school ready child is seen as a passive recipient of knowledge. Learning takes the form of knowledge, which is transmitted from the teacher to the child. The child is then tested to ensure that the facts and knowledge have been retained. This empiricist view of the child is a deficit model as the role of the teacher is to identify the missing experiences, concepts and skills and plan a curriculum which will deliver this learning (Bruce, 2015). This approach to learning is central to what Neaum (2016) refers to as the performance pedagogy model of school readiness, as assessment is used to evaluate whether the knowledge outlined in the early learning goals has been acquired. Norms, influenced by developmental psychology, are used to classify the child into normal and abnormal. This is seen in the summative EYFS Profile assessment (Department for Education, 2016), which judges children as having met, exceeded or not met the early learning goals at the end of the reception year.

2.8.4.1. The child as data
Recent developments in English school inspection procedures have led to progress being viewed as an indicator of school success (Bradbury & Roberts-Holmes, 2016b). As inspections have become shorter, data plays an increasingly important role. In the EYFS, school readiness is measured in terms of a ‘good level of development’ (GLD). This is defined as a child
achieving the expected level in the areas of communication and language; personal, social and emotional development; physical development; literacy and mathematics. The GLD is a key performance indicator. The accountability attached to this measure has led to what Bradbury and Roberts-Holmes call the ‘datafication’ of early years (Roberts-Holmes & Bradbury, 2016c). The embodied child becomes less important than the data attached to the child.

2.8.4.2. The child as acquirer of knowledge

This move from child-centred to data-centred learning has impacted on the pedagogy of early years. Teachers are moving towards a more empiricist approach to teaching, with adult-led, formal teaching replacing play (Basford & Bath, 2014; Neaum, 2016; Roberts-Holmes & Bradbury, 2016c; Whitebread & Bingham, 2011). Children who are close to achieving the norms are targeted, with those who have little chance of meeting them receiving less attention (Roberts-Holmes & Bradbury, 2016c). Literacy and numeracy are increasingly taught through direct teaching approaches. This can be seen in the teaching of phonics, which follows a traditional empiricist model. The child is completely passive in this process, acquiring the new information and demonstrating this knowledge through ‘application’ or testing of the sounds.

Whitebread and Bingham, in their review of school readiness literature, argue that this empiricist model of education leads to children losing out on the opportunity to develop the skills they need for life. In particular, they are denied the play-based learning, which they need to develop metacognition and self-regulation skills. Attention is drawn to the paradox that, in an attempt to provide missing knowledge identified in the child, the knowledge and experiences that they actually need are denied them. Thus, direct teaching of a narrow curriculum actually disadvantages children further (Whitebread & Bingham, 2011).

Literature around summative assessment, reveals deep unease with teachers feeling ‘lost’ in a world of meaningless tests. This can be particularly seen in Bradbury and Roberts- Holmes’ research into the
Reception Baseline Assessment (Bradbury & Roberts-Holmes, 2016c). In this paper, teachers report feeling fake, guilty and having lost control. Their feelings indicate a cognitive dissonance, which may arise from the discursive dissonance found between discourses of child-centredness and school readiness. The move away from play and child-centred approaches to teaching is incongruent with many of the principles of early years teaching found in the Statutory Framework.

2.8.4.3. Earlier is better
The successful child in the discourse of school readiness is a child who can learn skills early. The idea that ‘earlier is better’ is discussed in Whitebread and Bingham’s paper (2012). They cite research into the educational outcomes of children who learnt to read at age 5 and those who learnt at age 7. This research indicated that by age 11, the results were the same. The fact that children in England start formal schooling at an earlier age than most other countries in the world, but do not have better outcomes at the end of education, also supports the argument that earlier teaching has no long-term impact on the child’s learning.

In summary, the different constructions of the child found in the discourses have some elements of congruity, particularly between the discourses of play and child-centred learning. A discursive dissonance however can be found between the construction of the school ready child and the child-centred child. This dissonance also exists between the school ready child and the playing child, although to a lesser extent.

2.8.5. How has theory been used to create each discourse?
As is revealed in the various constructions of the child, theory has been utilised to support particular elements of each discourse. Certain readings of theory have been privileged, while others are marginalised to valorise specific approaches. In this next section I will explore how theory, notably, the theories of Piaget and Vygotsky have been inserted into the discourses of play, child-centredness and school readiness.
2.8.5.1. Piaget

The cognitive theory of Piaget is extensively used in play and child-centred discourses. He proposed that children progress through stages of cognitive development at particular ages. This idea was not entirely new, but Piaget is viewed as the originator of the ages and stages theory (Burman, 2017b). He also proposed that children actively make sense of the world and construct their own meaning through interacting with the environment.

Piaget, influenced by evolutionary theory, proposed that humans develop their mental structures in particular age-related stages, in order to adapt to the environment. Piaget saw play as a way to facilitate this active learning, linking it with assimilation. Thus, Piaget’s theories are used to underpin much of the literature on the subject of play and can be seen enacted in the English early years classroom, with its emphasis on the learning environment and child-directed learning.

Walkerdine’s seminal analysis of child-centred pedagogy and its relationship with Piaget’s developmental psychology establishes the conditions of possibility which led to the dominance of this approach to education (Walkerdine, 1998). She argues that the development of the human sciences, in particular, Darwin’s theory of evolution, led to the analysis of the developing child’s hereditary and environmental conditions.

Alongside these scientific developments, the political context also provided a condition of possibility for the emergence of child-centred pedagogy and Piaget’s theories. The first half of the 20th century was dominated by war. Freedom and rational thinking were valued and emotion was linked to war in terms of anger and aggression. Psychoanalysis also supported this idea with Klein proposing that aggression needed to be expressed in infancy, for later abnormalities to be avoided (Walkerdine, 1998).

In summary, the emergence of the human sciences and the belief in rational thinking and freedom gave rise to a set of circumstances in which the work of Piaget could be taken up in education. Piaget’s theory was interpreted as proposing that children developed away from emotional
towards the rational in a series of age-related stages. The pedagogy, which arose from this theory found knowledge to reside within the child. Given the right conditions, this knowledge was seen to emerge in a quasi-spontaneous way. The role of the teacher became that of the scientist, observing and categorising development as it emerged. In terms of early years pedagogy, play was seen as the key pedagogical device as it was constructed as the most free and natural expression of the child. These non-coercive pedagogies saw rational thought as the goal and observation as the main tool. Observation depends on classification, which solidifies the link between Piaget’s stages and child-centred pedagogy.

Since the advent of the EYFS and its associated assessment processes, Piaget’s developmental psychology has also been used to support a very different ideology—empiricist pedagogy. This approach, which can be seen in the performance pedagogy model of school readiness, uses developmental psychology as a norm against which children’s abilities are measured. The effect of this is to classify children as normal or abnormal. Grieshaber (2008) and Chung and Walsh (2000) identify these links between testing and child-centred ideology, both of which use elements of Piaget’s theories as a basis. The attachment of the early childhood education workforce to child-centred ideology has facilitated a movement away from this nativist view of the child to an empiricist view of the child as an acquirer of knowledge and skills (Grieshaber, 2008).

2.8.5.2. Skinner
In addition to using Piaget’s ages and stages to establish a norm, the performance pedagogy model of school readiness also uses behaviourist theory as a theoretical context. Influenced by the work of Skinner and Watson, this empiricist view of learning constructs the child as a blank canvas. Knowledge is transmitted from the teacher to the child in incremental steps, with each stage being mastered before moving onto the next (Bruce, 2015). This approach can be particularly seen in the teaching of systematic synthetic phonics, which is built into both the Statutory Framework and National Curriculum.
2.8.5.3. Vygotsky
In addition to the theories of Piaget and Skinner, the work of Vygotsky has also been highly influential in the development of the discourse of play. While Piaget largely ignored the cultural and contextual influences on the child, Vygotsky argued that social interaction with others enables children to make sense of the world within a shared cultural context. For Vygotsky, play was a key learning experience although not the dominant form of activity (Bennett et al., 1997; Olusoga, 2009). In his (1933) paper on the subject, Vygotsky explains that in play, children create and adhere to sets of rules. An example is that when playing at being a mother, a child adheres to the rules of maternal care. Through this kind of subordination to rules, children learn self-regulation. Children also learn to separate meaning from object so that an object can stand for another, as in the case of a stick being used for a horse. Vygotsky describes this psychological function as alienating meaning from objects and actions. The possibilities for children to subordinate to rules and to sever meaning from objects and actions are only possible through play. Play thus creates a zone of proximal development in which the child can achieve more than it could independently.

The focus of much of the literature is not on Vygotsky’s explicit work on play, but on an alternative interpretation of the zone of proximal development (ZPD) as the difference between what a child can do alone and what it can do with the support of a more knowledgeable other. Chaiklin (2003) suggests that the ZPD has been largely misunderstood and over-simplified. This limited interpretation of Vygotsky’s theory of the ZPD has been used to justify a move away from self-directed activities to adult-led and adult-mediated activities where the adult takes the role of the more knowledgeable other (Sylva et al., 2004; Tickell, 2011). Tickell uses the ZPD as justification of the move towards adult-led learning, ignoring Vygotsky’s work on play and assuming that this simple interpretation of the ZPD is applicable to preschool children.
This notion of the ZPD is also used to support the idea of ‘sustained, shared thinking’, a concept that was identified as good practice in The Effective Provision of Preschool Education (EPPE) project (Sylva et al., 2003). One of the main findings was that most learning occurred when adults interacted with the children in what is described as ‘sustained shared thinking’ (Siraj-blatchford & Sylva, 2004 p724). This is described as situations where the adult extends the child’s cognitive processes by engaging in a dialogue with the child. This is linked to Vygotsky’s theory of the ZPD as the adult acts as the more knowledgeable other, extending the thoughts of the child. It could be argued however, that sustained shared thinking is not really play, as the child is no longer in control of the play. Using the definitions of play being intrinsically motivated, child chosen, child invented and involving the players, the play described by Siraj Blatchford and Sylva is a very different kind of play.

In summary, a reading of Piaget in which children moved through distinct phases without the mediation of adults was used to support the child-centred ideology of the progressive movement. It has also since been used, alongside behaviourist theory, to justify an empirical approach to teaching where progress is measured against developmental norms. Vygotsky’s theories have been utilised by sociocultural theorists to emphasise the importance of culture and the scaffolding of more knowledgeable others. This has in turn been used to support school readiness arguments that privilege adult-directed learning over child-led learning. These interpretations of key theories have significantly contributed to the discourses of play, child-centredness and school readiness and are used to validate certain approaches to pedagogy.

2.8.6. What were the conditions of possibility which led to the emergence of each discourse?

2.8.6.1. Historical development of discourses

Having gained an understanding of how the dominant discourses use theory and construct the child, it is now useful to explore what particular conditions of possibility led to the current articulations. Starting with the
earliest articulations of play, child-centred ideology and school readiness, a brief history of the development of each will be established.

2.8.6.2. Early Pioneers
For the each of the discourses, the beginnings of the current notions began with the early pioneers. Rousseau (1712-1778) was perhaps one of the first pioneers whose ideas influenced early years discourse. He proposed that children were not, as was the dominant religious dogma of the time, born with original sin, but were rather, innocent. Influenced by Plato’s ideas, he proposed that through play, children’s natural goodness could emerge. His was a romantic ideal, which saw children as innately good. He believed that children should be influenced by nature, rather than society and should be given the freedom to play, as this was their natural state. (Grieshaber & McArdle, 2010).

Influenced by Rousseau, Froebel (1782-1852) also held play in the highest esteem. He felt that play was ‘the highest phase of human development’ (Froebel, 1900 in Greishaber & McArdle, 2010) and that it formed the foundations of the individual. He argued that play needs to be regulated to be most beneficial to children. Froebel developed educational play with an emphasis on self-directed play, using educational toys, which he called ‘gifts’. He also developed a child-centred approach to early education which is still a dominant discourse today (Bennett et al., 1997; Grieshaber & McArdle, 2010; Olusoga, 2009; Wood, 2013).

Montessori (1870-1952) did not believe that children need to play and did not value play as an end in itself (Wood, 2013). She did however, believe that the creation of a child-sized environment would stimulate children to engage with the real world and develop their social, moral, emotional and cognitive skills (Bennett et al., 1997). She promoted self-directed activity, a key aspect of child-centred philosophy, as this led to greater independence. Many would define the self-directed use of Montessori’s real world learning environment as play, but she referred to it as activity, defining play as using toys (Bruce, 2015).
In summary, the pioneers elevated the status of early years education. They began a tradition of educating young children through a child-centred, play-based approach, which would prepare them for later life. The purpose of this phase of development was, for Rousseau and Froebel, the development of the child, not a preparation for school.

The work of these pioneers was taken up in the early twentieth century by a range of theorists and educators to form the progressive movement. This movement linked the idea of child-centred education with developmental psychology and is worth exploring in some depth.

During the 1960s, child-centred pedagogy was legitimised in Britain with the publication of the Plowden report (Plowden, 1967). This report celebrated a progressive approach to education. Section 9 states ‘at the heart of educational process lies the child’ (Plowden, 1967 p7). The role of the teacher in this report was to provide the right environment to allow the child to develop naturally. Children were given autonomy to choose their activities and discover knowledge through experience. Teachers needed to carefully observe each child, mapping them against Piaget’s stages of development and identifying their needs and possible readiness. Play was central to learning, particularly with younger learners. The purpose of education was child-centred: to support and facilitate the development of each child.

Following a brief spell of popularity in the 1960s, the progressive movement fell from favour. From the 1970s onwards, a move towards neoliberal government characterised the political landscape. For early years education, this was realised in terms of a new curriculum for the early years, increased emphasis on assessment and growing accountability. In the new business model of education the school was reinvented as ‘the firm’ (Ball, 2017), where performance was celebrated over competence.

This political context provided the conditions of possibility for changes in the discourses relating to play, child-centredness and school readiness. Although a child-centred approach to learning through play was celebrated
in the Early Years Foundation Stage curriculum, the regulatory function of
the state demanded that assessment must be increased. This would
enable closer monitoring of standards in early years through increased
surveillance (Ball, 2017). Child-centred learning has thus, altered in its
meaning. It is no longer restricted to learning which is unfettered by adult
intervention but has moved to mean starting with the needs and interests
of the child (Chesworth, 2016; Department for Education, 2014c; Sak et
al., 2016). Child’s agency is reduced, as their play must lead to
measurable outcomes to facilitate accountability.

Discourses around play have also changed with the move towards
increased accountability. The EPPE project (Sylva et al., 2004) was highly
influential in changing the discourses of play towards a more adult
mediated interpretation of the discourse. The main findings of the project,
which measured, in empirical terms, the impact of preschool education on
outcomes in the three years following preschool, were that adult
intervention was linked to improved outcomes. Adult-led learning and adult
mediated play were constructed as having the greatest impact on future
learning. The resulting discourse of play privileged adult intervention over
child-led, child-centred play.

This has led to the current incarnation of the curriculum that privileges
three discourses which are not entirely compatible. Changes to the
understanding of child-centredness have not aligned it with the discourse
of school readiness as ‘starting with the child’ is not a feature of school
readiness. Likewise, current understandings of play as an adult-initiated
activity are not compatible with an empiricist approach to learning in which
knowledge is transferred from the teacher to the child. A child cannot be
simultaneously an active learner and a passive learner. Thus, the
emergence of the school readiness discourse has led to discursive
dissonance in the context of early years education.
2.9. Conclusion

My purpose in reviewing the literature was to identify the locus of tension articulated by reception teachers in order to begin to gain an understanding of the reception teacher identity. In identifying and exploring the prominent discourses, I uncovered a discursive dissonance, which has emerged largely from the development of ideas about school readiness. The Statutory Framework attempts to present a coherent approach to early years teaching but in fact reveals deeply dissonant discourses. Children are ‘unique’ but must all be assessed against the same norms. The cultural heritage of the child is to be celebrated but must be ignored when assessing against the early learning goals. Learning must be play-based, but must teach specific knowledge. I suggest that this discursive dissonance is leading to a cognitive dissonance in teachers, who attempt to reconcile very different approaches to pedagogy in reception classrooms. In order to address these dissonances, changes to policy are required to create a more coherent curriculum.
2.10. Analysis of the paper

This paper focuses on the first two questions:

1. How does datafication manifest itself in early years?
2. How does datafication impact on subjectivity?

Datafication is located within the discourse of school readiness, a notion which has been inserted into early years discourse as part of the 2012 reformulation of the EYFS Statutory Framework (Department for Education, 2012). Although school readiness was present in early years discourse prior to this, its prominence has significantly increased since it featured in the Tickell review (2011). The impact of datafication on child subjectivity is explored in the construction of the school ready child: a passive recipient of knowledge. The subjectivity of the teacher is also a focus of this paper, as the lack of congruence between the dominant discourses cause the teacher to experience “cognitive dissonance”. This may be a misuse of the term but what I meant by it was a mental discomfort arising from holding contrasting beliefs, in this case, beliefs about early years practice. Policy requires them to see children as both the child-centred, playing child and the school ready child: constructions of the child which are mutually exclusive.

This literature review contains the emerging threads which go on to be developed into my subsequent papers.

210.1. Threads of pendant 3: Constructing deficit data-doppelgangers

The power of data to transform practice and produce the school ready child is introduced in this paper. Linked to this, the process of normalisation and the production of the “abnormal” non-white subject is also present. Pendant 3 can be seen as an exploration of the process of datafication which is first outlined in this literature review. It makes an analysis of the micro-functioning of power to produce the child subject, exploring normalisation, hierarchical observation and the examination in much more detail.
210.2. Threads of pendant 4: the data-doppelganger and the cyborg-self

Pendant 4 also focuses on the power of data to transform practice and produce the school ready child. It explores child subjectivity, which is introduced in this literature review, in much more detail, asking how the data-doppelganger, or the version of the child produced in data, produces the child in terms of the three parts of the psyche. The notion of normalisation is also developed in pendant 4, as data acts as a mirror, repositioning the child as a normalised pupil. The exploration of the discourse of play in pendant 2, where I discuss the subversive nature of free play and its marginalisation in favour of adult mediated play, relates to the later conceptualisation of play in pendant 4 as an id driven and therefore dangerous activity.

2.10.3. Threads of pendant 6: resisting datafication

While pendant 4 focuses on the production of subjectivity, pendant 6 explores early years practice in terms of child-centred and data-centred learning. These terms are first introduced in this literature review, where I discuss the move from child-centred to data-centred learning as a result of the insertion of school readiness discourse into early years policy. Pendant 6, in fact, very much builds on pendant 2 as it is a further exploration of the impact of the discourses of child-led and data-led education on pedagogy. The discourses of child-centredness and play, present in pendant 2, are combined into the discourse of child-led learning in pendant 6, and school readiness is replaced by the discourse of data-led learning.

2.10.4. Threads of pendant 7: I feel like two different teachers

Pendant 7 takes the theme of teacher subjectivity. This theme is introduced in pendant 2 in the form of the focus on teacher identity. I had wanted to review literature on this theme but had been unable to find literature which directly related to the identity of the reception teacher. I return to the theme of identity in pendant 7, using identity literature to
develop the notion of the split self. I understand identity to be a product of subjectivity, a notion which was not developed until pendant 7.

The "cognitive dissonance" which I describe in pendant 2 is worked into the split self of the teacher explored in pendant 7. I feel the pull of the two dominant discourses in pedant 2 but am unable to conceptualise the impact this has on my subjectivity. The notion of the doppelganger, the teacher as physicist and philosopher, is explored in detail. The final conclusion of pendant 7, that teacher subjectivity is dependent on the acceptance of multiple subjectivities acts to address the dissonance noted in pendant 2 and in some ways resolve it.

2.10.5. Threads of pendant 8: A Romani analysis
The power of data to transform practice and produce subjectivity is no longer a focus in my final paper. Rather, I present an alternative construction of the Romani child subject. I explore the process of normalisation in terms of middle class, white, cultural norms which are introduced in pendant 2. The norms of Roma culture are also presented, with the child as a product of these different cultural norms explored. The beginnings of my understanding of the cultural nature of human development (Rogoff, 2003) are seen in pendant 2. I understand that learning and development are dependent on culture but do not yet grasp the concept of intercultural understanding.

2.10.6. Common threads
All of my subsequent papers can be traced back to this early literature review. Returning to the metaphor of the khipu, the same threads which create pendant 2, are also present in all of the other pendants. They are developed in different ways, with a range of focuses but each pendant is constructed from some or all of these initial threads.

The khipu continues with pendant 3, which introduces the concept of the data-doppelganger, as a way of understanding datafication, for the first time.
Pendant 3: Constructing Deficit Data-doppelgangers
3.1. The process of construction

This paper was started in 2017 directly following the preceding literature review (see pendant 2). In my earlier versions of the paper, I begin by explaining that it has arisen from a conceptual analysis of the literature surrounding assessment practices in England. It can therefore be seen as emerging from the preceding paper.

The motivation for writing came from a call for proposals for the 25th International Reconceptualising Early Childhood Education Conference (RECE, 2017), which focused on migration, indigeneity and citizenship. I wrote a 500 word proposal, in which I focused on the impact of datafication on new arrivals to the country. The requirement to focus on the theme of migration moved my thinking away from general datafication to the specific impact on young bilinguals. The subsequent development of the paper was written for this conference and was presented there in October 2017.

This was the first time I had presented a paper at an international conference. Meeting with delegates from many different countries enabled me to take a more global perspective on my research. I found that my experience of early years education in England was similar to experiences in other countries, in particular, the US. I began to see datafication as a product of a particular political system, namely neoliberalism. This led to changes in the paper as I read about the political system in the UK and made links between datafication, neoliberalism and nationalism.

The work of Foucault is central to the analysis in this paper. While working on it, I was studying *Discipline and Punish* (Foucault, 1977) as part of the University of Manchester social learning theories group. Foucault’s work on individualisation, focusing on the process of hierarchical observation, normalising judgements and the examination, is used extensively to analyse the workings of disciplinary power in the early years classroom. The paper can be seen as an exercise in “doing Foucault in early
childhood studies" (Mac Naughton, 2005) as I directly relate Foucault's ideas to current practice. I submitted the draft conference paper as a piece of assessment for this module using some of the feedback to develop the final version.

3.2. The justification for inclusion

This paper is included as it is the first published paper I produced. It was submitted to the journal Contemporary Issues in Early Childhood in 2018. This journal is closely aligned to the Reconceptualizing Early Childhood Education (RECE) organisation with several members of the editorial board presenting at RECE conferences. It was accepted with revisions and was published online in 2019.

It is significant because it is the first doppelganger paper and as such, introduces and develops my initial conceptualisation. It examines the construction of the data-doppelganger, a version of the child constructed from the data collected about each individual. It specifically focuses on the impact of datafication on young bilinguals, examining the normalising power of datafication to disadvantage marginalised groups.

The paper focuses on the first research question: “how does datafication manifest itself in the early years?”. It argues that in a process of educational triage (Gillborn & Youdell, 2000), data-doppelgangers which do not serve the needs of the teacher are classed as “no hopers” with the focus of attention instead going to those who are close to meeting the educational norms. In addition to this, I note that the data collected about young bilinguals is incomplete, as their language skills are not assessed.
3.3. Title. Constructing Deficit Data Doppelgangers: The Impact of Datafication on Children with English as an Additional Language.

3.4. Abstract

In this paper, an evaluation of the English early childhood education context reveals children constructed as data. The complex, chaotic and unpredictable nature of the child is reconstituted in numerical form; a form which can be measured, compared and manipulated. Children are reconceptualised as data-doppelgangers (Williamson, 2014), ghostly apparitions which emulate the actual embodied child. The focus of early childhood education and care thus moves from child-centred to data-centred education. I specifically focus on the impact of this aspect of the performative regime on children who have English as an additional language, an under-researched area in the field. Foucault’s work on governmentality is used as a theoretical lens through which to understand the process of datafication. I use a composite child, generated from a number of children from my experience as a teacher as a starting point for discussion. This reveals children as disadvantaged, as their home languages are no longer used to assess communication skills. Their data-doppelgangers are not useful to the teacher as they are unable to demonstrate a “good level of development”: a key measure of school readiness in English policy. I argue that in post Brexit vote Britain, subtle changes to early childhood education increase disadvantage, promoting white, British culture and thus marginalising those from other cultures.

Keywords

Datafication, English as an Additional Language, accountability, data, early years, governmentality
3.5. Introduction

This paper analyses changes in assessment and accountability policy relating to early childhood education and care in England. It uses Foucault’s (1977) work on governmentality as a tool to analyse processes of observation, normalisation and examination which I argue, lead to the datafication (Bradbury & Roberts-Holmes, 2017) of early years education. This process of datafication is defined by Bradbury and Roberts-Holmes (2017) in terms of the increase in the use of data in schools; its impact on child subjectivity and its role as a tool for governmentality. Laney (2001, in Bradbury and Roberts-Holmes, 2017) identifies three areas of increased use: volume, variety and velocity. Thus, the amount of data collected, the variety of its use and its processing rate have increased rapidly in recent years. This has led to a transformed educational landscape in which data plays a pivotal role.

I take the performance measure of the Good Level of Development (GLD) as a policy field through which changes to the use of data occur. This measure identifies children who have achieved a specific range of goals at the end of their early years phase of education at the age of 5 and is used to judge the effectiveness of educational institutions in England. The data is gathered gradually over the year, mainly through teacher observation and is then converted into a summative score for each child. I also discuss the recent development of online tracking systems to measure and analyse progress as a feature of datafication (Roberts-Holmes, 2015). Bradbury and Roberts Holmes (2017) argue that assessment in early years creates data-doppelgangers of each child. This term originally used to describe the online selves created by users of social media is adopted by Williamson (2014) to refer to the data-other created through the use of databases. These shadowy figures are constructed through the process of converting qualitative, observational data into numerical form for the purposes of national statistical analysis. The demands of accountability have created a system where this data may be more important than the actual embodied child. Thus, the aim of Early Years education has
become the formulation and maintenance of these data-doppelgangers. The doppelgangers create the “good data” demanded by national governments (Millei and Gallagher, 2017 p1528). The embodied child is sacrificed for the doppelganger as it is the doppelganger which will be used to judge the school.

My particular focus in this paper, takes Roberts-Holmes and Bradbury’s arguments as a starting point, applying their theories of datafication to the experience of the child with English as an additional language (EAL). An examination of policy changes reveals this group of children to be particularly disadvantaged and can be viewed as emerging from the political landscape which gave rise to the Brexit vote in England.

I use reflections on my experience as a preschool teacher as an initial stimulus for discussion. This takes the form of a vignette, a composite child generated from a number of children I have encountered as a teacher. It focuses specifically on the reception year- the final year of early childhood education and care in England, which happens in school. Prior to this, children access early years provision from a range of providers, some in school but many through the private sector. It is also influenced by anecdotal evidence from informal conversations with fellow teachers over the past three years. I use this vignette to illustrate the process of datafication as well as the disadvantage created by current early years assessment policy.

3.6. Vignette

In a school reception class in England, 5-year-old Mariam plays alone at the art table. She moved to the UK from Pakistan last year. Prior to entering the class, she had been cared for at home by her mother. Mariam speaks Urdu at home but does not speak at all at school. She found starting school very difficult and was distressed when left by her parents. Gradually, she settled and began to watch and play.

Mariam has created a picture on the art table. She takes it to the teacher and waits near her. The teacher is working with a writing intervention group and doesn’t notice Mariam. After a while, Mariam walks away. She had expected
to work with the teaching assistant in the English as an Additional Language group today, but the group has been suspended in favour of a maths intervention aimed at children who are almost at the expected level for mathematics.

During snack time, the teacher gives each child a piece of fruit. Today, Mariam feels that she is ready to try to speak English and in a very quiet voice says, "thank you" to the teacher. This is the first time she has said anything at school and the teacher is clearly very pleased. She hugs Mariam and says how happy she is that Mariam has spoken. She uses her iPad to take a photo of Mariam. Underneath she identifies her as "16-24 months low" for Communication and Language: Speaking. This grading indicates the expected level for an age band. As such, a score of 16-26 months low, indicates that Mariam is functioning towards the bottom of the expected range for an average toddler. Although the teacher is genuinely pleased to see Mariam’s progress, she knows that this progress will not significantly change her data. She also knows that Mariam’s language at home is probably at the expected level but because she does not speak English, this development will not be measured.

At the end of the day, the teacher updates her online learning journals, uploading Mariam’s observation into her blog. This adds to the emerging but incomplete picture of the child. The blog contains many photographs and observations of Mariam’s non-verbal play but lacks information about her language development. After updating the journal, the teacher opens her class online tracking programme. She amends Mariam’s score for Communication and Language: Speaking from “8-20 months high” to “16-26 months low”, highlighting “Copies familiar expressions” as being achieved. Over the year, Mariam has showed very little progress in this area, having moved up only one sub-category. The teacher reflects that for Mariam, achieving a “good level of development” is impossible.

Mariam’s position is not unusual. The current English system requires teachers to collect vast amounts of data for each child and many use similar online systems to record this data. Many speakers of English as an additional language, particularly those who are new to English, are unable to demonstrate their language development and as a result, are disadvantaged by the assessment system. In order to gain a deeper
understanding of the current situation in school reception classes, it is useful to track the key changes in the English political landscape over the last 20 years which have created the conditions of possibility for its present incarnation.

3.7. Policy Context

Prior to the New Labour administration of 1997, early years education held a relatively low status. There was a range of provision available, some of which was within the school setting. Child-centred pedagogy was dominant, with teachers seen as facilitators of learning. Observation formed an important part of this approach, as it enabled the teacher to determine what kind of provision should be given to children (Palaiologou, 2016).

During the New Labour years of 1997 to 2010, the status of early years education completely changed. The early years sector was seen as crucial in terms of developing human capital (Moss, 2014), enabling mothers to return to work and intervening early to ensure future academic success (Pugh & Duffy, 2014). In 2000, the Department for Education published Curriculum Guidance for the Foundation Stage (Department for Education, 2000). This related to children aged 3-5 and provided a set of norms, based on developmental psychology, for children’s education and development. Following on from this in 2003, a standardised, summative assessment for the end of foundation stage was produced in the form of the Foundation Stage Profile (FSP) (Qualifications and Curriculum Authority, 2002). In order to complete this assessment, practitioners needed to gather a wealth of observational data about each child. Knowledge of the child, which had previously been largely unrecorded, was converted firstly into writing in the form of observational notes, and secondly into numerical data. This turning point marked the beginnings of children being constructed as data.

A change of government in 2010 led to changes in the Early Years Foundation Stage curriculum. In 2012, the end of early years statutory
assessment, the Early Years Foundation Stage Profile (EYFSP) was redesigned, altering the norms against which children's progress was measured (Standards and Testing Agency, 2012). All communication, language and literacy goals were to be assessed in English, rather than the home language. Although teachers were encouraged to evaluate children’s proficiency in their home language, the final judgements must relate to the speaking of English. This meant that the communication skills of young children, new to English, were not formally assessed and that communication in English was privileged over all other forms of communication. Prior to this, early levels of communication could be assessed in the home language (Qualifications and Curriculum Authority, 2008), although higher levels of communication, language and literacy were to be assessed in English.

Alongside these changes, a new definition of the Good Level of Development (GLD) was introduced in 2013 (Department for Education, 2014b). This is a performance measure used for accountability purposes. Percentages of children reaching the GLD are submitted to the Department for Education and used to create national statistics. They are also used by the inspection body in the judgement of schools’ effectiveness. Prior to 2013, the GLD was defined as the percentage of children achieving the expected level in two areas: personal social and emotional development and communication, language and literacy alongside an average score across six areas of learning. Thus, a child with lower levels of English could still achieve the GLD if they excelled in other areas. The new GLD is a measure of those children who achieve the expected level in five areas: personal social and emotional development; communication and language, physical development, literacy and mathematics. This change has had a marked impact on EYFS pedagogy, as those children who have a “spiky profile”, who do not perform equally well in all five areas, are now unable to meet the GLD. Supporting these children to achieve a GLD has become an increasing focus for many schools . (Bradbury & Roberts-Holmes, 2016a)
A final policy development which has impacted on EYFS assessment is the introduction of a new National Curriculum in 2014 (Department for Education, 2013b) and its removal of the levelling system which had been in place since 1998. Government set levels enabled teachers to evaluate children’s learning against standardised norms. The removal of the levelling system, described as Assessment without levels (Mcintosh, 2015) opened up the market for businesses to create online tracking systems for Primary-aged children. Changes to the inspection process meant that progress data were increasingly being used as a primary performance indicator. As no system for tracking children in EYFS had been provided by the Department for Education, Development Matters (Early Education, 2012), a non-statutory guidance, which has since been removed from the Department for Education website, was used by many teachers to track children’s progress. The broad phases of development, described in this document, outlined expected developmental norms for an age-related phase such as 30 to 50 months. Broad phases of learning were found by the creators of many online tracking systems to lack the level of detail required to track the minutiae of child progress over time, so each broad phase was broken down into smaller steps to fabricate a more specific norm (Bradbury & Roberts-Holmes, 2016a).

3.8. Immigration

As part of its 2010 Manifesto, the Conservative Party committed to reducing immigration and promoting integration. This has been followed by an increasing focus on developing English Language skills in immigrants with tighter regulations requiring those applying for citizenship to possess English Language qualifications as well as the Life in the UK test. The current Prime Minister, Theresa May, has vowed to make Britain a “really hostile environment” to illegal immigrants (Hill, 2017) and since coming to office has presided over 7 immigration bills. A recent government report (Casey, 2016) into integration in the UK recommended that promoting English language must be a priority. Schools are also required to promote fundamental British values. These are defined as democracy; individual
liberty; the rule of law and mutual respect and tolerance for people with
different faiths or no faith (Department for Education, 2014a). The current
society is a society in which the British culture, British values and the
English language are privileged, a society increasingly hostile to
immigrants.

The increase in movement of peoples across the globe in a post 9.11
world gave rise to an increase in nationalism which could be seen in the
rise of nationalist parties such as the UK Independence Party. Nationalism
can be seen as a necessary aspect of neo-liberalism. Hoops et al argue
that as neo-liberalism demands open markets, nationalism is “deployed as
glue” to unite the nation in this global market (Hoops et al., 2016 p730).
This in turn has given rise to such initiatives as Prevent (HM Government,
2011). This policy is part of the UK Government’s counter terrorism
strategy and requires those working with children and young people to
report those who they feel are at risk of being “radicalised” and becoming
involved in extremist groups. It has been criticised by the National Union of
Teachers and the Muslim Council of Britain for discriminating against
Muslim children and promoting distrust (Versi, 2015). This is the political
landscape which in 2016, gave rise to the Brexit vote, in which the British
public voted to leave the European Union. The public began to see
immigration as a key cause of the global economic downturn.

In order to understand these changes to the political landscape and the
emerging policy implications more fully, an examination of Foucault’s work
on governmentality is useful. This analysis builds on the work of others,
such as Ball (2013, 2017) and Mac Naughton (2005) who use Foucault as
a lens to interpret current educational policy. In his work Discipline and
Punish (1977), Foucault provides a commentary on the technologies of
power, which he refers to as disciplines, used to create and control
citizens. He specifically discusses education in terms of disciplinary power
which he identifies in the schools of Eighteenth Century France. In part
three: Discipline, Foucault identifies three instruments of power:
hierarchical observation; normalising judgement and the examination. I will
examine each of these instruments in turn, relating them to current policy and practice in early years education.

### 3.9. Hierarchical Observation

Observation has always been and still is central to early years pedagogy. In order to teach the child, the teacher must know the child. This knowing takes the form of observation, as the child at this age produces little “work” which could be assessed (Dubiel, 2016). The young child exists within a dense network of surveillance. Foucault refers to the infant thus:

> “The body of the child, under surveillance, surrounded in his cradle, his bed, or his room by an entire watch crew of parents, nurses, servants, educators, and doctors” (Foucault, 1978 p 98).

Surveillance is a necessary part of caring for children. It is essential to keep them safe and is central to the child/carer relationship. The child who is not observed, whose parents do not keep it under constant surveillance could be constructed as “neglected”, such is the need for observation (Palaiologou, 2016).

Observation in the preschool classroom has intensified as changes to policy have altered the function of observation. The purpose of observation has shifted from being predominantly used to inform future planning to generating a body of evidence for accountability purposes and has thus moved from formative to performative assessment (Hatch & Grieshaber, 2002). This can be seen in the vignette where the teacher constantly collects evidence to enter into the child’s blog. Each day she spends time collating this evidence and using it to update her online tracking system.

The early years pupil is under constant and thorough surveillance. A body of evidence is collected about the child before they enter the class through home visits and liaison with the previous setting. A baseline assessment is usually completed within the first few weeks at school and is entered onto an online tracking system (Palaiologou, 2016). During the day, children
are watched, photographed and measured in every aspect of their work and play. Detailed notes are kept on their every moment, measuring development in all seven areas of learning from use of the toilet to knowledge of letter sounds. Checklists are used during adult-led sessions alongside tests for specific skills and knowledge with pictures, writing and mark-making retained and analysed as evidence of progress (Dubiel, 2016). Thus, surveillance is “inscribed at the very heart of the practice of teaching” (Foucault, 1977 p176). It is part of the technology of power as it enables the teacher to know everything about the child.

In current practice however, these data are not just used to inform future planning. The data-double of the child, constructed through recorded observation, is used to judge the teacher and the school. Failure to produce data which compare well to the national average results in teachers being judged to be failing (Department for Education, 2016). These data are used in the judgement of the school, intensifying the significance of each observation and leading to an increase in the amount of observational data collected.

This intensification of observation is not unique to the English system. Hatch and Greishaber (2002) explore the changing ways in which observation is used in both Australia and the US, concluding that both have moved towards observing against standardized norms. Scott’s poignant essay film Seeing Children (2015) comments on the emphasis on data collection and data management in a US preschool. Her two contrasting stories of a Korean preschool child echo Mariam’s story. Scott first presents the child as a series of statements, followed later in the film by a description of the significant contextual information missing from the data. Her work draws attention to the limitations of assessment against standardized norms to represent the real embodied child.

3.10 Normalising judgements

The purpose of the vast body of evidence collected about each child is to enable the teacher to make normalising judgements. The expected norms
for the end of the Early Years Foundation Stage are set out in the Statutory Guidance (Department for Education, 2017). As there are no current expectations of development prior to this point, many teachers and the producers of online tracking systems use the broad phases of learning established in Development Matters (Early Education, 2012). By knowing how their pupils compare to the expected level, teachers can plan appropriate activities to meet each child’s needs. Mariam’s language is assessed against the broad phases of learning. She is judged as being at the lowest level expected of a child aged 16-26 months when in fact, she is 60 months old.

Expectations based on Development Matters (Early Education, 2012) or other tracking systems are also used for the purpose of classification. Even before children enter the setting, the information collected about them is used to rank them into those meeting the expectations and those who are not. Each child is judged against the norm and ranked by their score. The highest-ranking children may demonstrate development and knowledge of an age band above their actual age, while the lowest ranking children, like Mariam, will demonstrate the development of a much younger child.

The use of numbers to classify is an essential aspect of neo-liberal policy. Dahlberg (2016) argues that numerical data are seen as neutral and objective. Thus, numbers acquire “significant power in the public space” (p125). Children must be classified in order for schools to be classified. This in turn enables schools to compete with each other which is seen as a driver for raising educational standards (Winter, 2017).

Foucault describes the disciplinary power of normalisation as consisting of five aspects: Comparison, differentiation, hierarchisation, homogenisation and exclusion (Foucault, 1977). Normalisation compares the individual child to the development of the whole, thus establishing their rank within the group. The statements of the tracking system constitute the behaviour of the whole and thus become a “field of comparison” (Foucault, 1977 p182). Mariam is compared to her classmates and found to be ranked
lowest in the class. Normalisation *differentiates* individual children, showing how they compare to the average or “rule”. Mariam is found to be far below the expected level of her age. It *hierarchises* children according to how they compare to the expected level. In this way, children are ranked according to ability and often grouped according to rank for the purposes of differentiated teaching (Frederickson & Cline, n.d.). The process of *homogenisation* requires all children, irrespective of culture, race, gender and language to meet the same norms. They are seen as a homogeneous group rather than diverse individuals whose development reflects their culture. Mariam’s culture and context are not taken into consideration in the assessment process. She is compared with native speakers of a language with which she is largely unfamiliar. Finally, it *excludes* by measuring who is “normal” and who is “abnormal” or in the case of EYFS, having special educational needs. Mariam is identified as abnormal as she has such low levels of English. As her actual communication skills are not assessed however, any special educational needs relating to language could be overlooked.

The process of normalisation constitutes Mariam’s data as useless to the teacher in two ways. The progress which she has made over the year cannot be measured as it is hidden in Mariam’s head. Her language acquisition has been developing over the year but is not yet visible to the teacher as utterances. This is in line with Krashen’s input hypothesis theory (Krashen, 1981) in which he suggests that a silent period is a normal part of second language acquisition as the learner processes the new language. In addition to demonstrating no progress, Mariam also cannot demonstrate attainment of the norms. With the exception of physical development, the early learning goals which constitute the Good Level of Development are dependent on language and so cannot be met. In this way, Mariam’s doppelganger is useless.

The norms against which Mariam and children across much of the Western world are judged, like numbers, are presented as neutral and objective. They emerge from the developmental norms of psychology.
Burman (2017) however, argues that such norms are anything but neutral. Rather, they emerge from an Anglocentric, white, middle-class, monolingual view of children. She notes that Anglo-US developmental psychology textbooks discuss bilingualism in the context of educational disadvantage and the failure to achieve in English language programmes. Bilingual children are expected to meet the norms of monolingual children from the moment they enter school and are constructed as failures when they are unable to do this.

In order to compare, differentiate, hierarchise, homogenise and exclude, a vast body of evidence is needed. Thus, the child is reconstituted in data. The data-other, which has been created for each child in the form of this corpus of data, is scrutinised, compared and polished to create the ideal version of the child needed for accountability purposes (Roberts-Holmes & Bradbury, 2016a). Hierarchisation is crucial as it identifies those who may possibly reach the Good Level of Development. These children then receive more attention. This process is referred to by Gillborn and Youdell as “educational triage” (2000), where children are divided into three groups: those who will meet the expected level, borderline children and the “no-hopers”. The teacher then focuses on the borderline children in an attempt to increase the percentage of children meeting the measure. More data are collected for the borderline children and interventions are planned to try to make them “good”. This can be seen in the intervention classes delivered to the borderline maths group in the Vignette. This phenomenon is not unique to the UK but has also been documented in other countries such as the US, where high stakes tests are implemented. Lauen and Gaddis (2016) for example report findings that for lower ability children, the focus on “bubble kids” (p127), or those who are close to meeting the expected level, lead to an increase in the gap between the low and high achieving students.

The normalisation process can be seen as an aspect of the neo-liberal system explored by Moss (2014). He argues that the story of quality and high returns dominates education. The purpose of education in the neo-
liberal world is to develop human capital. In order to measure the returns of the investment in this human capital, norms must be set against which children are measured. The focus of education thus becomes determining whether a child is “normal” or not rather than what they can actually do. This can be seen in many developed countries, where measures of “school readiness” are assessed at the end of the ECEC phase (OECD, 2017). This normalising function, he argues, determines the type of citizens produced by the state, transforming not only the systems for creating human capital but also the subjectivities of individuals.

3.11. The Examination

Foucault describes the examination as the combination of normalisation and surveillance. It is the means by which children are known. They are observed and classified through the process of examination. Examination makes each child into a case to be studied; an object to be measured and investigated; a scientific specimen. It also links knowledge with power as the teacher increases her knowledge of the child through the process of examination and as a result, alters the power relationship. Examination is a process which makes the invisible visible. Everything about the child must be known and examination is the process through which this visibility is established. In terms of the EYFS, examination reflects both the medical examination in terms of the close scrutiny of each pupil, and the educational examination in terms of assessing the knowledge of the children.

Children are examined on a daily basis to identify what they know. Evidence is collected from observations, photographs, video recordings, conversations with parents, data from previous settings, tasks, activities and a whole array of surveillance techniques (Palaiologou, 2016). It is then used to reveal the soul of the child, making their thought processes and development visible to the teacher. It is referred to in schools as
“assessment”, the process of “knowing and understanding children” (Dubiel, 2016 p8).

This daily form of examination is then used to demonstrate progress, the key tool, used by the Office for Standards in Education, Children’s Services and Skills (Ofsted) to measure the performance of a school. The purpose of this body is to inspect and regulate services that care for children and young people. In order to do this, data are collected and analysed by the school and presented for inspection. Qualitative, observational data are converted into numerical data in order to demonstrate progress over time. Many schools use online tracking systems to do this (Dubiel, 2016). Algorithms are used to identify how many children meet the expected level and how much progress has been made (School Pupil Tracker Ltd, 2017).

The examination can also be seen in early years in terms of summative assessment. In England, this takes the form of the Early Years Foundation Stage Profile (EYFSP) (Standards and Testing Agency, 2016). This examination can be described as a high stakes test as the results of the test are used to judge the performance of the school (Hutchings, 2015). Data from the EYFSP are mined by local authorities and the Department for Education and form part of the data set given to Ofsted to support their judgments of school effectiveness (Department for Education, 2016).

Research into high stakes testing indicates that it does indeed raise test results (Hanushek & Raymond, 2005). However, the negative impact of high stakes testing on children and teachers is also well documented. Knowledge is found to be restricted to the knowledge specifically required by the test and teaching is found to be narrowed, focusing only on the test (Hutchings, 2015). Hutchings, in her report for the National Union of Teachers lists the negative effects of high stakes testing on pupils and teachers as being:
less creative teaching; a narrowing of the curriculum; a focus on borderline students at the expense of others; pupil anxiety and stress; and temptation to both pupils and teachers to ‘game the system’ (Hutchings, 2015 p 11)

Foucault describes examination as a process which “introduces individuality into a field of documentation” (Foucault, 1977 p189). The surveillance and normalising judgements of the examination must be recorded, thus placing individuals in a “network of writing” (p189). For each EYFS child, like Mariam, there exists a vast body of written and numerical data. This mass of documents acts to “capture and fix” the child (Foucault, 1977 p189). The chaotic, unpredictable nature of the child is converted into fixed data which can then be measured and compared. It captures the child as it is then fixed in time, unable to change the version of itself formulated in the data. The use of online data analysis systems intensifies this process as it produces a “machine readable” (Williamson, 2014 p1) child. The huge quantity of qualitative data recorded in blogs and profiles are converted into numbers and inserted into the system. This datafication constitutes the child as an individual, a “describable, analysable object” (Foucault, 1977 p190). The purpose of this is to individualise the child. It pins down and fixes the individual, making them predictable and manageable: what Foucault calls “the calculable man” (Foucault, 1977 p193) Thus, individualisation creates a version of the child, determined by the examination and created through data: a data-doppelganger.

This data-double follows the child through school. Although Mariam may well have been labelled without the data, the increased focus on data strengthens the impact of this labelling process. Before Mariam enters Year 1, her EYFSP scores, her learning journal, her end of year report and the online tracking data will all be used to inform the new teacher. The teacher may well use this information to rank Mariam and put her into a differentiated group. Expectations will probably be low, as the doppelganger is not the “right” kind. In this way, Mariam’s doppelganger precedes her into the next class and determines the teacher’s
expectations. A distorted doppelganger showing very low language development will create distorted predictions of progress. Thus, expectations of Mariam’s development will be low, possibly leading to a lack of challenge and under-performance in her future education.

The reconstruction of children in data is not new to the English EYFS but has become more instrumental in shaping pedagogy and practice following changes to the GLD measure. The new GLD requires children to demonstrate attainment in a narrower range of areas and to meet more challenging targets. This makes it harder to achieve in two ways: the first is that children must achieve equally across five areas and the second is that they must achieve a higher level than previously. This was reflected in the statistical analysis of the EYFSP score results which showed a drop from 64% achieving a GLD in 2012 to 52% in 2013 when the new measure was introduced (Ofsted, 2014). The early learning goals for literacy and maths became significantly more challenging, with children now being expected to independently write simple sentences and solve mathematical problems using doubling, halving and sharing. The change in the GLD also privileges certain subjects such as literacy and maths, but marginalises the subjects which are not measured, such as expressive arts and design and understanding the world.

3.12. Research into Datafication

As the GLD is a performance indicator, the creation of the “right” kind of data, the “right” kind of doppelganger has become increasingly important to preschool teachers in schools. In pursuit of these useful doppelgangers, research reveals teachers staging intervention groups to try to get borderline children to the GLD, particularly in the summer term. These interventions are found to use more direct teaching and a less play-based approach, with an increased focus on English and mathematics (Roberts-Holmes, 2015). This increase in direct teaching is reflected in a recent report from Ofsted (2017) which recommended that in order to prevent children from “falling behind their peers” (p4) schools should “devote
sufficient time each day to the direct teaching of reading, writing and mathematics" (p7). Play, it suggested was not the best way to teach certain subjects. This move towards direct teaching reflects a view of the child as a recipient of knowledge rather than a constructor of knowledge. It prioritises direct teaching as it is seen as more efficient, quicker and results in short term performance “predefined and transmittable body of knowledge and predetermined outcomes” (Dahlberg, 2016 p125). In the global race for educational success, constructing knowledge is too slow. It is geared towards ensuring that in neo-liberal terms, a high return is guaranteed for the investment in human capital (Moss, 2014).

Research into child development suggests that in order to develop effective social and communication skills, children need to play. Play enables children to collaboratively create meaning which leads to a “deep understanding of self and others” (Brock et al., 2014 p 290). This kind of deep understanding cannot be transmitted from the adult to the child in a direct teaching approach. Jarvis (2018) goes further, drawing on evidence from neuroscience which indicates that children under the age of 7 have incomplete neural pathways. Thus, they are unable to process new information which does not relate to existing concepts in the child’s memory. Through play, children are able to build up knowledge at their own pace, relating it to their existing understanding. Direct teaching on the other hand, adds new knowledge which may not fit with existing knowledge. Jarvis uses a useful analogy of a wardrobe with insufficient hangers. If a child does not have the right hangers on which to build knowledge in the brain, the clothes will fall to the floor of the wardrobe in a jumbled mess (Jarvis, 2018). The increase in the use of direct teaching as an approach to support children who have not met the GLD can therefore lead to poor quality learning experiences and can deny them the learning through play which they need in order to develop appropriately.

Within the constructs of the importance of play, however, are notions of the “normal” child with “normal” development. Olusoga (Brock et al, 2014) explores these culturally defined notions of “normal” play, analysing a
teacher’s statement “a lot of children come to school unable to play” (p39). Clearly, there is a norm of play in the mind of the teacher which is not demonstrated by the children from “deprived backgrounds” who do not speak English in her class. Her concept of normal play is not neutral, but culturally biased, based on classed, raced and gendered ideas about what play should be. Grieshaber and McArdle (2010) also problematize the notion of play, questioning whether play is normal, fun, natural or leads to learning. They contend that a culturally mediated version of play is promoted in settings. Childhood practices manufacture a version of the “natural child” participating in “natural play” and any deviations from this norm are regarded with suspicion. Thus, even the EAL child’s play is measured against Anglo-American, white, middle-class, monolingual norms (Burman, 2017).

In addition to changes in pedagogy, researchers found evidence of teachers fabricating doppelgangers which reflected their own prejudices as moderation procedures demanded that the data must “look right”. Bradbury (2011) found evidence of teachers changing the data to reflect their expectations as well as evidence that teachers’ professional judgements were highly influenced by deficit discourses about groups such as EAL children. There is considerable evidence of teachers “gaming the system” (Hutchings, 2015 p36), creating the doppelgangers which will portray them in a good light and result in the school being ranked as “good”, rather than attempting to support the child’s progress through the assessment system (Roberts-Holmes, 2015; Hutchings, 2015).

EAL children are particularly disadvantaged by the current system. Their communication is not measured and therefore has no value as only communication is English counts. When a national baseline assessment for the start of Reception was trialled in 2015, language development was again assessed only in English. Bradbury and Roberts-Holmes (2017) identified disadvantage for EAL children as a key concern as knowledge of these children’s development could not be assessed accurately. Their deficit doppelgangers are more shadowy than their English-speaking
counterparts, as an incomplete data-double is created. As EAL children struggle to adapt to a new language and sometimes a new culture and place, their needs are neglected in favour of those whose doppelgangers will be more useful to the school. This can contribute to increasing marginalisation of children from immigrant families.

The important role of what Foucault calls “exclusion” (1977) or identifying those children with special educational needs, is also hindered by the creation of data-doppelgangers. Changes to assessment of language have meant that only English language development is measured. Language development may not be measured at all in non-English speakers like Mariam, which could lead to children in need of specialist language support not being identified. This is a well-documented concern explored in depth in Cline and Shamsi’s literature review (2000), Children with special educational needs at all levels of education were found to be overlooked at times as their language issues were misinterpreted as a result of their bilingualism rather than a specific learning difficulty. Cline and Shamsi also found that the opposite could occur, with children categorised as having special educational needs when in fact they did not display any evidence of specific learning difficulties. An example of this explored by Bligh and Drury (2015) is a child mistakenly diagnosed as being a selective mute when in fact they were displaying the expected behaviour of a child in the silent period of second language acquisition.

3.13.Conclusion

The demands of accountability have created a system where the data-doppelganger may be more important than the actual embodied child. The emphasis on pupil progress, where data are the key indicators used to judge the child, teacher and the school creates a landscape in which anything which cannot be measured is irrelevant. Thus, the aim of the Early Years Foundation Stage has become the formulation and maintenance of these data-doppelgangers. The embodied child is sacrificed for the doppelganger as it is the doppelganger which will be
used to judge the school. The impact of the creation of data-doppelgangers remains with the child throughout their education. Before they even enter the following year group, the data-doppelganger is already there, constructing the child in the mind of the teacher.

The creation of data-doppelgangers has privileged certain children, while the doppelgangers of others are deficit doubles. The system disadvantages children with English as an additional language as they are classified as “no-hopers” and therefore receive less attention than the children who are almost at the good level of development. Their progress is hidden as their early stages of second language acquisitions prevent it from being measured. Their development is measured against culturally unfamiliar norms which actively discriminate against young bilinguals. Their data is incomplete as their language development is not assessed, which can lead to special educational needs being missed or mistakenly identified.

The datafication of early years education has the capacity to lead to increased knowledge of the child and therefore more accurate planning for progress. The use of data to judge the status of the school, however, has repositioned assessment as a control mechanism to produce the “right” kind of child and the “right” kind of teacher. With such high stakes, assessment becomes more important than teaching; data become more important than children. Changes to the early childhood education system have led to children with English as an additional language being particularly disadvantaged, positioning them at the margins of the class and limiting their capacity to learn and develop. This may be symptomatic of an increasingly nationalistic society in which English Language is used as a tool to exclude and marginalize those from other cultures.
3.14. Analysis of the paper

An analysis of the paper reveals the development of two of the main threads which constitute the khipu. The thread of the doppelganger is introduced in this paper as a conceptualisation of datafication. It is developed significantly in subsequent work (see pendants 4 and 7). The thread of the teacher subject is implicit in this paper, hidden behind discussions of the child subject. In order to evaluate the development of the doppelganger concept and the emergence of teacher subjectivity, it is useful first to conduct a further review of the literature of datafication.

3.14.1. Review of datafication literature

In general terms, datafication can be defined as “the transformation of part, if not most of our lives into computable data” (Cheney-Lippold, 2017 p9). It is the move towards Big data, where almost every aspect of life is measured and harvested, to be analysed algorithmically to produce a data version of the self. It is a method for making the invisible, visible: bringing new parts of the subject into the data gaze (Beer, 2019). My discussion of hierarchical observation, normalising judgements and the examination demonstrates this process as the mass of assessment documentation formulates a data version of the child.

Foucault discussed the need for mechanisms of surveillance writing,

> What are required are mechanisms that analyse distributions, gaps, series, combinations, and which use instruments that render visible, record, differentiate and compare: a physics of a relational and multiple power (Foucault, 1977 p199).

The panoptic systems developed in recent years constitute these very mechanisms, leading to what Simon terms “dataveillance” or “the collection, organization and storage of information about persons” (Simon, 2005 p1). The data collected constitutes a “data-double” (p15) or “data-doppelganger” (Williamson, 2014) of the subject. This databased self, Simon argues, is not produced by us but rather produces us, leading to a new form of subjectivity. I explore the impact of datafication on Mariam’s
subjectivity, revealing the low expectations, the deficit discourses associated with bilingual students and the lack of adult interaction experienced by the child.

Williamson’s (2014) paper focuses on the increase in the use of database software and the impact this has on individuals. He examines a number of examples of educational database software, looking at how they use data to regulate both the system and children. His section on learning analytics explores software which takes attainment data and other information about children and makes predictions of future progress and attainment. This software, he argues, breaks children down into tiny bits of data and reassembles them in a machine readable form which can be manipulated by the software. This is the data-doppelganger or data version of the child which exists within the databases. My discussion of the EYFS Profile and the online tracking systems used to track pupil progress across the school demonstrate children being reassembled as machine readable data. The vignette illustrates this as Mariam’s progress is logged onto the system which gives an incomplete and oversimplified interpretation of her learning and development.

Roberts-Holmes and Bradbury have extensively researched the emergence of datafication in an educational context (Bradbury, 2019a; Bradbury & Roberts-Holmes, 2016b; 2016c; 2017; Roberts-Holmes, 2015; Roberts-Holmes, 2019; 2016c). They define datafication in terms of “increased significance, visibility and constant governance through dataveillance” (Bradbury and Roberts-Holmes, 2017 p6). They argue that datafication emerges from a discourse of neoliberalism. Bradbury and Roberts-Holmes also explore the impact of datafication on the formation of subjectivity (Bradbury & Roberts-Holmes, 2017). Data-driven child subjectivity, they argue, depersonalises children as data-points rather than individuals. Children become raw materials for producing data and as such are important yet powerless.

The impact of datafication on young bilinguals is the topic of Koyama and Menken’s (2013) paper. They examine the process of reframing
individuals as data, focusing on how this disadvantages emergent bilinguals and impacts on pedagogy. They draw attention to the process of assessment, which requires emerging bilinguals to complete tests designed to assess college readiness in native English speakers. The impact of this is that bilinguals are discursively reframed as quantifiable data, data which “really brings down a school’s numbers” (p84).

3.14.2. The emergence of the doppelganger
In this paper, my version of the doppelganger character emerges. The doppelganger of this work is a deficit doppelganger. This relates closely to Koyama and Menken’s (2013) work, which explores the reframing of emerging bilinguals in deficit terms. Like them, I question the accuracy of assessing language using a tool designed for native speakers. As the subject of my work is early years development however, I go further, suggesting that this results in a lack of assessment of language development which leads to an incomplete knowledge of the child. I introduce the novel idea of a deficit doppelganger, an aspect of the emerging doppelganger character which is developed in my subsequent papers (see pendants 4 and 7). This concept combines Koyama and Menken’s findings about deficit reframing of children and Williamson’s (2014) use of the term data-doppelganger.

Another main feature of my version of the doppelganger is that it is distorted. Again, this builds on Koyama and Menken’s findings that assessments in English do not accurately assess the learning of emerging bilinguals. If the function of datafication is to render the invisible visible, what is happening with the assessment of emerging bilinguals in English? Rather than revealing their invisible language knowledge, datafication is actively hiding this knowledge and replacing it with fabricated knowledge. I find that the bilingual child’s use of English is converted into data and used as a proxy for data about communication and language development. This creates a distorted doppelganger as the doppelganger is not the invisible made visible but fabricated data.
The concept of the data-doppelganger builds on and extends previous related work. For Williamson, the data-doppelganger is the digital version of the child present in database systems. Simon refers to this as the "databased self" (Simon, 2005 p16). He argues that in societies of control, surveillance acts on the databased self rather than the body or mind. His version of the double is a digital representation of the body. It has some agency, with examples being the digital-self enabling the user access to certain locations such as a gated community or having the capacity to predict the future. For both of these researchers however, the doppelganger is created exclusively from digital data.

For me, the data-doppelganger is created from more than digital data. Although at the beginning of the paper I define the data-doppelganger as constructed through the process of converting assessment data to numerical form, I later conceptualise it as being made up from all of the various forms of data generated about the child. Some of this is digital data but other forms of data such as written observations, photographs and checklists also contribute to the formation of the data-doppelganger. This move in my understanding of the doppelganger from purely digital to general data signifies my developing thinking. To me, the doppelganger is no longer constrained to the digital world, but exists beyond it within the many individual diverse bits of data which become the child in the mind of the teacher.

For Williamson and Simon, as well as for Bradbury and Roberts Holmes, the data-doppelganger is reductive (Roberts-Holmes & Bradbury 2016c; Simon, 2005; Williamson, 2014). It reduces the child from the complex to the simple in a process which selects only useful pieces of data. I also argue that the function of the doppelganger is reductive. However, my conceptualisation of the doppelganger is not simply a 2 dimensional digital form. I see the doppelganger as essentially a character, more like the doppelganger characters of the Gothic genre. The term “doppelganger” has sinister overtones. It is a shadowy, ghostly form, a projection of the troubled mind rather than a simple digital replication. Williamson’s
adoption of the term “doppelganger” appealed to me because I felt uncomfortable and disturbed by the formation of the data-doppelganger. It reflected my own conflicted subjectivity as much as it reflected the operation of dataveillance.

The lack of agency seen in Williamson and Simon’s version of the data-doppelganger was not an aspect of my conceptualisation. The doppelganger of my developing thesis has agency and power. My vignette reveals a knowledge that the data produced does not tell a complete and authentic story of Mariam’s development. In my role as teacher however, I do not feel able to act on this knowledge, as the data version of Mariam appears to carry more authenticity. When comparing the embodied child and the data-child, I narrate myself as privileging the data-child. The data-doppelganger seems to tell the truth. I believe the data, as can be seen in the vignette where I grade Mariam as being “16-26 months low” for communication and language. In this way, the data-doppelganger asserts itself as a powerful force. Its veneer of authenticity enables it to usurp the embodied child, becoming more valuable in the mind of the teacher.

3.14.3. The development of the teacher subject

The teacher subject is not explicitly discussed in this paper. This thread however, is present in the hidden teacher, the teacher of the vignette who does not notice Mariam when she waits at her side. The vignette reveals both sides of the split self which I later explore in the paper “I feel like two different teachers” (Pierlejewski, 2021) (see pendant 7). The teacher as physicist, or data teacher can be seen in the focus on the maths intervention group. I narrate my teacher-self as being so focused on the key marginal children that I don’t notice Mariam. I also act as the data teacher when I note the assessment data in the blog and add it to the online tracking system. The teacher as philosopher, or intuitive teacher, can also been seen in this vignette however. Care is shown for the child through the hug given to Mariam when she speaks.

Bradbury and Roberts-Holmes (2017) note the ideological tension between the paradigms of child and teacher-led pedagogy. They also
discuss the loss of care which datafication promotes as children are seen as producers of data rather than individuals. This loss of care can be seen in the poignant picture of Mariam standing beside the teacher’s chair with her artwork. The teacher is too busy to notice her. The hug however, shows a return to the value of care, revealing a deeply divided subject who both cares and does not care.

3.13.4 The paper as confession

The vignette created for this paper can be seen as an act of confession. As I reflect on my former teacher self, I reveal my feelings of regret and remorse. This can particularly be seen in the picture of Mariam as she waits near the teacher and then after a while, walks away. The act of walking away shows that she has given up on gaining the teacher’s attention. She is denied the reassurance and praise she needed as well as the opportunity to develop her relationship with the teacher. Foucault’s work positions confession as a technology of power (Foucault, 1978). The confession puts the secret act into discourse and thus creates a version of truth. It is an act of power because it establishes what is and is not considered a sin. My confession of ignoring Mariam and creating her data-doppelganger indicates that I see this as incompatible with my concept of the good teacher.

Foucault would ask, who requires my confession? Even if they are not there, there is always a partner who represents authority. In this case, the partner is the intuitive teacher. The version of me who is seen as the “real early years teacher” (Pierlejewski, 2021). The intuitive teacher emerges from the child-centred paradigm and represents the dominant discourse in the early years sector. My confession reveals my beliefs about what early years teaching should be and acts to produce me as the “fallen teacher”. Thus, the confession can be conceptualised as producing a divided subject, in which one part of the self, the data teacher, confesses to the other part, the intuitive teacher.
Pendant 4: The Data-doppelganger and the Cyborg-self
4.1 The process of construction

The stimulus for this paper was the release of a report entitled *Bold Beginnings: the Reception curriculum in a sample of good and outstanding primary schools* (Ofsted, 2017) published in late November, 2017. This paper, produced by Ofsted purported to be a piece of research into quality teaching in the Reception year. It was however, an analysis of the curriculum in schools which had already been evaluated according to Ofsted’s inspection criteria as good or outstanding. It was not therefore, research, as the definition of quality had already been established. The schools’ practice simply exemplified Ofsted’s definition of quality. Such criticisms of the document were outlined in the response from the association for professional development in Early Years, TACTYC (Tutors of Advanced Courses for Teachers of Young Children) along with many other more serious concerns (TACTYC, 2017). These additional concerns focused on the move away from play-based learning to more formalised approaches which were not underpinned by research into early childhood education. *Bold Beginnings* prompted a strong emotional reaction from many in the early years sector (Early Excellence, 2017; TACTYC, 2017) as it was interpreted as promoting an approach to pedagogy which was incompatible with a child-centred approach to learning. TACTYC expressed this in the strongest terms saying “adherence to the report’s recommendations will cause long-term, detrimental effects on young children’s confidence, motivation and disposition to learn” (p1). My own response to reading the document was a desire to add my voice to those of others in the sector criticising the report. Colleagues from my department felt the same and we agreed to work on a paper together.

I began work towards a joint paper by conducting a Foucauldian discourse analysis of the report. This revealed some interesting findings in itself, and led to a decision to write two blogs. I worked independently on a blog for *The Conversation* which focused on the marginalisation of play and
privileging of formal teaching methods. This was published early in 2018 (Pierlejewski, 2018). My colleague Yinka Olusoga and I worked together on a second blog which focused on the impact of statutory summative assessment on pedagogy (Olusoga & Pierlejewski, 2018). The publication of these blogs enabled me to reach a much wider audience. The piece in *The Conversation* was republished in 9 different outlets and was viewed over 6000 times. I felt that I was able to take a more activist role to unmask the political violence I perceived (Chomsky & Foucault, 2006). I continued to work on the joint paper but it became clear that my colleagues could not commit time to writing as they had other pressing commitments.

A turning point in the development of the paper occurred when I read Dolar’s paper "*I Shall Be with You on Your Wedding-Night*: Lacan and the Uncanny (1991). This evaluation of the uncanny introduced me to the psychoanalytic interpretation of the doppelganger. I began to see the doppelganger as more than a metaphor for the data about the child. I saw it as an aspect of the Gothic genre in literature and as an expression of psychoanalytic phenomena. Dolar used examples from Gothic literature to explain various aspects of the uncanny. This gave me the idea of using a doppelganger story to explain the function of the doppelganger in education. His explanation of how the doppelganger in literature stands for all aspects of Freud’s second topic led to the idea of creating research questions arising from these three aspects. From this, doppelganger as method emerged as I asked:

- How does the data-doppelganger complete the ego?
- How does the data-doppelganger reveal the repressed desires of the id?
- How does the data-doppelganger regulate the subjects?

I returned to the (Ofsted, 2017) *Bold Beginnings* report with these questions, using them to analyse the impact of datafication on subjectivity. Dolar’s creative dialogue between literature and psychoanalysis was inspirational in enabling me to draw from a wider range of sources and...
disciplines. I felt that this was the most original paper I had written to date and discovered that for me, academic writing could be an expression of creativity.

4.2 Justification for inclusion

This paper was published in preprint form in September 2019. I chose to submit it to the journal *Pedagogy Culture and Society* as I felt that it was aligned with its aim to “raise questions about the taken-for-granted in pedagogy as understood within a cultural and social context” (Pedagogy Culture and Society, 2021). This paper constitutes an original contribution to knowledge in terms of its methodology and development of datafication. Peer reviewers noted that the doppelganger as method approach introduced in the paper was a highly original contribution to the field. They also described the analysis of datafication and the conceptual framework developed as a “welcome innovation” (see Appendix C).
4.3 Title: The Data-doppelganger and the Cyborg-self: Theorising the Datafication of Education

4.4 Abstract

In this paper, I use the notion of the data-doppelganger (Williamson, 2014) as a theoretical lens through which to view the datafication of education. The data-doppelganger is the version of the self which exists in the significant quantities of data collected about both children and teachers. A psychoanalytic analysis of the literary genre of the doppelganger identifies the role of the double as a second self, which completes the ego, expresses the repressed desires of the id and regulates the subject as the superego (Dolar, 1991). Using this psychoanalytic understanding of the double, I explore the role of data in the policy document *Bold Beginnings* (Ofsted, 2018). I find that data holds a mirror up to the child, repositioning it as a normalised pupil; play can be understood as a dangerous, chaotic practice which must be suppressed and data functions as a regulatory device to objectify and control both teachers and children.

Keywords: Datafication; Teacher subjectivity; Child subjectivity; Accountability; Psychoanalysis

4.5 Introduction

Data plays an increasingly prominent role in all aspects of our lives. A simple example of this can be seen in a recent advertisement for information services company, Experian (2018). This advert features comedian, Marcus Brigstocke, playing Dan and Dan's data-self. The two do everything together; the self and the data-self are described as “inseparable”. The data-self harvested by Experian, is presented as an improved version of the self and the strapline for the advert is “get to know
your data-self with Experian”. The idea expressed in this advertisement is that data, as a controllable, predictable, measurable version of the self is more desirable than the slightly faulty, unpredictable, organic subject. Dan and his data-self need each other. Without the machine-readable data-self, Dan would not be able to get the things he wants in life. Dan and Dan’s data-self together form the whole person. Data has become a part of who we are.

Braidotti (2013) explores the posthuman condition in which technology and organic are fused: a new self emerges, which includes a physical and a data-self. She argues that “all technologies can be said to have a strong bio-political effect upon the embodied subject they intersect with” (p90). Similarly, Jurgenson (2012) posits an “augmented reality” in which the physical and the digital enmesh to form a new kind of reality. The ontological change conceptualised here is a move towards a posthuman existence in which data not only influences how we think and act but leads to a new kind of being in which humans think through data. Haraway (1987) refers to this as the formulation of a cyborg- “theorized and fabricated hybrids of machine and organism” (p3).

In order to understand the process of the creation of the cyborg-self, a separation of the data and the organic self is useful. This paper explores the function of the data aspect of the self in forming subjectivity or the concept of who we are. It takes the trope of the doppelganger, a figure from the literary genre of the same name and examines its function within education. The word doppelganger means double and is useful as an analogy for the data-self. In order to understand this trope, psychoanalytic, literary and film analyses of the genre are used to shed light on its relevance to education. This multidisciplinary, creative use of the doppelganger figure is termed “doppelganger as method”.

The object for analysis in this case is a report produced by the UK Office for Standards in Education, Children’s Services and Skills (Ofsted) into “good practice” in Reception (the final year of English early childhood education) (Ofsted, 2017). This report, entitled Bold Beginnings - The
reception curriculum in a sample of good and outstanding primary schools summarises Ofsted’s findings of a number of schools which they judged to be good or outstanding. It has provoked a strong, negative response from the early years community in England, who feel that it promotes an approach to teaching which is incompatible with discourses of good early years practice (TACTYC, 2017). Although this report focuses on early years education, its themes are echoed in education as a whole.

4.6 Datafication

Cheney Lippold (2017 p9) defines datafication as “the transformation of part, if not most of our lives into computable data”. He explores the way people are converted to data, which is then used to measure and predict who they are and will be. Although data is seen to be more authentic, more accurate than human judgement (Beer, 2019) Cheney-Lippold argues that it is less authentic. What is important about data is not so much whether it presents an authentic version of the embodied subject, but whether it can be used to categorise and classify the subject. This impacts on subjectivity as added onto the embodied self are “layers upon layers of …algorithmic identities” (Cheney-Lippold, 2017 p5). These algorithmic identities are comprised of calculations made from the easily measurable aspects of people’s lives and used to construct a data version of the self. These data-selves then become the focus of what Beer terms the “data gaze” (Beer, 2019). This is a form of surveillance in which the data-double (Simon, 2005) is the object of surveillance rather than the embodied subject. Beer discusses the regulatory power of this data gaze, exploring who is empowered to make data speak and what is rendered visible or invisible.

Bradbury and Roberts-Holmes build on this, exploring the role of data in early years education (Bradbury & Roberts-Holmes, 2016a; Bradbury & Roberts-Holmes, 2016b; Bradbury & Roberts-Holmes, 2017; Roberts-Holmes, 2015). They define datafication as the increase in volume of data, the changing use of data and the impact this data has on subjectivities.
The recent changes in the prominence of data in education reveal both qualitative and quantitative change in its use. The introduction of digital technology has impacted on the role of data, as society expects digital data to improve education (Bradbury & Roberts-holmes, 2017).

The inspection and regulation of schools in England and many other countries depends on data, as this is the key performance indicator used to judge a school’s effectiveness. For English early years education, the key measure of effectiveness is the Good Level of Development (GLD). This describes children who have met the expected level of attainment in five of the seven areas of learning which constitute the Early Years Foundation Stage (EYFS) curriculum. Data is thus used to judge the child, the teacher and the school. Pierlejewski (2019a) argues that this emphasis on data signifies a move from child-centred to data-centred education. This paper takes the conceptualisation of datafication further, positing a new cyborg-self, in which data impacts so much on the teacher and child that their subjectivity fundamentally changes. The creation of the cyborg-child is explored alongside the development of the cyborg-teacher.

4.7 Doppelganger as method

The novel, analytical approach developed in this paper, which I call “doppelganger as method”, builds on Burman’s “child as method” (Burman, 2018a; Burman, 2018b). The project “child as method” takes the idea of child or childhood and examines how it functions to reflect but also constitute socio-political axes and dynamics. It resists the “traditional, modern and Western abstraction of the child from socio-political relations that position it as other” (Burman, 2018a p18). The child in this sense, is a trope or figure, through which the research topic is viewed. In the same way, the idea of the data-double or doppelganger is used in this paper as a trope through which to view educational policy and practice. It examines the function of data in creating subjectivity; in creating the cyborg-self.

Burman describes “child as method” as being a “research analytic” (Burman, 2018b p3) rather than a particular method. It is not a set of
instructions for analysing data. Rather, this approach brings together into a creative dialogue, a range of analytical approaches from many diverse disciplines. An example is Burman’s use of psychoanalysis, feminist, postcolonial and childhood studies in her study of Brexit (Burman, 2018a). In a similar way, “doppelganger as method” utilises analytical devices from literary criticism, psychoanalysis, Foucauldian analysis, digital sociology, education studies and film studies. It takes the genre of doppelganger literature; literary and film analyses of the genre; psychoanalytic studies of the doppelganger; the concept of the cyborg and conceptualisations of data in education studies to investigate the function of data in education.

The development of the data-self, the technology aspect of the cyborg, can be understood through the trope of the doppelganger. The use of the doppelganger in education is not new. Williamson first used the term to describe the impact of datafication on children in his (2014) paper. He argues that education is being made increasingly “machine readable” (p1). Pierlejewski (2019a) builds on this, exploring how some data-doppelgangers are more useful to the teacher than others, leading to disadvantage for children with English as an additional language. However, the full resources of this metaphor as a way of reading current educational policy and practice have not yet been explored. The first stage in this exploration is an examination of the doppelganger genre in literature and film.

The doppelganger genre developed during the Enlightenment period and was a feature of the Gothic. It can be seen in such stories as E.T.A. Hoffmann’s The Devil’s Elixirs (1816, 2008), Edgar Allan Poe’s William Wilson (1839, 2009) and Dostoevsky’s The Double (1846). It is also extensively explored in film, examples being The Matrix (The Wachowski Brothers, 1999) and an interpretation of Dostoevsky’s novel of the same name, (Ayoade, 2013). Rank’s (1971) psychoanalytic analysis of the genre identifies several key features of the doppelganger story: all are explorations of identity as they tell us about the relationship between the self and the self; the double is always inextricably linked to the hero, so
that one cannot exist without the other; the presence of the doppelganger is a source of great anxiety to the subject, who experiences feelings of deep disturbance at the discovery of another self; the double is always ambiguous, both realising and restricting hidden desires and at the end of the story, the subject kills the double, but as the double is the self, this is an act of suicide.

4.8 Psychoanalytic concepts

Following on from Rank (1971) and Tymms’ (1949) psychoanalytic study of the doppelganger genre, in which they discuss the narcissistic nature of the double, I use the psychoanalytic concepts of Lacan and Freud as a useful heuristic, through which to understand datafication. Dolar (1991) explores the notion of the double as an example of what Freud (1919) referred to as “the uncanny”. The German word for this is *Das unheimlich* and Freud goes to great lengths to explain that the meanings of the word *heimlich* (homely, comfortable) can be extended to mean secret, hidden from others and by extension occult and uncomfortable, in other words the opposite of its original meaning. By *unheimlich*, Freud was referring to occurrences which make the subject feel uncomfortable, strange, disturbed, an example of which could be meeting someone who looks exactly like you. Dolar argues that this word *unheimlich* references the tradition within psychology of the drawing of a line between exterior and interior. As *unheimlich* is not quite interior (homely) or exterior (strange, occult) it represents a place where the uncanny happens. The doppelganger and the notion of the cyborg challenge this, as does the uncanny in all its forms as the boundaries between exterior and interior are blurred. The doppelganger is an example of the uncanny as the division between the consciousness and the body is blurred (Dolar, 1991). This leads to feelings of great anxiety as the fabric of reality appears to disintegrate. It can also be applied to the cyborg-self as data is not just exterior but becomes a part of subjectivity.
In his paper, Dolar (1991) argues that the double stands for all three parts of Freud’s model of the psyche— the ego, the id and the superego. A very simple explanation of these functions is that the ego is the rational, reality-oriented part of the psyche, the id is the instinctual drive and the superego performs a regulatory function. Dolar finds that the doppelganger is an essential part of the ego; it allows the subject to carry out the repressed desires of the id and it regulates the subject as the superego. These functions can be better understood in relation to an example of a story. For this purpose, I will use Edgar Allan Poe’s 1839 short story William Wilson (2009). A summary of Poe’s William Wilson follows:

4.8.1 William Wilson

The narrator, referred to as William Wilson, encounters a boy at school with the same name and birth date as himself. The double, referred to as “Wilson,” at first becomes close friends with William and begins to act more and more like him. As time goes by, William begins to hate Wilson as he feels that he is being increasingly controlled by his “distasteful supervision” (p157). William then spends some years trying to forget Wilson in a “vortex of thoughtless folly” (p158). The double however, continues to haunt William, preventing him sinking further into a life of debauchery. An example is his intervention in a card game where William intended to dupe a fellow student.

In a final encounter with the doppelganger, William is just about to seduce his host’s wife, when Wilson again appears. William attacks his double, piercing him with his sword but realises that he has attacked himself. The doppelganger utters his last words, saying “In me didst thou exist— and, in my death, see by this image, which is thine own, how utterly thou hast murdered thyself” (p165).

4.9 A psychoanalytic analysis of the story

Building on the psychoanalytic analyses of Rank (1971) and Dolar (1991), I formulate my own psychanalytic analysis of the story of William Wilson. The three aspects of the psyche can all be seen represented in the self
and the second self. An exploration of each psychoanalytic concept follows:

4.9.1 The ego
The double functions as the ego, as the mirror image of the subject and the subject itself, together become the ego. Dolar (1991) uses Lacan’s (1977) theory of the mirror phase to explain the use of the mirror in enabling the subject to see itself as an object. The subject, however, loses something in becoming aware of the reflection of the self. It loses its sense of self-being, the rejoicing in the being, without an awareness of the self as an object in relation to other subjects. Lacan refers to this as a castration or the discovery of lack, a loss of an essential part of the subject. This process is, however, what enables the subject to become “I” (so inscribing alienation or otherness within the constitutions of self). It is through the double that the ego is formed. In Poe’s story, the presence of Wilson enables William to see himself as an object. He reflects on who he is in relation to the double, he sees himself in a different way. The double therefore changes the subjectivity of William.

The doppelganger often represents a rational, measured, morally superior version of the self. This can be seen in the story as Wilson is referred to as possessing a higher moral sense. It contrasts sharply to the immoral, irrational, debauched subject in the form of William.

4.9.2 The id
In some doppelganger stories it is the double who expresses the repressed desires of the id (Dolar, 1991) but in this example, it is the subject who expresses them. These repressed desires are the unconscious, instinctual needs for pleasure which must be satisfied at all costs. In William Wilson, the subject- William allows himself to indulge in every pleasure and, in doing so, disregards all others, treating them as mere objects. William “spurned even the common restraints of decency in the mad infatuation of [his] revels” and in doing so “out-Heroded Herod” (Poe, 2009 p159).
An aspect of these revels is the card game- a kind of play. This can be seen as reflecting the expression of desires which are echoed in the more id-driven behaviour of children. Games can be seen as an expression of the desire for power over others. The game is a kind of trick, which allows William to dupe his fellow students. This is dangerous play which must be stopped by the double and indeed, in the story, the double steps in and stops the card game.

4.9.3 The superego
The regulatory function of the doppelganger limits the subject’s agency. In the story, Wilson acts as the advisor at school, offering advice from a morally superior position. William finds this “distasteful supervision” (Poe, 2009 p157) unbearable as his agency is removed by the “disgusting patronage”. He later laments “Poor indemnity for natural rights of self-agency so pertinaciously, so insultingly denied” (p163). Wilson intervenes to stop William achieving his desires, convicting him of his folly. William sees this as performing the role of admonisher; destroyer of honour; thwarter of ambition; revenge; passionate love and avarice. Wilson appears to be always there, whispering in William’s ear, controlling his behaviour and limiting pleasure. William feels that the presence of the doppelganger prevents him from carrying out his desires.

4.10 A “doppelganger as method” analysis of Bold Beginnings
Following on from this exploration of the role of the doppelganger in literature, I use the psychoanalytic concepts identified by Dolar (1991) to analyse a key document- Ofsted’s report Bold Beginnings (Ofsted, 2017). This method entails asking the following questions about the data:

- How does the data-doppelganger complete the ego?
- How does the data-doppelganger reveal the repressed desires of the id?
- How does the data-doppelganger regulate the subjects?
Using the executive summary of the report as the main data for analysis, these three questions are applied to each paragraph, with reference to the story of William Wilson as an example. The role of the doppelganger in policy is not overt. It is hidden from view in the unsaid and the implied. The analysis is structured around Freud’s model of the psyche with each section exploring one of the three aspects.

4.10.1 Doppelganger as ego
The data-doppelganger or data version of the child, like Wilson, is a safe and predictable version of the self. It is constructed from numerical data; it is governed by algorithms and can be manipulated and controlled. The data-doppelganger makes progress in measured steps on a steady upward trajectory towards a standardised goal. It is a decontextualized, normalised, objectified version of the self, untroubled by emotions, culture or socioeconomic status.

To be successful, teachers need to create data-doppelgangers of their pupils. These take the form of a vast collection of data which is used to make judgements about the progress and attainment of the child. The formulation of these doppelgangers must be the primary aim of the teacher as, in so doing, the doppelganger of the teacher will also be constructed. This activity is narcissistic in nature as it involves making the formulation of good data, the polishing of the teacher’s doppelganger, the obsession of the teacher. The teacher must spend time gazing into the mirror of this data-double, analysing the data and making it “right”. The mirror double, in the form of data about children, reflects back to the teacher the quality of the teaching. The mirror of data enables teachers to see themselves as objects and therefore constructs the ego. It is the reflection which enables the teacher to know if practice is deemed worthy. In this way, the data and the subject become “inseparable companions”- data-self and embodied-self fuse to become the cyborg-teacher. “My ego identity comes from my double” (Dolar, 1991 p12). Without it, the teacher is unable to know who they are.
The first paragraph of *Bold Beginnings* (Ofsted, 2017 p4) states: “for too many children…their Reception year is a missed opportunity”. Underlying this, is the assumption that all children have the capacity to meet the early learning goals, the measure of success in early years education. This concept of the child sees children as a homogenous group. They are all the same, decontextualized raw materials whose function is to formulate data for the school. The subject of the child, the physical embodied child, is less important than the data-doppelganger as it is the doppelganger which will be used to judge the school. Dolar (1991) argues that the mirror image is more real than the subject because it is not constrained to a physical body. The immaterial reflection survives the body and so constitutes the essential self. In a similar way, the data-doppelganger, as immaterial, will outlive the embodied child in the form of data remaining in the virtual world even after the child has grown up. In this way, the doppelganger is more valuable than the actual embodied child.

The recommended assessment practices which *Bold Beginnings* proposes are “checks…standardised tests…and scrutinies of work” (Ofsted, 2017 p4). These assessments are measures against the norms set by the state. For each aspect of this norm, a binary decision is made about whether the child can meet the norm or not. An example might be the phonics check which assesses whether the child knows all the main phonemes of English. This type of assessment measures the child against a norm, a norm, which is presented as value free, but is actually based on gendered, raced and classed ideas of what the child should be (Burman, 2017). This normalisation process presents the child with data about themselves. It holds the mirror of data up to them. They discover through the question “do you know this letter?” what they do and do not know in relation to expectations. In this way, data acts as a mirror which presents a new version of the self to the child.

Prior to entry into school, the child’s subjectivity can be argued to be primarily dependent on relationships within the family (Burman, 2017). The child’s ego is constructed through the “I” and “you” of parent and child. As
soon as the child enters the education system however, and is measured against norms, they discover in the mirror of data that they are deficient in many ways. They see themselves as the teacher sees them, as “they” rather than “you”. They are compared to other children, to normative expectations and see themselves as an object. Thus, using Lacan’s mirror phase as a heuristic, the subjectivity of the child can be seen as altered. The innocence of the pre-data-self is lost, and a new form of normative subjectivity is created: a fusion of data and embodied self- the cyborg-child.

**Bold Beginnings** may be paving the way for impending changes to English early years curriculum and assessment. One of these changes will be the introduction of a statutory reception baseline assessment in 2020 (Standards and testing Agency, 2018). The recommendation of testing as an efficient form of assessment is aligned with the methodology used in this new baseline. The baseline will move the presentation of the mirror of data forwards in time as children discover during their first few weeks of school that they are to be measured against a norm. Indeed, teachers have noted this impact on child subjectivity during trials of the previous baseline in 2015. One teacher reflects: “Some children looked at me and said “I can’t read” when asked to read parts of the assessment. It was heart-breaking to see their reaction to it and I spent a lot of time reassuring children” (Bradbury & Roberts-Holmes, 2016c p16). This account poignantly reveals the moment when the child discovers what they don’t know. Prior to this, reading may have been an activity which only adults performed. A pleasant experience of listening to an adult read a story, perhaps. The innocence of the unknown unknown is now lost. The data-doppelganger, like the double in Poe’s story, convicts the subject, whispering in the ear “you are not good enough”.

Once this data-doppelganger has been discovered, once the mirror of data has been held up to the child, it is their personal responsibility to love it and nourish it. The doppelganger is both *heimlich* and *unheimlich*, familiar and strange and the subject thus has an ambiguous relationship with data,
both loving it and hating it at the same time. Educational success is presented as a “missed opportunity” for some children (Ofsted, 2017 p4). It is the responsibility of the child to take hold of this opportunity. The data reveals this missed opportunity; it exposes the presence of failure. Having a “disadvantaged background” or any other contextual factor is presented as being no excuse for deficit doppelgangers. Children are presented as a homogenous group who are all capable of creating the same data. Successful schools are those in which “children, including those from disadvantaged backgrounds achieved well” (p4). These individualised children must ensure that they produce the best data possible. The personal responsibility for the doppelganger lies with the child.

The discovery of a doppelganger in stories such as *William Wilson* (Poe, 2009) always indicates a time of mental anguish. It is often associated with going mad as the self begins to disintegrate. In a similar way, the presence of the data-doppelganger for many children may be linked to mental health problems. If children see themselves as producers of data, as categorised and hierarchised objects rather than unique participants in society, their sense of self could be fractured. This can be seen in Clark and Glazzard’s recent research into the phonics check in England (Clark & Glazzard, 2018). This report found that many teachers reported children being affected by the phonics test with one teacher saying “Children are stressed. Some cry” (p18). This report also found that many parents observed a negative effect of the test on their children’s well-being, particularly when they failed the test in Year 1 (aged 5 or 6) and had to retake it the following year. The focus on the doppelganger at the expense of the embodied child can be seen as an act of neglect. The wellbeing of the child is sacrificed at the altar of good data.

**4.10.2 Doppelganger as id**

In contrast to the data-doppelganger, a predictable, ordered, machine-readable version of the child governed by algorithms, the organic child can be perceived to emerge from the id. The organic child is unpredictable, leaky, chaotic and complex. It is not easily measurable and does not...
develop according to standardised norms. This dark and dangerous child arising from the depths of the unconscious must be reassembled in order to be measured and controlled. The fear of this uncontrollable organic child can be seen in the attempts to control the child’s body. Good practice is described thus: “They used pencils and exercise books, while children sat at tables, to support good, controlled letter formation” (Ofsted, 2017 p5). The child’s mind is also regulated through the use of specific reading and writing programmes. Many children clearly resist, as they do not meet the early learning goals and miss the “opportunity” to become school ready pupils.

The vehicle for learning linked to the id-driven child is the equally id-driven and unpredictable notion of play. The pedagogy promoted in Bold Beginnings (Ofsted, 2017) exists in sharp contrast to the pedagogy of the Statutory Framework for the Early Years Foundation Stage (Department for Education, 2017 p9). This document states “each area of learning and development must be implemented through planned and purposeful play and through a mix of adult-led and child-initiated activity”. There is no mention in Bold Beginnings of child-initiated learning, despite the fact that it is a requirement of the framework. Child-initiated learning and its associated activity of play can be linked to the idea of the game in William Wilson (Poe, 2009): where a card game becomes a symbol of William’s debauchery and expression of his deepest desires for wealth and power.

The game, a type of play, is engaged in by the subject and linked to the id-driven behaviour of children. The role of the doppelganger in the stories is ultimately to stop this kind of behaviour. Likewise, the data-doppelganger limits play, as it does not produce the data needed. Play is an activity which has multiple outcomes and cannot easily be measured and controlled. It is chaotic, unregulated and dangerous; linked to degenerate behaviour in the doppelganger stories and springing from the id. A function of the data-doppelganger, therefore, is to control and regulate pedagogy. Like Wilson, it must step in and stop the game.
4.10.3 Doppelganger as superego

The importance of data-doppelgangers means that the production of data must be the purpose of education. In order to do this, the chaotic, id-driven child must be suppressed and replaced with measurable, ordered, predictable data. As superego, data is used as a regulatory device in the form of pedagogy. The pedagogy promoted in *Bold Beginnings* is “direct teaching” (Ofsted, 2017 p4): a one directional act which delivers knowledge from the teacher to the child. Discussions of maths and literacy teaching support this. The direction of action in these discussions is always from the teacher to the child. Listening to stories, poems and rhymes will feed children’s imagination, enhance their vocabulary and develop their comprehension. Using practical equipment in maths will support children’s grasp of numbers (Ofsted, 2017). This may appear benign, but it denies the children’s role in learning. There is no mention of the child as a meaning-maker or learner. Pedagogy is presented as cause and effect. An action is carried out on an object (the child) with a given result. The educational practices which enable children to construct their own knowledge, such as learning through play, cannot be easily measured but are arguably ones which will create the best doppelgangers in the long term. As they don’t produce clear data-doubles in the short term however, they are regarded is insufficient.

Clark and Glazzard (Clark and Glazzard, 2018) find that pedagogy takes a new form when dominated by the need for good data. The majority of teachers surveyed by Clark and Glazzard about the phonics check felt that the test had negatively impacted on their teaching. Comments revealed that teaching to the test and losing a love of reading were the main results of this doppelganger-centred education, with comments such as “We teach to the test. It's depressing and goes against everything most teachers want to deliver” (p21) summing up the impact on both teacher subjectivity and pedagogy.

The data-doppelganger also regulates the behaviour of the child. It forces itself onto the child from the first encounter with school. Children are
assessed on entry at age four, taken at their most vulnerable and measured against norms. The data-doppelganger, like an “intruder from the shadows” (Keppler, 1972 p3), enters the child’s consciousness as they become aware of themselves as objects. The awareness of this data regulates the child’s behaviour throughout school as they progress through a further raft of statutory and non-statutory tests which continue throughout their education. Every test ranks the child, categorising them as successes or failures. Foucault calls this the process of “individualisation” (Foucault, 1977), whereby children are regulated and controlled through the process of the examination, a process referred to by Allen as “benign violence” (Allen, 2014). The knowledge of their ranking and categorisation within the class is perceived as motivation for the child to improve their educational attainment although for many, the knowledge of their ranking will lead to demoralisation and alienation.

The presence of the data-doppelganger limits the teachers’ agency. The requirement to produce the right kind of doppelgangers means that the National Curriculum, the curriculum of the next stage, is driving the experience of early years education. Assessments must be “quick to collect” and useful to the teacher in the next class. The curriculum must be “fit for purpose”, the purpose being to prepare children for Year 1. Pedagogy must involve “direct teaching” of reading, writing and maths. All of these recommendations limit the agency of the teacher. Risky, creative pedagogy is not promoted, as the possibility of not producing the right kind of data is too dangerous. Even the statutory early years curriculum is presented as being not fit for purpose, as it is not aligned with the National Curriculum of the following year. Teachers are not free to follow the existing curriculum; they are not free to use play pedagogy and they are not free to use observational assessment methods to learn about the child. Many teachers may feel, like William, that their “natural rights of self-agency [have been] so perniciously, so insultingly denied” (Poe, 2009).
4.11 Conclusion

The data-doppelganger can be seen as an attempt to understand the posthuman condition. The impact of datafication on education goes far beyond changes to the curriculum and pedagogy; it creates a different kind of subjectivity in the cyborg-self. Children entering the world of school are repositioned as cyborgs. Data acts as a doppelganger to normalise the child, moving the concept of the self from one based on family relations to one based on wider societal and public normative judgements. Through the mirror of data, the child discovers the unknown unknowns and in so doing, the cyborg-self of the data-child emerges. Data acts as a regulator of the child, determining how the child will behave and learn. The cyborg-teacher too is regulated by data, programmed or at least pressured to behave in certain ways for maximum efficiency. Agency, creativity and autonomy are limited as the teacher becomes part of the collective consciousness of the data-generating machine.

Thus, “doppelganger as method” has revealed an educational world in which what it means to be human has been altered in favour of a cyborg existence. This form of cyborg existence is untenable. The doppelganger has become more important than the embodied person and thus both teachers and children are dehumanised.

The cyborg-self, however, is here to stay. The movement towards a data driven world is not unique to education but is an aspect of the posthuman condition. It seems unlikely that we will revert to the past, to the pre-data and pre-technology education of the last century. In light of this, cyborg-teachers need to explore new ways of existing in the dataverse. There may be new and, as yet undiscovered ways of taking back control of data, of using it to create more positive experiences for cyborg-children. The cyborg-child could be a positive development. Data could be used in many various ways to enhance the learning experience of children. An example of this is Ephgrave’s (2018) “planning in the moment” approach which promotes gathering a wealth of qualitative data in the form of parent and teacher observations, many of which will not be formally recorded, and
using these to plan individual learning experiences with each child. Data here is used to enhance learning rather than as a performance indicator. It is present in the mind of the teacher, as part of a relationship with the child, rather than in a computer system. Ephgrave, a practicing teacher, urges her readers to resist the demands of Ofsted for vast quantities of written data. Instead, she reminds teachers that they are professionals and know their children. She states: “Together we need to take back ownership of our profession and operate from a position of confidence in our pedagogy, rather than from a position of fear and top-down pressure” (Ephgrave, 2018 p135). This revolutionary statement gives some hope that teachers may be able to resist the control and regulation of the data-double and take back control of their profession.
4.12 Analysis of the paper

The focus of the article is on the first two research questions. I will evaluate how these questions are answered in the following section. This will be followed by an evaluation of the development of the doppelganger character in this paper.

4.12.1 Research question 1: How does datafication manifest itself in early years?

The impact of datafication on pedagogy is explored through the doppelganger as method approach. The questions asking how the data-doppelganger completes the ego, reveals the repressed desires of the id and regulates subjects highlight the impact datafication has on pedagogy. This can be seen most clearly in the section focusing on the doppelganger as id. Here, I argue that play is suppressed as a dangerous, id driven activity. As it is difficult to control and measure, it does not easily produce useful assessment data and is therefore not promoted. Direct teaching on the other hand, as a one directional, measurable activity, is promoted as a desired pedagogical approach. Datafication therefore impacts directly on pedagogy as that which can be measured is privileged while learning activities which are more difficult to measure are marginalised.

4.12.2 Research question 2: How does datafication impact on subjectivity?

The second research question is more prominent in this paper and constitutes the main focus of the research. I explore the impact of datafication on both child and teacher subjectivities through the exploration of the function of the doppelganger in constructing subjectivity.

Teacher subjectivity is examined in the doppelganger as ego section. Here, I argue that the formulation of child data-doppelgangers enables the teacher to know themselves. Without this data, they are unable to evaluate their own practice. The production of good data therefore becomes the main focus of teaching as without it, the teacher has no value. The doppelganger as ego section develops this further, arguing that datafication leads to a loss of teacher agency. Their practice is limited to
activities which produce data. The freedom to follow the existing curriculum, to promote play-based learning and to complete observational assessments are restricted in the vision of early years education proposed in *Bold Beginnings* (Ofsted, 2017)

Child subjectivity is also explored in the doppelganger as ego section. I argue here that the normalisation process involves children seeing themselves as objects. They are compared to normative expectations on entry into the education system. This awareness of themselves in relation to other school children impacts on subjectivity as they become aware that certain behaviours and skills are more valued than others. They evaluate themselves as objects, judging themselves in relation to norms. For some, this change in subjectivity can result in a reduction in wellbeing as it impacts on the child’s self-esteem. The agency of children is also impacted by datafication as the child must regulate the movement of their body. Play is restricted and instead, children must sit at tables using pencils and exercise books.

4.12.3 The development of the doppelganger

This paper builds on my previous published article (see pendant 3) in which I introduce the idea of the data-doppelganger. The doppelganger in pendant 3 is a data-doppelganger, created from the vast quantities of data collected by the teacher. It has an emerging agency as it is seen as more authentic than the embodied child. It is a projection of a troubled mind, a ghostly double rather than a simple replication in data. In this paper, I develop the character of the doppelganger much further.

The examination of the doppelganger in gothic literature and psychoanalysis led me to conceptualise it as a kind of monster. Although I use the term “ghostly double” in the final version of the paper, this was a recommendation of the editor, and I now feel that the word “ghostly” is not correct. The double to me was not shadowy or ghostly, it was as real as the embodied subject. The doppelganger in this paper is a monster who enacts a destructive and damaging change on the subject. Doppelgangers in film and literature are rarely “ghostly”. They are usually indistinguishable
from the subject in terms of physicality. It is their behaviour which differs, not their appearance or substantiation. I focus in this paper on the damage caused by the doppelganger. Datafication for me becomes personified in the form of the monster doppelganger who alters teacher and child subjectivity, destroys wellbeing and casts aside long established approaches to early years pedagogy. This relates back to my experience of suspension, as I felt at the time that I had been damaged by datafication. It became a malevolent force, which removed my agency and transformed subjectivity. The exploration of this monster-doppelganger also enabled me to explain the disintegration of the self. The character of William resonated with me as I felt that my agency had been denied. Like him, I wanted to kill the doppelganger but realised that this was not a possibility in the datafied world.

Alongside this conceptualisation of the doppelganger as a monster, is a quite different conceptualisation of datafied self as a cyborg. While the doppelganger is a second version of the self and so expresses the split nature of the subject, the cyborg is a more coherent subject who has incorporated additional components. The technology aspect of a cyborg cannot exist without the host body. It is a fusion rather than a division. On reflection, I feel that the cyborg expresses a coherence of self which I desired but did not feel. At the time, I felt that a coherent self was possible, that datafication had destroyed the coherent self and perhaps this aspect of the cyborg attracted me to it. The cyborg does however express the location of the doppelganger within the subject. It is an essential part of the subject, a development away from the externalisation of the doppelganger expressed in pendant 3, where it is more like a projection outside the child.

Following on from the conceptual work represented in pendants 3 and 4, I moved to a more active phase of the thesis development in which I took part in a research project. The project aimed to investigate the third research question, resistance to datafication, and is outlined in the next pendant.
Pendant 5: Using Community Collaboration to Improve the Assessment of Roma Children who are New to English
5.1. Introduction

This pendant explores the construction of a participatory action research project entitled *How can community collaboration improve the assessment of Roma children who are new to English in early years?* Returning to the Khipu metaphor, it tells the story of the design and creation of the research project pendant. It begins with the initial design of the pendant in terms of the ideas which led to the project. Following on from this is the choice of threads, which looks at the rationale for the selection of field, participants, and methods. Interwoven into this section is the choice of weave, which examines the approaches to methodology selected. The process of weaving follows, which documents the data collection process. The penultimate section reflects on the weaving process, evaluating the effectiveness of the project and the final section focuses on reading the pendant, exploring my approach to data analysis and positioning the pendant as part of the khipu as a whole.

5.2. The design of the pendant

Towards the end of my first year of doctoral studies, while writing my first published work, *Constructing deficit data-doppelgangers* (see pendant 3) I conducted a small pilot study as part of the professional doctorate requirements (see Appendix D). In line with the topic of the paper, I chose to investigate the impact of datafication on young bilinguals, interviewing two members of staff in a reception class about their bilingual pupils. The research questions for this study were:

1. How is the child constructed in the data system?
2. How is the child constructed in the mind of the teacher?
3. How does the teacher account for her use of the online tracking system?
I was particularly interested to find out how teachers accounted for the impact of datafication. I wanted to compare the view of the child in relation to quantitative data (the doppelganger) and the view of the child seemingly constructed in the mind of the teacher from the continual formative assessment conducted as part of the teacher’s role. I found that the participants were reluctant to admit that their data did not tell the same story as their ongoing formative assessment. They appeared to want to believe that their data system was aligned with their teacher knowledge and appeared to be uncomfortable with the thought that perhaps the data system gave an alternative truth.

This initial pilot study marked the start of the research project design. I realised from interviewing teachers that interviews could be limiting. I did not feel that the participants were comfortable talking to me and there was a lack of trust between them as participants and me as a researcher. I was very aware of the power dynamics and the limitations this put on the conversation. This led me to the realisation that my research needed to involve building strong relationships with participants over a long period of time. I also wanted to look for a research methodology which would challenge the power of the researcher. The pilot study therefore, helped me to know what I did not want to do in terms of the research process.

The focus of the pilot study- the impact of datafication on young bilinguals, remained as I began to explore alternative forms of research. My interest in young bilinguals had been influenced by the experience of family members who moved from Mexico to England. They related to me that when they arrived in England, their 7 year old son found adjusting to school very difficult. In Mexico, he had spoken three languages: English and Spanish at home and German in his preschool setting. He was viewed as a capable child and was very happy in his preschool. In line with many other countries outside the UK, preschool did not focus on learning to read and write, but on play-based experiential learning and the development of skills rather than knowledge (OECD, 2017). When this child started in an English year 2 class, he found that his bilingual skills were not valued and
that he was seen as a failure because he could not read and write. He was subject to an intervention plan which involved intensive support from home to “catch up” with his peers. This had a significant negative impact on the child and his parents which is still seen today, 6 years later. I had initially considered using this child as a case study. I moved away from this however, as he was 9 years old by this time and I wanted to focus on the early years.

5.3. The choice of threads

The first iteration of my research proposal consisted of working in a reception class for a year. My research questions in this draft proposal were very similar to the overall thesis research questions:

1. How does assessment contribute to datafication?
2. How does datafication impact on child subjectivities?
3. How does datafication impact on pedagogy?

I planned to select a school in which datafication could be seen in action and document this through ethnography. I focused on unmasking political violence as I had done in the deficit doppelgangers paper (see pendant 3).

5.3.1. Selecting the field thread

A visit to “Pine Tree school” (pseudonym) marked a change in the direction of my study. I had encountered the school as part of my role as a teacher educator. A group of final year teacher education undergraduates and I visited a number of schools in Bradford as part of a teacher recruitment drive led by Bradford Council. The school made a significant impression on me. I noticed that this school felt different to all of the other schools I had visited. The atmosphere in the school was relaxed and happy, with both staff and pupils appearing to be very passionate about their learning. The relationship between staff and pupils stood out as respectful yet close. One particular moment encapsulates this, which I will relate below. The students and I were in the year 6 classroom listening to a talk given by the assistant headteacher about the school. While the teacher was presenting, we noticed a number of year 6 pupils outside the
door. The teacher opened the door and smiled at the pupils, asking what they wanted. They then came into the classroom to retrieve some items. I reflected that in most schools, the year 6 pupils would have been expected to wait until the presentation was finished. I may have expected there to be a degree of frustration communicated by the teacher that her presentation was interrupted. Instead, the teacher welcomed the pupils into the classroom and did not communicate any negative emotions at all. This indicated to me that there was a high level of mutual respect and a deep relationship with the pupils. The children appeared to be the priority at this school, rather than the teachers or processes.

Pine tree school also fitted my requirements in terms of diversity. The school is located in an area of high deprivation and poverty (Communities and Local Government, 2019). It is very large and occupies two sites. The larger of the two sites is a newer building which houses about 450 children. The other, smaller site is one mile away and is a Victorian building. About 250 children attend this site. It has an ethnically diverse population with the majority ethnic group being children of Pakistani origin. Eastern European Roma children make up a quarter of the pupils, being the second largest ethnic group. The high levels of bilingual children meant that I could focus on young bilinguals as planned.

The fact that this school had a child-centred ethos and appeared to be resisting datafication led to a change of direction in my research design. I realised that researching the negative impacts of datafication would be less relevant here. Instead, I moved towards exploring counter discourses to datafication. Rather than researching on the participants, I wanted to work in partnership with the school. For this, a new approach was required and I began to consider the possibility of participatory action research (PAR), which I discuss in depth later in the chapter. The action aspects of participatory action research appealed to me as I wanted to enact some change to improve the experiences of the children I would be working with. I realised that social justice was an important driver for me, which related
to the final research question of my thesis: How can early years teachers resist datafication?

5.3.2. Developing the research questions thread

As the design of the research project progressed, the research questions changed in response to the focus. The move away from documenting the negative impact of datafication to focusing on resistance to datafication led to 4 new questions:

1. How can settings resist the pressures of datafication in supporting the learning and development of young bilinguals?
2. How can settings disrupt the process of datafication in their work with young bilinguals?
3. How can we not focus on the data, but focus on the individual needs of each child?
4. How can we support children’s language development in both languages?

My overall aim moved towards improving the experience of young bilinguals as I engaged with the literature of activism and participatory action research. These new research questions marked a slight move away from datafication and I wondered at the time, if I had lost my focus on datafication as a result of the focus on activism.

Following visits to Pine Tree School, I became more aware of the Roma community. I knew very little about the community prior to visiting the school and began reading to increase my knowledge of this cultural group. Conversations with the head teacher, led to a decision to work with members of this community as part of the project, which led in turn to a modification of research questions. I moved towards one main research question with two sub questions.

1. How can assessment demonstrate the capabilities of young Roma children?”
   a. how are Roma children currently constructed by the teacher?
   b. How are Roma children currently constructed in data?

The focus here was on assessment, which related more closely to datafication. As I continued to read about Roma culture and the education
of Roma children, I developed an understanding of the importance of intercultural understanding. The role of the cultural mediator and the value of community collaboration was an emphasis of a number of studies (Klaus & Marsh, 2014; Lalueza et al., 2019; Penfold, 2016; Silva et al., 2020). This led to a final modification of the research question, which finally emerged as

How can collaboration with the local community improve the assessment of Roma children who are new to English in Reception?

5.4. Determining the choice of weave

Having decided on a focus for my enquiry, my next step was to ensure that my paradigm was a good fit.

5.4.1. Post-structuralist paradigm

The desire to enact change marked an ontological shift for me. Prior to beginning work on the research project, my ontological and epistemological assumptions had emerged from a post-structural paradigm. My concept of reality had changed since becoming an academic, moving from a fixed view of reality as something which exists outside the mind to a post-structuralist view of reality as something which is perceived by the subject in a unique way. For me, reality thus exists more in the mind of the perceiver than outside the mind. This reality changes in response to the emotions, experiences, interactions and memories of the perceiver (Scott & Usher, 1996). It is constantly being constructed, reconstructed and co-constructed with others. The way reality is perceived in the mind of the subject and the discourses concerning this reality create and mediate the experience itself.

My view of truth or knowledge was influenced by my reading of Foucault. To Foucault, the idea of scientific truth as something which is “discovered” is flawed (O’Farrell, 2005). He sees truth not as a neutral phenomenon but as mediated by culture. In his debate with Chomsky, he describes it as “a thing of this world: it is produced only by virtue of multiple forms of constraint” (Chomsky and Foucault, 2006 p189). These constraints define what will be construed as truth in any particular culture. Foucault seeks to
question the established concepts of truth in order to reveal a different kind of truth. His drive to unmask “political violence” (Chomsky and Foucault, 2006 p41) motivates Foucault to expose the systems of power which regulate truth. This same drive motivated my own research. The desire to explore the limitations on truth, the exercises of power, in the form of policy, which regulate our notions of truth and unsettle established conceptions in an attempt to unmask political violence was a key motivation for me. Foucault saw truth as being created by and a creator of power, indeed, he stated “truth is already power” (Chomsky and Foucault, 2006 p171). Like Foucault, I sought to expose the systems which regulate truth in order to unmask political violence.

5.4.2. Critical paradigm
Gaining an understanding of subjectivity and unmasking political violence (Chomsky & Foucault, 2006) did not go far enough for me in terms of research impact however. I wanted to work in partnership with Pine Tree school to make a difference in the lives of others and to do this, I drew on the critical paradigm. The critical paradigm has grown out of Marxist thinking, having its origins in the Frankfurt School (Crotty, 1998). For Marx, interpreting the world in different ways was not enough: he wanted to change it (Marx, 1961). This changing of the world needed to start with circumstances of existence as for Marx, “Life is not determined by consciousness but consciousness by life” (1961 p90). Changing the way we think about something, changing subjectivity, changing discourse, could only happen when the conditions of people’s existence were changed. Habermas however, challenged this, arguing that the fusion of action and theory in praxis could not be grounded in Marxian theory. He reworked Marx’s ideas positing a difference between the instrumental action of labour and the communicative action of social interaction. These two kinds of action, along with a focus on power and domination gave rise to Habermas’s threefold typology of human existence. (Crotty, 1998). He divided these systems into three cognitive interests, each emerging from a different form of action. The cognitive interest of prediction and control led to the empirical paradigm and existed in the realm of instrumental action.
Understanding and interpretation led to the interpretivist paradigm and existed in the realm of communicative or practical action and the cognitive interest of emancipation and freedom led to the critical paradigm existing in the realm of emancipatory action (Habermas, 1986). Looked at through this lens, I had moved from the understanding and interpretation of the interpretivist paradigm to the focus on emancipation and freedom of the critical paradigm.

Freire’s (1972) work focuses on emancipation and freedom and emerges from the critical paradigm. He argued that "reflection without action is empty verbalism" (p147). Consciousness impacts on reality because reality is perceived through the mind of the perceiver. To change consciousness through critical reflection is already action because if consciousness changes, reality also changes. This, in essence, is praxis, which Freire defines as "reflection and action upon the world in order to transform it" (1972 p28). This in turn links to Habermas (1986), who defined stages of ideology critique. These were:

1. Description and interpretation of the existing situation
2. The conditions of possibility for the ideology
3. A plan for action
4. An evaluation of the action

Here, an interpretation of the current situation precedes action to change the situation. Action and reflection work together to enact change. My work emerges form a critical paradigm. My aim was to describe and interpret the exiting situation of educational datafication which I had observed in practice. The thread of datafication is explored in my paper Constructing Deficit Doppelgangers (see pendant 3). The conditions of possibility for datafication are then examined in the paper the data-doppelganger and the Cyborg-self (see pendant 4). Following on from this reflection, I moved to the action phase of research which involved planning actions to enact change in Pine Tree School.
5.5. The choice of weave

The choice of weave looks at the approaches to methodology selected, as this determines how the research project was constructed. This section focuses in particular on participatory action research and ethnography.

5.5.1. Participatory action research

The dominant of the two is participatory action research, a key methodology emerging from the critical paradigm. Action research involves groups of people working together to develop practices which will be transformative and emancipatory in their purpose (Reason & Bradbury, 2008). This seemed appropriate for a partnership approach to research, which I envisaged with Pine Tree School. I wanted to use my teaching experience as part of the research project, working as part of a team of educators rather than observing without participating. Reason and Bradbury (2008) describe participatory action research as a "living inquiry" (p1), a generation of knowledge which is rooted in experience, is continually developing and has the purpose of changing the lives of the participants. Key aspects of action research noted by Reason and Bradbury are that it is a set of practices which responds to the needs of a community or organisation; it involves collaboration with people which opens up "communicative spaces" (p3) in which change can occur; it involves diverse ways of knowing, in terms of both the enquiry process and communication of findings; it is oriented around values, leading to improvements in the experience of human beings; it is an emergent, living process which evolves rather than being pre-determined and is in a constant state of flux. I was aware that there were a number of diverse cultural groups at Pine Tree School. It was important to me to work alongside staff who had knowledge of the local community. I also wanted to involve members of the local community in the research team to open up communicative spaces and enact change together. Without this community involvement, any change would be imposed on the community from outside rather than generated from within.
Participatory action research is a form of action research in which participants are co-researchers who plan and evaluate actions together. PAR actively challenges traditional empirical approaches to research in which people are treated as objects of research. Rather, they are actors in the process of research, or in fact "the stars of the whole process" (Swantz, 2008 p33). Swantz (2008), in her discussion of her PAR project in Tanzania notes that the members of the community who form part of a PAR team are not "informants", as this would indicate a distance between the researcher and the local partners. Rather, knowledge is shared between the scholar and the community members, with all co-researchers learning from each other. She acknowledges that the researcher cannot know the "life world" of the co-researchers. In PAR, the scholar co-constructs knowledge with co-researchers by participating in their world. All participants learn from each other giving scholars the opportunity to learn about the life world of the community members and community members the opportunity to learn from the researcher. In working with a PAR team, I would learn from other team members and they would also learn from me.

As the research project progressed, I moved from working with a research team of school staff to working with Juice, a member of the Roma community. The work with Juice continued after the school phase of the project had finished, when we began to work together to understand the experience of Roma children in school. This was documented in our book chapter A Romani analysis of English preschool education (see pendant 8). The work with Juice can be seen as an example of critical participatory action research (CPAR). Fine and Torre (2021) define CPAR as being PAR which specifically focuses on power and injustice by researching with members of marginalised groups who have traditionally been the object of research. This approach attempts to democratise and decolonise research through a process of “praxis with communities under siege”. As Roma groups have been named as the “most excluded ethnic minorities in Europe” (Klaus & Marsh, 2014 p338), the Roma communities in the UK could certainly be described as a “communities under siege”. One of the
democratising and decolonising aspects of CPAR is that it can bring to light marginalised discourses, presenting an alternative viewpoint of the research topic as a way of enacting change. Fine and Torre advise researchers to “get beneath the dominant stories and bring to the surface important counter narratives and knotty contradictions in your work” (2021). Juice and I worked together to communicate counter narratives and in so doing, to change approaches to educating Roma children in English schools. In this way, the research project moved from PAR during the initial phase of the project to CPAR in the subsequent phase.

5.5.2. Ethnography

Although I had decided upon PAR as my main approach to research, I wanted to include aspects of ethnography. Hammersley and Atkinson define ethnography in broad terms as “participating, overtly or covertly, in people’s daily lives for an extended period of time, watching what happens, listening to what is said, asking questions” (Hammersley & Atkinson, 1995 p1). The approach grew out of anthropology as a way for researchers to gain a deep understanding of the cultural worlds of others. As my main research question for the enquiry was “how can collaboration with the local community improve the assessment of Roma children who are new to English in Reception?”, an understanding of the culture of both the school and the community were important to me. A shorter definition of ethnography also proposed by Hammersley and Atkinson is “participant observation” (p1). Observation was an important aspect of the study as I wanted to find out about the existing school and community cultures. Participation in the culture of the school however, was also a key aspect as I wanted to take an insider view, participating in school life as well as observing.

Willig and Stainton-Rogers (2008) outline several important features of ethnographic research. Firstly, it is essential to understand culture to understand a social group. I felt that I needed to be a part of the school to understand the school. Secondly, it seeks an insider’s perspective. I
wanted to be a teacher within the school as this would help me to understand the perspective of other members of the school team. Thirdly, the case must be studied in its natural setting. The context of the study was crucial as data must be socially situated. The fourth feature is that ethnographic studies are usually loosely planned and evolve over time. My broad research question lent itself to this loose form of planning as I did not know in advance what actions would be developed over the course of the project. I wanted it to evolve naturally as the group worked together over the year. Willig and Stainton-Rogers’ next point is that ethnography is a multi-method form of research. LeCompte and Preissle (1993, quoted in Cohen et al, 2011) describe the ethnographer as a“methodological omnivore” (p232). I did not want to limit myself to one particular research food, but rather to use whatever I felt was appropriate at the time. The sixth feature is that ethnography generally involves prolonged periods of data collection. I wanted to observe the whole arc of a primary school year from September to July. This would enable me to observe changes in a longitudinal way and would give me time to become an insider. The seventh and final feature discussed by Willig and Stainton-Rogers is the importance of reflexivity. I understood that my presence in the classroom would impact on the social world which I was researching. This was essential to me as I wanted to enact change.

5.5.3. Ethnographic participatory action research

Neither participatory action research nor ethnography seemed to fully describe what I wanted to do in Pine Tree School. I wanted to enact change through action research; I wanted to work with participants on a group project together and I wanted to be immersed in the life of the school as an ethnographer. Ethnography seemed to be the best approach for understanding the social world of school and therefore exploring datafication and resistance to datafication. PAR however, seemed the best approach to working with members of the community to promote collaboration and develop new forms of assessing children. An answer to the dilemma of whether I was an ethnographer or an action researcher came when I read Katie Van Sluys’s (2010) work. She described her
research project with a group of secondary students in the US as “collaborative, ethnographic, participatory action research” (p139). In summary, Van Sluys designed a participatory action research project with a group of participants, which included 6 children. The children worked with Van Sluys to introduce a parent literacy project with bilingual parents. All participants collected and analysed data, being involved in all aspects of the research process. Van Sluys was motivated by a desire to take a democratic approach to research and learning as well as to give a voice to marginalised groups of people and to enact social change. The study resonated with me as the situation was similar to mine. Van Sluys was also a teacher educator, who had an existing relationship with the school through her role as an academic. The school had a high number of new to English learners and was in an area of deprivation very like Pine Tree School. She was also interested in challenging notions of learning as transference of knowledge and to position bilingual learners as constructors of knowledge rather than failing students. The use of the terms “ethnographic” and “participatory action research” in Van Sluys’s (2010) work incorporated the aspects of each approach which I wanted to use in my study. I wanted to work with participants and to include them in all aspects of the research project. I hoped to enact change through actions and I wanted to immerse myself in the life of the school through ethnography. Ethnographic participatory action research therefore, was the term which best matched my project.

5.5.4. The action research cycle
The action research process was influenced by Lewin’s (1946) codification into four main stages: planning, acting, observing and reflecting. The participatory action research team were involved with all aspects of the cycle, although not all members participated in every aspect or every cycle. We were also influenced by McNiff’s (2013, p. 90) development of Lewin’s model in which she describes the basic action research process as follows:

- we review our current practice
• Identify an aspect we wish to investigate
• Ask focused questions about how to investigate it
• Imagine a way forwards
• Try it out, take stock of what happens
• Modify our plan in light of what we have found and continue with the action
• Evaluate the modified action
• And reconsider what we are doing in light of the evaluation

I chose to spend a day a week in school for a year. The beginning of the cycle, in which we discussed and reviewed current practice began during visits to the school prior to the main research period. This continued during the action research project as members of the research team discussed practice informally. These reflections and discussions were recorded in my field notes. In addition to this informal and unstructured review of current practice, the team also met regularly to review and plan actions. The first of these meetings involved reviewing current practice in relation to the research focus on improving assessment of Roma children through community involvement.

The process of identifying areas we could change and considering how we could enact change also took place both in the informal conversations we had with each other and the more formal meetings. The regular meetings gave us an opportunity to focus exclusively on the action research process and to share our emerging ideas and reflections with each other. Some members of the action research team did not engage with me regularly at school and so needed to be given opportunities to reflect and plan with the teaching team.

I planned an agenda for the team meetings which involved reviewing the current actions, considering emerging aspects we wished to investigate and imagining new ways forward. We worked on more than one action simultaneously, as several areas for investigation and a range of actions emerged from our discussions. We did not want to limit ourselves to focusing on only one action at a time. This focusing on multiple actions
meant that there were multiple action research cycles happening at the same time. McNiff (2013) reflects that action research is not a sequential process and that it can be more fractal in nature than circular. Like her, I saw action research as a “spontaneous, self-reflective creating system of enquiry (p67). Rather than circles of action research we created spirals which “unfold from themselves and fold back again into themselves” (p67). McNiff also notes that it is possible to address multiple issues while remaining focused on one. We addressed several issues, which will be outlined below, but all were focused on the same one issue of improving the ways of assessing and knowing Roma children.

One of our first actions was to implement a new approach to pedagogy called “in the moment planning” (Ephgrave, 2018). This is an approach in which the adult does not plan focused activities for the children. Instead, the role of the adult is to observe children in their child-directed play, looking for “teachable moments” (p97), which are then utilised as opportunities to support children to develop their thinking further. This child-centred approach to teaching and assessment became the main action of the project as it gave us alternative ways of assessing the children. The approach continues to be used at the school, indicating the lasting legacy of the project.

Related to this was an action to introduce children’s literature which was relevant to the Roma children. I had noticed that the school reading scheme featured stories which bore little cultural relevance for the Roma children. I looked for books written by Roma or Gypsy authors and found an author called Richard O’Neill. I introduced one of his books entitled Ossiri and the Bala Mengro (O’Neill, 2016) to the children and found that the pictures inspired meaningful discussions about home life. The children particularly responded to an illustration depicting Gypsy musicians as all of them could talk about the experience of listening to Roma music at home. I had not anticipated the impact this would have on assessment. The introduction of culturally relevant literature led to a deeper understanding
of the Roma families and therefore improved the assessment of the Roma children.

A further action was to trial the use of Seesaw (SeeSaw, 2018), an app which enables schools and parents to work in partnership. This action was not successful because we were unable to effectively communicate with parents using the free version. Another action was the deployment of the Polish bilingual support worker (Amelia) in the class. She communicated with the Roma children in Czech and Slovak. Some children clearly benefitted from this, as Czech was their first language. Others, however, did not speak the language of the country of origin, instead, speaking Romani at home. For them, the communication with Amelia was limited. An additional benefit of working with Amelia, however, was an improved communication with Romani parents as all could communicate effectively with her in Slovak or Czech.

A final action was to find a Roma liaison worker to work at the school. I had read that Roma liaison workers could be very helpful in bridging the cultural and linguistic divide between the school and the Roma community (Bibby et al., 2017; Wilkin et al., 2009) and had hoped that one of the Roma parents might be interested in this role. After several months of enquiring, we had still not managed to find anyone who was interested. I did however, make contact with Gyula (aka Juice) Vamosi, who became a member of the PAR team and advised throughout the project. He later became employed by the school as a Roma liaison worker, meaning that this action took place after I had left the school. He has continued to work for and with the school, developing relationships with Roma families and school staff, which is indicative of a lasting impact of the project.

5.5.5. Threads of the research team participants

The participatory action research team developed and grew as the project progressed. Initially, the key members were (anonymised):

Tania-reception teacher

Kate-the head of school,
Hannah-new to English lead teacher
Angela-learning mentor
Amelia- Polish bilingual support worker
Sophie-teaching assistant

Later, the team was expanded to include a member of the Roma community who acted as an advisor throughout the project. I have included his real name, Juice Vamosi, with his consent, as he was an advisor and co-author. He is referred to as “Juice” rather than “Gyula” as he considers this to be his real name. Juice explained to me that in the Roma community, people are given names by their families and friends which may be very different from their official names. Roma people consider these names to be their real names as they reflect the personality and characteristics of the individual. In keeping with this tradition and in agreement with Juice himself, I will refer to him as Juice throughout. The exception to this is the book chapter (see pendant 8), in which we decided to adhere to academic conventions, using the name “Gyula”. I have also used Kate’s real name as she co-authored Resisting datafication through in the moment planning (see pendant 6) with me.

In this section I will give a brief summary of the role of each member of the participatory action research team.

I was the lead academic on the team. I am a white British woman with a British Dutch heritage and have grown up in the North West of England. I have worked for Leeds Beckett University as a teacher educator since 2016 and prior to this was an early years teacher for 14 years. My role within the school was of additional teacher, working alongside Tania and Sophie every Friday morning for a year.

Tania was the class teacher. She comes from a white British family and has grown up in the local area of Bradford. She had trained to teach at the school and had qualified in the Summer of 2018, just before I started the project. She was mentored by a senior member of staff within the school.
Prior to becoming a teacher, Tania had worked as a teaching assistant at the school for several years. Tania was based at the smaller school site. Kate was the head of school. She is from a white British background and has grown up in Yorkshire. As the school was very large, there was a leadership team consisting of the principal, the head of school and a number of assistant head teachers. Kate’s office was located at the smaller site, next to Tania’s classroom. Kate was seen as the head teacher at this site while the principal mainly worked at the larger site. Kate had been at the school for 11 years. She was a part of a team of staff who took over the leadership of the school after it failed an Ofsted inspection in 2008. I used Kate’s office as a base from which to write my field notes which gave us many opportunities to talk and reflect on the project.

Hannah’s role was to lead the education of children who were new to English at the school. Hannah is also from a nearby rural part of Yorkshire from a white British background. During the mornings, she taught a group of children, focusing on supporting their developing English skills, taking a bilingual approach. She was supported by two Polish teaching assistants who also worked with small groups of new to English children.

Angela was a learning mentor at the school. She is from a white British background and has grown up in the local community close to the school. Her role was to liaise with the parents and the community. She visited them in their homes, evaluated family needs, met with them before and after school, led training and sessions with families and supported teaching staff. She was based at the smaller site.

Amelia was a bilingual support worker. She is from a white Polish background, growing up in Poland and moving to the Bradford some years ago with her family. As well as Polish and English, she also spoke some Czech and Slovak. Amelia’s role was to translate for children and families. She also taught new to English children, under the guidance of Hannah. She supported children in the classroom, speaking both Polish and English as needed. As the year progressed, Amelia was deployed to
spend one afternoon per week in Tania’s class, working with the Roma children.

Sophie was a teaching assistant in the reception class with Tania. She is from a British Pakistani background and has grown up in the local Bradford community. She had been working at the school for a number of years, but this was her first year in reception. She had a child in the class so was also a parent. Sophie spoke Urdu and English but mainly spoke English at school. She supported Urdu speaking parents by translating for them before and after school.

Juice is a Roma activist who acted as a cultural guide and advisor. He is from a Roma background, growing up in Hungary. He moved to England with his family several years before and now lives in Oldham. I met him through a mutual friend in February 2019, 5 months after the project started. Although he did not live within the school community, he was able to advise me on Roma culture. I met with Juice regularly and communicated through text. As the project developed, he became more involved and, in the summer of 2019, I asked the Principal if there was funding to employ Juice as a Roma Liaison worker. Funding was secured and Juice has been working at the school since then. Juice is also a film maker and has worked on several documentaries about Eastern European Roma people in the UK. Juice and I have continued to work together since my ethnographic work in the school finished.

5.5.6. Preparations for the pendant
I designed a short pilot study prior to my main data collection at Pine Tree School, which took place in June, 2018. The aim of this study was to give me some experience of writing field notes and to establish the existing situation in the school with regards to datafication. I visited the school for three full days. On the first visit, I interviewed staff using the same questions I had used in the first pilot study. I recorded these interviews and made some notes. During the second visit I met with a number of staff members and made field notes. The third visit involved going on a trip to
Scarborough with a group of new to English children and some staff members.

The interviews with staff produced some very useful data, which I later used in the paper *I feel like two different teachers* (see pendant 7). I felt that the staff were much more open with me and reflected deeply on their practice. The process of audio-recording however, revealed some limitations as I found transcription very time consuming and was aware that the process of audio recording impacted on the teacher’s willingness to be open. I noticed that although they were more open than the initial pilot study participants, frequent glances as the recording device indicated that there was some regulation of speech which may not have occurred had I taken notes rather than recorded.

The practice field notes taken during the second visit were very helpful. I discovered that the process of writing notes at the end of the day helped me to analyse my observations. In this way, description and analysis happened simultaneously. I experimented with writing structures, finding that the use of headings and summaries helped to distil my thoughts and made the notes easier to read. I also learnt from this pilot that I needed to set aside a significant amount of time during the day to write field notes as I would not have time outside my research day each week to do this.

The three visits to the school also helped me to gain a much deeper understanding of the culture of the school. I discovered that there was far more evidence of datafication than I had expected and that attainment was very important to the head teacher. I began to see the school in more realistic terms, identifying the limitations and weaknesses which I had been unable to see prior to this. This knowledge of school culture continued to develop as I engaged in the main phase of the research project and became a member of the school staff team.

I planned to visit the school every Friday for a year, beginning in September 2018 and ending in July 2019. I would have liked to spend more time in the school but was unable to do this due to my employment commitments. I planned to act as an additional teaching assistant in a
reception class. This class consisted of 26 children aged 4 and 5 years old. I would be working alongside a teacher (Tania) and teaching assistant (Sophie). I had been asked to focus on the 6 Roma children so planned to work more with these children than the other members of the class. During the afternoons, I would write up field notes and hold research team meetings. The class in which I was to work was in the smaller, Victorian site. This area is more deprived than the other, larger site and has a bigger Roma population in the local community.

5.6. Choice of method threads

As this project was ethnographic in nature, naturalistic participant observation was the main strategy for collecting data. I decided to use a wide range of observation techniques, including field notes, records of meetings, and observations in the classroom. I also planned to use observational data collected as part of my role as an additional member of staff. These would take the form of written observations of children, photographs and audio recordings. As an addition to the observational tools listed above, I also used unstructured interviews to supplement my data collection. I will explore each of these instruments in turn in the following sections.

5.6.1. Field notes

Mills and Morton note that “methods play a role in making the worlds we inhabit” (2013 p2). The way we interpret the world we observe, the stories we tell about it, create the reality we are seeing. The writing of field notes plays an important part in this construction of reality as the writing process helps the researcher to evaluate what has been observed. Thinking happens through writing, making the act of writing field notes central to the research process.

I explored various approaches to writing and decided that I would write and analyse simultaneously. I felt that the analysis and the writing of the notes could not be kept separate. As I think through writing, I intended to analyse the notes as I wrote them. I also reflected that I think through
reading and would therefore analyse as I reread notes. Luker (2008, cited in Mills and Morton, 2013) recommends writing before speaking to others. I chose to reject this idea however, as I wanted to make meaning through dialogue. As this was participatory action research, I felt that dialogue with others would provide a means by which the narrated thoughts and feelings of other participants could feature in the field notes. I had chosen not to ask other participants to write field notes as I felt that this would be too demanding on their time. There was no funding to release other staff from their duties and I did not feel that it would be ethical to ask them to spend their own time writing field notes for this project.

The question of which stories to tell from the chaotic, unstructured flow of life was influenced by Wragg’s (1994) work on critical events. He discusses this in the context of classroom observation. A critical event, for him, is one in which the observer sees something particularly significant or illuminating. These events are critical because they are particularly revealing or novel. I chose to select events from the day which seemed particularly significant to me. This reflexive position meant that I was selecting events based on my construction of reality and in doing so, was making those events significant. I chose not to make notes during the day, but to reflect during the afternoons so that I could sift through my memories of the morning to evaluate which events seemed significant to me.

In addition to selecting critical events, I also chose to create a summary of analysis in the form of an analytical memo. Mills and Morton (2013) describe this as a tool for analysing fieldnotes as they are being written. It is a short piece of writing which distils the main findings and thoughts about an event. They suggest that this can help to make links between analysis and literature and to identify patterns and themes.

I planned to write notes largely in digital form using Microsoft OneNote on my work iPad. This device was password protected and all data was backed up to my University OneNote account. The sections of the
OneNote digital notebook were also individually password protected to ensure data was kept secure.

After researching field notes, I decided to act on Mills and Morton’s suggestion of trialling field notes. I visited the school for a day and spent the evening writing notes. This process helped me to develop an approach which would work in practice. I selected critical events from the day and wrote about each event in a narrative form. I wrote in the first person, including my own feelings and response as well as an account of my observations. I used subheadings for these sections which helped to structure my analysis. I concluded the field notes with an analytical memo in the form of a bulleted summary of the main observations from the day.

5.6.2. Evaluation of field notes
The strategies developed in the trial were used throughout my research project. I wrote every afternoon using the subheadings, critical events and some analytical memos. I also included photographs when necessary and wrote about the photographs in my notes. I often discussed the critical events with Kate, the head of school, as I was using her office as a workspace. Our conversations about the events became a key aspect of the field notes as we worked together to co-construct meaning from the events.

In addition to writing during the afternoons of my school visits, I also wrote additional field notes in other situations. I created a tab in the OneNote file entitled Thoughts in which I recorded my emerging thoughts on the research process. These notes were often made at home between visits. The thoughts occurred in response to reading, conversations with colleagues, training, university teaching and even reading my trainee teachers’ dissertations. They formed a significant section of my field notes.

5.6.3. Records of meetings
As well as writing field notes following my work in the classroom, I also led and attended a number of meetings over the course of the research project. The meetings which were recorded in my OneNote took the form
of research meetings, meetings with colleagues and meetings with other academics. The system of writing about critical events using sub headings did not work for this form of field note. Notes on meetings I led usually started with an agenda. I then took informal minutes of the meetings as we discussed the issues on the agenda. Notes on meetings which I did not lead simply consisted of minutes of the meeting. This form of writing was quite different to the main field notes as I was writing as the meeting was taking place rather than recalling key events afterwards. I read through my notes after each meeting and sometimes added comments and thoughts but essentially, these records were informal minutes.

5.6.4. Classroom observations
To gain a broad understanding of the practice in the classroom, I conducted some classroom observations. I would observe the whole class, identifying significant moments as I observed. These were similar to the lesson observations I conducted as a teacher educator and were used to evaluate teaching and learning. I particularly gained an understanding of the role of the practitioner from these observations, noting the pedagogical approaches and relationships.

5.6.5. Practitioner observations
Part of the role of the early years practitioner is to perform observations of children (Department for Education, 2021). These are used to assess children's developing knowledge, skills and understanding and constitute the main form of formative assessment in EYFS. Observations gave me the opportunity to gather live data in situ (Cohen et al, 2011). It was thus quite different form my field notes, which were written after the event. Cohen et al (2011) argue that observations yield more authentic data as they make use of in the moment reflections on what is being seen. I planned to use observations of children as part of my data collection.

5.6.5. Participant children
During my time at the school, I worked mainly with the six Romani children in the class. I considered these children my key children and spent time observing them, playing with them and developing relationships with them.
Celina was a 4 year old Roma girl. She arrived at Pinetree School without registering beforehand and so was not already in the school system. She had not attended the school nursery (age 3-4) class as most of her classmates had. She arrived speaking no English, using Romani for the first week or two. She was very distressed during the first week of school and cried for long periods. Celina’s parents had been deported to Slovakia and her grandmother was the main carer. She was very slow to learn English but by the end of the year she could speak in short sentences and phrases.

Stefan was a 4 year old Roma boy, the 6th child of 7 children. His family moved to the UK from Slovakia several years ago. They came from Eastern Slovakia, a very deprived area. Stefan spoke reasonably good English. His first language was Romani but his family also spoke Slovak, Hungarian and English. He was a confident child who is a leader among his friendship group. His interests were cars and football. There had been some safeguarding issues with Stefan relating to domestic violence.

Maria was a 5 year old Roma girl, the 7th of 10 children. Her brother David was also in the class, being 11 months younger than her. Her family was very large. There were 14 people living in a 3 bedroomed terraced house. Maria spoke reasonably good English and spoke Czech at home. Maria loved to play school and would often role-play being the teacher.

David was a 4 year old Roma boy, the brother of Maria. He was the 8th of 10 children. David was mainly silent at school and rarely spoke at all. He was in the early stages of learning English. He would speak to Maria in their home language and Maria often translated for him. He was quite reliant on Maria and lacked confidence. He was a very creative boy who loved drawing.

Raddek was a 4 year old Roma boy. He was the older of 2 children. It was unclear what Raddek’s home language was. His English was developing and he was keen to speak English all the time, but it was difficult to understand him. His English was very jumbled and his words were unclear. He may have been speaking a mixture of several languages.
Raddekk had an excellent knowledge of sports cars and liked to play driving games. There had been some safeguarding issues with Raddekk relating to domestic violence.

Borsca was a 4 year old Roma girl. She was the middle child of 3 children. At the beginning of the year, Borsca had almost all her teeth removed because of acute tooth decay. Borsca loved school and spent her time drawing and writing. She was in the early stages of learning English and could speak in short phrases. Her home language was probably Romani but this was not confirmed.

5.6.6. Evaluation of classroom observations

I conducted a number of different kinds of observation while in the classroom. These included extended observations, instantaneous observations, group observations, audio recordings and photographs.

5.6.6.1. Extended observations

In order to assess the children at the beginning of the project, I conducted some extended observations of the key participant Roma children engaged in child-directed play activities. I tried to record their exact words to gain an understanding of their language development. I also noted their actions and social interactions. Dubiel defines assessment as “the knowing and understanding of children” (Dubiel, 2016 p8). This was my purpose in conducting long observations of each child. I needed to gain as much knowledge as possible about each child. Dubiel argues that these extended observations can be useful as they enable the practitioner to explore the child’s learning in more critical depth. The detachment necessary for this kind of observation gives the researcher the opportunity to fully analyse what is happening.

5.6.6.2. Instantaneous observations

Alongside the extended observations, I also recorded instantaneous observations using the school observation sheets or post-it notes. These observations recorded moments which I felt were significant for the individual child. They represented critical events (Wragg, 1994) in the
learning and development of the child. Dubiel (2016) discusses the body of knowledge which the practitioner measures these events against to determine their significance. I noted these moments and identified them as significant amongst all the plethora of other behaviours and actions which could be seen at the time. These observations were useful in tracking the development of each child in detail.

5.6.6.3. Group observations
One of the key actions of the action research project was to introduce in the moment planning (Ephgrave, 2018). As part of this approach, observations of groups of children are used. These are made after the event rather than in situ, to enable the practitioner to engage with the children without being distracted by recording. The detachment required to record observations in situ was a limitation of the extended and instantaneous observations. Ephgrave notes that only a small number of interactions with the children can be recorded but that these can be used to inform parents and document some of the child’s learning. She recommends that “learning journeys” (p108) are used to document the observation, the teaching and the outcome of the interaction between teacher and child. We used group learning journeys to document this observation, teaching and outcome, recoding significant teachable moments after the teaching had occurred. I found these observations useful to evaluate the effectiveness of my teaching and to identify key learning.

5.6.6.4. Audio recordings
In addition to these extended observations, I also conducted audio recorded observations of the key children. Cohen et al (2011) argue that an advantage of audio-recording is that the recording can be reviewed many times and gives a more complete picture of the material. A disadvantage however is the problem of reactivity, where participants react to the presence of the audio device and change their behaviour as a result. I tried to avoid this by recording on the school iPad, without the children being aware that their voices were being captured. This was done
as part of the assessment practices in operation in the school and these conversations were not recorded as data as part of the research project. The resulting audio recordings were transcribed and the recordings themselves kept on the school device. These transcriptions were very useful for evaluating language development. In particular, they helped me to understand the emerging English spoken by the young bilinguals. This language was difficult to understand in situ, but could be deciphered by listening to the recording for transcription purposes.

5.6.6.5. Photographs
I had not asked permission to photograph or video record children as part of this project. I did, however, take photographs and videos in my role as practitioner but these were kept on the school devices. I used photographs of children’s work to evaluate learning. These photographs were sometimes inserted into my field notes and analysed as additional data. Banks (1995, cited in Cohen et al, 2011) argues that images cannot be viewed outside socio-cultural contexts. The images which I took indicate the significance of the subject. They often represented a critical event (Wragg, 1994) or were used as an aid memoire for the event which I then expanded in my field notes.

5.6.7. Unstructured Interviews
In addition to the observational data mentioned above, I also used interviews as a methodological instrument. The interview involves human interaction and as such is intersubjective rather than subjective or objective (Laing, 1967, cited in Cohen, 2013). Knowledge is co-constructed between the interviewer and the interviewee rather than existing outside the participants. The relationship between interviewer and interviewee is essential to the validity of the tool. I had already experienced the limitations of interviews when interviewing participants for the first pilot study. The relationship between interviewer and interviewee was not established and as a result, the participants were not comfortable to express themselves. They did not trust me as an interviewer, an important attribute of the ethnographic interviewer (Cohen et al, 2011)
The three attributes of ethnographers identified by Woods (1986) are trust, curiosity and naturalness. He defines trust as a relationship which transcends the research. The relationship is more of friendship and togetherness where both researcher and interviewee are in pursuit of a common mission. Curiosity is defined as the deep desire to know people, to understand their feelings and thoughts and to hear their stories. Naturalness relates to the willingness of the interviewee to narrate their thoughts and feelings, in a way that they feel is honest. The presence of these three attributes would lead to validity within the interview process.

I wanted the attributes of trust, curiosity and naturalness to be present in my interviews and so took an unstructured approach. In addition to the more natural communication elicited from an unstructured interview, Cohen et al (2011) also note that it is useful when the researcher doesn’t know what they don’t know. I had ideas about what I wanted the interviewee to talk about but didn’t know exactly what it was I was looking for until I found it.

Recording of interviews can either take the form of audio or visual recordings or written notes. Cohen et al (2011) note that all transcription filters out important contextual factors. Audio recordings exclude the visual and non-verbal aspects of the interview. Aspects which can give key information to the researcher. Transcriptions always limit the amount of data recorded and exclude many aspects of the original social interaction. When selecting what to transcribe, the interviewer is already analysing the data, making value judgements about what should be recorded. I chose to use a mixture of both audio and written forms of recording, selecting one or the other depending on the situation.

I interviewed several colleagues and participants as part of the research process. I approached the interview situation with notes on what questions I would ask or which areas I would like to talk about. Interviews were recorded either using an audio recording device or extensive notes were taken during the interview. I found that audio recording was slightly inhibiting and that participants were more guarded and unnatural when
being recorded. The exception to this was when I interviewed Juice Vamosi and his family at home. The interview took over an hour and after a period of time, the participants seemed to forget about the audio recording and spoke in a very natural way. Making extensive notes was also effective but was very labour intensive for me and sometimes made the conversation difficult. It worked very well however, when I was interviewing over the telephone, as I sometimes did with Juice. As I did not need to look at him, I was able to focus on making my notes and listening carefully to what he was saying in order to accurately record his words.

5.7. Reflections on the weaving process

This section reflects on the process of the research project, examining the twists and turns, unexpected developments and the integrity of the project as a whole.

5.7.1. Twists in the weave

As a participatory action research project, I was unable to plan any of the actions in advance as the research team as a whole would determine the actions together. This meant that there were times when I was unsure of the direction of the project and felt that I had lost my way. This was particularly true of the research questions. I began with the main research question of how collaboration with the local community could improve the assessment of Roma children in Reception. Collaboration with the community however, was very difficult to develop as relationships with community members were very limited. I attempted to get to know the Roma families through interactions prior to and subsequent to the teaching day. This was not successful however, as I was limited to one day per week and the language barrier presented a significant problem. The team also worked together to introduce “stay and play” sessions where parents would stay to play with their children. The Roma parents however, did not attend these sessions so they offered no opportunity for collaboration. An afternoon parents’ meeting offered the best occasion for developing relationships as it gave me time to interact informally with some members
of the Roma community. I had hoped that this might lead to further collaboration and tried to arrange for a sibling of one of the Roma children to work as a Roma liaison person. This however did not come to fruition and left me wondering whether collaboration could be achieved in the short space of a year.

As we had very limited opportunities to collaborate, I moved away from the collaboration aspect of the research question and focused instead on the assessment of Roma children. As a result, I refined my research question to be "How can assessment demonstrate the learning of young Roma children?" In research team meetings, we discussed questions of the effectiveness of the assessment approaches we were trialling, evaluating the ITMP approach (Ephgrave, 2018) to assessment.

The introduction of Juice Vamosi into the research team helped to move the focus away from assessment back towards community collaboration, although not in the way I had expected. I had planned to develop a relationship with the local Roma community in order to understand the specific context of the children in the class. Rather than developing this specific knowledge, the relationship with Juice helped to develop intercultural understanding on a more general level and thus enabled us to address the original research question of how community collaboration could improve the assessment of Roma children.

Developing a professional relationship with Juice proved to be a significant turning point and key twist in the weave of the project. I was introduced to Juice through a mutual friend which immediately helped to establish trust between us. Juice saw himself as an advocate for the Roma people and was keen to take on such a role in the project. During the first meeting with Juice and his wife, Maria, I discussed the work we were doing at Pine Tree School. Juice joked that I must have some Roma blood and repeated this several times in subsequent discussions indicating a level of acceptance and trust.

The relationship developed when I was asked to visit Juice and Maria’s home for a party. This informal social event gave me the opportunity to
meet members of Juice’s wider family and friendship group. It was significant for me as I felt welcomed and accepted by Juice and Maria, despite the fact that I was essentially a stranger. Juice was willing to invite an outsider or Gadze (non-Roma person) into his home, despite the fact that some guests were very nervous of me and clearly did not feel very comfortable with my presence at the party. Following on from this, Juice and I met regularly and developed an effective working relationship which culminated in us writing together.

The close relationship with Juice gave me an insight into the Roma community which I had been unable to develop prior to meeting him. All of my knowledge about Roma people was based on reading and I realised later that I had many misconceptions. I felt comfortable to ask Juice a wide range of questions about Roma life and culture. He became a much needed advisor for the project, indirectly supporting the wider team to develop their understanding of the Roma children in the school.

A final twist in the weave which I had not anticipated was the involvement of Kate Rhodes with the writing and analysis process. As Kate was the head of school, I had not expected her to be a significant member of the research team. Her office however, was the only vacant room available for us to meet and for me to write up my field notes. As I worked alongside her every Friday, we began talking about the observations of the morning. Kate’s thoughts and opinions became enmeshed into my own evaluations of the day and her influence grew as I developed a relationship with her. Like the relationship with Juice, this led to us co-authoring a paper together.

5.7.2. Tangles in the weave
There were several struggles or tangles which occurred during the research process, the main one being the process of writing with others. Writing with Kate evolved naturally as we analysed the emerging data in the form of my reflections each week. Kate began to bring her interpretation of the project into the evaluation, based on her study of the Leuven scales (Laevers, 2019a). We attempted to bring together my
Foucauldian analysis of the implementation of ITMP and Kate’s Leuven analysis into a joint piece of writing. Difficulties arose when I realised that these two approaches were not compatible, as they arose from very different paradigms. I felt that some of my integrity was lost in this paper as I tried to incorporate our different interpretations (see Pendant 6). I tried a different approach when writing with Juice, keeping our different approaches separate within the writing. I chose to write a kind of conversation, using Juice’s writing and my own responses to communicate our separate but connected analysis of the data. This was much more successful as both our voices are present. The lack of authenticity which emerged in the writing with Kate was resolved in the book chapter co-authored by Juice and I (see pendant 8).

5.7.3. My position as weaver
My position within the research project changed as it developed. I began as an outsider, a university academic visiting the school each week. In my field notes, I refer to “the school” and “the staff” indicating that I did not see myself as part of the school or the staff. I had hoped to take on the role of an extra teaching assistant within the class but by the third week in school, I was reflecting that my role was more that of advisory teacher. In my field notes dated September 21st 2018 I note:

I feel that my role in the research is changing. I am becoming more of an advisory teacher. I need to use my expertise to improve provision for the children. It would be wrong not to. The power dynamic is not what I thought it would be. I had an idealistic view that I could be on an equal level with all participants but I don’t think this is possible. I am an expert in early years education and I cannot put this aside. I need to intervene and advise

I realised that I could not disregard my extensive academic knowledge and experience as a former early years teacher. I was beginning to feel that I was a part of the teaching team as I needed to “intervene and advise”. I was not simply an observer and assistant. Tania and Sophie were also beginning to see me as part of the teaching team as they asked for advice. Two weeks later, Tania mentioned that she looked forward to my visits as
she could ask advice from me. I began to feel that I was taking on the role of mentor with Tania, who was a newly qualified teacher at the time.

Towards the end of 2018, there were two events which indicated to me that I had moved from a position of outsider to insider. The first of these was the Christmas party. I was invited with all the other staff to a Christmas party at a local restaurant. This gave me an opportunity to socialise with staff and reveal a bit more of myself on a personal level. We discovered that we had a shared history, having attended the same clubs and bars in the early 1990s. During this event, Sophie also talked about my role within the school, saying that she said, “it’s OK, we’ve got Mandy” to Tania when they worried about their teaching.

The second event which solidified my status as an insider was when a member of staff showed me a humorous adult book she had bought for a friend. The sharing of this book was symbolic of transgression. I felt that I had crossed a boundary as I was now trusted with taboo subjects such as sex. The book was also symbolic of a deliberate resistance and subversion of professionalism. Sharing it with me could be seen as a test to discover my response to such subversion. I felt that I had passed the test by joining in with the humour. I was now seen as “one of us”.

By the end of January, 2019, I had begun to refer to the school as “my school” and to the children as “our children”. This change in my language belies a change in attitude as I saw myself now as a member of the school. My role as advisor had also changed and moved towards additional teacher as I was asked on several occasions to cover the class while Tania was absent. I was not only trusted on a personal level, but also on a professional level. My role as university academic receded as I became a valued member of the teaching staff. The power dynamic also shifted as I was asked to perform the role of teacher. An event which symbolised this occurred in the summer of 2019. A child had an accident in the toilet which Sophie felt unable to deal with. I put on rubber gloves and an apron and cleaned the bathroom. This practical aspect of the role of early years practitioner flattened the power dynamic as it demonstrated
that I was able to participate in all aspects of the role, including tasks which can be regarded as menial.

5.7.4. The integrity of the pendant
To ensure the integrity of the pendant, I needed to consider the ethical nature of the study as well as its validity. Prior to commencing this study, ethical clearance was sought and confirmed from the University of Manchester ethics committee (see appendix F for ethical consent confirmation letter). This research was planned according to guidelines set out in the BERA Ethical Guidelines for Educational Research (British Educational Research Foundation, 2011) and University of Manchester Code of Good Research Conduct (University of Manchester, 2020).

Working with such a wide range of people presented some ethical challenges. The issue of informed consent was arguably the most significant of these. In an ethnography, the ethnographer will observe the situation from many viewpoints and will reflect on events involving a very wide range of people (Mills and Morton, 2013). Questions arise as to whether all of the people observed, from children in the classroom to parents in the playground and staff in the staffroom should be asked for informed consent. It would be impossible to gain consent form the several hundred people involved in the school as a whole. In order to make this manageable and realistic, I decided to seek informed consent from the people I would engage with regularly. This was the teaching staff at the school, the parents of the children in the class and the members of the Roma community who become involved with the project. I created a participant information sheet and consent form (see appendix G), which I also translated into Hungarian (see appendix H).

A further issue with consent was the language and literacy barriers of the Roma community. Some parents could not read and write and many had very limited English skills. I addressed this by creating a visual consent form to be used with bilingual adults (see appendix I). I translated the written section of this form into Slovak as well as English (see appendix J for Slovak visual consent form). The purpose of the study was
communicated verbally by a bilingual member of staff using a Participant Information Script for parents (see appendix K) and the visual consent form was signed and returned.

Related to this is the ethical issue of seeking the assent of young children. I created a participant information script for children (see appendix L) which I used to explain to them the purpose of my study in very simple terms and asked for verbal assent. This would be an ongoing negotiation as children may indicate their reluctance to participate through body language and other non-verbal clues. Mukherji and Albon (2018) suggest that ongoing, rather than one-time assent, should be negotiated with children in addition to consent from parents. If a child appeared unwilling to work with me or talk to me, I ensured that I respected their wishes.

Central to ethics considerations must be the beneficence of the research. An ethical issue which did arise was that I observed conversations which I consider to be prejudiced against Roma people. As this was a collaborative project, the question of whether such speech should be challenged and discussed in group meetings was significant because such discussion could upset participants. I decided not to challenge discriminatory views overtly, but to work throughout the project to try to challenge negative opinions. I did however, report discriminatory speech about Roma people to the headteacher of the school so that he could address it with the staff.

As the project was participatory in its nature, the collaborative approach to research and analysis ensured that the work accurately reflected the participants’ narration of themselves. The main danger was that I would misrepresent the opinions or values of others, which would lead to an inaccurate study. By writing with members of the research team on 2 of the 3 subsequent papers, I ensured that mine was not the sole voice. I also asked Juice and his wife, Maria to read through any work I had completed independently. I had written a paper in 2021 which examined the Roma approach to child development using interviews with Juice and Maria as my main source of data. Prior to publication, I sent them the
paper to read and arranged a meeting for them to feed back. In this meeting, Juice explained that I had misunderstood their discussions of child development and that my work did not represent a Roma perspective. I immediately discarded the paper and will rework it, in collaboration with them, in the near future. This process of collaborative working effectively ensures that I do not speak on behalf of others, making claims to their thoughts and feelings.

The only paper emerging form the research project which is solely authored by me is pendant 7 I feel like two different teachers. In this paper, I reflect extensively on my ethnographic experience of teaching as well as drawing upon the reflections of Tania. I was unable to co-author with Tania as she did not have sufficient time but have sent the paper to her to read. As the reflections are more focused on my experience than Tania’s and I have used her exact words noted in my field notes, I feel confident that I have represented our experience as we narrated it.

5.7.5. Reading the pendant

In this final section I reflect on the analysis of the data and how it fits into the thesis as a whole. Following the research project, I wrote 3 quite different papers. As each paper was authored differently, each uses a different approach to data analysis. Pendant 6, Resisting datafication through the implementation of ‘in the moment planning’ was co-authored with Kate Rhodes and uses both Foucauldian discourse analysis and Leuven scales analysis. The following paper, pendant 7, I feel like two different teachers: the split self of teacher subjectivity, uses elements of Foucauldian discourse analysis alongside Doppelganger as method developed in pendant 4: The data-doppelganger and the cyborg-self. The final paper, pendant 8, A Romani analysis of English preschool education develops a Romani approach to analysis in which data is analysed from a Romani perspective, relating it to Romani values and culture. Details of these approaches to analysis will be explored in more depth in the subsequent pendants.
Threads which were developed in earlier papers, such as datafication and the doppelganger exist as fine filaments in this pendant. They are present, but not explicitly so. Datafication supports the efforts to find new ways of assessing children. Throughout the project, there was a shared understanding that we would try to find ways to resist datafication and this was a driving force for the actions we took. The thread is picked up again in pendant 6: *Resisting datafication* where it is the main focus of the paper. It is also a dominant theme in pendant 7: *I feel like two different teachers*, where the struggles to resist datafication are examined in depth. The final paper, documented in pendant 8: *A Romani analysis* evaluates an alternative form of assessment which is again, a form of resistance to datafication. The thread is finer in this paper but is present none the less. The doppelganger is an even finer thread in the research project but returns as a primary cord in pendant 7: *I feel like two different teachers*, which examines the split self in terms of the teacher as scientist and philosopher.

A dominant thread found in the research project is the thread of the teacher subject. As my field notes contained many detailed reflections on my own subjectivity, the teacher subject develops into a thick fibre. This fibre is present in all the former papers and is developed further in the following pendant, *resisting datafication*. It is in pedant 7: *I feel like two different teachers*, however, that this cord becomes central to the weave. The paper explores the nature of teacher subjectivity, resolving the conflict of the split self through acceptance of the divided nature of the subject.
Pendant 6: Resisting Datafication
6.1. The process of construction

The process of writing began in 2017 when I wrote *Documenting discursive dissonance: a conceptual synthesis of the discourses of play, child-centredness and school readiness* (see pendant 2). This paper contained a discourse analysis of school readiness, a theme which I re-engaged with as I began working on a following paper. School readiness is a topic closely related to datafication, as measures of school readiness compare children to a set of norms. This assessment requires large quantities of data and became a key performance indicator for schools: it thus contributed to datafication. In March 2019, I met with Professor Ruth Lupton of the University of Manchester to discuss her work with Manchester City Council to address issues with using the good level of development as a measure of school readiness. This discussion reignited my interest in school readiness and I began to consider alternative forms of assessing school readiness as well as asking questions about what school readiness meant. I also became involved with the Manchester City Council working party into addressing school readiness, attending meetings with other stakeholders from the borough.

I began researching school readiness in June 2019, re-reading some of the texts which I had analysed for pendant 2 as well as reading new material. The work of Jan Dubiel (2016) particularly resonated with me as he discussed the folklore around assessment which defines it as a means to collect data for outcomes. He compares this to assessment which focuses on knowing children defining it as “practitioners knowing the children they work with, understanding their learning and being able to link this with the next steps in progress and development” (p9). I was inspired by Dubiel’s work to explore two opposing discourses of early childhood education which developed into the sections of data-led and child-led education which feature in the paper.

As I was still conducting research within Pine Tree School at the time, I spoke about my emerging ideas concerning school readiness to Kate Rhodes during my afternoon field note writing sessions. I asked Kate if
she would like to co-author a paper with me as I had wanted to include a member of the research team in the analysis and writing phase of the project. Kate agreed and we began discussing the implementation of in the moment planning and how this related to datafication and school readiness.

I re-read my ethnographic notes, collecting any writing which I felt related to school readiness. I then evaluated this collection of excerpts, reducing it to a small number of key extracts which would be analysed in more depth for the paper. Kate had attended some training on the Leuven scales of wellbeing and involvement (Laevers, 2019b) and suggested that we could use this as an approach to analysis. We agreed that she would analyse the excerpts to identify levels of child and adult wellbeing and involvement using the Leuven scales. I used Foucauldian Discourse Analysis (FDA) to analyse the same data, sharing my findings verbally with Kate. I then sent a draft of the paper to Kate into which she added her Leuven analysis, which constituted about 20% of the finished paper. As I constructed the paper using Kate’s sections and my own work, I found that the FDA did not fit with the Leuven scale analysis. I decided to omit much of the discourse analysis, only including the sections of the discourses of child-led and data-led pedagogy.

I presented a version of the draft paper as part of a symposium at the 2019 BERA conference (Pierlejewski, 2019a). In this paper, I discussed data-led pedagogy and the challenge to this through ITMP. I claimed that the focus on the process of learning had led to improved outcomes. In a conversation following this presentation, a senior academic criticised my presentation saying that my paper was not Foucauldian. My academic pride was significantly damaged by this interaction but I later reflected that the criticism was justified- my paper was not Foucauldian. In trying to work with another participant, I had removed almost all of my own Foucauldian analysis. I also realised that I had attempted to use outcome data to support resistance to datafication. In effect, I had used datafication to justify resistance to datafication.
Following the BERA conference I altered the paper, removing any reference to Foucauldian discourse analysis and the discussion of pupil outcomes. The paper was submitted to *Early Years Journal* in November 2019. It was accepted with major revisions the following year in May 2020. The reviewers suggested that a more balanced analysis of datafication was needed alongside a clarification of the aim of the paper, some improvements to structure and a more detailed literature review (see appendix M). I addressed each of these recommendations, although the revisions could be considered minor rather than major as I did not change the paper significantly. I resubmitted in June 2020 but did not hear back from them regarding the acceptance of the revisions. After several attempts to contact the editors, I decided to withdraw my submission in February 2021. I planned to resubmit the article to *Contemporary Issues in Early Childhood* and prepared a new, shorter version for this journal which is included below. I began the submission process but while writing the letter to the editor, I decided that I could not put my name to this paper. The process of sending the paper to an editor who I knew and respected made me realise that I did not feel a sense of pride in the work. I felt that the paper was not authentic as it did not reflect my Foucauldian approach to writing. It did not compare well with my previous work, which was much more creative and post-structuralist in its approach. Rather than submit it, I decided to completely rewrite it. The process of the rewrite resulted in another paper entitled *growing up Romani* which is not yet completed and has not been included in this thesis.

6.2. The justification for inclusion

Despite the fact that I chose not to submit this paper, I have included it in the thesis as it records the development of my thinking following the research project.

As my first attempt at writing with another author it is interesting in itself. As I became an insider in the school, I began to think much more like a teacher than an academic. I may have lost sense of my critical self as I
became drawn into the world of the school. Outcomes became important to me as I felt the need to receive validation of my own teaching. In some sense, I may have been experiencing over-rapport (Hammersley and Atkinson, 1995 in O’Reilly, 2012) as I became so much a part of the school that I lost objectivity. The lure of acceptance (O’Reilly, 2012) by Kate and the school may have led me to privilege Kate’s analysis and opinions over my own and in so doing, create a piece of work which did not feel authentic. The inclusion of this flawed attempt to co-author reveals the struggles to write as part of a participatory action research team.

There are some aspects of the paper however, which are worthy of inclusion due to their quality. The development of the two discourses of child-led and data-led education is an example of this. I had developed the analysis of these discourses much further in my preparatory work but did manage to communicate something of this analysis in the article. I have used sections of this paper in my university teaching to help students understand the two main approaches to assessment. This analysis is supported by my observations of practice and builds on existing literature, giving it validity. My initial analysis can be summarized in the following table:

<table>
<thead>
<tr>
<th>Child-led pedagogy</th>
<th>Data-led pedagogy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child leads</td>
<td>Early Learning Goals (ELGs) lead</td>
</tr>
<tr>
<td>Aim- to know the child</td>
<td>Aim -to create data-double</td>
</tr>
<tr>
<td>Data is a means to know the child</td>
<td>Child is a means to create data</td>
</tr>
<tr>
<td>Data mostly in teacher’s head</td>
<td>Data mostly in data base</td>
</tr>
<tr>
<td>School readiness = Characteristics of Effective Learning (CoEL)</td>
<td>School readiness = GLD</td>
</tr>
<tr>
<td>Intuitive assessment</td>
<td>Data-led assessment</td>
</tr>
<tr>
<td>Process valued</td>
<td>Performance valued</td>
</tr>
</tbody>
</table>
Temporal focus on Present | Temporal focus on Future
---|---
Being | Becoming
Re-professionalises practitioners | De-professionalises practitioners
Teacher has power | Data has power
Child has power | Child has no power
Teacher controls time | Time controls teacher
Teacher controls space | Space controls teacher
Nourishes teachers soul | Terrorises teachers soul
Assumption that learning is complex | Assumption that learning is simple
Learning is spontaneous | Learning is predictable
Re-Humanises children | Dehumanises children

**Figure 2. Table of discourses of child-led and data-led pedagogy**

Some of these aspects of the discourses are discussed in the paper such as the use of data, the form of assessment and the aim of the pedagogy. Other aspects are developed further in the *I feel like two different teachers* paper (see pendant 7). Much, however, is not developed in favour of privileging the Leuven scale analysis developed by my co-author.

A further justification for the inclusion within the thesis is the function of the text to evaluate the action of implementing ITMP. Kate’s Leuven scale analysis evaluates the quality of teaching using the ITMP approach in terms of its impact on involvement and wellbeing. There are no published papers which evaluate this approach at the time of writing, which is growing in popularity in England. Additionally, the paper explicitly addresses research question 3: How can early years teachers resist datafication? It explores attempts to resist datafication through a focus on intuitive assessment for learning rather than assessment for data collection purposes.
6.3. Title: Resisting Datafication through the implementation of ‘in the Moment Planning’

Authors: Mandy Pierlejewski and Kate Rhodes

6.4. Abstract

The increased focus on educational accountability over the past thirty years has led to the use of outcome data as the primary means to judge quality in early childhood education in many countries. The purpose of this research project was to investigate resistance to datafication in an English context, focusing on developing more child-led ways of teaching. Using ethnographic participatory action research, a group of practitioners and a researcher investigated the implementation of a child-led approach to pedagogy called “In the Moment Planning”. This approach reframes long established approaches to pedagogy in a way which appeals to the current workforce. We found that a focus on the process of learning and a move away from forward planning led to deep level learning. The use of intuitive, more than data-led assessment contributed to a thorough knowledge of the child, which was then utilised to facilitate the development of children’s schemas.

Keywords: word; datafication; early years; assessment; accountability

6.5. Introduction

Moves to prioritise early years education, begun by the UK Labour Government (1997-2010) and continued by the subsequent governments have led to an increased focus on accountability. Measurement of learning, in terms of educational outcomes, has become the primary tool for measuring the performance of schools in England. The increased need for data and the use of this data has led to what Bradbury and Roberts-Holmes (2017) and others (Selwyn, 2015; Williamson, 2014) call “datafication”: an increase in the volume, the value and the implementation of data in education. In this paper, we explore an attempt to investigate
resistance to datafication through the implementation of a child-led approach called *In the Moment Planning* (Ephgrave, 2018). We find that the introduction of a child-led approach leads to deeper involvement and increased wellbeing for both teacher and child as well as a privileging of the marginalised discourse of child-led education.

### 6.6. Methodology

The study took place from July 2018 to July 2019 in a school reception class in the north of England. The methodology used for this study was ethnographic participatory action research (Sluys, van, 2010). In this approach, rather than the ethnographer doing research on a group of people, the ethnographer becomes part of a research team, which aims to transform practice. Emerging from a critical theory paradigm (Cohen et al, 2011) the aim was to improve the educational experiences of children and in so doing, challenge the dominant discourse of datafication. The team met regularly to plan and evaluate previous actions on the action research cycle (McNiff & Whitehead, 2001). As the study developed, the main action became the implementation of an approach known as *In the Moment Planning* (Ephgrave, 2018).

The team was made up of a university researcher (Mandy), a newly qualified teacher (Tania), a reception teaching assistant (Sophie), the head of school (Kate), a bilingual teaching assistant (Amelia), a Roma liaison worker (Juice) and the new to English lead (Hannah). Mandy visited the school every Friday for a year, teaching alongside Tania and Sophie and discussing findings with Kate and the team. Mandy began as an outsider but as she developed a relationships with other members of the team, she came to feel that her position had changed to that of insider. Mandy’s field notes, observations and assessments have formed the main body of research data. The research was conducted within the British Educational Research Association (BERA) Ethical Guidelines (2011); the school and all participants other than the authors were given pseudonyms to protect their anonymity.
As this is a participatory action research study, the analysis of data has been conducted by more than one member of the team with Mandy and Kate working together on some, but not all, of the analysis. Firstly, the vast quantities of field notes were reduced to a selection of significant excerpts. Mandy identified these by re-reading all of her field notes, selecting sections which referred to data collection. Mandy and Kate worked together to analyse the shortlist of excerpts using the Leuven involvement and wellbeing scales (Laevers, 2019a; Leavers, 2019b). For each significant observation, the wellbeing and involvement of both adults and children were scored against the Leuven scales and the quality of the involvement was analysed.

6.6.1. School context
Pine Tree Primary School (psuedonym) is a large primary school located in the North of England. It has a very diverse community with approximately 27 different languages spoken. The school is in an area with very high levels of deprivation (Communities and Local Government, 2019). The class in which the research took place had 23 children at the beginning of the school year. There was a total of 12 different languages spoken with 83% of the children having English as an additional language. The largest ethnic groups were children of Pakistani origin and Roma/Gypsy Roma.

6.7. Review of Literature
The following review of relevant literature examines key literature relating to both data-led and child-led education. The political context in England is also summarised in relation to pedagogy.

6.7.1. Data-led education
The notion of datafication emerges from a discourse of data-led education. In this discourse, outcome data is seen as more authentic than human judgement. Beer explains that “authenticity and accuracy are ascribed and engraved into the materiality of the data” (Beer, 2019 p6) and it attains a “veneer of knowing” (p4). Teachers no longer trust their professional
judgement and instead rely on standardised assessment data to give them new ways of knowing children (Ephgrave, 2018). Pedagogy becomes the use of assessment data to identify gaps in knowledge in order to fill them (Carr, 2001). It is a deficit model of “fixing” children. Learning in this model is seen as a simple process of transferring knowledge from the teacher to the child in small, progressive steps (Laevers, 2015). Quality is defined by performance so that outcomes become the key performance indicator. Neaum (2016) refers to this as the *performance pedagogical model* as the focus is on *what* the child will learn rather than *how* they learn. The collection of standardised assessment data to demonstrate quality thus becomes the aim of education as it is this data which will be used to judge the school, the teacher and the child (Pierlejewski 2019b).

The Office for Standards in Education, Children’s services and Skills (Ofsted), the national inspection body, has a unique power to set the discourse within education in England, as it establishes the standards against which schools are judged. The paper *Bold Beginnings* (Ofsted, 2017) suggests that to promote effective teaching in the final year of early childhood education (ECE), practitioners should move towards “sufficient direct teaching time every day” (p4) and its associated assessment method of “checks of children’s phonics knowledge, standardised tests (for reading, for example) and scrutinies of children’s work” (p4). Although this paper has been criticised by many within the early years community (TACTYC, 2017), the power of Ofsted to define good practice cannot be overestimated. These approaches to assessment and pedagogy emerge from and create a discourse of data-led education.

### 6.7.2. Child-led education

Resistance to this discourse, however, can be seen in child-led education. This discourse is currently more marginalised than data-led education in the English context. It focuses on using data to know the child, privileging teacher knowledge over formal assessment methods and process over performance (Ephgrave, 2018). A movement towards child-led education has recently emerged from within the profession itself and has been
fuelled and spread through social media. Facebook groups, such as “Keeping early years unique” (Bennett et al., 2019) give opportunities for practitioners to share ideas and support one another in developing child-led approaches to teaching in the Early Years Foundation Stage (EYFS). Ephgrave, a pioneer of this grass roots movement, has produced several practitioner guides to her approach, which she calls “in the moment planning “ (ITMP) (Ephgrave, 2013; 2015; 2017; 2018).

ITMP focuses on the role of the adult in supporting children’s learning through play. Rather than planning for future lessons based on objectives identified by the teacher, most focused activities and whole class teaching are replaced by in the moment planning. Ephgrave advises practitioners to look for “teachable moments” (Ephgrave, 2013) and to use these to further the child’s thinking. This approach reflects Broadhead and Burt’s (2012) juxtaposition model in which the practitioner’s role is to identify, record and plan for children’s developing interests. They do this by observing the child’s play, identifying how the adult can support this play and planning opportunities in the moment and beyond to extend learning. It specifically moves away from the dominant discourse of planning, enshrined in the English Teachers’ Standards (Department for Education, 2013a), which involves forward planning and teaching of specific learning outcomes.

The authors have been unable to find any empirical research into ITMP and as such, this paper is the first to evaluate this approach. Ephgrave’s approach is underpinned by cultural historical theory as it focuses on the role of social interaction and play in learning (Vygotsky, 1933). It also builds on Fleer’s (2011) theory of conceptual play, in which, imagination is conceptualised as a bridge between play as the leading activity in preschool and learning as the leading activity in school. In this theoretical model, play enables children to develop concepts as they move in and out of the play world, between the imaginary and the real. The role of the adult in this theory is to support the child’s development of concepts through encouraging metacognition. With the help of the adult, the child starts to think consciously about concepts, and can move towards more abstract
thought. This role of the adult, as sensitively interacting with the child, is reflected in Ephgrave's model of in the moment planning.

6.7.3. Child-led play
ITMP also builds on a large body of research into the value of child-led play which posits play as the primary learning vehicle for young children (Athey 2007; Wood 2013; Bruce 1991; Brock, Jarvis, and Olusoga 2014; Gray 2011; Singer 2013;). Ephgrave herself describes her approach as “nothing new” (Ephgrave, 2018 p1). What is new however, about this approach is the way it is framed for the contemporary workforce. The word “planning” satisfies the need to evidence practice to regulatory bodies such as Ofsted. The term “in the moment” links with concepts of mindfulness and signifies a move towards more meaningful interactions with children. The body of written evidence demanded by regulators is still being produced, but in a different way and with a different temporal focus. Ephgrave not only gives her readers strategies for teaching, but also provides the key language to challenge the dominant discourse of data-led education.

6.7.4. Wellbeing and Involvement
Ephgrave’s work on ITMP is underpinned by research conducted in the Centre for Experiential Learning at the University of Leuven (Laevers, 1993). Laevers’ approach has been used in the school to inform evaluations of early years practice. In an attempt to accurately measure quality in education, Laevers focuses on the process of learning, rather than the concepts to be delivered or the outcomes. He argues that this process can be effectively measured by focusing on two dimensions: wellbeing and involvement (Laevers, 2015). Understanding that high levels of wellbeing encourage high levels of involvement, the evaluation of quality becomes focused on the content of the child’s experience. In order to know how each child is doing in a setting, the focus needs to be on exploring the degree to which children feel “at ease, act spontaneously, show vitality and self-confidence” (Laevers, 2015 p2). Although this
approach can be seen as another form of surveillance, it is useful in shifting the focus from the child’s outcomes to their learning process.

Building on this literary context, the research project aimed to improve children’s educational experience in reception (the final year of Early Childhood Education, (ECE) in England) by focusing on the process of learning. We hoped to resist the current move towards datafication by implementing Ephgrave’s (2018) approach.

6.8. Data analysis

This section has been divided into two main areas, pedagogy and assessment. For each area, we present an excerpt from Mandy’s fieldnotes, followed by the analysis.

6.8.1. Data-led pedagogy

In several EYFS classes within the school, and at times within the research class, pedagogy was largely data-led. The aim of lessons was to deliver knowledge and skills to the child, based on assessments which identified gaps in knowledge. Carr refers to this gap-filling approach as her “folk model of assessment” (Carr, 2001 p2). It is based on a set of assumptions which assert that the purpose of assessment is to check against a list of skills and that the focus of teaching should be to fill these gaps.

An example of this data-led pedagogy can be seen in an observation of a reading lesson which was documented in Mandy’s fieldnotes. It was prompted by the pressure to achieve a specific percentage of children at the Good Level of Development (GLD) and was planned in response to assessments which indicated that a group of children were not quite at the expected level for reading.

The GLD is the measure of school readiness in England and includes Early Learning Goals (ELGs) or normative targets for communication and language; physical development; personal, social and emotional development; mathematics and literacy (Department for Education, 2017).
It is a high stakes assessment as it is used to judge the effectiveness of the school. This group of children were “key marginal” children as they were the ones who, with intervention, might achieve the expected level and therefore improve the class data. This is an example of “educational triage” (Gillborn & Youdell, 2000), a process where teachers focus their attention on the children just below the grade. The teacher (Tania) referred to the group as the “push GLDs” as she was trying to push them towards achieving the GLD.

6.8.2. Push GLDs excerpt
In this extract, Tania works with a group of four children. She has given them a set of pictures to match with sentences. Each child must read the sentence using phonic strategies and then find the matching picture.

Tania is working with her “push GLDs” These are the key marginal children.
Tania said, “I’m just going to do some reading activities (rolls eyes). I don’t want to!...”
Aleena has been keen to read other people’s sentences
She sits next to Tania
Tania helps with the “ar” diagraph
Tania sound-talks the word “m-ar-k” and Aleena can blend. Aleena is sound-talking but not blending independently.
Aleena is not there yet with blending.
Tania says, “If you do it a bit quicker Aleena it makes it easier to hear.”
Aleena has now given up and is not looking at the sentence. She clearly feels a bit demoralised.
…Tania says, “We are going to do this every day so that we can become expert readers.”

6.8.3. Analysis of Push GLDs excerpt
A Leuven scales (Laevers, 2019a; 2019b) analysis of this observation indicates low levels of both wellbeing and involvement. Aleena is not looking at the card and her expression leads the researcher to conclude that she is demoralised. Her involvement is at the lowest level, defined by the characteristic of “staring into space” (Ephgrave, 2018). Aleena has not
chosen this activity and she is unsure of why she is doing it. She demonstrates signs of boredom and frustration towards the end of the observation, by looking away from the sentence card. There is no evidence of learning taking place in this activity. The purpose is to increase the numbers of children achieving the GLD more than to develop Aleena’s existing schema for reading.

An evaluation of the teacher’s involvement and wellbeing also reveals low levels of both. Tania feels coerced into teaching in this way, saying “I don’t want to!” when explaining the lesson to the researcher. Her eye roll gesture suggests that she sees the activity as ridiculous and perhaps meaningless but feels that she must do it despite these reservations. She is also aware that the researcher would probably not approve of this method of teaching and this must impact on her ridicule of the activity demonstrated through the eye roll. Both teacher and child appear to lack autonomy: they feel coerced to participate and thus demonstrate resistance through their eyes.

6.8.4. Child-led pedagogy
An alternative to data-led pedagogy is the child-led pedagogy of ITMP. In this approach, children are given more autonomy and can choose what they would like to play with. The role of the adult is to provide a stimulating environment and assess the learning which is taking place. They then decide whether or not to become involved with this learning and what intervention will be the most useful to the child.

6.8.5. Puddles play excerpt
An example of ITMP, taken directly from Mandy’s fieldnotes, is included below. In this example, Mandy observed Tania playing with a group of children outside on a rainy day.

Now Tania and some children have started a game. They are splashing in puddles and marking with chalk how far the water goes. She records on the floor with chalk and writes the name of the child Adebayo now has the chalk and is recording the splashes.
Tania said at the end that she had done lots of maths with the children outside, talking about shapes, distance, measuring, taking turns, capacity, height.

Tania: “I love my job this week! We’ve had such a good week!”

**6.8.6. Analysis of puddles play excerpt**

Tania’s role in this play activity is essential. She has intuitively assessed in the moment, basing her assessment on everything she knows about the children, her knowledge of child development, her knowledge of the ELGs and her feelings about what will engage them. She uses this data, which she has gathered in her head to identify how she can support the children’s development. She has spotted the invisible moment of possibility (Dubiel, 2016) and has decided that the best way to take the learning further is to model recording a measurement.

This fits with the maths Early Learning Goal “Children use everyday language to talk about size…position, distance, time and money to compare quantities, objects and to solve problems” (Department for Education, 2017b p 12) and this must be in the back of Tania’s mind indicating the regulatory function of datafication. It also, however, indicates that Tania is helping the children to consciously develop their concept of measure. She is engaging in conceptual play with the children (Fleer, 2011), using data to further their learning rather than devising activities to collect outcome data.

A Leuven involvement scale evaluation of the observation reveals high levels of both wellbeing and involvement. Mandy observed, without recording, the expressions on the faces of the children; they were laughing and smiling, talking animatedly to each other and very keen to play, indicating very high levels of wellbeing. Involvement was also evident in all participating children. Adebeyo, in particular, showed persistence, concentration, creativity and energy, indicating that he was demonstrating extremely high involvement. He had taken on the role of the teacher, recording the distance and name for each splash. The teacher also demonstrated high levels of wellbeing and involvement on the Leuven
scale. She was able to fully immerse herself in the engagement of the children, ensuring their wellbeing was high and in doing so determining her own wellbeing “I love my job today!”. As she co-constructs alongside the children, she is unconsciously demonstrating and modelling the high levels of involvement she expects from the children. Thus, all members of the group, both adult and children, support each other’s wellbeing and involvement.

6.9. Assessment

In this section, two approaches to assessment are analysed using excerpts from Mandy’s field notes as a basis for analysis.

6.9.1. Data-led assessment

Prior to the implementation of ITMP, assessment was primarily seen as the process of observing and ticking off a list of statements from Development Matters (DM) (Early Education, 2012). DM is a non-statutory list of statements associated with age related developmental bands. It is used by many English schools as a tick list to demonstrate progress in the EYFS (Roberts-Holmes and Bradbury, 2016). Each band is broken down into subcategories to enable even finer tracking of progress. This was the case at Pine Tree school. At the beginning of the year, Sophie, the reception teaching assistant, referred to Development Matters as a “mental tick list” which she was constantly aware of. An excerpt from Mandy’s fieldnotes from September 2018 quotes the teacher, Tania saying: “I find myself looking at it all the time and I’m constantly thinking do they know this and do they know that rather than just what they are doing.” Tania clearly felt that she should be observing what the children were doing but felt pressured to refer to the mental tick list whenever she was observing a child. The purpose of this kind of assessment is to collect data to demonstrate progress and attainment.

Data-led assessment can be defined as assessment which has the express purpose of collecting data to match a child to a set of pre-determined standards. It starts with targets rather than the child and is
driven by the need to prove a child’s progress against these targets. It is a convergent form of assessment as it is looking for only one answer (Torrance and Pryor, 1998). The practitioner must defend their judgement with a robust body of written and photographic evidence.

6.9.2. Puddles tick list excerpt
An example of data-led assessment can be seen in a section of Mandy’s fieldnotes. This was taken from the observation of the puddles play documented above. While Tania was playing in the puddles with a group of children, another practitioner was also outside making observations and recording these on a spreadsheet.

The teacher has a clipboard in her hand and is recording phonics observations. The children splash in puddles and shout “splash” so she ticks off “makes body sounds”.

This spreadsheet included twenty-one statements across the top with the names of the children down the side. The teacher could be seen making a mark for each observation of an aspect of phonics (Department of Education, 2007). When a child had three observations, they were deemed to have met the target. This form of assessment is important in identifying the learning which has taken place in order to plan next steps. The process of collecting this data however, has removed the teacher from the children, meaning that the focus is entirely on data-collection, rather than on supporting the children in their learning.

6.9.3. Analysis of puddles tick list excerpt
The assumption in this observation is that if there is no written data collected for a given standard then the child has not met this standard. There is little recognition that teachers may have knowledge of the child which is not recorded or that children might demonstrate learning when the teacher is not observing. The purpose of data-led observation can be seen to create a data-doppelganger (Williamson 2014; Pierlejewski 2019a) of the child which can then be used to decide whether the child is at the expected level or not. This data-doppelganger is another version of the
child formulated by the vast body of evidence collected for each child. Assessment thus becomes the creation of data-doppelgangers, rather than “knowing and understanding children” (Dubiel, 2016).

6.9.4. Intuitive assessment

The primary method of assessment used in ITMP we term “intuitive assessment”. The definition of intuitive assessment builds on Dubiel’s (2016) work. It is assessment which gathers information about the child from every interaction with the child, their friends, their family and their community. The practitioner thus develops a deep and thorough understanding of the child, not just through conscious observations but also through what they sense and feel about them. It is an aspect of being, what Dubiel calls, an “intuitive professional” (p59). He refers to this form of assessment as based on the value set of the practitioner. The practitioner decides what is significant because of their beliefs about learning and development. It is not objective. “Everything viewed, heard or even assumed, falls through the ‘prism of values’ and is then considered whether or not it is important enough to be realised” (p10). Dubiel defines assessment as “behaviour that relies on intuition to such a great extent and is often subconscious in its delivery” (p9). This subjective, intuitive assessment however, is not unsupported by knowledge. The practitioner must use their understanding of child development and pedagogy to underpin their evaluations.

Intuitive assessment can be compared to tidying up the toys and bits and pieces from around the classroom at the end of the day. At first, they are a jumbled-up mess but gradually the practitioner sorts them out and puts them in the place where they belong. It is like tidying up the mind. The teacher takes in vast amounts of data in the form of sensing, observing, co-construction, conversations, feelings and more. All kinds of information go into the brain and for each little piece of information, a judgment is made. Is this important? Where does it belong? Once sorted, this becomes the body of mind-knowledge about the child, from which decisions about how the practitioner can help the child develop and learn
are made. This contrasts to the data-led observation which can be compared to going around the classroom looking for a Lego piece. In the end, the teacher finds the Lego piece but in the process, may miss all the other little bits and pieces which are scattered around the room. They find one piece of data but miss the others.

6.9.5. David and the measuring cylinder excerpt
An example of this kind of assessment can be seen in the excerpt below. This is a detailed reflection of a learning episode which was completed as part of fieldnotes in June 2019, just weeks before the end of the reception year. Mandy was playing with David in the classroom. She recorded the reflection, at first briefly at the end of the day for David’s learning journal and then later, in more detail as part of her fieldnotes.

David was trying to get a foam letter out of the measuring cylinder. He had a ruler which was too wide for the neck of the cylinder. He had a look of intense concentration on his face, and I knew that he was very focused on the task of trying to get the foam letter out. After trying many objects, I realised that there may not be any suitable objects in the classroom. I decided that I would need to suggest something which was not in the classroom. In our sustained shared thinking here, I used my additional knowledge to support David in his problem solving. I suggested that we go to the Year 1 classroom to look for a long paintbrush. David was brave and asked the Year 1 teacher for a long paintbrush.

He was very pleased to have found a tool of the right length to try to get the foam letter out of the cylinder. David then spent a long time, maybe 10 minutes, on his own, poking the letter with the paintbrush…After some considerable time, he managed to manipulate the letter out of the cylinder. He showed great pride on his face when he managed to achieve his task.

6.9.6. Analysis of David and the measuring cylinder excerpt
This long description reveals Mandy’s thought process as she supports David in his learning. She knows David well as she has played with him all year. She knows his level of language development as well as his personal social and emotional development. Mandy and Tania had been
concerned about David’s self-confidence and this awareness of his need to develop self-esteem is also a factor in deciding when and how to support him in his learning. Much of the assessment which took place during this session was unconscious. Mandy made “in the moment decisions” as she spotted “invisible moments of possibility” (Dubiel, 2016 p32), for instance, suggesting that David go to the Year 1 classroom to borrow a paintbrush. Mandy gathered all her intuitive knowledge of David and used it to support his learning and facilitate his exceptionally high levels of involvement.

A Leuven scales evaluation of this observation demonstrates very high levels of involvement from both adult and child. Mandy assesses David’s knowledge of the shape and size of objects using Piaget’s cognitive theory (1952). David’s schema includes the knowledge that long, thin objects can be used as tools. The disequilibrium occurs because David’s schema does not yet factor in the width of the object. By supporting David to continue experimenting and supporting him in his search for the right tools, Mandy enables him to resolve his disequilibrium by accommodating his existing schema: thus, deep learning occurs. Not only does David solve his problem, but he also changes his thinking. Rather than acquiring an additional bit of information - that a paintbrush will fit into a measuring cylinder, David’s schema for shape and size is altered.

6.10. Conclusion

The move towards a child-led pedagogy, which focuses on the process rather than the outcomes of learning, appears to have led to deeper learning and better relationships with the children. It resisted datafication in that data was used to plan experiences in the moment for children rather than to identify gaps in learning. This aligns with Laevers’ findings that quality education is defined by a focus on process (Laevers, 1993). Instead of attention being given to shortcuts to improve performance data, the teachers’ energy was focused on how children were learning and how to support that learning. This indicates that assessment drives pedagogy
as what is measured becomes the focus of teaching. When assessment focuses on normative judgements, pedagogy focuses on filling gaps. Conversely, when assessment is intuitive, measuring the process of learning, pedagogy focuses on enabling the process of learning to take place.

The introduction of a new approach did not lead to a replacement of one discourse with another, however. The discourse of data-led pedagogy was still present throughout the year. Instead, the marginalised discourse of child-led pedagogy became more privileged and a balance between both approaches was achieved.
6.11. Analysis of the paper

6.11.1 Incongruent cords
The co-authorship of this paper with Kate did not lead to a cohesive paper. It can rather be seen as a weave of two incongruent cords. The sections which I wrote examine the conflicting discourses of early childhood education. Their conceptual framework is Foucauldian, examining the workings of power to regulate and govern. This can be seen in the summaries of the discourses of data-led and child-led pedagogies and in some of the analysis of field notes. The sections written by Kate however, use a different conceptual framework in the form of the Leuven Scales analysis. This emerges from a more positivist paradigm as her aim was to evaluate the effectiveness of in the moment planning. Her analysis sets out to prove the hypothesis that ITMP leads to better outcomes for children. The incongruence of these two conceptual frameworks, each emerging from very different paradigms resulted in a paper which lacked cohesion. The weave of the two cords was not effective in producing the unified whole I had hoped for.

6.11.2 An analysis of the analysis
The main form of analysis discussed in this paper is a Leuven scales analysis. The process of this was to evaluate the observations documented in the paper against the Leuven scales for wellbeing and involvement (Laevers, 2019a; Laevers, 2019b). A significant omission of the paper is a critique of this approach to assessing the quality of early years education. I note that it can be seen as surveillance but do not explore this in any depth. Using assessments of the process of education to make judgements about quality is equivalent to using outcome data as a measure of quality. In both approaches, data is used to make a value judgement about provision. Both forms of surveillance create data-doppelgangers of the child. The forms of data used to create these doppelgangers vary however, with process data being used for the Leuven scales and outcome data being used for the EYFS Profile. Another critique of the Leuven scales assessment is that it creates norms against which
children are compared. Norms are never value free but rather represent the expectations of a particular cultural group (Burman, 2017b). They do not take into account the varied cultural and socioeconomic contexts of children and in so doing, disadvantage children from more marginalised groups. Leuven scales analysis can be seen as another form of datafication as data becomes the key technology for judging quality.

The other form of data analysis used in this paper but not documented is Foucauldian Discourse analysis. I used this extensively to formulate the discourses of data-led and child-led education examining a wide range of texts and combining this with an evaluation of my reflections. I identified how the discourses were created and the impact they had on education, conceptualising them as a technology of power. I also used FDA to analyse the push GLD excerpt and other excerpts which did not make it into the paper in detail. To do this, I used an approach based on *The History of Sexuality Volume 1* (Foucault, 1978) in which I took the questions Foucault asked of the repressive hypothesis (p11) and applied them to the texts. This resulted in the following questions:

1. Why has it been so widely discussed and what has been said?
2. What are the effects of power generated by what was said?
3. What are the links between these discourses, these effects of power, and the pleasures that were invested in them?
4. What knowledge was formed as a result of this linkage?
5. Who speaks?
6. Who cannot speak?
7. What does one decline to say or is forbidden to name

This resulted in the discussion of the eye roll as a signifier of resistance. I also identified the coercion felt by Tania and Aleena expressed in their desire for resistance. The marginalised discourse of the work as meaningless was highlighted in my FDA notes but not discussed. I also
made interesting observations that Tania was moving between different discourses in this excerpt, beginning by ridiculing the activity saying “I’m just going to do some reading activities (rolls eyes). I don’t want to!” and then later urging the children to practice so that they can become “expert readers”. Much of this fruitful analysis was lost as it did not fit with the aim of the paper to evaluate ITMP. The “lure of acceptance” (O’Reilly, 2012) also contributed to my decision not to include this analysis as I wanted to please Kate.

6.11.3 Thread of datafication
The thread of datafication is prominent in the weave of this pendant. I state that the aim of our project was “to improve the educational experiences of children and in so doing, challenge the dominant discourse of datafication” This is an interesting deviation from the main research question of the PAR project which was: how can collaboration with the local community improve the assessment of new to English children in Reception? In this paper I reframe the project as challenging the discourse of datafication and improving educational experiences. This reframing relates very closely to an earlier incarnation of the research question which was: how can settings resist the pressures of datafication in supporting the learning and development of young bilinguals? It may indicate that I had lost my focus on finding new ways to assess Roma children as the project progressed. It may also relate to the fact that for Kate, the experience of Roma children was less important than the experience of all children as she was responsible for educational outcomes in her role as head of school.

My exploration of the discourse of data-led education seeks to expand the notion of datafication as it explores the far-reaching impact it has on education. Datafication creates data-led education as a practice as the changes in the use of data lead to changes in pedagogy. Datafication also creates the discourse of data-led education as the way we speak and think about data changes with its increase in value. My analyses of data-led
pedagogy and data-led assessment build on this, exemplifying the impact of datafication on teaching and learning.

6.11.4 The development of the doppelganger

The character of the doppelganger is not explicit in this paper. The conflict between the two aspects of the teacher self is a shadowy presence throughout this paper. I conceptualise this in pendant 7 as the teacher as physicist, or data teacher and the teacher as philosopher or child-led teacher. The incongruent cords discussed earlier can be seen as indicative of the split self of the teacher as I wrote within two different conceptual frameworks. As teacher as physicist, I used data form the Leuven scale analysis to prove that in the moment planning led to better outcomes for children. As teacher as philosopher, I sought to reveal the impact of datafication with a view to resisting it, promoting child-led learning as an alternative to data-led education. The presence of these two teachers led to a conflict which was present throughout the paper. This conflict between the two parts of the doppelganger had been even more dominant in the earlier incarnations of the paper. A section which I removed from the version included in this thesis reveals the conflict:

One observation of the impact of this deep level learning was that the children made very good progress over the year. This was indicated in the summative assessment made at the end of the reception year which showed an increase in the percentage of children achieving the expected level from 55% the previous year to 72%. The shift in focus from measuring outcomes in terms of collecting data against a set of developmental norms to focusing on the process in terms of deep level learning appears, in this case, to have contributed to an improvement in outcomes. Using outcome data to justify an attempt to resist datafication however is deeply problematic

As teacher as physicist, I was excited to find that our outcomes had increased. As teacher as philosopher however, I was uncomfortable in using data to justify resistance to datafication. I was unable to reconcile this conflict and so removed this section from the final version. The unresolved conflict discussed here however, is still present throughout the
revised paper and has led to its incoherence. The theme of this conflict between the two aspects of the teacher self is explored in much more detail in the next pendant *I feel like two different teachers* (see pendant 7).
Pendant 7 I Feel Like Two Different Teachers
7.1 The process of construction

As I was completing my field work in 2019, I noticed that time was an emerging theme. In the moment planning (Ephgrave, 2018) contained reference to a temporal notion (the present moment) and there were many references to time in my field notes. I began researching time towards the end of the year, reading a range of texts and listening to podcasts. At the time, I thought that the paper would be written with Anna Ephgrave and would focus on how ITMP challenged dominant discourses about time. As I continued reading however, I became fascinated with a book which told the story of a debate between Einstein and Bergson entitled *The Physicist and the Philosopher: Einstein, Bergson and the debate that changed our understanding of time* (Canales, 2015). This non-fiction text is written for the general public, but is based on Canales’ academic research into the two men. The reading of this text began to shift my focus away from notions of time in education towards teacher subjectivity. To me, the differences in the way Bergson and Einstein viewed time reflected the way teachers viewed education and I began to see the debate as a metaphor for the split self of teacher subjectivity. The final submission was completed in September 2020 and was submitted to *Pedagogy, Culture and Society*.

I received the reviewers comments later in 2020. Both felt that there was potential for the paper but that significant revisions were required. Their main criticisms were that the methodology was underdeveloped, the use of Canales’ text needed clarification and I needed to move away from the dichotomy of two teacher selves to the idea of multiple subjectivities. In response to this, I researched teacher subjectivity, focusing specifically on Foucauldian notions of the subject. This research proved particularly fruitful as my understanding of subjectivity deepened and changed. I began to see that the idea of a coherent self was not tenable and that to care for the self, the subject must accept multiple subjectivities. I reached
a turning point when I realised that an incoherent self, although uncomfortable, was a necessary part of subjectivity. I rewrote the paper, including a large new section on subjectivity and identity and resubmitted it to the journal. This revision was accepted and the paper was published in May 2021.

This paper was written during the COVID-19 pandemic, which started in England in early 2020. It is noticeable, when collecting my notes, that there were long periods where I did not work on the paper. These times of withdrawal from the PhD writing process happened from March to July 2020 and again from January to March 2021 and coincide with the national lockdowns. I was unable to work as I was under considerable pressure in my post as full time academic and was also educating my youngest child at home. Reflecting back on these periods however, it seems that the act of withdrawing from the research actually led to creative thinking when I reengaged with the paper. Following the break from March to July 2020, I moved from focusing on time to focusing on teacher identity and wrote a very different paper to the one I had initially intended to write. The break enabled me to use Canales’ books as an heuristic device, returning to the creative approach to writing I had developed in my previous paper *The data-doppelganger and the cyborg-self* (Pierlejewski, 2019c) (see pendant 4). The second break, at the beginning of 2021, enabled me to look at the paper anew, reworking it to focus more on teacher subjectivity and enabling me to embrace the idea of the incoherent self. Without this break, I may not have been able to remove myself from my existing ideas. The breaks in writing enforced by the pandemic therefore, seem to have had a positive impact on the writing process as it gave me distance from the work and as a result, enabled my work to take on new perspectives.

7.2 Justification for inclusion

This paper explores all three research questions in depth. It examines how datafication manifests itself in early years, using data from field notes as
well as interviews with participants to identify the impact of datafication on pedagogy. It explores the impact of datafication on subjectivity, concluding that the discourses of performativity and child-centred learning produce a bi-Discoursal subject. It rejects the idea of the coherent self, claiming that the care of the self depends on the acceptance of the divided subject. It also examines resistance to datafication, finding that resistance and compliance are both necessary. Complete resistance to datafication is not possible as this would mean removing the subject from the discourse which created it. The paper marks a significant change in the focus of the thesis as it moves from trying to resist datafication to accepting that datafication forms the subject.
7.3 Title: “I feel like two different teachers”: the split self of teacher subjectivity

7.4 Abstract

In this paper, I use a debate between Albert Einstein and Henri Bergson about the nature of time as a heuristic tool to understand the nature of teacher subjectivity. This debate outlines notions of time as measurable and time as duration or flow. These two interpretations of reality, one from a physicist and one from a philosopher, are used to examine the bi-Discoursal nature of the teacher identity An ethnographic participatory action research project in a preschool class in England finds that teachers operate as both physicist and philosopher, sometimes simultaneously. At times, the teacher is a physicist, measuring the geometry of child development and comparing it to a fixed point of normative expectations. At other times, the teacher is a philosopher, existing in the moment with children and focusing on the lived experience of being. The simultaneous existence of these two identities is a cause of anguish, forming a conflicted and contested self. This, however, is necessary to function in the current educational context and forms an aspect of the care of the self.

Key words: teacher subjectivity; identity; datafication; time; doppelganger

7.5 Introduction

In 1922 the then well-known philosopher and scientist, Henri Bergson and the emerging physicist, Albert Einstein met at the Collège de France for a debate (Canales, 2015). Both held very different ideas about time, with Einstein discussing the nature of scientific time and Bergson focusing on the philosophical nature of time as duration or flow. For the physicist, time, and by extension, reality, was a concept that could be measured using mathematics. For Bergson however, what mattered was the experience of reality, and he argued that to measure this was to change its very nature.
In this paper, I mobilise Canales’ account of the argument between the two men as a lens through which to understand the conflicted nature of the teacher self. The self is split into two opposing identities: the teacher as physicist and the teacher as philosopher.

This paper builds on my previous work, which uses the doppelganger or ghostly double as a trope to express the divided nature of the current professional educator. These papers examined the creation of data-doppelgangers as an aspect of datafication (Pierlejewski 2019a; Pierlejewski 2019b). I argued that data-doppelgangers of children are created in the vast amounts of data collected about each child and then used to judge progress. Here, I use the doppelganger trope to problematise teacher subjectivity. I apply a narrative of the two selves, the teacher as physicist and teacher as philosopher, to my ethnographic work in a preschool class, as highlighting the conflicted character of current teacher subjectivity. I bring together a number of different research interests and phenomena in this paper, namely, interpretations of time, the functioning of the teacher-self and datafication. I examine the intersection of these three phenomena through my investigation into teacher subjectivity.

7.6 The physicist and the philosopher

In order to use the heuristic of the physicist and the philosopher, an understanding of Canales’ (2015) text is necessary. I used this text as the main focus for analysis, as it gives a narrative of the move in discourse from philosophy to science. I found this account of the emergence of the scientific discourse fascinating and saw clear parallels with the emergence of the performative discourse in education. The book explores the relationship between Bergson and Einstein from the early twentieth century until the death of Einstein and beyond. It tracks the emergence and development of the debate about time, with philosophers arguing that time is defined as human experience and physicists arguing that time is defined by its measurement. Although the debate was about time, it is
difficult to separate time from reality as time is an aspect of reality and the argument was extended to consider the nature of reality itself. The debate begins with Bergson believing that the two ideas could coexist, as he saw himself as a scientist as much as a philosopher. Einstein, however, established a dichotomy between the scientific and philosophical view of time by stating at the Collège de France debate “the time of the philosopher does not exist” (p19). Einstein believed that reality is that which can be measured. In his paper *Geometry and Experience* (Einstein 1921 in Canales, 2015), he claimed that his geometry was *the* geometry of the universe. His techniques were “more than simply tools used by physicists; they were actual models of the universe itself” (Canales, 2015 p157).

Bergson, on the other hand, argued that reality is not divisible. To measure time would be to separate the flow or *duration* of time into small sections in order to count them. This division of reality into smaller parts, for Bergson, was a change in the nature of time. He argued that this division transformed time into space as there must always be a concept of the parts existing next to each other in a spatial medium. He compared the measurement of time to film, where reality is recorded in a series of static frames that, when played one after the other, give the illusion of flow. A film, however, is not reality; it is a representation or symbolic form of reality: “real time has no instants” (Bergson, 1965 p52). Bergson, in fact, went further, arguing that when any kind of reality is put into language, its nature changes and it becomes symbolic, creating a “second self which obscured the first ” (Bergson, 1910 p48). In my terms, Bergson saw measured reality as a doppelganger, or second self, of reality.

The dichotomy between scientific and philosophical truth grew, with the positivist discourse of science as truth growing to become hegemonic. Bergson, who had been one of the most celebrated philosophers of the century fell into obscurity and Einstein became arguably the best-known scientist of the time. In the same way, scientific truth was created in discourse as the only truth, with other forms of knowledge becoming
marginalised. Following Foucault, I define truth as a concept created by discourse or “ways of speaking and seeing, the whole ensemble of practices which served as supports for…knowledge” (Foucault, 1984 p54). Truth is not seen as an abstract concept, but rather as emerging from discourse and therefore susceptible to change. Here, truth has undergone what Foucault calls a “global modification” (p55) as it has moved away from valuing philosophy and ideas to valuing science above all else. This discourse of science as truth can be seen in the evidence based practice privileged in contemporary education (Pring & Thomas 2004) where particular kinds of research showing “what works” are valued (Education Endowment Foundation, n.d.).

7.7 Datafication

Alongside this understanding of the debate about time, it is also important to understand current discussions around datafication as it is the measurement of reality, or creation of data, that defines the teacher as quasi physicist. Bradbury and Roberts-Holmes’ work explores this in an educational context. They define datafication in terms of “increased significance, visibility and constant governance through dataveillance, and as being what happens when people or systems are subjected to the demands of data production” (Bradbury and Roberts-Holmes, 2017 p6). Their work (Roberts-Holmes and Bradbury 2016; Bradbury and Roberts-Holmes 2016; Bradbury 2014; Bradbury 2019; Roberts-Holmes 2015; Bradbury and Roberts-Holmes 2017) explores both the productive function of datafication in producing teacher and child subjectivities as well as the reductive function of judging child development through attainment data alone. I build on this work, defining datafication as data becoming more important than the child, and, correspondingly, assessment more important than teaching (Pierlejewski 2019b). Williamson also explores the notion of datafication, focusing on the impact of digital database systems on education (Williamson, 2014; Williamson, 2015). He uses the analogy of the data-doppelganger to explore the notion of the child being reproduced in data form (Williamson, 2014). I take this notion further,
Datafication is defined in the field of digital sociology as “the transformation of part, if not most of our lives into computable data” (Cheney-Lippold, 2017 p9). Cheney-Lippold argues that this data is used to predict who people are and will be. He sees this as less authentic than human judgement as what matters is not the authenticity of the subject, but its usefulness for classifying and categorising humans. People are reconstructed from easily measurable aspects of their lives and their subjectivity is complicated by “layers upon layers of…algorithmic identities” (p5). Beer however, argues that data is seen as being more authentic and accurate than human judgement and the data-self becomes the focus of what he calls the “data gaze” (Beer, 2019). The regulatory power of the data gaze controls what is made visible and which aspects are rendered invisible. Data is seen as a technology of power used to regulate society. The question of the authenticity of data was recently brought into public discourse in the UK when algorithms were used to calculate A level results in the absence of test data (Coughlan, 2020). Results based on algorithms, rather than student attainment, were seen to be unfair and public pressure led to a government U-turn (Richardson, 2020).

7.8 Subjectivity
This paper explores notions of subjectivity. My understanding of this concept is built on the work of Foucault and Foucauldian scholarship. In his earlier work, Foucault (1977) examines governmentality, or the systems and technologies of power which produce the subject. Discourses work to create a matrix within which subjectivity can be produced, with certain subjectivities allowed and others disallowed. His later work however, focuses on the ethics of the self, or how the self is made an
object of government by the self in a hermeneutics of subjectivity (Foucault, 1994a).

In his work on Foucault as Educator, Ball (2017) explores the late work of Foucault focusing on the care of the self. He argues that the ethics of self-care require the subject to engage in parrhesia (Foucault, 2001). This term can be interpreted as meaning "fearless speech" or "truth telling". Here, Foucault moves from a focus on the construction of truth to a focus on the truth teller and the act of truth telling. Parrhesia has a dual purpose- to critique power and circumstance and to narrate the self differently. In this way, the subject can destabilise the powerful discourses which seek to create certain kinds of subjectivity and work to produce alternative subjectivities. Ball describes this as a double refusal as the subject renounces the idea of the intelligible self that is seen to be authentic and the refusal of the technologies of power which seek to represent it. This process of the construction of the self is ethical in that it produces a kind of freedom, the freedom of self-creation. It is also however, deeply uncomfortable, making the subject vulnerable and ambiguous. Zembylas (2015) refers to this as the "pedagogy of discomfort", building on Foucault's discussion of the ethics of discomfort (Foucault, 1994b). He argues that a pedagogy of discomfort can lead to social and individual transformation as students question their long-held beliefs. This paper is in some ways a pedagogy of discomfort in itself, as the focus of investigation is the uncomfortable tension between conflicting identities.

7.9 Identity

Butler's work, which builds on the work of Foucault, is used here to define identity. For Butler, identity emerges from a subjectivity produced within a power network which determines what a person can and cannot be. Before an individual can take on an identity, they must first be made visible within the matrix of power relations which constitutes the subject. She defines “subjection” as being the process by which the subject is produced and maintained by power. She explains "subjection consists
precisely in this fundamental dependency on a discourse we never chose but that, paradoxically, initiates and sustains our agency" (Butler, 1997 p2). In other words, without the technologies of power which govern the subject, the subject could not exist, as it is these technologies which produce both compliance and resistance. Out of these subjectivities emerge a range of identities available to the subject. Brady and Schirato (2010) argue that for Butler, the politics of identity always emerges from, is dependent on and is made explicable by subjectivity.

Teacher identity has been well researched and is viewed primarily in relation to the performative school culture and as co-constructed with others. The performative culture can be seen to lead to an inauthentic self where "value" in terms of the effectiveness of the teacher, rather than "values" are what matters (Ball, 2003). Wilkins and Wood (2009) argue that "coercive compliance" guarantees the erosion of professional judgement. Sachs (2003) argues that this can lead to two types of teacher identity, the managerial professional and the democratic professional. While managerial professionals comply with the performative regime, democratic professionals resist, valuing the teaching community over the organisation and developing an activist self. This, she argues, can lead to transformation where public accountability and professional autonomy are more balanced. Alsup (2005) examined the contested nature of teacher identity and found that new teachers who problematised their identity and accepted multiple discourses simultaneously, were more successful. She draws on the work of Gee, who proposed that bi-Discoursal people, or those who work within two conflicting discourses are the “ultimate sources of change” (Gee, 2015 p185). This is because bi-Discoursal people are able to enact changes in big Discourse by “infusing” them with aspects of other discourses.

Youdell (2011) also found that the acceptance of multiple identities was important in the development of subjectivity. Her work examines the subjectivation of both teachers and students in the context of a school for children with social, emotional and behavioural difficulties (SEBD). Youdell
examines the data in terms of intersectionality, looking at the multiple categories of identity occupied by the subjects and the relationships between these. She takes a post-structural approach to analysis, examining how subjects are constructed within discursive matrices, situated within relations of power. In particular, she examines how the students are subjectivated as both bad school subjects and cool street subjects. These opposing subjectivations are constructed in the discourse of both students and teachers. Youdell suggests that the student's practices of self shift between the two commensurable identities. The discourse of the boys as "SEBD" school failures, however, is their normative positioning and they act against this through finding lines of flight that might destabilise such a position. In this way, the students are struggling to choose where they stand as they narrate themselves within the discourses which make them recognisable.

My work builds on these notions of subjectivity and identity as I examine the power of the discourse of performativity to produce teacher subjectivity. Identity, in the form of the teacher as scientist and teacher as philosopher is explored, with particular focus on the tension between these two opposing identities. Like Youdell’s students, the teachers in this study find themselves simultaneously occupying both identities and struggle to choose where they stand as they act their place within the discourses which make them recognisable. I find that the problematisation and acceptance of multiple identities is necessary for the care of the self.

7.10 Methodology

The research on which this paper is based, was conducted in a preschool class in the north of England from 2018-2019. The school is in an area of very high deprivation and poverty (Communities and Local Government, 2019). Its ethnic make-up is diverse, with the largest groups being South Asian and Eastern European Roma children. The aim of the project was to devise actions which would improve the assessment of preschool children. I was interested in datafication and its impact on child subjectivity and
wanted to explore ways to challenge this discourse in practice. I chose a setting which had an ethos of child-centred learning and devised an ethnographic participatory action research project involving a research group at the school.

Ethnographic participatory action research is a methodology in which researchers work collaboratively with participants to affect change. The project was ethnographic, as I was participating as a teacher within the school. It was participatory, in that the research was conducted with the participants, rather than on them. Finally, it was action research, as the team decided on actions to be taken and reviewed these actions regularly in terms of their impact and effectiveness. The purpose of the research was to enact change, particularly with marginalised groups of children. Participatory action research challenges power dynamics as researchers and participants co-construct knowledge together (Tedmanson & Banerjee, 2012).

The research team consisted of a preschool teacher, Tania; the head of school, Kate; a new to English lead teacher; Amelia, a Polish bilingual support worker; Sophie, a teaching assistant; Juice, a Hungarian Roma advisor and me. My position within the project was of both teacher within the school and academic. I taught alongside the main class teacher every Friday and recorded my ethnographic reflections as field notes. The research team met regularly and made decisions together about the process of the project. Actions to be enacted were decided upon together and reflections were shared during meetings and informal communication. The research followed ethical guidelines laid out by the British Educational Research Association (2011) and all names and identifying features of the participants are anonymised.

Conversations with the class teacher, Tania and the head of school, Kate, were instrumental in the construction of field notes. Although I wrote the notes, they were a result of collaborative thinking and represented a co-construction of knowledge. In addition to my field notes and the notes from research team meetings, I made notes on meetings with parents,
preschool team meetings and conversations which happened around the school. I also collected data in the form of group mind maps and conducted a small number of interviews with teachers at the beginning of the project. One of these interviews has been particularly fruitful in writing this paper. This is with Francesca, a preschool teacher, who was about to leave the school and move to another post elsewhere. She was interviewed in the summer of 2018, just prior to the beginning of my regular teaching at the school. The data analysis for this project took several forms. I worked with other members of the team to analyse data for some publications but chose to work on the data independently for this paper.

The main action of the action research was to implement an approach called *In the moment planning* (ITMP) (Ephgrave, 2018). This is a child-led approach which emerges from a child-centred discourse. Ephgrave advises teachers to move away from planning lessons in advance and rather, to look for “invisible moments of possibility” (Dubiel, 2016 p32) when interacting with children. Teachers look for these opportunities and decide in the moment, how they can support the child in their development and learning through sensitive interaction. It is very different from the approach favoured by many schools in England, where teachers use assessment data to identify gaps in knowledge and plan activities in advance, to fill these gaps. This is enshrined in the Standards for Teachers, Standard 6: “use relevant data to monitor progress, set targets, and plan subsequent lessons” (Department for Education, 2013 p12).

### 7.11 Doppelganger as method

The approach to data analysis, used in this paper, doppelganger as method, was developed in a previous work (Pierlejewski 2019a). It builds on Burman’s (2017) “child as method” approach in which the trope of child is examined to evaluate how it functions to constitute socio-political axes. The child is a figure through which the research topic is viewed. In the same way, I use the trope of the doppelganger, taken from both literature
and film, to view educational policy and practice. I examine the function of the divided self, in this case, the teacher as physicist and teacher as philosopher, in producing teacher subjectivity.

In order to understand this approach, it is important to have an understanding of the doppelganger genre in literature, film and psychoanalysis. The genre emerged during the Enlightenment period as an aspect of the Gothic. Examples of this can be seen in Hoffman’s *The Devil’s Elixirs* (Hoffmann, 2008), Poe’s *William Wilson* (Poe, 2009) and Dostoevsky’s *The Double* (Dostoyevsky, 1846). It has also been explored in many films such as *The Double* (Ayoade, 2013) and *Fight Club* (Fincher, 1999). In all of these stories, during moments of mental anguish the subject comes across another version of themselves. This deeply disturbs the subject and they develop an ambiguous relationship with the other self. Many stories end with an attempt to kill the doppelganger, but these in turn reveal the true nature of the double as an aspect of the self. To kill the doppelganger is to kill the self. The doppelganger genre has several key features identified by Rank in his (1971) psychoanalytic analysis:

- The doppelganger is an exploration of identity in terms of the relationship between the self and the self
- The doppelganger is inextricably linked to the subject and neither can exist without the other
- The presence of the doppelganger is a source of acute anxiety to the subject
- The doppelganger is ambiguous, both realising and restricting desires

In this paper, I use the trope of the doppelganger to investigate teacher subjectivity. I ask how the teacher’s self is divided and examine the relationship between these two identities. I combine this with the two interpretations of time documented in Canales’ (2015) text to identify two versions of the self. These are the teacher as physicist and the teacher as philosopher. I ask

- How does the teacher function as a physicist?
- How does the teacher function as a philosopher?
• How do the two selves operate simultaneously?
The next section explores the two aspects of the split self, addressing each of the questions in turn.

7.12 Teacher as physicist
An analysis of field notes indicates a discourse of teacher as physicist throughout. There are three main aspects of this which emerge from the data. These are the regulatory function of time as a technology of power; the non-statutory guidance Development Matters (Early Education, 2012) becoming a geometry of child development; and the joy of data seen in the pleasure derived from creating and analysing data.

7.12.1 Time as a technology of power
From the very first meeting with staff at the school, the pressure to achieve the statutory measure of school readiness was a dominant feature of discussion. In England, this is known as the Good Level of Development (GLD), and is determined by the ability of pupils to achieve a number of goals in personal, social and emotional development, language and communication, physical development, literacy and mathematics (Standards and Testing Agency, 2018). At the end of the reception year (age four to five), all teachers in England must assess their pupils against a number of early learning goals in the Early Years Foundation Stage Profile (Standards and Testing Agency, 2018) and this is submitted to the local authority. From this ‘profile’ data, the GLD is constructed and used as key performance indicator for the school. The aim is for all children to achieve the GLD but the current average percentage is 71.8% (Department for Education, 2019). This pressure to meet targets requires the teacher to focus attention on measurement. Reality, for the teacher as physicist, is that which can be measured. Pupils must be assessed throughout the year to ensure that they are on track to achieve the GLD. It also requires the teacher to collect vast quantities of data in the form of observations and other assessments, to prove that each child is meeting the target. In the same way that, in his theory of special relativity, Einstein
measured a clock travelling at the speed of light and compared it to a static clock back on earth, teachers measure the lived experience of the child and compare it to the static descriptor of the child found in Development Matters (Early Education, 2012).

This performative pressure to move children to a specific goal in a particular time frame can be seen in several comments by teachers about the nature of the Early Years Foundation Stage (EYFS). Francesca, a preschool teacher at the school, describes her role in an early interview as:

> You’ve got to start from that point, you’ve got however much time with them and you’ve got to get them reading and writing by the end or they will not get it

The EYFS year is conceptualised as a race. This aligns with imagery used in education which uses the race as an analogy for schooling (Paterson et al., 2014). This conceptualisation posits the teacher’s job as to get as many children to the finishing line as possible in a short period of time. The teacher must “get them reading and writing”. It is her job to coerce the children to perform certain tasks “reading and writing” by the end of the year. The consequences of not getting them reading and writing by the end of the year are devastating. Francesca, later goes on to say, “You get a good score, you get looked upon as a good teacher”. This implies that if you do not get a good score, if enough children do not perform the required tasks, you are not a good teacher. The value of the teacher as physicist depends on the quality of the data. If the data is not good, the teacher is not good. This can also be seen at the end of the research project when the scores for each class are calculated. My field notes record a meeting in which all members of the preschool teaching team evaluate the statutory assessment scores. One teacher, Susanne, received the news that a low percentage of her children had achieved the GLD. My notes record her reaction:
As soon as Kate [the head of school] worked out that the overall GLD was 53% all of the teachers were clearly disappointed. It was as if their balloon was deflated. The morale slipped.

Susanne was particularly upset with her data as she only had 9 children at the GLD. She said: “It’s upsetting” “it’s sad” and was visibly upset, close to tears.

Susanne narrates herself as feeling that the measurements of her children convict her of being a bad teacher. She is experiencing the “terrors of performativity”, as Ball (2003) so brilliantly puts it.

### 7.12.2 The geometry of child development

In order to measure children, a fixed point for measurement must be established. For most schools in England, this fixed point is outlined in the non-statutory guidance, Development Matters (Early Education, 2012). This non statutory guidance document outlines child development in age bands from birth to sixty months. Each age band overlaps the next and contains a number of descriptors for each of the seven areas of learning. Each list of age-related descriptors ends with an early learning goal (ELG), which must be achieved by the end of the year. An example is a descriptor for the speaking element of communication and language for a child aged between forty and sixty months: “Extends vocabulary, especially by grouping and naming, exploring the meaning and sounds of new words” (Early Education, 2012 p21). These descriptors of normative development are taken by the teacher as physicist to be fixed points. They are accepted as the geometry of child development, rather like Einstein believed he had discovered the geometry of the universe. They are not seen as a possible way to describe reality, but rather the description of reality itself. This can be seen in my discussion with Tania, the preschool class teacher, about a child’s progress towards the ELGs.

Tania and I discussed GLD. We were talking about whether Maria would get the GLD or not. Tania had said that she thought Maria was on track. We talked about the difficulty of using past tense and retelling stories, which are ELGs she can’t do yet.
In this excerpt, I narrate myself as acting within the teacher as physicist identity. I am basing my discussion with Tania on the assumption that Development Matters is the fixed point of measurement. I am assuming that this is where Maria should be and that her difficulty in reaching some aspects of the goal indicate that she has failed. I accept the goal unquestioningly in this discussion, as if it told me some truth about Maria, despite the fact that when acting as teacher as philosopher, I know that developmental norms are classed, gendered, raced and culturally biased (Burman, 1994). They are not the neutral statements they claim to be.

Why is it that, in the role of physicist, teachers accept norms which in the role of teacher as philosopher, they know to be non-neutral? One explanation may be the need to have a fixed point to measure from. Without the fixed point, measurement is meaningless as no comparisons could be made. Without measurement, the teacher would not know whether they were “looked upon as a good teacher”. Within the discourse of performativity, the purpose of education is to achieve particular measurements at the end of a fixed time period. This can then be used to judge the quality of teaching, establishing the value of the teacher. Truth, within the discourse of performativity is different to truth emerging from a discourse of child-centred education. The teacher must navigate both of these opposing truths simultaneously in order to drive change and survive.

Another explanation is proposed by Britzman (2011) who, in her psychoanalytic exploration of education, explores the notion of the manual as an object of transference relationship. Transference, she explains, is when feelings about past relationships are transferred to other people or objects. She claims that it is central to therapeutic and, arguably, also other educational and institutional processes. This extends also to educational policy documents. The manual, an instruction text, is an example of such an object. Love (among other feelings) is transferred to the manual as, like a parent, it will remove vulnerability of not knowing. This covers over the vulnerability and lack of knowledge of the child, thus reducing the unbearable feeling of not knowing. The manual thus
becomes a love object. Development Matters can be seen as such an object. It acts in the role of parent for teachers, reassuring them that they are not vulnerable, that their lack of knowing is hidden as the manual contains the knowledge they lack. This can be seen in an excerpt from my field notes where Tania and I look at the data for the class. I had devised a system where assessments against Development Matters are converted into quantitative data and then used this data to show that children had made progress.

I then looked at the data with Tania and asked about progress. I calculated how many points were on track at baseline- 115 and how many at mid point- 240ish. This is a big leap and showed Tania that more children had made progress.

With the help of the manual, Tania and I were able to narrate ourselves as good teachers. The manual functioned as a parent, reassuring us of the value of our work.

7.12.3 The joy of data
When our measurements demonstrated success, we experienced a sense of joy in this data. As a physicist, the analysis of data and the subsequent knowledge that is generated is a source of joy. This can be seen in my own reflections about data. Following on from the previous excerpt, in which Tania and I “discover” that our children are making good progress, I note the following:

We discussed this data quite a lot. Tania had not analysed the data in this way before and found my analysis helpful. This is the believer me who loves data! …I love analysing this data.

In this excerpt, I narrate myself as loving data because it reassures me that I have value as a teacher. The transference object of the manual had been effective in acting like a parent to protect us from our unknowing and we loved (or feared) it in return. The use of the term “believer” is also interesting as it aligns my relationship with assessment data with a
religious belief. I write that I am willing here, to put faith in the data, not because I know it is true but because I need to feel it is true. As it is telling me the story I want to hear- a story of success, I am willing to suspend my disbelief and put my trust in it. This again relates to Britzman’s (2011) concept of the transference object. The data here is the love object which appears to be loving me back. I believe in it because it is giving me what I need.

The joy of data also relates to the concept of the mirror of data (Pierlejewski 2019a). This emerges from Lacan’s (1977) work on the mirror phase, in which the mirror enables the subject to see themselves for the first time as an object. Bibby explores this, explaining how children learn about themselves through looking into the mirror of the teacher (2011). I take this further, positing data as a mirror which reflects a version of the teacher. I suggest that “this activity is narcissistic in nature as it involves making the formulation of good data, the polishing of the teacher’s doppelganger, the obsession of the teacher” (Pierlejewski, 2019b p7). The doppelganger here is the assessment data which creates another version of the teacher. My obsession is to make the data as pleasing to me as possible. Like Narcissus, I like what I see in the reflection, it brings me joy.

The idea that there are two types of teacher identity, two teacher selves, emerges from the research data early on. Francesca described two types of teacher in her interview:

True early years teachers feel that way. Data teachers who can only teach to this [the GLD] because this tells you what to do, don’t fully understand how a young child learns and the pedagogy behind that learning

Clearly, Francesca narrates herself not as a data teacher but as a “true early years teacher”. Despite the fact that Francesca has also described her role as “to get a certain percentage of GLD through to year 1”, she does not define herself as a data teacher. Conversely, the role of teacher as philosopher is felt to be the true self of the participants, despite the fact
that they are often very much in the role of the data teacher, or teacher as physicist.

7.13 Teacher as philosopher

Bergson’s work as a philosopher is useful in understanding the role of teacher as philosopher. In his view, reality was confused, ever changing, chaotic and unpredictable. To measure this reality, to put it into discourse even, was to change its very nature. He explains this in his thesis *Time and Free Will* (Bergson, 1910 p45)

> Our perceptions, sensations, emotions and ideas occur under two aspects: the one clear and precise, but impersonal; the other confused, ever changing and inexpressible, because language cannot get hold of it without arresting its mobility or fit it into its common place forms without making it into public property

What he means by this is that language changes what we experience. When we put things into language, we put them into the symbolic and create another version of the self- the symbolic self. This is a kind of doppelganger. The symbolic self in terms of children is the version of them which we describe and quantify. By observing and measuring, we change that which we measure. He goes on to clarify this point saying,

> Thus, a second self is formed which obscures the first, a self whose existence is made up of distinct moments, whose states are separated from one another and easily expressed in words (p48)

By trying to create data out of human experience, we reduce that experience to a series of distinct moments which exist separately from each other. This doppelganger obscures the subject, as it recreates it in the symbolic forms of words and numbers.

7.13.1. The joy of the moment

The teacher as philosopher embraces the experience of teaching, finding joy in the moment. By this, I mean that their joy comes from the
experience of the flow of time, from the “confused, ever changing and inexpressible” nature of being (Bergson, 1910 p 45). This can be seen by the spontaneous expression of joy given by Tania while playing with children outside. Tania has been playing in the rain with a group of children, splashing in puddles. The children and teacher have co-created games in which children measure the splashes and mark on the floor how far each splash went. Tania speaks to me towards the end of the session saying “I love my job this week! We’ve had such a good week!” Tania had not planned to play in the puddles, she had been led by the children’s interest.

This kind of working involves practitioners focusing on the moment, on the experience of time as duration as opposed to planning activities in advance. Rather than focusing on future learning outcomes, the focus is on what the adult and child are doing now. Adult and child work together to co-create learning, with the adult sensitively interacting with the child, looking for opportunities to support the child to move their learning forward in their child-initiated play (Ephgrave, 2018). There is an unpredictability about this pedagogy which is expressed by practitioners as “going with the flow”. I reflect on this in my field notes, noting,

This way of learning is unpredictable, unplannable and chaotic. It is highly creative, brave, scary and kind of insecure. You never know where you are going to go each day. You can’t really prepare for it, but you use all the skills you have gained along the way.

The analogy of the journey recurs throughout the study. Our in the moment planning approach feels like a journey to an unknown destination “you never know where you are going each day”. There is no map, no planned route and no specific destination. This can provoke feelings of insecurity as it feels like a high-risk strategy, but this risk may be a part of what makes the practice exhilarating and therefore provokes feelings of joy. I reflect in my field notes, “I love that we never know what we are going to do” indicating a pleasure derived from the risk of the unknown. Rather than using the manual as a transference object to control
vulnerability, I narrate myself as embracing the vulnerability and finding pleasure in it.

Practitioners reported that they felt that ITMP pedagogy gave them a sense of freedom. This can be seen in an evaluation meeting I held with the preschool teaching team at the end of the project. I asked the participants to mind map their response to the implementation of ITMP. They utilised terms such as “individuality”, “autonomy” “flexibility” and “loose” in their mind maps. The pressure to measure the regulatory function of time seemed to have been removed. This corresponds to Bergson’s ideas about measurement of time. Guerlac paraphrases Bergson, saying

> If we try to measure and count our feelings, to explain and predict our motives, and actions, we will become like automatons- without freedom, without beauty, without passion, and without dreams. We will become mere phantoms of ourselves (Guerlac, 2006)

Science, for Bergson, was appropriate for measuring things, but not for measuring human experience. The measurement of our lived reality removes our freedom and passion and makes us into doppelgangers, perhaps in the form of the teacher as physicist. Conversely, to remove this requirement to measure, restores a sense of freedom and passion, which can be seen in the responses of participants to the change in pedagogy. The joy emerging from the experience of acting in the moment with children is comparable to the joy experienced in analysing the data.

### 7.14 The contested self

Throughout the research, the teacher as physicist and the teacher as philosopher are both equally present in a contested or bi-Discoursal self.

#### 7.14.1 Two teachers

The notion of the contested self is perhaps made most explicit in the Tania’s comments following parent interviews. Tania reflected on the kind of feedback she gave to different parents. She noticed that she did not
mention the GLD to parents whose children, she felt, had no chance of achieving it. When talking to others however, she mentioned that they were on track to get the GLD. Tania indicated that she felt that there was something morally wrong with this saying, “I feel like two different teachers. Morally, it’s not sitting right with me.” This was a turning point in the study, as Tania and I both began to narrate ourselves as existing within two discourses simultaneously. Tania expresses her dissonance here by describing herself as a split self: two teachers. She is aware that she has a doppelganger. Tania also expresses her feelings about this split self. She is uncomfortable with the incongruity of the divided self. This bi-Discoursal self, however uncomfortable it might feel, is essential for the development of the subject as it drives change. Through problematising both the teacher as physicist and the teacher as philosopher, a new version of the teacher subject can emerge. A self which accepts the notion of the split self.

My own narration of the self in the field notes also suggest a complex subjectivity. The following excerpt follows a meeting in which staff discussed school assessment data.

I reflected at the meeting that I have a very complicated relationship with data. I can at the same time discuss data as if it were a real signifier of knowledge while resisting data as a false signifier of knowledge. What is it? How do I really feel about data?

I genuinely want children to get the GLD even though I think it is false. I can’t escape it. I am trapped by data. It impacts on who I am and makes me something else. I want to resist it, but I can’t. It is always there, influencing how I think about children.

The overwhelming feeling I describe here is that although I want to be the teacher as philosopher, I cannot escape the teacher as physicist in me. My account of feelings of being trapped by data indicate that I feel my agency has been removed and I am unable to be the intuitive, creative self I expressed in my reflections on planning in the moment. I see myself as simultaneously the teacher as physicist discussing “data as if it were a real
signifier of knowledge” and the philosopher “resisting data as a false signifier”. This challenges my belief that my subjectivity should be somehow coherent. My realisation that I have a doppelganger, that I am not a coherent self, that I can simultaneously think as two different teachers causes mental anguish. I narrate myself as powerless to be myself and experience a feeling that I am “something else”. This corresponds with Rank’s (1971) work and Dolar’s (1991) description of the effect of the double on the subject: “this crumbling of the subject's accustomed reality, this shattering of the bases of his world, produces a terrible anxiety” (Dolar, 1991 p11). This anguish, however, can also be interpreted as the pedagogy of discomfort. In order to care for the self, it is essential that I experience the discomfort of changing my beliefs in order for a new type of subjectivity to emerge. In this subjectivity, multiple identities are possible and the idea of a coherent self is rejected.

7.14.2 The completion of the ego
The subject and the doppelganger, in the forms of the teacher as philosopher and teacher as physicist remained throughout the study. One of the features of the doppelganger in literature is that as part of the self, it cannot be destroyed. To kill the doppelganger is to kill the self. Dolar argues that the doppelganger completes the ego (Dolar, 1991). According to Lacanian psychanalysis, to understand subject/object relations, the subject needs the mirror image as, without the image, the self as other, the subject’s ego is not developed. In the same way, the knowledge of my split self helps me to understand who I am as a teacher. I narrate myself as being able simultaneously to be both teacher as physicist and teacher as philosopher and derive joy from both.

7.15 Conclusion
During the study, I had hoped to rid myself of the teacher as physicist. I felt, like Francesca, that I was not a “data teacher” but a “true early years teacher”. Planning in the moment (Ephgrave, 2018) seemed like a pedagogy which would enable me to do this, as the focus was on
interacting with the child in the here and now, rather than on planning for future learning based on assessment data. The reality of teaching in the current political context, however, is that the discourse of performativity as much as the discourse of child-centredness produces the bi-Discoursal subject. Both are instrumental in creating subjectivity. To participate in the current educational reality, where quality is measured by outcome data, involves becoming a part of the system. The teacher as philosopher is trapped by data and in order to operate in this world, must embrace the opposing role of teacher as physicist. To completely reject either aspect of teacher subjectivity would be to kill the doppelganger, which in the literature of the doppelganger genre, can only result in death. The care of the self therefore, depends on the acceptance of the divided subject.
7.16 Analysis of the paper

This analysis focuses on the main thread of the paper—datafication, followed by an evaluation of the development of the characters of the teacher subject and the doppelganger.

7.16.1 The thread of datafication

The notion of datafication is developed further in this paper as I explore the relationship between time and datafication, the geometry of child development and the use of the manual. Time, I argue, is a key technology of power as it transforms education into a kind of race. The pressure of time is constantly felt by the teacher, who must get as many children to the finishing line of the expected level in as short a time as possible. Child development norms are seen as a neutral fixed point, against which all children must be measured. These measurements are not questioned, but are seen as the geometry of child development. Finally, the record of these norms found in Development Matters (Early Education, 2012) is viewed as a manual for teaching. It acts as a love object, reassuring teachers that their lack of knowledge will not be seen as the manual contains all of the knowledge they lack. The relationship between the teacher and the means for creating data is a love relationship, it reassures the teacher that they are doing a good job.

Closely related to this slightly more positive view of datafication is the idea that data brings joy. I discuss the joy experienced by both Tania and I as we analysed the data and found that it told a story of success. Our joy was narcissistic in nature as it reflected back the sort of teachers we wanted to be. This analysis of datafication as leading to a positive emotional response is very different to the construct of datafication discussed in earlier papers. It moves away from datafication being a kind of evil force to seeing datafication as more neutral.
7.16.2 The development of the teacher subject
My reading into Foucauldian ideas of subjectivity led to a significant change in my understanding. In this paper, subjectivity is presented as being a product of discourse. We have no control over the discourses which produce our subjectivity but are nevertheless produced by them. In the first version of this paper, I focused exclusively on the dichotomy of the teacher as philosopher and teacher as scientist. I felt that subjectivity must be coherent and that a teacher should be one or the other. Like Francesca, I felt that I was a “real early years teacher” and did not want to be a “data teacher”. Through researching subjectivity however, I decided that the idea of a coherent self was not possible. Subjectivity could not be contained in categories of purely scientist or philosopher. Rather, subjectivity is messy, incoherent and fluid. The rejection of the coherent self and the acceptance of multiple subjectivities was a major turning point for me and to an extent, resolved the conflict between the two teachers both Tania and I felt ourselves to be. The teacher subject, in this paper, has therefore evolved into a much more complex character, with multiple subjectivities.

7.16.3 The development of the doppelganger
Closely related to my analysis of the development of the teacher subject is the analysis of the doppelganger character. My rejection of the coherent self was also a rejection of the idea that there could be an existence without the doppelganger. The acceptance of multiple subjectivities meant that the doppelganger was accepted as an aspect of the teacher subject. It was no longer a ghostly double, a kind of monster to be feared and fought, but simply another version of the self, more homely (heimlich) than occult (unheimlich). Although the doppelganger remained a source of anxiety to me, I began to see this anxiety as a necessary aspect of the pedagogy of discomfort which led to a development in subjectivity. This final doppelganger paper demonstrates an acceptance of the doppelganger as an essential part of the self and a rejection of the doppelganger as a monster.
Following this acceptance of multiple subjectivities, I felt able to move on to focus on my work as an activist teacher. The next pendant explores some of this work, containing a paper I co-authored with Juice Vamosi, in which we attempt to provide an alternative construction of the Roma child.
Pendant 8 A Romani analysis
Chapter 3: The process of construction

This book chapter constitutes chapter 3 of the book *Childhoods in More Just Worlds: an international Handbook* (Kinard & Cannella, 2021). The process of construction began in February 2020, when editor Gaile Cannella invited Erica Burman, my main supervisor, to contribute a chapter. Erica suggested that I might be interested and we pitched the idea of writing about the impact of in the moment planning on Roma children. I had already started working on a paper about Roma concepts about time with Juice Vamosi. Juice was part of the participatory action research team for the research project (see pendant 5). We discussed working together on the book chapter and agreed that we would use the original draft paper on time as a starting point.

Juice and I began by writing separate sections of the paper. I used large excerpts from the transcript of an interview I had conducted with Juice and his family in an attempt to present the Roma voice. Juice however, was unhappy with the inclusion of the transcripts as he felt that the language was too colloquial (he described it as “kitchen language”). I suggested that he rewrite the sections of transcript in academic language. We began this process but I struggled with the use of voice. I wanted Juice to write in the first person, but also wanted to write in the first person myself. It did not feel authentic to use the plural “we” for Juice’s contributions as these were not my reflections, but his. After struggling with this for some time, we agreed to write a separate book chapter with a slightly different focus and the time paper became a part of my paper *I feel like two different teachers* (Pierlejewski, 2021) (see pendant 7). The focus for this new piece of writing would be a Romani analysis of preschool education. We wanted to take a Romani perspective, evaluating the mainstream approach from this perspective, taking Romani views of child development as the norm.

Following a break in working due to the COVID-19 pandemic, Juice and I returned to the book chapter in September 2020, as the submission date was December 2020. We began communicating via Whatsapp and in Zoom meetings as we were not able to meet in person. I sent sections of
my field notes to Juice and asked him to send a response via Whatsapp. This proved to be a very effective way of writing together as Juice would often respond very promptly. The use of the Whatsapp responses also solved the problem of voice. I had decided to try to structure the book chapter using a conversational style, inspired by Bibby, Lupton and Raffo’s (2017) text in which vignettes are written by teachers and commented upon by academics in an “editorial response”. I felt that this would preserve both of the authors’ voices, enabling us both to write in the first person.

The use of these “voiced extracts” (my term) challenged the traditional power dynamic between academics and non-academics as neither voice was privileged. I felt that the process of merging the two voices into one would have privileged one writing style over another, implicitly giving the message that there was a “right” way of writing. The unique style of each author would have been lost in the process. It also contributed to the function of participatory action research to co-construct knowledge, challenging the epistemological assumption that the researcher is the possessor of knowledge. Relating back to Freire’s (1972) definition of praxis, our purpose was to reflect and act upon the world in order to transform it together.

The issues of co-authorship, which I had experienced when writing Resisting datafication through in the moment planning (see pendant 6) were overcome in this paper. Through keeping each author’s writing contained within the voiced extracts, the danger of over-rapport with the research participants and the subsequent privileging of the co-author’s voice over my own was mitigated against.

Juice and I decided to follow academic convention and use Juice’s “official” first name of “Gyula” in this publication.

8.2 The Justification for inclusion

This paper directly relates to the research project as it addresses the main research question “How can collaboration with the local community
improve the assessment of Roma children who are new to English in Reception?” Through collaboration with Juice, a member of the Roma community, I was able to assess the case study child in a new way. His Romani analysis of her behaviour and learning provided a new way of knowing the child. It challenged mainstream assessment as it did not use developmental norms as a measure of development. Rather than starting from the normative child and asking how the child compares, the paper starts with the Roma norms in the form of Pachiv (the set of unspoken rules which govern Roma behaviour) and asks how she compares to these alternative norms. A very different kind of data is produced by this analysis, improving the assessment of Roma children by enabling teachers to understand the behaviour they observe. This is the only Romani analysis I have found in my literature search and is thus a significant contribution to knowledge.

The paper also addresses the third research question: how can early years teachers resist datafication? By analysing and evaluating the child’s development from a Romani perspective, we are rejecting the normalisation process which occurs through measuring children against the norms of the Early Learning Goals (Department for Education, 2017). This resists datafication as it assesses with the purpose of understanding the development of the child within a culturally appropriate context rather than assessing to produce data for school accountability purposes. It also resists datafication as it produces an alternative child-subject, rejecting the deficit subject produced through normalisation.
8.3 Title: A Romani Analysis of English Preschool Education

8.4 Introduction

This chapter has been written by Mandy, a ‘gadji,’ or non-Roma academic, and Gyula, a ‘rom’ (adult Roma male). It uses a sociocultural approach to explore the education of Roma children in an English setting, focusing on the case study of a 4-year-old child. Themes of transition, cultural expectations and play are analysed. For each theme, an excerpt from an ethnographic study is used as a basis for reflection by both Gyula and Mandy. Gyula gives a unique Roma interpretation of the data, relating it to his personal, insider understanding of Roma culture. He does not claim to represent all Roma people but presents his personal experience of being a member of this ethnic group. Mandy reflects on this as a teacher, considering the implications of the knowledge shared for her understanding of the case study child and future practice with Roma children. The process of writing this chapter was impacted by the COVID-19 epidemic as the authors were unable to meet in person. To overcome this, matters were discussed in online meetings and social media was used to facilitate writing. A method emerged in which Mandy would send excerpts of her field notes to Gyula in a digital chat form. He would then write a response, using a social media app. These WhatsApp conversations have become the main body of the chapter. Digital chat writing created a non-threatening space, in which both authors could communicate. The use of mobile phones, rather than the computer, to write also contributed to a more relaxed writing environment, reducing the power imbalance between the authors. A decision was made to preserve the voice of both writers through the use of excerpts from field notes followed by voiced responses, written in the first person. Writing in the third person throughout would have detracted from the Roma voice, a voice which we felt was missing from educational literature. We did not want to confer a voice on the ‘other’ but, rather, privilege the subaltern voice (Cannella, & Viruru, 2004).
8.5 Gyula: History of Roma in the United Kingdom

Roma, often referred to by the non-Roma population as ‘Gypsies’, originate from various parts of the north-west of India. The base of our language is Sanskrit; therefore, it is similar to Urdu, Punjabi and Gujarati. This group migrated from India between 1000 and 1068 and then stayed in Byzantium for about 200 years before moving towards the Balkans (Hancock, 2002; Matras, 2014). In what is present-day Romania, Roma people were enslaved for about 500 years. During the Second World War, along with Jews and other groups, Roma people were selected for elimination. It is impossible to establish definite numbers, but Hancock estimates that 1.5 million Roma were killed in what is now known as the ‘Gypsy Holocaust’ (Fonseca, 1996; Hancock, 2002; Matras, 2014). Following this, during a period of communist rule in Eastern Europe, attempts were made to assimilate the Roma into mainstream culture (Scheffel, 2005). Since the collapse of the former Soviet Union and the enlargement of the European Union in 2004, large numbers of Eastern European Roma have moved to settle in the United Kingdom. Estimates of numbers vary but range between 80,000 and 300,000 (Morris, 2016). These have added to the numbers of people classed as Gypsy, Roma and Travellers (GRT), with estimates of at least 500,000 GRT people in the United Kingdom, Eastern European Roma make up an estimated 50% of the GRT population. These groups are not travelling people but live in settled communities in the cities of the United Kingdom.

The influx of Eastern European Roma people into UK cities has been a relatively recent event: Schools in some parts of the country now have large populations of Roma children. Having no past experiences with Eastern European Roma, these schools have struggled to adapt as their existing knowledge of Roma culture is very limited. The new communities have often experienced issues with communication as schools have little knowledge of the Romani language. When non-Roma Eastern European
bilingual support staff have been used, there have been examples of racism and prejudice (Penfold, 2015) as well as a lack of understanding that for many children, the Eastern European language is not their mother tongue. Schools therefore experience problems such as poor attendance, a lack of parental engagement and low achievement but have little or no understanding of the reasons behind these issues (Penfold, 2016).

8.6 Mandy: Literature Focusing on Roma Education

There is a wealth of literature focusing on the education of Roma children in Europe and beyond. This literature can be categorised into two main groups: literature which focuses on interventions to enable Roma children to integrate into mainstream school culture and literature which focuses on developing intercultural understanding. Intervention-focused literature starts from an assumption that children are a homogeneous group. It sees children as developing along predetermined pathways based on developmental psychology, irrespective of culture. Roma culture and child development are looked at from the perspective of the mainstream White middle-class culture, creating an ethnocentric deficit model. Roma parenting is thus pathologised in a similar way to other practices which do not conform to normative expectations (Phoenix, 1997). Bennett’s (2012) report into Roma early childhood inclusion exemplifies this view. The key messages are that barriers to learning must be ‘torn down’, enabling children to perform at the same level as their non-Roma counterparts. Roma children are seen as a problem which must be fixed. Questions arise about why Roma behave in the way they do are not asked, which means that their culture is not valued or understood. Most policy-based literature represents this deficit discourse, proposing evidence-based strategies to improve outcomes (Klaus & Marsh, 2014; Wilkin et al, 2009).

Literature which focuses on intercultural understanding, however, tells a different story. Some of this is written by members of the Roma community, with notable examples being Smith (1997) and Kyuchukov (2000). These examples give detailed information about Roma culture,
explaining from an insider’s perspective, the behaviours identified as ‘problematic’ for mainstream educators and researchers. Smith explores Romani child socialisation processes, exploring the development of the Roma child and their education within the family. The values of autonomy, responsibility and the active participation of children in society are contrasted with mainstream middle-class views of children as dependent and regulated by the school regime. Similarly, Kyuchukov focuses on the beliefs of teachers that all children start school with the same level of knowledge and that they should know how to cope with the school rules.

Non-Roma researchers who have taken an intercultural approach to educating Roma children have identified that working closely with the community to try to gain an understanding of Roma and mainstream values and beliefs can be very successful. Schools and organisations that are willing to adapt and change based on this developing awareness tend to find approaches and strategies which are amenable to both the Roma families and the schools. An example of this is Laloeza, Martinez-Lozano, and Macias-Gomez-Estern’s (2019) work with Roma children in Spain. The projects discussed demonstrate a deep understanding of Roma culture and attempt to make school learning meaningful to Roma children by relating it directly to their lives and values. We wanted to build on this intercultural model of work with Roma children by working as a team to gain a better understanding of Roma culture.

8.7 Research Project

The research we undertook was a participatory ethnographic action research project. In this approach, the researcher and participants work together for change (Tedmanson & Banerjee, 2012). The work is emancipatory in purpose and involves the people involved experiencing and formulating the problem being investigated (Cohen et al., 2011; Montero, 2000). All members of the research team were insiders, albeit in different positions of authority, researching their own practice and experience (Mills & Morton, 2013). The project took place in a preschool
(ages 4–5) class in the north of England for a year, starting in June 2018 and ending in July 2019. The research team consisted of a number of school staff. Mandy worked as an additional staff member, and Gyula, who was a Roma advisor for the project, joined the team halfway through the year. The team worked together to try to devise new ways of assessing and teaching children, with a specific focus on six Roma children in the class. The research took place in Pinetree School (pseudonym), a very large primary school in the northern English city of Bradford. The school is located in one of the most deprived wards in the region as defined by national measures of deprivation (Ministry of Housing & Local Government, 2019). The population is mixed, with about half of the children from Pakistani heritage and one quarter of Eastern European Roma origin, mainly from the Czech and Slovak regions. The remaining population represents a broad range of ethnicities. A focus for the school was to improve the educational outcomes of Roma children, as this group has been shown to be the lowest performing group nationally in the key performance measures (Department for Education, 2019).

The work for this chapter was completed by two members of the research team: Mandy and Gyula. Mandy has focused on the experience of teaching, and Gyula has contributed his knowledge of the Romani people and their history, characteristics and values. Both Mandy and Gyula have been involved in the analysis of field notes with Gyula offering a Roma interpretation and Mandy responding to this with reflections on practice. Gyula’s wife, Maria, has also been involved in this analysis to give a female Roma perspective. Matras and Leggio (2018) note that many Roma advisors have not been included in the writing of academic papers, despite the fact that their contribution in terms of insider knowledge has been significant. This chapter starts from the acknowledgement of this omission and aims to go some way to address it.

Following on from the research project, both Mandy and Gyula have continued to be involved with the school. Mandy has taken a post as a school governor, and Gyula is now employed as a Roma liaison worker.
Gyula supports Roma children with home learning activities and helps the well-being of Roma families via establishing a secure and safe home environment. He also introduces the school community to Roma culture through music and artistic projects.

The main focus of the analysis is a case study of a Roma child with whom Mandy worked during the research project. An outline of the case is included, followed by excerpts from Mandy’s field notes which are analysed by both Gyula and Mandy.

8.8 Focusing on Celina: A 4-Year-Old Roma Child

‘Celina’ is a 4-year-old Roma girl. She arrived at Pinetree School without registering beforehand and so was not already in the school system. She had not attended the school nursery (ages 3–4) class as most of her classmates had. She arrived speaking no English, using her own language for the first week or two. She was very distressed during the first week of school and cried for long periods. The school knew virtually nothing about Celina upon her arrival. They were unclear about who her carer was, what language she spoke and who her immediate family were. At first, the sister was thought, by staff, to be her cousin, and her grandmother was thought to be her mother. As the year progressed, staff made enquiries with Celina’s family and, by halfway through the school year, had discovered that Celina’s parents had been deported to Slovakia and her grandmother was the main carer. Celina lives in a very deprived part of the city, within a Roma community. She spends time out of school with other Roma children and families. She was very slow to learn English, but by the end of the year she could speak in short sentences and phrases. Gyula deduced that of the many disparate Roma communities, Celina was from the Vlax group through assessing her dialect.

8.9 Transition

This excerpt from Mandy’s field notes is taken from the first week of the school term in September. Mandy reflects on Celina’s transition to school.
Celina was very upset and crying for about an hour this morning. This child has virtually no English and has no previous experience of education. She has been in school since Wednesday and started full time on the first day. The child was clearly very distressed. I tried to distract the child and comfort her. She responded briefly to a teddy but then became distressed again. The staff said that this was her worst day but that on previous days, she had calmed down when left to her own devices. They said that attention seemed to make her more distressed. Later the child did calm down and played with the other children and adults.

8.9.1 Gyula Writes
Parenthood in the Roma community is considered to be the most important obligation in life. The community will do everything possible to keep a family together and children’s well-being overrides parents’ individual goals. With a long history of persecution, every day in the life of a large proportion of Roma families is a matter of survival. Members of a Roma household and the extended family are expected to make a contribution to meet the physiological and safety needs of every member of the family support network in terms of food, shelter, generating income, health and housing. Individual ambitions to gain status or recognition in the ‘gadjo’ (non-Roma) world or desires to fully achieve one’s own potential without an actual benefit to the Roma family and/or wider community will be perceived as ‘gadjikano’ (belonging to the non-Roma world). Therefore, children also have their role to play in looking after younger siblings, keeping their home tidy and, following the Roma rules, engaging with adults not belonging to the household. The mini adult-child (as the gadjo would see it) may also help with cooking and gathering or chopping firewood. They are also responsible for passing on gadzikano knowledge such as school lessons or digital skills such as using YouTube, Facebook and TikTok (often the only social media platforms known by Roma) to younger children.

Housing and homelessness have been an issue for the Roma community since the abolition of the ‘Gypsy Laws’ in Romania in the second half of
the 19th century (Achim, 1998). Roma communities often need help navigating emergency situations such as evictions and police raids, and in such distressing situations, children normally have an important role to play. Most members of the Roma community rarely nurture relationships or friendships in the gadjo world, and their only opportunity for direct contact with the gadje are emergency situations. As a result of this, being left in the gadjo world without any member of the family support network, would be perceived as the most heart-breaking situation for a Roma child. However, if a Roma child is exposed long enough to the gadjo environment, their beliefs about the gadjo adults will change, and they will learn ways of connecting to the non-Roma world. This leads to children becoming the mediators for adult members of the family support network whenever they need to connect to the gadjo world, which is a phenomenon often seen with immigrant children mediators (Chu, 1999).

I believe that the most important lesson children receive not only from the parents but also from all members of the extended family, which includes grandparents, uncles, aunts and their children, is that absolute honesty in the family support network is at the core of any interaction. Showing love and giving support to other family members in hard situations are more important than individual feelings or developmental goals and even goes beyond individual freedom. Family goals will override individual financial needs or career aspirations. Among all family roles, however, motherhood is perceived as sacred by the Roma.

The strongest bond one develops in the Roma Gypsy community is traditionally with the mother. The physical connection is established via breastfeeding that may last several years. A Roma mother will teach her child to stand out in the Roma community and will also pass on the defence mechanisms against anti-Gypsyism that many Roma come across upon engaging with the non-Roma world. The expectation to act as mini adults is a hard burden on children, which is constantly counterbalanced by a strong emotional connection with all family members.
8.9.2 Mandy Responds

Gyula’s response to the excerpt from my field notes explores three aspects of the role of the child in the Roma community. These are the bond between the mother and the child, the role of the child in supporting the family unit and the isolation of the community from the gadjio world. These aspects largely stem from an important Roma value, which is the importance and closeness of the family unit. Although this will vary from family to family, Gyula feels that this value is shared by most Roma people. His reflection contrasts starkly with the deficit picture painted by reports into Roma inclusion such as Bennett’s (2012). Here, the focus is on urgent intervention to ensure ‘developmental readiness’ of Roma children. These interventions focus on “pre- and postnatal health, parenting and adult education” (Bennett, 2012 p14). Bennett (2012) is explicit later in the study, stating that “many factors interfere with the Roma child’s readiness for school” (p37). The measure of successful parenting here is “readiness for school”—a measure which is based on the developmental expectations of mainstream middle-class culture. In this measure, Roma parents, like many other groups whose parenting approach is different from mainstream expectations, are perceived to fall short (Phoenix, 1997). It also ignores the communal nature of childcare, a form of ‘othermothering’ (Wane, 1996) in which many members of the community are involved in caring for children. The solutions suggested focus on the education of Roma mothers in mainstream approaches to parenting. They do not take into account the different understandings of the role of the parent and child discussed by Gyula in his reflection. They also ignore the fact that, for Roma mothers, as for many mothers in Indigenous populations and the global majority world, the aim of parenting is to support the child in their ongoing participatory role within the family. It is not to prepare the child for later life in the gadjio world. As in other cultures, children learn tasks such as caring for younger siblings, supporting older relatives and helping parents with cooking and cleaning (Katz, 2004). Children participate in the mature activities of the community, learning by participation, rather than being separated from the adult world.
and treated as different. These skills, however, are not seen or measured and as a result, do not count.

8.10 Contextualising Educator Expectations

The next extract from Mandy’s field notes explores Celina’s struggles to engage with books. Written in February 2019, it focuses on Mandy’s concerns about Celina’s lack of focus. By this time, Celina had been in school for 5 months, about half of the school year.

Celina and I sat in the foyer to look at the book. Celina wanted to start at the back of the book and found it very difficult to cope with working through the story in order. She continually took the book from me and looked at random pages. When we were looking at a particular page, she would not actually look at the pictures, but rather looked all around the foyer. She was unable to focus on the book. She holds books upside down, starts at the back and does not treat them with respect. Her lack of focus is starting to concern me. Her behaviour is very different to the other children, but it is unclear at this stage if this is just a lack of school readiness and experience or if it is Attention Deficit Hyperactivity Disorder (ADHD). It is very difficult to have a conversation with Celina as she is constantly being distracted.

8.10.1 Gyula Writes

Tools such as toys for improving fine-motor skills or books for either parents or children are completely lacking in many Roma households. Roma children will be trained to engage with objects used in cleaning and maintaining the home environment or with items and/or animals belonging to the traditional trade of the family network such as violins, wood, horses, spoons, nails and the like. Learning activities are social in nature with activities being carried out in collaboration as part of a team normally formed between siblings and cousins. One to one teaching only rarely occurs in Roma families and even then, it will focus on human engagement. Learning to use an item which does not contribute to the daily survival or growth of the family is normally considered insignificant.
I feel that the key aim of education in a Roma family is to develop children’s human engagement skills. Being highly skilled at social interactions at a young age is perceived as highly valuable. With Roma children, the focus is on learning and instantly applying social engagement rules as per the internal code of conduct which is called ‘Pachiv’, or more widely referred to as ‘Romanipen/Romanipe’. Children are often judged on their ability to engage with adults while following Pachiv.

Pachiv is the code of respect: the thousands of unwritten civil laws of the Roma that have been passed down from one generation to another for centuries. The strict rules apply to every individual in the community and impose strict obligations. Breaking the code will risk the survival of the community and could result in someone becoming ostracised by their own family support network. Pachiv defines how one is supposed to behave in certain situations. Members of the community learn these roles by growing up and living with the community and the obligations will change throughout the various stages of life. A ‘śòrri’ (a young unmarried girl) is expected to look after younger siblings as soon she is strong and sensible enough to copy the adult behaviour patterns. Both a śòrri and a ‘śavorro’ (young unmarried male) are expected to follow the code and act as (what gadjo would see as) mini adults. The Vlax Romany Gypsy communities, with the highest concentration in Central and Eastern Europe and the North American continent, consciously maintain the thousands of rules and would also verbally educate their children about the rules of Pachiv. However, many other Roma communities would also follow the code even though they are not familiar with its actual name or origins. As a śòrri in a non-Roma context, a girl would be expected to engage with a non-Roma person, such as the teacher, and show the same level of respect as to a Roma adult. According to the Roma code of conduct, Celina was fulfilling her role by trying to engage with the teacher. However, the subject of their engagement contributed no value to Pachiv or to the survival or growth of her family network.
8.10.2 Mandy Responds

The code of conduct outlined by Gyula was completely hidden from me as a teacher. Although I knew something about the Roma community from reading, I had no real concept of what it meant to be a Roma person. I based all my assumptions about Celina on my White middle-class academic understanding of children’s development and learning. Although this included knowledge of other minority cultures, the culture of the Roma people was not something I had experienced prior to this. In this sense, I was typical of most British teachers. My knowledge of Pachiv began to develop when I visited Gyula’s family and was given the opportunity to build relationships with members of the Roma community. Over time, through many conversations, Gyula helped me to understand more about the code, which, in turn, has enabled me to reflect on the experiences of Celina and the other Roma children in the class. At the time, my observations focused on Celina’s inability to meet my expectations of a 4-year-old child. I expected her to be able to look at a book, talk about the pictures, start at the front and work systematically through the book and to focus on a task with me, the teacher. I found that Celina could do none of these things. She entered the class with no concept of what a book was. She had no interest in books, apart from as a device to gain my attention. At the time, I was concerned that this lack of interest in books was an indication of a neurological condition such as ADHD. My only explanation for her inability to meet my developmental expectations was that she must have a special educational need (SEN), thus pathologising her behaviour. Very high levels of SEN within the Roma community at the school were noted by other members of staff, indicating that this was a frequent misunderstanding, contributing to an “overrepresentation” of Roma students being identified as requiring special education interventions (Artiles, 2003 p165).

My developing knowledge of Pachiv and Roma culture gives a very different perspective. To Celina, her primary role was to develop social interactions with others. Her education at home would have focused on learning the skills of human interaction, developing social intelligence.
Technical intelligence—the skills of relating to and manipulating objects such as toys and books—would not have been highly valued and therefore not encouraged. This could be seen in how Celina used books. She perceived quite early in her relationship with me that I valued books. For me, the opportunity to look at a book had the purpose of developing early literacy skills. For Celina, however, the opportunity to look at a book meant that she could be alone with me in a quiet place and we could have uninterrupted social interaction. Celina used these opportunities to ask questions and talk. The book itself was a distraction from this valuable learning experience. Book sessions were a useful stimulus for conversation, and in my field notes, I recorded many examples of such fruitful conversations. My comment in this excerpt about the difficulty I experienced in having a conversation with Celina was based on my assumption that the conversation must be about the book. As the book did not interest Celina and had no value to her, she did not want to have a conversation about it. I overlooked her social intelligence by looking for the literary intelligence valued by the school culture.

My evaluation of Celina’s struggles to focus on the book also belies my assumption that Celina had an understanding of written language. For British teachers, the notion of ‘school readiness’ includes a knowledge of written English as a means of communication (Peckham, 2017). We expect children to have read books at home and be familiar with text. This is reflected in the non-statutory guidance used in many English early-years settings, *Development Matters* (Early Education, 2012). This document outlines developmental expectations in terms of age bands. From the earliest age band, birth to 11 months, children should enjoy “looking at books and other printed material with familiar people” (Early Education, 2012 p28). This document is presented as a value-free, factual account of a universalist child development. It takes no account of the cultural nature of development and the varying expectations for change experienced in different communities. This view of child development and learning has been challenged for many years (Burman, 1994/2017; Cannella, 1997). Far from value-free, it is a raced, classed and gendered version of the
child which is presented as a norm. *Development Matters* can also be compared to a kind of child development manual. By the dominant British culture, it is seen as ‘common sense’, but to other cultures, it is anything but common, a point made by DeLoache and Gottlieb (2000) in their imagined childcare guides.

For Roma children, looking at books written in their home language of Romani is not a possibility as Romani is largely a verbal language. Roma children would not have access to children’s books written in Romani. They may also have very little experience of the spoken word being written down as symbols. This symbol system, for many, may be relatively unknown. The exception to this is the use of mobile phones as a communication medium. This is becoming increasingly popular with Roma people and may offer the opportunity for Roma children to develop an awareness of text. The language of school, however, is not Romani. For children such as Celina, learning to read involves first learning the new language, then learning that speech can be represented as symbols and following on from that mastering the symbol system to be able to decode text.

The child-led approach practised at her school that allowed for collaborative, social learning helped Celina to gain an understanding of literacy. She had the freedom to spend time observing both adults and children engaged in writing and reading. She often watched me intently as I made my field notes in the classroom. Sometimes she would mark-make on my notes, and as the year progressed, she began to engage in writing herself. She was excited to recognise her name in my notes, showing that she was beginning to develop some reading skills despite the fact that she did not particularly enjoy books.

8.11 The Construct of Play

This final excerpt focuses on Celina’s play. It formed part of a long observation, recorded in January 2019, during which Mandy spent an entire morning playing with Celina.
We played with Luke in the house for a sustained period of time. Celina was fascinated with the real lamp in the house. She switched it on and off at the plug lots of times. I said “on off”. I asked if she wanted it on or off and she said “on”. She is learning these words. Celina and I made a shopping list. I instigated this when Celina got a shopping list sheet. I said that I needed to go to the shops. We played a game where I phoned Celina and said “Ahoy Celina, can you go to the shop and get some bread?” She was on the other phone and said “yes”. Then she used mainly emergent writing to write her shopping list. We did bread, eggs, coffee and milk.

8.11.1 Gyula Writes
Many Roma families live in extreme poverty in which the daily food acquisition, heating provision and helping others in the family support network are the main focus of everyday life. Buying educational toys for children and reading books are an uncommon practice in Roma families. Therefore, Roma children use whatever is available in play. Roma children will turn anything they have access to into play. Beds and light switches can be found in even the poorest households. Switching the light on and off and jumping on beds in the house are exciting games for many Roma children. Due to the lack of constant energy supply in some Roma households, switching the light on and off can be rather ‘electrifying’ for Roma children. From time to time, they may also access run-down toys found on the streets or in bins and may introduce them into their play. However, the focus normally is on playing together with siblings and cousins. Role-playing is probably the most popular game with Roma children, where they copy the behaviour patterns of adults in the family support network, such as parents, grandparents, uncles, aunts and elderly cousins, and act out scenes they find funny in everyday life. These scenes are normally taken from negative experiences and crisis situations such as playing out evictions, quarrels and fights between family and with non-Roma.
8.11.2 Mandy Responds
Gyula’s reflection contrasts the learning environment at home with that of the school. To Celina, the classroom and its contents were a completely alien environment. The focus on playing with objects is not a part of her culture, so she has little understanding of how to play with objects such as toys. The most familiar aspects of the school environment were the outdoor learning space and the real objects. She would spend time engaged in physical play outside, digging, climbing, jumping and sometimes engaging in boisterous play with other children. Inside, she used the junk modelling area, experimenting with recycled materials such as boxes and tubes.

Reflecting on Celina’s play over the year, one of her primary objectives was to participate in shared endeavours with adults. To do this, she needed to gain the attention of the adults who were often involved with other children. She tried various strategies, including asking the adult to do things for her and performing actions which she knew would gain attention, such as taking other children’s toys and finding objects like books which she knew adults valued. She also spent a lot of time observing other children and adults playing but did not play with the resources herself. When holding a toy or making something, she often looked around the classroom. She was focused on the other people rather than the objects. This links to Gyula’s earlier explanation of the importance of developing social intelligence in Roma education. Toys can be seen as a distraction from this learning rather than a tool for learning themselves. Celina was following the Roma code, focusing on developing relationships with the adults in the setting through gaining their attention.

8.12 Conclusion
Rogoff’s (2003) exploration of the cultural nature of child development divides approaches to the education of children into two broad categories. The categorising of cultural practices into two groups can polarise them. It can also present groups as homogeneous, which they clearly are not.
Despite this danger of reification, Rogoff’s categorisation is useful in explaining the difficulties the two groups find in understanding each other. She proposes that in some systems, children are involved with adult activities as soon as they are able. They are seen as full members of the community from birth and have responsibilities within the community which change as they master the various practices valued by the group. All learning occurs within the context of the activity and children are motivated by a desire to participate. The other main cultural system separates children from the adult population. Rather than participating from birth, they are not seen as full members of the community until they reach adulthood. Childhood is seen as a preparatory phase during which lessons are learnt which will prepare the child for later adult life. Gyula’s description of Roma children as ‘mini adults’ who have responsibilities within the community aligns with the first cultural system of children as participants. The approach of the school, and of the wider community, is based on the second system, in which children are segregated and educated together in schools. Although Roma children attend schools in the United Kingdom, they have retained the values of children as participants. While varying within themselves, their cultural systems, ways childhood is constructed and the purposes of learning, are fundamentally different from the dominant cultures within the United Kingdom.

In order for education to be relevant to Roma families, both the Roma community and the school community must work together to develop intercultural understanding. This needs to go beyond seeing Roma culture as a resource to facilitate learning. It is useful to celebrate International Roma Day, sing Roma songs and tell Roma stories, but such activities are not enough. If schooling is to make sense to Roma families, pedagogy must be shaped to build on Roma cultural systems. Examples could be to move away from individualistic approaches to learning and work towards collaborative, collective learning. Involving children in real tasks in which groups can work together would echo home learning in which children participate in adult activities. Early-years settings could provide opportunities for children to use recycled materials and open-
ended resources such as pieces of material, boxes and crates, which will be more familiar to the children than toys. Roma staff could tell and read stories in Romani to children, modelling literacy in the home language. Liaison workers who are Roma, whenever possible, are essential in providing this bridge between the two communities, supporting each to learn from the other. These developments are only possible if real connections are made with members of the Roma community. Finally, these connections will be realised only if Roma culture, intelligence, communication and involvement is genuinely valued, encouraged and supported.
8.13 Analysis of the paper

8.13.1 Where is Foucault?
On first reading, it may appear that Foucault’s work is not present in this paper. We make no mention of Foucault and use an alternative conceptual framework in the form of sociocultural theory. Our decision to use sociocultural theory was based on the fact that both authors had a commitment to intercultural understanding. Juice’s father selected him to perform the role of advocate for the Roma people. He was encouraged to focus on his education so that he could perform this role from being a child. He took this further as an adult, dedicating his life to representing Roma people in a wide range of different roles including film making, translating, advising on Roma matters, forming the Roma charity Kaskosan (n.d.) and most recently, being a Roma liaison worker. Being an advocate promotes intercultural understanding in an attempt to improve the experiences of Roma people. My focus, as a researcher at Pine Tree School was also to promote intercultural understanding in the form of using cultural knowledge to improve the assessment of Roma children. Our aims were therefore closely aligned and sociocultural theory underpinned both of these aims.

Foucauldian principals however can be found beneath the surface of this work. One of our main aims was to challenge the powerful discourses about constructions of childhood. Implicit in this paper is the discourse of the western child. It underpins all of my assumptions about Celina as I compare her to developmental norms which construct a dependent child in need of education. The paper seeks to promote a much more marginalised discourse emerging from the Roma community, which presents the child as a participator in the community with significant responsibilities to the family and community. This discourse is so marginalised that the majority of teachers working in the school, including myself, were completely unaware that it existed. The knowledge presented in this text represents a new kind of truth, emerging from a subaltern group of people which challenges the established truth of child
development. Foucault is therefore very much present in this paper, despite the omission of his name.

### 8.13.2 The thread of datafication

Alongside an omission of Foucault’s name, the term “datafication” is also not used in this paper. This does not however, mean that it is not present. In my previous papers, I had argued that a key aspect of datafication was the comparison of all children with norms. This normalisation process produced the data-doppelganger in the form of the assessment data collected about a child (Pierlejewski, 2019b; Pierlejewski, 2019c). In this paper however, the norms embodied in the early years curriculum are rejected. Instead, we see the child not as they compare to mainstream developmental norms but through a Romani lens as they compare to Romani expectations. The observations of Celina are not measurements but explanations of why she might behave as she does. This new kind of data supports the practitioner in knowing children (Dubiel, 2016), enabling them to make sense of what they observe and plan for next steps in their learning. In this way, the paper embodies a resistance to datafication. It insists on seeing the child in a new way, through a new lens, thus producing an alternative construction of the Roma child.

### 8.13.3 Praxis

The act of working together to produce an alternative construction of the child can be seen as an act of praxis. In this pendant, I had moved beyond the focus on the impact of datafication on practice and subjectivity to focus on ways in which datafication could be challenged. This represented a move towards a more activist stance, as I replaced the subjectivation of the Roma child as an educational failure with an alternative subjectivation of the Roma child as active and successful member of the Roma community.

The move from critiquing datafication through the use of the doppelganger metaphor to challenging datafication through praxis is explored further in the following pendant, which draws together the whole study in a conclusion.
Pendant 9: The Khipu
9. Reading the Khipu

In Hyland’s report into Andean khipus (2017), she claims that the twisted chords of the khipu constitute narrative texts. Spanish witnesses had related that khipus encoded historical narratives, biographies and epistles, with the story encoded in the threads, the weave and the knots. I have used the khipu as a literary device, taking the idea as a metaphor for my thesis, examining the threads which form the themes and conceptualising each chapter as a pendant. This final pendant returns to the metaphor, looking at the khipu as a whole and asking what story does it tell and what stories are omitted. In particular, I ask what theoretical story does it tell? What methodological story does it tell? And what practical story does it tell? The pendant then concludes with an examination of the stories it cannot tell in the form of limitations to the project.

9.1 The theoretical story

9.1.1 The doppelganger

The development of the doppelganger as a tool for thinking is one of the main stories contained in this khipu. This theoretical tool builds on the work of others, such as Williamson (2014) and Simon (2005). My work however, takes the metaphor of the doppelganger further, exploring its use as a tool to understand datafication and later as a way of explaining the divided teacher subject. I use the doppelganger trope to answer research question 1: How does datafication manifest itself in early years?

My initial work conceptualises the doppelganger as the version of the child created through data. The appeal of this metaphor was a desire to personify datafication. To me, datafication had become a destructive force which had led to the loss of my teaching career. I externalised this force in the form of the doppelganger, making it into a monster. My early work extended Williamson’s (2014) and Simon’s (2005) existing conceptualisation of the data-doppelganger through its focus on the distorted and deficit double. I focused on the impact of datafication on
young bilinguals, applying an existing conceptualisation in a new context. The impact of datafication on children with EAL was identified by Bradbury and Roberts-Holmes (2017) as being an under researched area. This exploration of the impact of datafication on young bilinguals therefore addressed this gap in the literature.

My second doppelganger paper, The data-doppelganger and the cyborg-self (Pierlejewski, 2019c) (see pendant 4) represents a significant theoretical contribution to knowledge as it develops the concept of the doppelganger much further. Using a psychoanalytic lens, I used the doppelganger as a conceptual device to explore the impact of datafication on early years pedagogy, focusing on the damage caused by this “monster”. I found that datafication led to more direct teaching with play marginalised as dangerous and uncontrollable. In this way, the paper answered research question 1: How does datafication manifest itself in early years?

In this paper, I also developed the idea of the doppelganger as an aspect of subjectivity. I saw the impact of datafication on the child and teacher subjects as a highly destructive force which must be fought. I continued to externalise datafication, moving responsibility for participating in datafication away from me as a teacher on to the doppelganger. I was aware however, that the doppelganger was also another version of the self but I was not yet able to take responsibility for its actions. The doppelganger here was not merely a version of the child represented by data, it was another version of the self, a version which could change pedagogy, limit agency and change subjectivity. The image of the cyborg demonstrated this conceptualisation of the doppelganger as part of the subject as it was a fusion of both selves rather than a division into two selves. This paper therefore also explored research question 2: How does datafication impact on subjectivity?

The final doppelganger paper, I feel like two different teachers (Pierlejewski, 2021) (see pendant 7) developed a completely new conceptualisation of the doppelganger that is not found anywhere else in
literature. I moved away from the idea of the data-doppelganger and instead, continued to explore teacher subjectivity examining two conflicting aspects of the teacher self. My reading of Butler’s (1997) and Youdell’s (2011) work on subjectivity led me to understand subjectivity as being produced by discourse. The conflicting discourses of data-led and child-led education therefore produced two very different subjectivities. The doppelganger conceptualises these conflicting subjectivities as being two versions of the self. The paper presented a very different view of the doppelganger as more *heimlich* than *unheimlich* (Freud, 1919). When the doppelganger is accepted as a part of the self, it appears to be less strange and frightening. In this paper, I was able to demonstrate the more positive aspects of the doppelganger as exemplified in the joy of data section.

The conceptualisation of the doppelganger found in pendant 7 explains the dissonance identified in pendants 1 and 2. I had wanted to understand my own feelings of dissonance but had been unable to find any literature to address this. The paper therefore addresses this gap in the literature as it offers an explanation for the conflict experienced by reception teachers by drawing a link between discourse and subjectivity. The conceptual framework of the doppelganger therefore, theorises the impact of datafication on reception teacher subjectivity which answers research question 3: How does datafication impact on subjectivity? This represents a significant theoretical contribution to knowledge.

The notion of the doppelganger further contributes to an understanding of the relationship between discourse and subjectivity as the split self produces discourse. The subject, in the form of both the doppelganger and its double produce the discourse which produces them. From the position of teacher as scientist, I contributed to the discourse of data-led education by participating in datafication. In the same way, as teacher as philosopher, I produce the discourse of child-led education. I am both a product and a producer of both dominant discourses, a realisation, which for me, led to an acceptance of the divided subject.
For much of this thesis, I saw data-led education embodied in the doppelganger as an enemy which must be fought and resisted. It became a monster in my mind with which I waged war through my writing. The climax of this story was the realisation that the enemy was within me. It was produced by me as much as it made me. I had returned to the classroom in the hope that I may find a way to vanquish this enemy only to find that I was actually fighting myself. Like William Wilson, I looked in the mirror to find that to kill the doppelganger would be to kill the self (Poe, 2009).

9.1.2 Datafication
The concept of the doppelganger was forged out of conflict. It was a product of datafication as it was created from my struggle to participate in a datafied world as a teacher and to conceptualise this world as an academic. Datafication was therefore a theme present throughout the entire khipu. My struggles with datafication began in the practice related in The Fall (pendant 1). Here, I narrated myself as a victim of datafication as both my practice as a teacher and my beliefs about education were challenged through the suspension. I was no longer able to practice but I was also no longer able to believe that teacher knowledge was a valued form of assessment.

My first three papers (see pendants 2,3 and 4) reflected on the impact of datafication on early years practice and subjectivity. In Foucauldian terms, they explored a framework imposed on the production of knowledge and how this power operates (Allen & Goddard, 2014). They presented a deep and detailed analysis of the operations of datafication as a technology of power to govern both teachers and children.

The final three papers (see pendants 6,7 and 8) focus on my attempts to resist datafication. I had hoped to eliminate datafication from my practice in school but found that this was not possible. Instead, the reflections embodied in pendant 7 I feel like two different teachers, enabled me to accept that the discourse of datafication constructed me as a teacher subject. It was therefore impossible to exist outside the discourse of
datafication. I moved towards a position where datafication could be seen as a part of teacher subjectivity and the idea of a coherent self, in which the teacher subject rejects datafication altogether was rejected.

Although datafication in the final papers was seen as a discourse which constructed the teacher subject, this did not mean that there was no resistance. This resistance could be seen in the child-led approaches developed in the classroom (see pendants 6 and 7) and in the rejection of normative assessment practices documented in pendant 8.

9.1.3 The care of the self

In Foucault’s late work, he moves his focus from the discipline of society towards the discipline of the self (Foucault, 1986; Foucault, 1994a). In his work, *Technologies of the self* (Foucault, 1994a) he explains that his interest has been to investigate specific “truth games” by which he means the way truth is produced and operated. The technologies used in these truth games are listed as technologies of production which permit us to produce things, technologies of sign systems which permit us to use semiotic systems, technologies of power which objectivise the subject and technologies of the self which permit us to act on ourselves in order to transform ourselves. His focus, he explains has been on the interaction between the final two technologies. He then goes on to give a genealogy of the technologies of the self, exploring the notion in relation to ancient Greek thought.

Care of the self, for Foucault is very different to the notion of knowing the self. It is an active, difficult process in which the self is transformed and subjectivity produced. He describes it as “a real activity and not just an attitude” (Foucault, 1994a p230). Praxis is therefore central to the care of the self as action and thought are combined: “The care of the self is the care of the activity and not the care of the soul-as-substance” (p230-231).

By this he means that the soul is cared for by activity, an activity he specifically refers to as political activity. Foucault goes on to expand on this point by discussing the concept of *askesis* by which he means being prepared for action. He defines this as
Exercises in which the subject puts himself in a situation in which he can verify whether he can confront events and use the discourses with which he is armed. It is a question of testing the preparation. Is this truth assimilated enough to become ethics so that we can behave as we must when the event presents itself? (Foucault, 1994a p239).

There were two exercises required by subjects in order to prepare themselves. These were *meleté* which can be defined as an imaginary experience which trains thought, and *gymnasia*, which is training in a real situation even if it has been artificially induced.

*Meleté* or meditation gives the subject an opportunity to try out the “discourses with which he is armed” (p239), to test the truths being explored, to struggle with discourses and concepts in the theoretical realm. My first three papers (see pendants 2,3 and 4) can be seen as *meleté*. In them, I struggled with the concept of datafication, using the doppelganger as a tool for thinking in this active meditation. The meditation however, was not enough. For *askesis*, both *meleté* and *gymnasia* were required and for this, I needed to return to the real situation. It was not enough to simply critique the operations of datafication from an academic standpoint. I also needed to act.

*My gymnasia* was in many ways an artificially induced real situation. I was in a real school, in a real classroom but I was not actually returning to teaching. I was re-entering this world on a partial and temporary basis, to examine how I might act in such a situation. My struggle with datafication continued as I tried to use the discourses with which I was armed to investigate whether datafication could be resisted. This struggle is documented in pendant 7 *I feel like two different teachers* where I argue that it is not possible to operate outside of datafication as my subjectivity is being continually produced by it. More than that, I narrate myself as being a divided subject, a product of two conflicting discourses and in doing so, I reject the notion of the coherent subject.

This exercise in *askesis*, therefore, can be seen as an active meditation in what it means to be an ethical subject which in my case meant an activist
teacher. I tested out my preparation and in the process, a new subjectivity was produced. The discourses with which I was armed included the discourse of the coherent self and this discourse changed through the process of gymnasia. Unlike many Foucauldian thinkers, as documented in Allen and Goddard’s (2014) work, praxis was an essential aspect of my study. I could not have engaged solely in critique without engaging in the struggle to resist. Simply documenting and describing the operations of datafication as a technology of power were not enough. In this way, I answered my final research question: How can early years teachers resist datafication?

My final paper (see pendant 8) can be seen as an exercise in both meleté and gymnasia. In it, I attempt to confront events with the discourses I was armed. Juice and I both meditate on the dominant discourse of datafication while also exploring an alternative construction of truth embodied in Pachiv. This presentation of an alternative construction of the child challenges the accepted truth of the child present in school discourse. It is activist in that it attempts to change the way teachers think about children. It presents an alternative truth, in some ways a revolutionary truth about children from marginalised groups. In this way it is an example of critical participatory action research as it brings to the surface important counter narratives (Fine & Torre, 2021) and attempts to challenge power and injustice. Although Foucault was very wary of revolution, as he proposed that “to imagine another system is to extend our participation in the present system”, he nevertheless did engage in political activism himself (Foucault, 1980b, p. 230). The work of Juice and I with Roma children does involve participation in the current system. Any replacement of this would be a new set of norms, which would act as a form of governmentality. Our work however, does attempt to destabilise the current system, to present other forms of truth which may lead to reconstruction of some sort. In this way, our Romani analysis of English preschool education answers the final research question: How can teachers resist datafication?
9.2 The methodological story

This thesis has not followed academic convention in terms of its structure. After attempting to structure it in a modular fashion, I deliberately chose to reject academic conventions to construct it in a linear way, as I felt that following convention would restrict my academic content. I began writing the introductory pendant and wrote the whole of the thesis from beginning to end in one continuous stream of work. The papers which were incorporated into it had already been written but the weaving of the khipu was constructed in a linear fashion. It therefore does not follow the conventional structure of introduction, literature review, methodology, findings, discussion, conclusion. Literature is reviewed throughout, methodology is discussed in each of the papers and findings emerge from pendant 2 onwards. As a contemplation on my struggles as a teacher activist to function within the current education system, this structure supported meditation. The very act of writing the thesis was a form of meletê.

9.2.1 Self writing as care of the self

Foucault’s later work focusing on the care of the self includes a reflection on the role of writing. In *Self writing* (Foucault, 1994a) Foucault explores the *hupomnēmata*, which were books in which the Ancient Greeks recorded their notes on reading and reflections or reasonings which had been encountered during the day. The act of writing was seen as an essential part of the process of turning discourse into action. Through writing, discourses are deeply lodged in the soul and from there can become transformed into ethics. Writing is an essential stage in *asksis* as it is the process by which “accepted discourses, recognised as true [are fashioned into] rational principles of action…it is an agent of the transformation of truth into ēthos” (Foucault, 1994a p209). For me, the act of writing enabled me to constitute myself as a subject, a subject which changed as I wrote the thesis. I was writing myself as a subject as I wrote myself into the thesis. This made my thesis intentionally and unapologetically personal. It begins with my personal experience as a
teacher and engages throughout with my personal struggle to situate myself within the conflicting discourses of datafication and child-led education. As an act of meditation on the activist teacher this is essential. Writing the thesis as an act of self-care breaks from convention and in so doing constitutes an original methodological contribution to knowledge.

9.2.2 Creative writing
This thesis has also deviated from academic convention in its style. I was inspired by Ingold’s (2015) book as it was written in a literary style. It utilised poetic linguistic formations which made it a pleasure to read. The combination of creative and academic writing resulted in a book which was much more than an academic conceptualisation of life. As a writer, it was important to me that my work was clearly written and enjoyable to read. I saw myself as a creative writer as much as an academic writer. I therefore wrote the thesis as if it was a book, rather than a thesis, using elements of story and autobiography, literary devices such as metaphor and imagery, as well as reflections and conceptualisations.

I also saw writing as an expression of creativity. I saw myself as an artist whose medium was ideas more than an academic giving an account of a research project. I played with and experimented with the ideas I was using, trying them out in different contexts and drawing upon a vast range of influences. This creative approach to writing enabled me to utilise ideas taken from psychoanalysis, science and philosophy as devices to understand myself as a teacher. This approach can also be seen as an example of meleté as I train my thoughts through imaginary experiences.

9.2.3 Foucauldian praxis
The combination of Foucauldian analysis in terms of the exploration of datafication as a technology of power and participatory action research is highly unusual. Both approaches emerge from different paradigms, with Foucauldian discourse analysis emerging from a post-structural paradigm and PAR emerging from the critical paradigm. An examination of Foucault’s relationship with activism is useful in explaining how these opposing approaches have been utilised.
Allen and Goddard (2014) make the rejection within Foucauldian studies of Foucault as activist the subject of their paper. They describe the “Foucault effect” in which many of Foucault’s followers translate his analytic caution into a form of “political quietism” (p31). This was a result of his reluctance to associate himself with the major movements of The Left at the time because he felt that the replacement of existing normalising discourses with new systems would necessitate new normalising discourses which could be equally destructive. They argue however, that this is not the whole story and that although Foucault moved from the militant language of war, discipline and power to the more ambivalent language of governmentality, his erstwhile militant tendencies were still present as a driving force for his work. Foucault’s underlying militancy can be explicitly seen in his interview about revolution where he states:

[W]e can’t defeat the system through isolated actions; we must engage it on all fronts – the university, the prisons, and the domain of psychiatry – one after another since our forces are not strong enough for a simultaneous attack. We strike and knock against the most solid obstacles; the system cracks at another point; we persist. It seems that we’re winning, but then the institution is rebuilt; we must start again. It is a long struggle; it is repetitive and seemingly incoherent. But the system it opposes, as well as the power exercised through the system, supplies its unity. (Foucault, 1980b)

This discussion of militant resistance as isolated actions describes the struggle necessary for change. Without this “long struggle” there is no activism. For me, this struggle began in practice. I narrate myself in pendant 1 as being at war with datafication. I saw data as a “dark destructive force” and from the very beginning was driven to enact change. This struggle continued through my conceptual papers and became very real during the research project where I note feeling “trapped by data”. I struggled to resist but at times felt that resistance was not possible. My final paper (see pendant 8) is an attempt to produce a new
kind of assessment. It is an embodiment of resistance to datafication and an act of activism.

To me, participatory action research was the only approach to research which would enable me to engage in the war against the neo-liberal regime within which I found myself. The struggle had begun before I became an academic. I was already a “walking wounded”, describing myself as “damaged by datafication” and the idea that I would critique the system without fighting was inconceivable. My reading of Foucault is of Foucauldian praxis (Allen & Goddard, 2014), in which I see the links between action and thought. I see this praxis in the discussion of the care of the self where askesis involves the training of thought alongside the training in reality. I also see it as the driving force behind Foucault’s work, noting that some of the final words of *Discipline and Punish* (Foucault, 1977 p308) are: “we must hear the distant roar of battle”.

Allen and Goddard (2014) argue that in the face of the current struggle with neo-liberalism, a new militancy is required. This militancy, they argue, cannot be prescribed in advance but must be forged through “engagement with the process of struggle itself” (p48). This is what I have attempted to do in my thesis. I have engaged in Foucauldian praxis, attempting to both unmask political violence and fight against it through practice. This, in itself, is a significant contribution to methodological and conceptual knowledge as the insertion of action research into Foucauldian analysis is rarely attempted.

**9.2.4 Innovative methods**

Finally, the methods developed in this khipu have been innovative and original. I develop an approach which I call *doppelganger as method* in both *The data-doppelganger and the cyborg-self* and *I feel like two different teachers* (Pierlejewski, 2019c; 2021). This method involves using psychoanalysis as an heuristic device to understand datafication. It builds on Burman’s child as method approach in which the construction of the child and childhood are used to shed light on the workings of power, privilege and oppression (Burman, 2017a). It uses the construction of the
doppelganger to shed light on the workings of power and oppression. Applying the metaphor of the doppelganger to the analysis of data takes it from the conceptual to the practical and constitutes a contribution to methodological knowledge.

The method developed in pendant 8 A Romani Analysis is also innovative. I wanted to include Juice’s own words in the book chapter without rewriting his contribution in the interests of continuity. To rewrite Juice’s words would reinscribe the very colonial violence we were attempting to challenge. I chose to reject the idea of a coherent voice in the chapter and instead use “voiced extracts”. The use of Whatsapp as a vehicle for writing was also innovative as it enabled Juice to communicate in a form which he felt most comfortable with. The use of Whatsapp writing reduced the power imbalance between us as it did not follow academic conventions for writing.

9.3 The practical story

9.3.1 The impact of my papers

At the time of writing, 2 of my 4 published papers have been cited. These are the papers which were published as preprints in 2019. The first paper, Constructing deficit doppelgangers (Pierlejewski, 2019b) has been cited 7 times and the second paper The data-doppelganger and the cyborg-self (Pierlejewski, 2019c) has been cited 11 times. Of these citations, most are brief references to my work. There are 2 papers however, in which the impact of my work is more significant.

Smith’s (2021) paper focuses on racist nativism in English educational policy. It builds on my (2019b) work, Constructing deficit doppelgangers to position EAL children as disadvantaged by an inherently racist system. Smith quotes my paper, saying that the language development of EAL children is not measured and is therefore invisible. She goes on to argue that racist nativism constructs both Muslims and speakers of languages other than English as “the outsider within” in English education policy. This builds on my discussion of English language being used as a tool to
exclude and marginalise those from other cultures in an increasingly nationalistic society.

My second article *The data-doppelganger and the cyborg-self* (Pierlejewski, 2019c) is extensively used in Clutterbuck et al’s (2021) article exploring data infrastructures as sites of preclusion and omission. Building on my work, this paper examines the operations of datafication as a technology of power. It explores a system for collating big data, problematising the use of such systems and revealing broken data in terms of missing information. The authors note the purpose of datafication in creating doppelgangers which are more easily governed:

> In this way data can be viewed as going beyond making education and schooling machine readable, to creating more easily studied objectified data-doppelgangers (Williamson 2014) that are somehow construed as easier to deal with than the ‘physical embodied child’ (Pierlejewski 2020, 469).

(Clutterbuck et al., 2021, p. 15)

The authors also discuss the datafied self in terms of the data-doppelganger which precedes the student and exists in the dataverse after the student has left, saying; "Data retention legislation ensures the maintenance of the datafied doppelganger as a functioning participant within schooling’s datafied policy spaces" (p16). The data-doppelganger as a datafied version of the self is a key aspect of the argument and is present throughout the paper, revealing the impact of my work on the authors’ thinking.

The co-authored book chapter *A Romani analysis of English Preschool education* (Pierlejewski & Vamosi, 2021) has not yet been cited as it was published very recently. Juice and I have, however, received feedback from two important Romani scholars via email. Dr Thomas Acton OBE is emeritus Professor of Romani Studies at the University of Greenwich. Acton commented that our book chapter was an important piece of work saying,
just as it refines/conceptualises Pachiv as a thing, rather than just the way things are, it also enables us to understand the expectations of the teacher as a similar structured thing rather than just as an absence of knowledge about Roma.

(personal email communication)

He felt that both marginalised Roma discourses and privileged school discourses were examined, as opposed to focusing on the school discourse as simply a lack of knowledge. The school discourse in this way was not privileged over Roma discourse. Alongside this critique, he also highlighted the risks of essentialising culture which will be discussed in more depth in the section focusing on limitations of the study.

Alongside this response from Acton, Juice also received a response, via email, from Professor Ian Hancock OBE. Professor Hancock is director of the Program of Romani Studies and the Romani Archives and Documentation Center at the University of Texas at Austin. Hancock said that he found the article extremely interesting and commented on the struggles of Romani children to function within gadzo schools. He sent a book chapter which focused on this struggle indicating that he felt that our chapter contributed to this ongoing academic discussion.

9.3.2 The impact of the research project
Of the many actions which constituted the participatory action research project at Pine Tree School, 3 had a significant and sustained impact. These were the implementation of in the moment planning (Ephgrave, 2018), the introduction of culturally appropriate literature and the deployment of a Roma liaison worker.

9.3.2.1 The implementation of in the moment planning
This approach to teaching, which privileged in the moment interactions with children over the advanced planning of adult led learning, was trialled as part of the research project in September 2018 in Tania’s class. From January 2019 onwards, it was also introduced into the parallel reception
and nursery classes. The following year, it was built into the key stage 1 curriculum. The school however, did not feel that this was enough and have now developed a form of continuous provision, which they call “enquiry based learning”, in all classes. This is influenced by ITMP as it features areas of the classroom which can be used independently by the children to extend their learning further through active play. The introduction of ITMP has therefore had a significant and permanent impact on the school.

As part of my research project, I conducted a group discussion with staff at the end of the project to evaluate the impact of the study. We created mind maps based on the discussion to record responses. These mind maps focused on comparing their experience of teaching ITMP with their previous experience of teaching. I asked them to reflect on assessment, relationships with children and pedagogy. Of these three discussions, the reflection on changes to pedagogy provoked the strongest emotional response, revealing not just how they felt about pedagogy but also reflections on their own teacher subjectivity.

Figure 3. A mind map of pedagogy now and then
The responses recorded in the mind map reveal teachers feeling that ITMP was emancipatory. They moved from feeling that pedagogy was “controlled” and “regimented” to feeling that they were given autonomy over their teaching. This indicates a movement from feeling de-professionalised by the demands of the previous curriculum to being re-professionalised. Rather than having to follow a “formulaic” structure, they were able to make decisions about how they taught based on the needs of individual children. This change indicates not just a change in pedagogy but a change in teacher subjectivity.

9.3.2.2 The use of culturally appropriate literature
As part of the research project, I introduced culturally appropriate literature in the form of books by the author Richard O’Neill (2016). During the project, the school contacted Richard O’Neill and invited him to come to work with the children. He has since developed a close relationship with the school, working with staff and children to encourage them to write their own stories based on their cultural heritage. Although this work did not directly emerge from the research project, the value of culturally appropriate literature has significantly increased in the school. My work can be seen as playing a part in engaging children with literature which reflects their Roma heritage and is also a resource for all the children and staff in making the school a more supportive, informed and receptive environment.

9.3.2.3 Addressing antigypsyism
As well as meeting with the research team regularly to focus on the reception class within which I was working, I also met with the new to English lead teacher Hannah and the bilingual support worker Amelia. Although their work was largely with the older pupils in the school, we met to share the ongoing progress of the project. I also introduced them to Juice, who later worked under Hannah’s direction when he became employed by the school. The research project therefore had an impact in the school beyond the reception class. I met with Hannah and Amelia at the end of the school phase of the research to discuss the impact of the
work. Amelia spoke to me about her changing attitudes and I recorded this discussion as a mind map.

Figure 4. Mind map of New to English staff reflection on the impact of the research project

Amelia reveals her deep seated prejudice against Roma people in this discussion. Her comment that she now sees that “they are people” indicates that she had previously not seen them as people- a dehumanising discourse of Roma as other. She also notes that she was unable to identify good things about Roma prior to this study. Her comments were quite shocking to Hannah and me, as we had not realised how deep Amelia’s antigypsyism went. This evaluation of the project enabled Amelia to express these views, making visible her prejudices and therefore enabling us to discuss them. I also reported these findings to the head teacher as I felt that it was his role to identify racism within his staff and address it professionally. Amelia’s views, however, had changed as a result of the study. She was able to see the Roma people “in a different way”, identifying similarities with others and valuing their language as examples of these changes. Her comments that we must “remember they
are gypsies” and “they tell lies” ‘indicate subscription to wider discriminatory discourses.

**9.3.2.4 The role of the Roma Liaison worker**

One of the main actions which I wanted to implement was the recruitment of a Roma liaison worker. I was unable to secure anyone from the local Bradford Roma community during the project but did make contact with Juice Vamosi, a member of the Roma community in Oldham, who became a member of the participatory action research team in the role of Roma advisor. During the summer of 2019, I asked the head teacher if there was funding to employ a Roma liaison person at the school. He agreed to employ Juice as there was funding available for a fixed term contract. This contract began in July 2019, just as my project was ending.

Juice worked as an paid Roma liaison worker at the school from July 2019 to July 2021. Initially, he worked supporting young bilinguals in the classroom with their reading and other work. He also worked with a group of Roma children, focusing on developing reading as well as nurturing their musical abilities. During the 2020 national lockdown however, his role changed dramatically. He began to support families at home by visiting them to support with home learning and to deliver food parcels. This work was documented by the Roma charity which Juice set up, Kaskosan (Kaskosan, 2021a; Kaskosan, 2021b).

In addition to Juice’s work for the school, the charity Kaskosan also employed Juice’s wife Maria Pálmai as an additional Roma liaison worker from September 2020 to July 2021. Her role was to liaise with the Roma women in the community. She developed close relationships with many of the Roma women, gaining their trust. She related that she was able to gain this trust because they were able to position each other within Pachiv (the unspoken rules and values of the Roma people). Within this framework, she was bonded to the Roma mothers because she was married at the same age and because like them, she ran a large family. Maria’s role was to support Roma women through visiting them at home and developing relationships. She also passed information from the school
to the families through face to face contact and through creating videos which were then posted on the school social media platforms.

Since July 2021, when funding for a paid Roma liaison worker ran out, Juice and Maria have continued to liaise with the school and the families on a more informal voluntary basis. They speak regularly to members of staff in an advisory capacity and also meet regularly with members of the Roma community in Bradford. The appointment of Roma liaison workers had a lasting impact on both the school and the community. It enabled the school to gain a better understanding of Roma culture and to develop relationships with Roma families. It also enabled Roma families to gain a better understanding of the school. This work was reported in the national press in an article for the Guardian (Batty, 2021). In it, the role of the cultural liaison worker is explored, with teachers noting the improved relationship with Roma families. The Guardian article raised the profile of the Kaskosan charity. It now has additional trustees and has been approached by a number of funding organisations. Juice and Maria are now involved in new projects with other Roma groups to promote Roma culture and heritage. The work at the school therefore also had an impact beyond the school and community as it acted as a springboard for other projects with diverse Roma communities.

9.4 Limitations of the project

This participatory action research project made a significant impact. Practice in the school has been permanently changed and the involvement of Juice and Maria as cultural liaison workers has had a significant impact on both the school and wider Roma community in Bradford and beyond. There are however limitations which must be acknowledged and stories which were not told in this khipu.

9.4.1 Prejudice in the school

As discussed earlier, the evaluation of the project unearthed prejudice and antigypsyism which was not previously visible. Although the school have made efforts to address this matter, long held beliefs take time to change.
The project had some limited impact on these views as Amelia indicated that she now saw Roma people in a different way. Further work is needed however, to address prejudice and discrimination exhibited by staff and other members of the local community. I chose not to tell the story of prejudice within the school as my focus was on the actions we took to resist datafication and how this prejudice could be challenged.

9.4.2 Funding for Roma liaison workers
The involvement of Juice and Maria made a significant impact on the school and community, which was recognised nationally in the Guardian article. This funding however has now ended and there are no official liaison workers funded by the school. In recent weeks however, a Roma nursery worker has been employed as part of the Government Kickstart scheme, which provides funding for unemployed young people to develop skills within a workplace (Department for Work and Pensions, 2022). Although this member of staff is not employed specifically as a cultural liaison person, she is acting in this capacity. Her role includes using home languages with the Roma children and liaising with parents. The early years leader and I have recently discussed how this role could be developed further in the future. There is, however, still work to be done to raise awareness within school communities of the importance of cultural liaison workers so that funding for such staff is prioritised. This is an area which merits further research and is one which Juice and I plan to prioritise in the future.

9.4.3 The danger of reification
In his response to our book chapter *A Romani analysis of English preschool education* (Pierlejewski & Vamosi, 2021), Thomas Acton noted that I thought I had learnt something about Roma more than that I had learnt about myself as a teacher. He indicated that I was at risk of orientalising the Roma as “other” and seeing my own school culture as “normal”. I thought that this was a fair criticism. As the Roma culture is "different" to my own white British culture I had slipped into the trap of not seeing my own culture in the same way. I did learn about teacher
discourse as well as Roma discourse but did not explicitly mention this in the paper.

Acton also notes “Juice formulates the knowledge about Roma to include, but not to define or limit himself” (personal email communication). In other words, his knowledge of the Roma includes himself, but he isn’t saying that he is defining Roma culture as this would be to essentialise it. This was one of the main reasons for asking Juice to write with me in his own words, as I did not want to make claims to knowledge of Roma culture. I do think however, that there is a very real danger of reification, where I represent Juice’s experience of being a Rom to represent all Roma people and thus limit Roma culture rather than understanding it as fluid and diverse. The temptation to homogenise a disparate group of people and to essentialise culture is always present. I have however, influenced by Madill (Wilkinson & Kitzinger, 1996), attempted to take a relative position based on the assumption that I cannot speak for the Other as there is no “truth” to represent, either in my own fluid position or the position of the Other. Rather, I have attempted to speak about the Other by analysing the discourses and narrations of the self, given by myself and others. In order to address this in future work, I plan to continue working with Juice as a co-author using the voiced extract approach developed in the book chapter. Juice can then author himself as a Rom while I author myself as a gadze teacher. Further research (Morgner, 2020; Wilkinson & Kitzinger, 1996) into the dangers of reification will also help me to avoid this possible pitfall in the future.

9.5 Changes in policy

Since conducting this research, a new early years foundation stage framework has been released (Department for Education, 2021). Although the requirement to complete the Early years Foundation Stage Profile at the end of reception remains and a new Baseline assessment has been introduced at the beginning of the reception year, there has been a slight shift in the methodology for data collection. Section 1.10 now states:
When forming a judgement about whether an individual child is at the expected level of development, teachers should draw on their knowledge of the child and their own expert professional judgement. This is sufficient evidence to assess a child’s individual level of development in relation to each of the ELGs. Sources of written or photographic evidence are not required, and teachers are not required to record evidence.

(Department for Education, 2021, p. 11)

The final sentence of this statement is significant as it removes the requirement to collect such vast quantities of written evidence to prove that a child is meeting the norms. Anecdotal evidence from serving teachers indicates that many feel more free to follow an ITMP approach as this privileges teacher professional judgement. Although the system is still highly data-driven, with judgements against the normative statements of the early learning goals reported in the EYFSP at the end of reception, the volume of data collected has reduced, meaning that the impact of datafication could be seen to be slightly less. Many teachers have reported to me that they feel more able to spend time playing with children as less time is needed to record observations. These changes demonstrate that even very small changes in policy guidance can have a positive impact and may indicate a glimmer of hope for the future. Had these changes been implemented when I was teaching, I may not have left the profession as I, like teachers today, valued my teacher professional judgement over the judgment of formalised observations.

9.6 Final thoughts

This khipu has documented my story as a teacher. It began with my professional fall and has narrated my struggles to produce myself as different teacher subject. The use of the doppelganger as a thinking-tool enabled me to experiment with fighting against datafication in the form of the data-doppelganger. It later enabled me to produce myself not as a coherent subject but as a divided self, a new subjectivity which to me,
made sense of the conflicted world I found myself in. This acceptance of
the divided subject constituted a resolution to the conflict I encountered
within myself and enabled me to engage in active resistance to
datafication. The Romani analysis (see pendant 8) embodies this
resistance as I link thought and action in praxis to produce an alternative
child subject, a subject not seen through the lens of datafication, but
viewed through a Romani lens. In this way, the khipu tells the story of my
experience of datafication, a journey from encounters with the
doppelganger to a final act of praxis.
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Appendix A. Manchester University Guidance on journal format thesis

Journal Format PhD Theses - Guiding Principles for Students and Staff

This information is provided as supplementary guidance to the main University ‘Presentation of Theses’ Policy which students should consult before starting to write the thesis. Students can submit their research in the traditional thesis format or the Journal Format and should ensure they read all available guidance before making the final decision on thesis format. In some disciplines the Journal Format thesis is the standard and it is therefore important that students also refer to any discipline specific guidance which is available via the relevant supervisor/ School/ Faculty.

1. INTRODUCTION TO THE JOURNAL FORMAT

i. Journal Format was formerly referred to as Alternative Format.

ii. The Journal Format thesis allows students to write sections of their doctoral thesis in a format suitable for publication in a peer-reviewed journal.

iii. One of the major considerations for submitting in Journal Format is the level of contribution that the student has made to the papers to be included in the thesis. The level of the student’s contribution must be made explicitly clear within the thesis.

iv. Papers within the journal format do not have to be already published or even submitted for publication. It is recognised that eventual publications may differ from the chapters in the Journal Format thesis due to feedback from publishers, further research or developments in the subject.

v. Not all research projects will produce material suitable to present in Journal Format and consideration should be given to the most appropriate format for the research.

vi. The thesis should adhere to the basic principles of a traditional thesis, i.e. it must still represent an original contribution to the field of research, demonstrate an understanding of the entire body of work in the thesis, outline the relationship with existing literature.
and future developments and it must be a coherent body of related work.

vii. If it is appropriate to do so, and the main supervisor is in agreement, it may be possible to submit an MPhil / MD / Professional Doctorate/ Practice – Based/ DBA thesis in Journal Format.

2. ADVANTAGES OF THE JOURNAL FORMAT

i. Presenting research in the form of papers will help students to develop their skills in writing scholarly papers or other research outputs. These skills will be essential for a career as a researcher. (Note: it is important to recognise that the traditional format thesis will also develop writing skills and consideration should be given to the best approach for the student’s research outcomes and discipline area).

ii. Sections of the paper (e.g. the method section or the results section) can be written-up and prepared as the student progresses through their programme. This avoids having to rewrite parts of the thesis to submit for publication at a later date.

iii. This format reduces the potential conflict of interest between the drive to publish papers and timely completion of the thesis as both can be achieved simultaneously.

iv. Encourages faster publication and enhances the student’s research profile /career prospects.

3. CHALLENGES OF THE JOURNAL FORMAT

i. Not all Examiners are familiar with the Journal Format thesis. However, a thesis submitted in Journal Format is assessed on the same basis as any thesis and guidance is provided to Examiners on this type of thesis submission.

ii. It can be difficult for examiners to determine the student’s individual contribution to publications. However, if the guidance is followed and students clearly document their own contribution throughout the thesis these problems should not arise.

4. DECIDING TO WRITE A JOURNAL FORMAT THESIS

i. The decision to submit in Journal Format will be part of the planning of the research project and students should discuss the format of their thesis with their main supervisor early on in their
programme because this will give time to plan the structure and content of the thesis and also to set aside time to write the papers.

ii. Students will also be asked to comment on these discussions regarding thesis format as part of the annual expectations form at the start of each year.

iii. There is a potential conflict between producing multiple papers for the Journal Format thesis and producing 1 high impact paper (1 paper would not be sufficient for Journal Format). In some cases this decision can only be made once the results have been identified but this should be discussed between the student and the main supervisor prior to making any final decision on thesis format. In addition, it is worth noting that a high impact paper can be created from a fusion of thesis chapters formed of smaller papers.

iv. Depending on how the research develops and the analysis of data, there is flexibility on when students have to make the final decision regarding the type of thesis format submission and it may not be until Year 2 or 3 that students feel in a position to use the Journal Format. As with all aspects of the programme, planning the best approach for students, in conjunction with the main supervisor, will be the most effective way to manage the Journal Format.

v. If a decision is made to submit the thesis in Journal Format, the student should discuss their intention with their supervisor. The student should then declare their intention on thesis format on the Notice of Submission form.

vi. If students subsequently decide that a traditional thesis format might be more appropriate, they should carefully consider this course of action in terms of the time it takes to put the thesis together and discuss with their supervisor. Supervisors may not agree if it is felt that the student may not be able to submit on time. It is important that students do not leave this decision too late in the process.

5. STRUCTURE/CONTENT OF JOURNAL FORMAT THESES

i. Examples of other theses that have been successfully submitted in Journal Format (previously called Alternative Format) should be available via the supervisory team, the Graduate Office or via the institutional repository. It may not be possible to find an example in the exact research area so students are advised to review a few examples of successful submissions in the first instance. Full guidance on the format and structure required is provided in the Presentation of Theses policy. The thesis should include a general
introduction and literature review to set the context and hypotheses. This should also include the details of each paper contained within the thesis and ideally a narrative of how these papers constitute a coherent body of work and relate to each other. It is particularly important for the Journal Format thesis that the aims and objectives are written to emphasise how the body of work interconnects. Furthermore, students can also include chapters on methodology and their critical evaluation of their studies, including a more detailed discussion and critique, than allowed for in a journal paper.

ii. The majority of results chapters should be presented as a ‘paper’ with an abstract, introduction, materials and methods, results, discussion and references.

iii. A final concluding discussion chapter (which should not be a repetition of previous chapters) should bring the thesis together and provide a critical evaluation of the findings, justify decisions made and set out ideas for future work. If not contained sufficiently within the papers, students may want to include supplementary information such as statistical data. The main supervisor can advise on relevant information to include.

iv. The number of papers included in the Journal Format thesis may vary according to discipline and is not prescribed, but should reflect the quantity, quality and originality of research and analysis expected of a candidate submitting a traditional thesis. There is no upper limit, but three to five papers or equivalent results chapters is typical. Students should also speak to their Faculty/ School about any discipline – specific guidance and consult with their main supervisor for advice. Ultimately the examiners will judge whether the quantity and quality of the work, the critical analysis and originality of the research and the defense of the thesis in the Viva Voce, justifies the award of a PhD so this must be taken into consideration when writing the thesis.

v. Students should ensure that the thesis is not weakened by lack of continuity and reasoning between chapters or by the separation of figures from the text they refer to.

vi. It is recommended that separate versions of the paper be inserted and that the pagination sequence should flow throughout the thesis rather than inserting pre-prints. Ideally, to ease readability, figures/tables and accompanying legends should be included at the appropriate point in the text of the papers, and not at the end of the text as would be typical for a manuscript submitted for publication.
vii. The journal Format offers flexibility in that students may include papers that have already been published or submitted or draft papers that have not yet been submitted or are not yet suitable for publication. Chapters can include various kinds of data and results including reviews, preliminary studies, pilot data, trial designs and lab results. Students are not precluded from presenting ‘negative’ results as long as they form a coherent part of the thesis. It is important to note that journal chapters which have not yet been submitted for publication may subsequently change when submitted for publication following input from co-authors, journal editors or peer review. Therefore journal formatted chapters may form a stepping stone towards a subsequent publication and there may be a long lag from thesis submission to publication.

viii. It is expected that students will have taken the major role in ALL aspects of production of the papers including: planning and execution, data acquisition, analysis and writing the paper. Where students have collaborated or co-authored any papers, the level of contribution must be made explicitly clear in the introduction of the thesis. Where students include a published paper which includes content authored by themselves within their thesis they must make it clear that the paper has already been published in order to avoid issues with self plagiarism. ix. If data is not contained in sufficient detail within the published papers and is important to the thesis, it should be included in the same way as supplementary material for the journal i.e. in journal style (e.g. statistical data or a more detailed description of methods). Space restrictions do not apply to a thesis in the same way as restrictions on published work (see section 9 in the Presentation of Theses Policy for information on word count restrictions). Examiners will still want to see evidence of the detailed thought processes that led to the research design (including experimental design) and conclusions that are presented.

x. It is possible to add information to papers which are already in press or published. If the content from a published paper is significantly revised students will need to reference the paper at all appropriate points, otherwise this could be considered as self-plagiarism. See also sections related to IP/ Copyright/ Plagiarism.

xi. As noted in point vi it is not recommended to include pre-prints in the thesis but instead students are advised to insert a version of the paper. Where this presents problems, students can bind off-prints straight into the thesis. However, students may wish to consider reformatting if they are much smaller than A4 (or different sizes), so to be consistent with the overall presentational style of the thesis.
xii. All figures and tables should be legible and appear as close to the relevant text in the thesis as possible; this applies to both published and non-published material that is included in the thesis. Sometimes images/figures in published papers need to be placed according to best space fit.

xiii. As each paper will have a self-contained list of references and individual style depending on the journal requirements, students will need to consider making minor formatting / stylistic adjustments so that the thesis has consistency (e.g.: references should all be provided in the same format). Papers should be presented in such a way as to assist the examiners’ reading of the thesis in the best way possible. References associated with the introduction and concluding chapters should be presented in the most appropriate format. Students should consult their main supervisor and any discipline-specific guidance on this.

6. IP / COPYRIGHT / PLAGIARISM

i. Students will be required to sign a declaration that the thesis is their own work and that they have not submitted the work for another qualification. Students should explain and fully justify the nature and extent of their own contribution and the contribution of co-authors and other collaborators in the introductory part of the thesis and anywhere else appropriate throughout the body of the thesis. Students should consult University guidance on plagiarism for further guidance.

ii. It is advisable for students to discuss their stated contribution to each paper with their main supervisor and co-authors. Even if the student is the first author, the main supervisor or others may have contributed to the paper and the student needs to clarify the contribution of others. In some cases, it may be reasonable for a student to be asked to revise a paper chapter in order to reflect their own contribution more directly. Examiners will expect students to defend all of the work in any paper that forms part of the thesis, even if the work has been done (and acknowledged as such) by someone else.

iii. If appropriate, students can state their contribution in individual chapters relating to specific publications.

iv. Generally, unless IP has been signed over to a third party, and the student has solely created the IP and is not a member of staff, the student owns the IP they have created. However, it is expected that the student obtains permission from all co-authors for any paper that is included in the thesis. Most publishers request that students sign over copyright of any published material once
published. Students should seek copyright permission from the publisher for any published work included in the thesis that isn’t published in an ‘open-access’ journal. Where the publisher owns the copyright, permission from collaborators/co-authors would not therefore be needed.

v. Any concerns about IP should be discussed with the main supervisor in the first instance. UMIP also offer advice on IP and copyright regulations.

vi. Any sections which are copied from any published materials must be referenced appropriately, otherwise the student would be plagiarising material, even if the student was the original author of this material. If sections of the student’s own papers are used without the appropriate references this will be considered as self-plagiarism.

7. EXAMINATION OF JOURNAL FORMAT THESES

i. The examination process will be exactly the same as for a traditional thesis. The examiner will be informed that the thesis has been presented as Journal Format and the School/Faculty office will provide them with the links to University guidance and policy documents on thesis submissions and Journal Format. It should be made clear to examiners that there will inevitably be some degree of repetition in the Journal Format thesis due to chapters being self-contained papers and background literature and issues being repeated. Students should not be penalised or asked to correct work on the basis of repetition within journal style chapters.

ii. A major consideration when preparing a Journal Format Thesis is that the examiners can follow and understand the thesis as a coherent body of work. Students should ensure that their thesis does not lack a full explanation of technical detail and consideration of controls because it is in the publication style format. The examiners will expect the thesis to demonstrate rigour in all aspects of the research. As noted earlier supplementary chapters containing methodological details such as raw data etc. may be included.

iii. The entire thesis is subject to scrutiny, including any peer-reviewed or published papers. The examiners are effectively another set of peer reviewers who are looking at the published papers in the context of the whole thesis. There are often examples where peer-reviewed work contains mistakes, errors or points of contention and so the student may still be required to correct, supplement, or explain all work presented for examination, even if it has already
passed through a separate peer review as part of the publishing process.

iv. It is recommended that supervisors and/or internal examiners speak to the external examiner prior to submission to ensure they are aware of the requirements of submitting a thesis in Journal Format.

8. PUBLICATIONS AND OPEN ACCESS

i. Students should discuss their ‘publication strategy’ with their supervisors and check with their Faculty/ School for local discipline-specific guidance, from an early point in the programme. Students would need to consider the journals that they would target for publication of their papers and review their position on prior publication of work. Most publishers do not view work that has appeared in a thesis as ‘prior publication’ and in these scenarios, the thesis should be made open access, but the viewpoint of each publisher can vary. If in exceptional circumstances, a publisher does consider the thesis as prior publication, advice must be sought from the publisher to determine whether making the thesis open access would impact future publication of the work.

ii. The access setting on the theses may also be dependent on funder terms and conditions and students should check with their funder whether there are any contractual requirements.
Appendix B. Notes from Supervision. 28.10.16

Mandy Pierlejewski
Tutorial 28/10/16

My journey towards selecting a research aim has lacked direction as I had not found a topic which particularly resonated with me. I knew that I was interested in power and resistance but struggled to settle on an arena for this theme. I had originally discussed the idea of resistance in Year 1 through the use of play as a pedagogical approach. This however, did not have a particular personal meaning for me and I felt that my feelings about the subject were not sufficiently strong to motivate me to pursue it further. Many conversations led me to consider other areas but none captured my imagination in the way that my previous investigations into assessment in early years had done.

This changed when I was asked by a colleague to contribute to a paper on surveillance in the early years. I was immediately interested in this and began to read a small range of papers recommended by the colleague. As I read, I felt the excitement and fervour which I had felt previously. I realised that the topic of surveillance in the early years foundation stage (EYFS) in schools was very personal to me. I had been falsely accused of misconduct, while teaching in EYFS, as a result of my assessment data. This personal experience of being judged by my data had a deep meaning for me. It had impacted on my professional and personal identity and had led to my choice to leave the profession. My emotional response to this event therefore is part of the drive to study the notion of surveillance through data further.

Reflecting on this reading and my thought processes, I explored a research aim. In broad terms, I intend to find out what the research literature says about the impact of surveillance on teacher identity in EYFS in schools.

More specific questions relating to this aim are as follows:

- How are EYFS teachers fabricated by data?
- What forms does surveillance take in EYFS in schools?
- How are online data tracking systems used as a tool for surveillance?
- How is the EYFS Profile assessment used as a tool for surveillance?

My search of the research literature in this area started with the papers given to me by the colleague. These papers, all on the subject of surveillance in schools, can be used as a starting point for pearl growing as they contain references to a wealth of relevant literature. I have used Mendeley to organise notes on my reading, using the note facility to record thoughts and key points as I read. I have also begun to organise my papers using Mendeley as a filing system.

In addition to this, I intend to use the university library and Google to search for relevant literature.
Appendix C. Feedback from Reviewers for The data-doppelganger and the cyborg-self

Referee(s)' Comments to Author:

Referee: 1

Comments to the Author
I think there is an interesting paper in here but the argument will need to be a lot tighter for it to work. You need to go through carefully step by step and make sure that it hangs together clearly and that nothing is extraneous. I was not sure that the Wilson story helped you to clarify the concepts you are using, and the discussion of Lacan's mirror phase seemed unnecessary. Overall, an interesting idea that needs more careful argument to work properly.

Referee: 2

Comments to the Author
I thought this was a very interesting paper, which develops an original analysis of the datafication of education and what it is doing to pupil/teacher subjectivity. The conceptual framework it develops, involving a data-doppelganger is a welcome innovation. The discussion of Poe's William Wilson (which must be necessarily brief) helps unpack the core conceptual apparatus of the paper before it is applied to a critique of the Ofsted report, Bold Beginnings. This critique is usefully and insightfully developed. I have a number of questions that the author/s may wish to address, along with a few very minor suggestions at the end for correction/adjustment.
A few questions which the author/s may want to address (I'll leave that up to the author to decide if they would help improve the paper or not):

Would it be useful to indicate, very briefly, what exactly is ‘post’ about the ‘posthuman’ as conceptualised in this paper? And how does this help with the idea of the cyborg-self? Why is it useful to bring Braidotti into conversation with Haraway at this point?

The cyborg is mentioned to help frame the analysis, but the paper quickly switches to its main topic, the doppelganger as an example of how we might think of the cyborg. Might it be worth commenting briefly on why this offers a useful extension of Haraway's (much discussed) cyborg?

Would it be helpful to clarify just how Freud/Lacan's psychoanalytic concepts are being used in this paper? I.e are they being used as a useful heuristic, or are they being used in a strict psychoanalytical sense, as offering fundamental insight into the ontological condition of children subject to datafication, where the id, ego and superego are being treated as fundamental conditions that make up what it means to be human? If the latter, how does this fit with Braidotti/Haraway?

Has Poe's story been analysed via a psychoanalytic reading of the double? If so, how does this account draw from, develop those analyses?

How does the double 'carry out the repressed desires of the id'? In the account of the 'id' at the bottom of page 9, could this be further explained? It seems that the double is doing the opposite, namely stepping in to regulate the repressed desires of the id in this example. The same seems to be happening on p. 15.
Also, does the claim ‘Games can be seen as repressing the id’ (p. 9) need developing, and perhaps further exploring where play returns as a key theme on p. 15.

On p. 10, does the following sentence need reformulating: ‘The presence of the doppelganger prevents William from being himself’. This seems to indicate a secure sense of self that the rest of the psychoanalytic, interpretative work of this paper is bringing into question.

On p. 10 the discussion of Poe’s story seems to break off very abruptly. Are a couple of sentences necessary to lead into the discussion of Bold Beginnings? Does the reader need to be reminded how the discussion of Poe has developed a framework that will be crucial in the subsequent critique?

On pp. 11-12 there seems to be some slippage between the pupil’s doppelganger and the teacher’s own doppelganger, which in the latter case seems to involve some kind of hybrid with the pupil’s doppelganger (since the success of the teacher, and identity of the teacher, is wrapped up with the data the teacher accumulates relating to his or her classroom). It might be worth explaining this slippage.

p. 12 the sentence: ‘Prior to entry into school, the child’s subjectivity is primarily dependent on relationships within the family’ might be hedged a little.

p. 12 according to the mirror phase, children have already long been subject to a form of psychic violence, long before they enter school and have themselves ‘mirrored’ once again. If this paper was clearer about where it stood in relation to Lacan/Freud, and their respective claims about the makeup of the ego, the reader would be in a better position to understand whether, for the author, this mirroring at school is a kind of secondary mirror phrase, or is just using the idea of the mirror as a heuristic.
p. 13 How does this sentence ‘Once this data-doppelganger has been discovered, once the mirror of data has been held up to the child, it is their personal responsibility to love it and nourish it’ fit with the claim that the doppelganger is a disturbing, uncanny presence, and is not, therefore easily loved.

p. 15 In a number of places, including page 15, a romantic notion of the healthy child seems to intrude upon the analysis: ‘The wellbeing of the child is sacrificed at the altar of good data.’ Can this position be sustained, though, given the psychoanalytic framing of the paper, where perfect health is never the object of therapy (or is it?), perhaps only what Freud called ‘common unhappiness’.

pp. 16-17 Is the link back to the ‘banking model’ necessary for this paper? It seems like a bit of a jump, and introduces a very different critical framework that is not really brought into conversation (because of its brevity) with the psychoanalytic framework developed in this paper.

p. 18 Is it overstatement to claim that the teacher comes to resemble the Borg, and has his or her agency entirely evaporated so that she becomes a mere technician (also p. 19)? How does this fit with the opening statements about datafication producing a new form of subjectivity, where presumably that new subjectivity develops new ‘freedoms’, or possibilities for self-understanding? Isn’t the analytic interest in this paper as much about what datafication makes possible, as what it hinders? Is this paper sustaining its analysis throughout, or does it fall back at points, in to (a) a romantic conception of the child/play/education, and (b) a typical critique of examination and audit culture as being a restraint to freedom.

p. 19 The point about ‘career suicide’ seems underdeveloped. Given that it is such a strong point, it might need to be hedged a bit, taken out or developed.
p. 20 The optimistic end to the paper which appeals to a particular teacher’s hopes about how the profession might be reclaimed, does not seem to fit with the analysis of this paper (in terms of interlocking with its conceptual work) and may be the subject of a different paper.

- 

Very minor points:

Use of p. to indicate page number needs to be consistent across the paper and in conformity with the journal’s usage.

p. 7 ‘all three parts of the Freud’s’ to ‘all three parts of Freud’s’

p. 8 missing end bracket after ‘(p157’

p. 12 sentence beginning ‘A norm..’ does not appear to be a complete sentence.

p. 14 ‘crime of failure’ seems a bit strong? ‘presence of failure’?

p. 15 ‘A symbol’ to ‘a symbol’?

Referee: 3

Comments to the Author

Review for data doppelganger & cyborg self

The introduction provides an engaging introduction to, and justification for the significance of the approach taken to understanding the nature of data, and its relationship to the self to which it pertains. The notion of data as ‘part of who we are’ is a powerful metaphor for the nature and influence of data within people’s lives. The notion of ‘doppelganger as method’ is an interesting contribution to the field in and of itself.
The application of this methodological approach to the document ‘Bold beginnings - The Reception curriculum in a sample of good and outstanding primary schools’ is clearly important to the development of the concepts elaborated in the article; this application to a specific policy (i.e. mention of the policy) needs to be foregrounded in the abstract and earlier in the Introduction where the notion of the data doppelganger is actually being developed.

The literature on ‘Datafication’ seems under-done. While Bradbury & Roberts-Holmes are certainly central here, refer to other key figures in early childhood who critique application of notions of data in these settings.

Dolar’s analysis of the ego, id and super-ego are effectively applied to Poe’s short story, as a precursor to the analysis of the ‘Bold beginnings’ document. The application is clear and engaging. It is also particularly well expressed in relation to the small amount of literature that is drawn upon (Bradbury & Roberts-Holmes), and would be further enhanced through more rigorous application of additional literature on the datafication of early years (as an extension, and application of the additional literature referred to above). The use of the Clark & Glazzard study, for example, was particularly effective in this regard.

On an analytical note, the alteration of the ego through the loss of the pre-data self is particularly poignant, and the construction of the ‘cyborg-child’ is effectively conveyed through this process. The focus upon the data/doppelganger, rather than the child, is also particularly effective to the principal argument of the article. In the conclusion, the metaphor of ‘career suicide’ is also effectively engaged in light of the earlier explication of efforts to expunge the doppelganger. The hopeful note in the conclusion is important.

This is an interesting and innovative analysis of current policy constructions of notions of the self in relation to data through a particular policy text. The modifications indicated will further enhance the argument.
Accept, subject to minor revisions as indicated.
Appendix D. Transcription of Pilot study interview

R
not early years trained
4 years' experience
Trained on the job
Overseas early years' experience
Age bracket 20s

J
24 years experience
ITE age 3-8
KS1 mostly
Experience across primary phase
This year moved into Reception
50 years old.

M I've got one question relating to last week before we sort of press on so I was just wondering, I never asked you this I don't think at the time but how did you decide to break the broad phases of learning as in 30 to 50 months 40-60 into the 3 bits of it?
R into the emerging expected exceeding? Its something that Classroom Monitor… did already
M OK
R When we signed up to it
M Yeah
R so then we just went with that but like I said, its tricky anyway isn't it ‘cause we try not to tick off…cause obviously the early years it shouldn't be a tick [list]
J [Tick list]…
M [Yeah]
R of what they could do it should be [where the best fit]
J [and its more of a discussion]
R so classroom monitor sort of goes against… what we try and do.
M Yes
J We use it as a as a part of what we do
R Yeah, [absolutely]
M [Yeah]
M So how do you make a decision then this is for both of you really how
do you make a decision about which you know emerging expected or
exceeding within a broad phase [how do you make that decision?]
R [well we look] at all of the descriptors don’t we and we just find a best fit
do we think that this child do the majority of it can they do all of it and there
just tipping into the next one or can they not really do much of it. That’s
what
J And it is a discussion that we have with each other and we try to include
the teaching assistants as well because obviously they’ve got some
knowledge that we might have missed so we take their thoughts into
account as well
M and does that information go into Classroom [Monitor?]
R [Yes]
M When you how do you put it cuase you don’t use the click click [how
many times]
R [no we don’t]
J no you [can adjust the level] manually
R [yeah we manually imput]
J you can say that we think this
R we think [theyre emerging]
J [that’s perfectly acceptable]
R Yeah
M Fabulous, that's great that just clarifies that, so we'll move on to talking about Nina then so basically I just want you to talk through your knowledge of her sort of from the beginning and, and you know as you've gone through the year.

R Well we did the home visit together didn't we… and that was… interesting

M Tell me about the home visit

R Mum didn't speak very good English did she although I think it has improved

J [improved]

R but she didn't speak very much English at all and the little baby was poorly

J Jordan

R [Yeah]

J [baby brother she's got]

R and Nina wasn't there was she?

J No, I don't think we met her at the [home visit]

R [and that'] usually what we go to do

M yes

R is to meet the [children]

J [Yeah]

M [OK]

R erm…and then…I don't think mum really gave us us much information about Nina did she

J no, no, not that we've go the erm the all about me didn't we back which is ( )

M can I take photos of these sort of documents that 'd be [really]

R but she didn't want any of the letters translating did she or [anything] like that

J [no]
R she… she wanted [to be as] independent… as… as  she could be

M That’s interesting

((Break while we look for papers))

5.00

J but basically it didn’t give us it didn’t give us a lot of information but erm just that it was a mum and dad and she got a baby brother

R and that she went to Fieldside for like a couple of hours a week didn’t she but not more than that. Was it 5 or have I made that up something like that though wasn’t it

J I’m not sure

R yeah

J erm, but she liked dancing it said she liked cooking and it said travelling and I think they do go back to Poland and they’ve been… on a term time… holiday back to Poland this year

M Yeah, do you know anything about the family like what… you know do they work or anything like that [sort of thing]

J[ I think mum works] you [don’t think]

R [I don’t know] of

J I think she does

R not sure

J But I don’t [know]

R [Dad definitely] does doesn’t he because he’s never,

J No I’ve not…[really had anything with dad no]

R [he never comes] to…to school does he

J No I’ve never met dad

M so have neither of you have ever met dad [Ok just met mum]

J [and mum brings] Nina to school on her own as far as I can see and I’d not met Jordan or it took me a while to find out about well, apart from the all about me for Nina to start talking about Jordan

R her brother yeah and then it was more pictures she did didn’t she at the beginning [lots of pictures]
J [she was] silent when she started both both our EAL… erm…[children chose]

R [were very minimal]

J not not to speak at first but we did expect that didn’t we

R £ until I was saying to Mandy last week until she came up to us one day and said “where’s… where’s my bag go?”

all Laugh

J So I think they were just taking everything in at first which is what we expected because we had the lady in from the language

R from ( ) oh what she called? MEA Minority Ethnic Achievement

M Yes

R She comes in

M Is that something from [Yorksh]

R [From] Selby

M From Selby

R [from Selby yeah]

J [she came] in and spent quite a while with us and we’d had whole school training about that as [well]

R [yeah at the beginning of the year]

6.45

J [and basically] she started the training by putting (laughs) a Polish lady at the front and just speak to us in Polish and not explain what she was saying just to give us a flavour of what it might actually [feel like]

R[Yeah,] and we were all like …ohh

M yes (laughs)

R awful

J so

R ( )

M and had you as a school had other erm EAL children what’s your norm, you know, do you usually have [EAL Chil]
R [we have] a couple [don’t we]
J [we have Maria’s brother], who’s older isn’t he but [he’s]
R [yep] I think we have one or two in each year don’t we I think Year 1 this
years the only oh we’ve got a little Spanish girl but apart from that
J we we’re not inundated like some schools say they are we tend to get
just one or two
R yeah
M OK
R and they were quiet weren’t they when they both started
J and what I think I’ve found throughout the year is because they’ve had
each other they’ve tended to gravitate towards each other and speak in
Polish when they’re playing which sort of excludes the other children so
we’ve talked to them about if you speak in English then everyone can join
in with you and so they do try and they have come on ever such a lot both
of them
R and we were doing Time to Talk weren’t we
J yes
M is that an intervention?
R yeah
M do you wanna just tell me a bit about it?
R yeah is it its based about a little bear isn’t it its called Ginger bear and its
just about erm they work in really small groups I think there’s about 5 of
them in each group and they just talk about listening skills, how we listen
well to one another you know its important that we speak up so other
people can hear us and just sort of try and build that confidence but we did
put them in 2 separate groups because what we were hoping [was that]
they’d… sort of expand then and their friendship groups
J [yeah]
8.45
J they are beginning to erm I’ve found that that because I read the advice
from the M…
R MEA
M yeah

J MEA and it said about them having a buddy so even now they’ll come in and say can I choose a buddy and obviously when Nina went to Poland then Maria was alone

M Right, when was that?

J it was some time this year erm…….I don’t know but I’ve got may in my head

M OK

J So it was into the year that she went but the still come to me every morning and say “can I have a body” which means “buddy”

(all laugh)

M Yeah

J and they will choose someone and that is sort of widening their friendship groups

M great great

R so that’s good

M mmm

R but at the beginning Nina was poorly a couple of times wasn’t she and that left the other [one just…absolutely lost]

J [ yeah and this is what we say to all the children really] to have just one exclusive friend then if that’s childs away so [we did have that chat]

R [cause that] was something you had to say to Mum wasn’t it about she was having a lot of time off and I think she was poorly for a little bit of it but she’d have like if she had a sniffle then she wouldn’t come in

M OK yeah

R and mum had said about the fact that if they were back in Poland they wouldn’t be in school

M so there’s different [expectations]

10.00

R [and Maria’s] mum says that doesn’t she like they’re too little[ like so if they’re] a bit poorly I’m going to keep them off
J [to be in school]
R but we were saying like it would do them really good to keep coming in
M yeah
R but they don’t do that anymore do they
J no, no
R I think it was just the beginning of the year
J but I was talking to both girls the other day and they do tell me that they
do both speak Polish at home it did say in the All About me that they do
speak Polish at home but that’s not something we [discourage]
R [no]
J but.. its something.. to be aware of I suppose
R I think Matyas… one of the older…brothers of er…one of the children in
the class, he tries to speak English [but mum says “you need to speak
Polish at home”]
J [yeah he’s got…He’s got quite good English hasn’t]
M Yeah, OK
R which is, you know, fair enough isn’t it…
J mm…
R I mean last time we were talking about would there be a difference if
Nina…was…at school in Poland and I said
J what, academically
R yeah I thought [there would be]
J [I think the language] barrier does in certain aspects [does ( )]
M [Yeah] I ‘d asked if this school was a school in Poland and it was still
you and youre doing all the same things but the language was different
would it have made, you know, would you have assessed her differently
really would she would would things be different?
11.15
J a lot of them do rely on the speaking and the understanding and the
quite [high level of language don’t they]
R [and that’s why we’d said like we couldn’t give her the, I know we’re not talking about data but we were giving the ( )

(M laughs) its alright

J because it needed a certain level of language skills

R [like when they were talking about the world and]

J[ (when) we had the training the] lady said to us did she say it was either five or seven years that they would need to live in a country before they got to the same complex level of language

M gosh

J erm as if you were born in that country…so…

R and we do have…other children…again in KS2 who…have.. done that but when they start in early years it is hard for them

J yeah and as we say they were silent at first but they have come on ever such a lot. Where they’ve, they’ve come on a lot of its copy language

M yeah

J erm, so even if just asking you know getting their dinner or the register answer they’re confident with that now but what they really love to do and I think makes them feel part of things is the singing or any stories and rhymes so when we were doing the bear hunt they knew and they’d come sort of to life don’t [they]

R [yeah]

J Oh I know this one and we’ve been doing the Katy Perry Roar song

12.30

M (laughs) Oh I love that!

J and they, and they absolutely give it everything because I know this, I know [the words] yeah

R [and even in] even in singing assembly they both

J it’s the singing

R I know this is [meant to be about Nina] but they…

M [isn’t that interesting]

M yeah
J yeah
M so they come to life with the singing
R absolutely
M fantastic
13.30
J because they’re the same as everyone else when they’re all singing the same words and they’re not trying to find the word or …
R and I think it helps that…maybe…all when I’m thinking of singing assemblies, all the younger ones, they can’t read the words on the board so part of them they do just go raa raa raa raa (singing) oh I know this bit der de de and that probably makes them think ah this is alright cause everyone else is doing it so I don’t feel so different
J yeah, I notice that ever so much that that’s were they come to to life and you wouldn’t pick them out because they are just joining with that
M so what are Nina’s strengths, I mean we just talked about one of them there but she what d’you think [they]
J erm they’re quite creative. I keep saying “they” cause they [do tend to stick together]
R yeah cause…together
J so creative she likes she likes imaginative
M yeah
J play. She likes counting
M right
J you know the number, they quite often go together and they’re counting and they do try to do that in the English when they’re counting. Erm I think the phonics is they’ve really tried to to grasp that erm more so in the reading, I think they find try but any child would find it difficult to transfer the phonic skills to the writing so composing sentences and things is a bit of a struggle, she would need support with that
M fantastic. Do you wanna show me a bit of Nina’s …so do you have everything on erm… how do you tell me how this works (laughs) [I know a bit about these systems]
(J and R show me the print out of an online blog)

14.30

J [These come from the classroom] so erm sometimes they’re individual children, sometimes they’re group, sometimes they’re whole class and these are shared with parents each week so that they can see what’s been happening erm we put the next steps on as well and we try to relate to the areas of learning [ (and the) characteristics of learning]

M [can I just add a character into my learning?]

R do you want one of Nina rather than the other children?

M yeah

R here we go. Maria and Nina often (laughs)

J always together!

M great

R Oh that’s quite a nice one because its showing them looking at the poster and things like that… m

(pause)

M lets see if I can make this pen work. So d’you wanna talk me through just

(J and R laughing at the photos)

15.15

(everyone laughs)

M so… er… let me just write on here, so what is it what’s it called this sysetm? 2 build a profile. Is it 2 Simple?

J yes its

M right… so you take a photo or do you sometimes just make a note?

J you don’t have to have a photograph, its optional

M (writing) in class…observations…

J so what we would tend to do is we’d quick snapshot and some notes and then we would write it up another t.
(recording cut off)
Appendix E. Research proposal

How can community collaboration improve the assessment of Roma children who are new to English in early years?

Rationale and Literature Review

Early Years Assessment

My interest in early years assessment began when I was working as a teacher in a reception class in England. As an experienced teacher, I had spent many years assessing young children and had always believed that assessment gave a reliable insight into the nature of the child. In my final year of teaching however, I began to question the validity of assessment practices in my school. This was partly a result of changes to policy which resulted in a new measure of attainment. This measure defined a good level of development in the reception year as being demonstrated by children who could reach a specific set of goals in the areas of personal social and emotional development; communication and language; physical development; mathematics and literacy (Department for Education, 2014). As a teacher, I found that this was very difficult to achieve for many of my pupils and I started to see children who did not meet the measure as failures. At the end of this year, only 30% of my pupils met the good level of development, a percentage which I felt did not reflect their progress and development. This led me to question the validity of the early years assessment system.

I continued to explore questions of the validity and ethics of assessment during my subsequent masters’ degree. I wrote about the power of the system to construct teachers as failures, using a Foucauldian lens to explore governmentality in schools (Pierlejewski, 2015). Assessment, I argued was key to this technology of power as pupil data was used to judge a teachers’ effectiveness. My final masters’ dissertation (Pierlejewski, 2015) explored the Reception Baseline Assessment: a new system for assessing children on entry into reception which was trialled in 2015 but withdrawn the following year. A Foucauldian discourse analysis of policy documents, baseline provider propaganda and twitter data revealed a conflict between a desire for validity and concerns about the ethics of testing such young children. I found that validity was the primary
driver for the government policy with no reference to the ethics of assessment. Providers and twitter users however, were concerned with ethics and felt that unethical assessment invalidated the process. Interestingly, the Reception Baseline Assessment was withdrawn due to “insufficient comparability” between the different baselines, which led to it lacking validity (Standards & Testing Agency, 2016: 20).

My interest in early years assessment continued into my doctoral studies. I began to reflect on the experience of children I had taught who were new to English. My interest in this area arose as a result of the experiences of a family member who had moved to the UK from Mexico. This 6-year-old child and his parents related their story to me, discussing the feelings of inadequacy and frustration which the child felt on entering the English system in Year 2. I knew the child well and could see his strengths and capabilities. He spoke three languages when he moved to the UK and had received a very positive report from his previous teacher in Mexico. The focus of his new school however, was focused entirely on his lack of literacy skills. Pressure to perform in the KS1 statutory assessments led to an unhappy experience for both child and parents, which has continued through his schooling. I felt frustrated at the school's emphasis on reading and writing skills, with little attention being given to support his second language acquisition. I asked myself why being bilingual is often viewed as a barrier to learning rather than a useful skill (Safford and Drury, 2013).

Young Bilinguals

As a teacher, I had taught many young bilinguals, some of whom were completely new to English. Changes to the early years assessment policy in 2012 led to communication being assessed entirely in English at the end of reception (Department for Education, 2012). I reflected that for many of the children I had taught, the achievement of a good level of development as defined by the Department for Education (2014) was impossible, as their communication skills were not assessed in their first language. Although the current EYFS states that “practitioners must explore the child’s skills in the home language with parents and/or carers” (Department for Education, 2017b: 9), the purpose of this is only to identify language problems. There is no requirement to assess language development in home languages in children who do not present as having possible language delay.
The difficulties in new to English children in achieving a good level of development became the focus of a paper which is currently in press (Pierlejewski, 2018). In this paper, I use Williamson's (2014) notion of the data doppelganger, another version of the self, represented in data, which is constructed by the teacher at school. I argue that the data doppelgangers of young bilinguals are deficit doppelgangers, as they only represent a limited view of the child’s capabilities. Building on the work of Bradbury and Roberts-Holmes (Bradbury, 2011; Bradbury and Roberts-Holmes, 2016, 2017), I argue that the creation of data-doppelgangers has privileged certain children, while the doppelgangers of others are deficit doubles. The system disadvantages children with English as an additional language as they are classified as “no-hopers” and therefore receive less attention than those who are close to achieving the good level of development.

Datafication

My research has focused on the datafication of early years children. Roberts-Holmes defines this concept as the process by which children are reconstituted as data (Roberts-Holmes, 2015). An increase in the amount of data collected and its use in education has led to a transformed educational landscape in which data now plays a pivotal role. Reading around the subject of datafication in early years revealed that there was little research into the impact of datafication specifically on young bilinguals in the English system. Roberts-Holmes and Bradbury have contributed a significant body of research into the datafication of early years but have not focused on children with English as an additional language.

There is some limited research from the UK which focuses on the experiences of young bilinguals in early years education. Drury’s (2007) ethnographic study of bilingual nursery children reveals children who are dispossessed of their ability to communicate. The picture which emerges from the home setting of these children appears in sharp contrast to the emerging picture of the child at nursery. Drury cites Pollard who draws attention to the reconstruction of the child as pupil in school

“It is only when the socially created ‘planned intervention’ of curriculum and schooling is introduced that the child is repositioned as ‘pupil’ and
becomes viewed, in terms of the education system as deficient” (Pollard, 2000: 127 in Drury, 2007)

This relates to the notion of the data doppelganger, as the repositioning of the child is a result of the intervention of the curriculum. When viewed through the lens of the curriculum, the child is deficient. Assessment is central to the curriculum as it is the means through which the pupil is constructed as either deficient or comparable to educational norms. The curriculum, pedagogy and assessment work together to create the pupil experience of early years education.

Bilingual Education

Further reading into the subject of the education of children with English as an Additional Language (EAL) revealed that the use of the home language as a tool for teaching and assessment was well researched (Siraj and Clarke, 2000; Conteh, 2006; Drury, 2007; Whitehead, 2007). Bilingual teaching promotes additive bilingualism (Cummins, 2000) where the new language is built onto the existing language rather than replacing it. Bilingual pedagogies not only support the language development of the child but also the cultural, social and emotional development of the child as “culture, identity, knowledge, experience and language are closely interwoven” (Conteh, 2006:28). Readings of my students' work on supporting children with EAL and my observations of the teaching of EAL children in my role as a teacher Educator, indicate that this approach is currently not being widely used. This led me to begin to consider how bilingual pedagogies may impact on the assessment process and the pupil experience.

Pilot Study

My pilot study examined the difference between the teacher's knowledge of the bilingual child in comparison to the data version of the child. I found that the teachers actually knew very little about the bilingual child I asked them to discuss. They mainly discussed the child in her relation to another Polish child, referring to “them” and “they” even when asked specific questions about the target child. In the expert below, the researcher is M and the teacher is J:

M so what are Nina’s [pseudonym] strengths, I mean we just talked about one of them there but she what d’you think? [they]
J  *erm they're quite creative. I keep saying 'they' 'cause they do end to stick together*

(Appendix A: 30)

This indicates an othering of the young bilinguals, seeing them as different to the majority population. I also found that the language and culture of the child were seen in deficit terms. The teachers criticised the Polish parents for not conforming with the English system, particularly, visiting the home country in term time and keeping the child off school when they had “a sniffle” (appendix A: 27). The child’s home language was seen as excluding other children rather than enabling the child to think and play with her Polish speaking friend.

Post-Colonial Literature

The othering of this child led me to research post-colonial literature (McLeod, 2000; Cannella and Viruru, 2004) which revealed language being used as a colonising tool with a subaltern group of children. Cannella and Viruru define subalterns as being the colonised people and extend this to all groups who are othered by the colonising people. This linked to my former reading of Foucault (1977) which revealed the normalising function of discourse. I began to understand the construct of the normal child to be a Western, middle class, white and colonising construct (Cannella, Gaile; Viruru, 2004; Burman, 2017) against which subaltern children were measured.

Cannella and Viruru’s (2004) text also led me to reflect on the purpose of my research. I had focused on the desire to reveal the perceived injustice of the current early years policy. The final chapter of the book “constructing decolonial research agendas/methodologies” (p145) focuses on alternatives to research which creates an unequal power relationship between the researcher and the researched. I felt uncomfortable with the notion of observing subalterns and their teachers from the privileged position of the middle class, white, academic. I wanted to give the subalterns voice, to work with the communities and the people I was researching. This led me to explore possibilities of working with teachers, bilingual support staff and communities to develop new ways of assessing young bilinguals.

Sample- Case Study
I approached a school which I knew had very high levels of new to English (NTE) children and who had developed a centre of excellence for working with such children. As part of their school improvement plan, the staff had identified the progress of NTE children in the early years as a priority area. The school were very keen to work with me and liked the idea of a joint research project. The demographics of this school are very unusual in the UK because they have a very high percentage of Czech Roma children. This is one of the highest proportions of this ethnic group in a primary school with over 120 Roma children enrolled. The school related that working with this group of children was a challenge for them as the children had very low levels of English and poor attendance. The increase in the proportion of Roma children in the local area is also a very recent development, so there was little existing expertise within the school.

Roma Education

Research into work with Roma children reveals a challenging picture. Gypsy and traveller communities in the UK experience significant, pervasive and lifelong discrimination and inequality (Cemlyn et al., 2009). Barriers to learning for early years Roma children are identified as being lack of permanent accommodation and frequent evictions, lack of parental literacy, fears over the safety of children in schools and cultural expectations that the mother should be the main carer for young children (D'Arcy, 2010). Added to this for the Czech Roma is the lack of spoken English used within the community and the range of Roma dialects spoken (Smith et al., 2017). As this group of children were the focus of the school’s development plan, I chose this group for my primary focus.

While there is a range of research into the education of gypsy, Roma and traveller children in the UK (Myers and Bhopal, 2009; Bhopal, 2011; Heaslip et al., 2016) this mainly focuses on the established traveller population in the UK rather than new immigrants and refugees from the EU. As the migration of eastern European Roma people to the UK is a relatively recent phenomena, little research has yet been conducted in this area. There is limited research into early years education and Roma children although there is guidance from the former department for education and traveller support groups (DfES, 2003; Mason, P., Plumridge, G., Barnes, M., Beirens, H., and Broughton, 2006; D'Arcy, 2010). A useful study which focuses on the use of bilingual approaches to the education of Roma children is Smith and colleagues’ work on
translanguaging (Smith et al., 2017). This project used interactive spaces to support Roma children’s language development in both their home language and the new language. It also focuses on developing strong links with the Roma community. Initial findings are that children were more engaged, attendance increased, digital competence increased, and educational achievement improved.

The importance of creating links with the Roma community was echoed in a range of other literature (Bibby, Tamara; Lupton, Ruth; Raffo, 2017; Lalueza et al., In Press, 2018). Through developing strong links with the community, the discontinuity between the cultures of the Roma community and the school could be addressed. The issue of language was one of many cultural differences which needed to be understood in order for schools and parents to work together to educate their children.

Focusing on developing links between the community and using this developing relationship to more effectively assess children emerged as a gap in the literature and will be the focus of my study. Rogoff argues that humans should be viewed as “biologically cultural” with both nature and nurture operating as inseparable influences on human development (Rogoff, 2003). Part of the aim of this project then, is to develop relationships with the community which will enable deeper understandings of what the child can do and who they are. My final research question therefore, emerged as “How can collaboration with the local community improve the assessment of Roma children who are new to English in Reception?”

Epistemology and Ontology

Epistemology

In order to explain the rationale for my approach to this study, it is useful to explore my ontological and epistemological views as these underpin my research design.

My concept of reality has changed since becoming a researcher, moving from an objectivist view of reality as something which exists outside the mind to a more constructionist view of reality as something which is perceived by the subject in particular ways. This view of reality is constantly changing in response to the emotions, experiences, interactions and memories of the perceiver, as they interact with the concrete world. Influenced by social constructionism, I see reality as being constantly
constructed, reconstructed and co-constructed with others. The way reality is perceived in the mind of the subject and the discourses concerning this reality create and mediate the perception of experience itself (Crotty, 1998)

Ontology

My view of truth is influenced by my reading of Foucault. To Foucault, the idea of scientific truth as something which is “discovered” and is flawed (O’Farrell, 2005). He sees truth not as a neutral phenomenon but as mediated by culture. In his debate with Chomsky, he describes it as “a thing of this world: it is produced only by virtue of multiple forms of constraint” (Chomsky and Foucault, 2006:189). These constraints define what will be construed as truth in any particular culture. Foucault seeks to question the established concepts of truth in order to reveal a different kind of truth. His drive to unmask “political violence” (Chomsky and Foucault, 2006:41) motivates Foucault to expose the systems of power which regulate truth. This same drive motivates my own research. The desire to explore the limitations on truth, the exercises of power, in the form of policy, which regulate our notions of truth and unsettle established conceptions in an attempt to unmask political violence. Foucault saw truth as being created by and a creator of power, indeed, he stated “truth is already power” (Chomsky and Foucault, 2006:171). Like Foucault I seek to expose the systems which regulate truth in order to unmask political violence. I hope that by developing new ways of assessing children, new truths will be revealed and some of the limitations on truth will be altered.

Discourse

One of the key features of post-structuralist thinking is the central position of language. Language is seen as a creator of reality. Foucault argues that the world is not there to be described but rather, in the describing, it becomes real (Foucault, 1978). He explores the notion of discourse, describing it as creating subjects as well as being created by them. Discourses are responsible for determining the ‘taken-for-granted’ ways of seeing which permeate our culture. They ‘reflect particular ways of thinking, feeling, believing, valuing and acting’ (Osgood, 2012: 28). Foucault describes discourse as an instrument of power as it acts to regulate the behaviour of subjects. An analysis of the discourses which are created by and act upon the subject of the research can reveal the
workings of power. They help the researcher to gain an understanding of how subjects are constructed.

Critical Theory

In addition to unmasking political violence, I also want to do something to change the situation. Critical theorists argue that qualitative research should not just document phenomena, but it should seek to change. It is emancipatory in its purpose with redressing inequality and promoting individual freedoms within a democratic society at its heart (Cohen et al., 2011). I want to do research with people, rather than on people with the express purpose of improving the experiences of minority ethnic pupils. In order to achieve this research aim, I chose ethnographic participatory action research as my methodology.

Methodology

Summary

In summary, I plan to spend one year working as a voluntary teaching assistant in a school in a multi ethnic community in a northern English city. During my time at the school, I plan to work with a team comprising the reception teacher and nursery nurse, the NTE leader, a learning mentor and a member of the Roma community. I aim to design the project with this core team as a collaborative project. The team will be responsible for planning and evaluating the actions as well as analysing the data. Our aim will be to develop relationships with the Roma community which will facilitate a better understanding of the Roma children and in turn lead to a more appropriate form of assessment.

Ethnography

Ethnographic research seeks an insider view of the social world (Mills and Morton, 2013). It enables the researcher to participate in and observe the complex, messy, contradictory cultural world of the subjects. It enables detailed description and detailed, deep understandings, rather than a cursory overview. Collaborative ethnography is the most appropriate methodology for gaining an understanding of the culture of the people I want to work with as it will promote the use of multiple voices and realities as well as a deep understanding based on insider knowledge. Rather than the researcher observing the group from within, the ethnography will be
collaborative, enabling members of the group to observe and document the research together.

Participatory Action Research

Participatory action research involves groups of people working together to make a change. Rather than the researcher leading the action research project, the people who experience the problem become co-researchers in the process of trying to find a solution (Montero, 2000). It has emerged from the critical theory paradigm as it promotes social justice and gives oppressed peoples a voice (Tedmanson and Banerjee, 2012). It challenges the power dynamic between the researcher and the researched, the learner and the teacher, as all participants become coresearchers and learning is reciprocal (Campbell and Lassiter, 2010). This approach requires groups to identify needs, plan and deliver actions and evaluate their effectiveness in a collaborative way. As I want to find out how working more closely with the community can improve assessment for NTE Roma children, a collaborative, action-based approach emerged as the most appropriate. This would enable me to gain from the knowledge of the group as a whole and make changes to improve the experience of the Roma children.

Methods

Participant Observation

Ethnography and participatory action research both use a range of methods to collect data. The primary method used in this project will be participant observation in the form of field notes. I chose this because it would enable me to participate in the experience as an insider to gain deep understandings and generate “thick descriptions” (Geertz, 1973 in van Sluys, 2010) of the situation. I will take the role of participant as observer (Cohen et al., 2011) as I have a role in the school as a TA every Friday. I will be involved in playing with the children, looking after their needs, keeping them safe and doing activities with them under the direction of the teacher. In addition to this, as a member of staff, I will interact with parents and colleagues during the school day. My field notes will be written during the afternoon of each visit. These findings will then be discussed the following week with the research team.

Observation is a key assessment tool in the Early Years Foundation Stage (Department for Education, 2014). As part of the duties of an EYFS
practitioner, staff will collect written observations, photographs and video recordings of the children. The life of children at home may also be observed through the use of parent generated observations, anecdotal evidence, photographs and video recordings. The use of evidence from home and school is recommended in the EYFS assessment guidance (Department for Education, 2017a). I will create these observations in my role as a teaching assistant and will also analyse existing observations as a researcher. These observations will contribute to the emerging knowledge of the child and are likely to form a basis for the developing assessment system. Ethically, this presents some problems because parents and children are not asked for consent to use this data at school. As this is data which the school have collected in their role as the educator, I will treat such evidence as documentary evidence along with other evidence such as assessment data and school policy documents. This will be analysed at school by members of staff including myself and will remain the property of the school. I may discuss this analysis in my research but will not keep copies of any such observations in my own data.

Observations can produce very authentic data as they are thought to have high ecological validity (Cohen et al., 2011). The observer can see not only what is said but also non-verbal communication and actions. Judgements are made about what is recorded and the meaning made from what has been observed as the observer interprets what they see. In order to improve the validity of the observations made, selected observations will be discussed with the team to elicit an agreed understanding. Consent will be sought form both children and parents prior to observations taking place.

Interviews

In addition to observations, interviews will also be used to collect data. These interviews will enable me to gain an understanding of the culture, views about education and world view of participants. These will be audio recorded and transcribed. In an interview, knowledge is co-constructed between the interviewer and the interviewee. The knowledge produced is intersubjective (Laing, 1967 in Cohen et al., 2011). I do not intend to complete any interviews until a good relationship has been formed with the interviewees. I will use unstructured interviews to elicit deep, descriptive answers. Translators will be used where necessary to enable interviewees
to communicate in the language with which they feel most confident. Translation will inevitably lead to the translator interpreting what is being said based on their understanding the speech, which will mediate the communication of the participant.

Data Analysis

As this is a collaborative research project, the analysis of the data will also be collaborative in nature. I plan to meet each week with the research team to discuss the progress of the actions and evaluate the data together. We will do this by discussing moments which we identify as significant form the week. I will work with the team to reflect on these moments, identifying emerging themes as they arise. These meetings will be audio recorded so that we can capture the ideas being generated by the research team.

In addition to this collaborative analysis, I will also analyse my field notes each week as I create them. As recommended by Mills and Morton (2013), I have trialled the use of field notes by writing up my observations following a visit to a school. I found that the most effective form of writing was to categorise my observations into key events, then to analyse the data as I wrote. I also reviewed my field notes after writing up and made additional analysis notes. Finally, I summarised my key findings from the day in analytical memos. Mills and Morton suggest that analytical memos can help the researcher make links between their research and the literature and can also identify emerging themes and patterns. This fits with the view discussed in their book that “all ethnographies are educational” (p123). The process of being in the field involves ongoing thinking and evaluation. The analysis is part of the process, rather than something which happens separately from the ethnographic experience.

Foucauldian Discourse Analysis

When conducting this ongoing data analysis, I will be using elements of Foucauldian discourse analysis. This focuses on how language is used to create subjectivities. In order to identify discourses, I will use elements of Parker’s method (1994) of discourse analysis. I will identify the constructions of the subjects, looking in particular, at how different groups, such as the Roma adults, teachers and children are constructed. I will then map the different versions of the social world which emerge from these constructions, identifying dominant discourses. The workings of power
within the social worlds will be examined, identifying how power creates subjectivities. I attempted to use this approach in my trial field notes and found that as I wrote, I was able to use discourse analysis to evaluate my observations.

Validity and Reliability

The validity of an ethnographic study relates to the honesty, depth and richness of the descriptions (Cohen et al., 2011). In a collaborative, participatory action research study such as mine, the honesty of the descriptions can be validated by the research team, as ongoing field notes will be discussed, and data analysed in the team meetings. Moser (1975 in Swantz, 2008) suggests that there are three key measures of validity in participatory action research. These are the transparency of the process, the compatibility of the aims of the project with the methods used and the claim that the researcher knows the situation better than any outsider and will honestly account for all aspects she becomes aware of (p43). I intend to ensure that the process is transparent by discussing all aspects of the project and co-creating the ongoing research in team meetings with the research team. The methods I have chosen match well to the aims of the participatory action research project and my flexible approach will enable new methods to be used as determined by the emerging study. Finally, as multiple insider voices will be represented in this study, claims can be made that the research team know the situation better than any outsider could.

The challenges for a study of this nature are that I could lose my ability to analyse effectively by becoming so much of an insider that I lose my perspective. This is referred to as “going native” by anthropologists (Swantz, 2008). I will ensure that this does not happen by continuing to discuss aspects of the ongoing study with academics outside the school. There is also the danger of the halo effect (Cohen et al., 2011) in which the researcher’s belief in the goodness of the participants affects their ability to observe the whole person. The collaborative nature of the project should ensure that this cannot happen as multiple voices and viewpoints will be represented. A third challenge will be my ability to represent multiple viewpoints. My opinions may differ from those of members of the research group and of other participants observed. Our understanding of the culture and reality of certain members of the group and of children and families may be very limited. I hope that the use of interviews and the
creation of a diverse team will ensure that multiple viewpoints are represented. Finally, language could be a barrier to the validity of this research as members of the Roma community may speak languages for which I have no interpreter. I am relying on finding a member of the Roma community who will act as a mediator and translator. This may prove difficult and could result in limited communication with the Roma community. A third language translator may be used in this instance to translate from Czech, the Roma’s second language into English and back.

The findings of this research project will not be generalisable as the situation at the school is unique. As with all ethnographies, the same study could not be conducted elsewhere with the same findings. The general approach to involving the community with assessment in early years however, may be more generalisable, as schools in similar situations could create their own programmes using similar principals. The school and I hope to disseminate our findings into the local area in terms of training and recommendations for practice. The school is already a centre of excellence for NTE children and hope to use the findings of this study to add to this provision.

Ethics

In addition to challenges with validity and reliability, there are also some ethical challenges in this study. The issue of informed consent is arguably the most significant of these. In an ethnography, the ethnographer will observe the situation from many viewpoints and will reflect on events involving a very wide range of people. Questions arise as to whether all of the people observed, from children in the classroom to parents in the playground and staff in the staffroom should be asked for informed consent. It would be impossible to gain consent form the several hundreds of people involved in the school as a whole. In order to make this manageable and realistic, I have chosen to seek informed consent from the people I will engage with regularly. This will be the teaching staff at the school, the parents of the children in the class and the members of the community who become involved with the project.

A further issue with consent is the language and literacy barriers of the Roma community. I will address this by seeking verbal consent using a script which will inform participants of the purposes of my study and their role and rights as participants. I will attempt to use translators wherever
necessary to ensure that participants understand and can be properly informed. I will wait until a professional relationship has been formed with community members before asking for this consent.

Related to this is the ethical issue of seeking the assent of young children. I will address this by explaining in age appropriate terms the nature of my study and asking them for verbal assent. This will be an ongoing negotiation as children may indicate their reluctance to participate through body language and other non-verbal clues. Mukherji and Albon (2018) suggest that ongoing, rather than one-time assent, should be negotiated with children in addition to consent from parents. If a child appears unwilling to work with me or talk to me, I will ensure that I respect their wishes irrespective of parental consent.

Central to ethics considerations must be the beneficence of the research. An ethical issue which could arise is the possibility that I could observe behaviour or conversation which I consider to be prejudiced. As this is a collaborative project, the question of whether such behaviour or speech should be challenged and discussed in group meetings is significant because such discussion could upset participants. As a researcher, I will need to be sensitive to the emotions of members of the group and will attempt to address any such matters in a diplomatic way. It may be that a more private conversation may be appropriate or that certain issues may not be discussed until much later in the project when a more appropriate time arises. Throughout the project, ethical issues must always be an ongoing consideration with questions being continually asked about whether a course of action is the most ethical in that particular circumstance.

Reference List


Roberts-Holmes, G. (2015) ‘The “datafication” of early years pedagogy: “if the teaching is good, the data should be good and if there”s bad teaching, there is bad data”.’ *Journal of Education Policy, 30*(3) pp. 302–315.


Appendix F. Ethical Consent Confirmation Letter

Environment, Education and Development School Panel PGR
School for Environment, Education and Development Humanities
Bridgeford Street 1.17
The University of Manchester
Manchester
M13 9PL

Email:\nPGR.ethics.seed@manchester.ac.uk

Ref: 2018-4836-6967

22/08/2018

Dear Mrs Mandy Pierlejewski, , Prof Erica Burman

Study Title: Constructing alternative data doppelgangers

Environment, Education and Development School Panel PGR

I write to thank you for submitting the final version of your documents for your project to the Committee on 22/08/2018 11:03 . I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form and supporting documentation as submitted and approved by the Committee.

Please see below for a table of the titles, version numbers and dates of all the final approved documents for your project:

<table>
<thead>
<tr>
<th>Document File Name</th>
<th>Date</th>
<th>Version</th>
</tr>
</thead>
</table>

346
This approval is effective for a period of five years and is on delegated authority of the University Research Ethics Committee (UREC) however please note that it is only valid for the specifications of the research project as outlined in the approved documentation set. If the project continues beyond the 5 year period or if you wish to propose any changes to the
methodology or any other specifics within the project an application to seek an amendment must be submitted for review. Failure to do so could invalidate the insurance and constitute research misconduct.

You are reminded that, in accordance with University policy, any data carrying personal identifiers must be encrypted when not held on a secure university computer or kept securely as a hard copy in a location which is accessible only to those involved with the research.

For those undertaking research requiring a DBS Certificate: As you have now completed your ethical application if required a colleague at the University of Manchester will be in touch for you to undertake a DBS check. Please note that you do not have DBS approval until you have received a DBS Certificate completed by the University of Manchester, or you are an MA Teach First student who holds a DBS certificate for your current teaching role.

**Reporting Requirements:**

You are required to report to us the following:

1. **Amendments**
2. **Breaches and adverse events**

We wish you every success with the research.

Yours sincerely,

Dr Sarah Marie Hall

Environment, Education and Development School Panel PGR
Appendix G. English Participant Information Sheet and consent form

How can community collaboration improve the assessment of children who are new to English in early years?

Participant Information Sheet (PIS)

This PIS should be read in conjunction with The University privacy notice.

You are being invited to take part in a research study as part of a student project into supporting new to English children, which will constitute part of my PhD Degree. Before you decide whether to take part, it is important for you to understand why the research is being conducted and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for taking the time to read this.

Who will conduct the research?

Mandy Pierlejewski
Manchester Institute of Education
University of Manchester
Ellen Wilkinson Building
Oxford Road
Manchester
M13 9PL

What is the purpose of the research?

I am working with a small team of teachers, teaching assistants and community members to find new, more effective ways of assessing young
bilingual children in reception. Part of this will involve building relationships with local communities and involving parents and families in the assessment of their children. We hope to develop ways of assessing children in their home languages as well as their developing English. This study involves the researcher spending a year working as a part time volunteer teaching assistant in the school. It is ethnographic, which means that the researcher will be involved in the whole life of the school and will reflect on the experience of teaching young bilingual children in a research diary.

Why have I been chosen?
You or your child have been chosen because they are involved in the class which the research team are working in. You may be a parent, a child, a community member or a member of staff at the school.

What would I be asked to do if I took part?
Different people will have different roles in the research. For children, community members, staff members and parents, this involves fulfilling your usual roles at school and at home. For some teachers and staff, the research may take the form of an interview in which you will be asked questions about the project and the children. For some bilingual staff and community members, your role may be to translate and mediate between communities.

What will happen to my personal information?
In order to undertake the research project, we will need to collect the following personal information/data about you:

- Yours or your child’s name
- Your contact details
- Audio recordings of research group meetings. These will be transcribed and used as data in this study. When transcribed, names will be anonymised.
• Audio recordings of interviews. These will be transcribed and used as data in this study. When transcribed, the names will be anonymised.

• Observations of children. These will be recorded on paper at school and will be put into their learning journals. If I quote any observations, I will anonymise them.

• Observations of school life. These will be recorded on my ipad and will be transferred to encrypted storage at the university. I will anonymise as I write.

Only the research team and school staff will have access to this information. Only the researcher will have access to the field notes.

There may however, be circumstances which may lead to disclosure. These are:

• in the event that there are concerns about the participant’s safety or the safety of others I may need to contact their GP/care team/family member

• where there is a professional obligation to report misconduct/poor practice I may need to inform their employer/professional body

• reporting of current/future illegal activities to the authorities

We are collecting and storing this personal information in accordance with the General Data Protection Regulation (GDPR) and Data Protection Act 2018 which legislate to protect your personal information. The legal basis upon which we are using your personal information is “public interest task” and “for research purposes” if sensitive information is collected. For more information about the way we process your personal information and comply with data protection law please see our Privacy Notice for Research Participants.

The University of Manchester, as Data Controller for this project, takes responsibility for the protection of the personal information that this study is collecting about you. In order to comply with the legal obligations to protect your personal data the University has safeguards in place such as policies and procedures. All researchers are appropriately trained and your data will be looked after in the following way:
The research team at the University of Manchester will have access to your personal identifiable information, that is data which could identify you, but they will anonymise it either as it is being written or as soon as it is transcribed. However, your consent form and contact details will be retained for 5 years. Hard copies will be kept in a locked filing cabinet in my office until scanned. They will then be kept on the University of Manchester Research Data Management System.

Your data will be transferred from my recording device within 2 weeks of the recording and will be kept in the Research Data Management System (RDMS). It will then be deleted from the device. I will transcribe data myself. My field notes will be recorded using my password protected iPad, using Onenote and will be stored in my password protected University of Manchester Onedrive.

You have a number of rights under data protection law regarding your personal information. For example you can request a copy of the information we hold about you, including audio recordings or photographs. This is known as a Subject Access Request. If you would like to know more about your different rights, please consult our privacy notice for research and if you wish to contact us about your data protection rights, please email dataprotection@manchester.ac.uk or write to The Information Governance Office, Christie Building, University of Manchester, Oxford Road, M13 9PL. at the University and we will guide you through the process of exercising your rights.

You also have a right to complain to the Information Commissioner’s Office. Tel 0303 123 1113

**Will my participation in the study be confidential?**

Your participation in the study will be kept confidential to the study team and those with access to your personal information as listed above.

For audio recordings and photographs:

- The recordings will be used to create transcripts which I will transcribe.
- Personal information will be removed in the final transcript
- The audio recordings will be kept on the RDMS for 5 years
- The research team will have access to the recordings
What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time without giving a reason and without detriment to yourself. However, it will not be possible to remove your data from the project once it has been anonymised and forms part of the dataset as we will not be able to identify your specific data. This does not affect your data protection rights.

You do not have to give your consent to be audio recorded. If you do give consent to be recorded, you should be comfortable with the recording process at all times and you are free to stop the recording at any time.

Will my data be used for future research?

Your data will not be used by anyone other than myself for future research.

Will I be paid for participating in the research?

You will not be paid for the research.

What is the duration of the research?

I will be volunteering in the school for one year. During this time, I will be collecting ongoing data through my field notes.

Where will the research be conducted?

The research will be conducted at Bowling Park School.

Will the outcomes of the research be published?

The outcomes of the research will be published in academic papers. It may also be published in the form of a book.
Disclosure and Barring Service (DBS) Check (if applicable)

I have an up to date DBS certificate.

Who has reviewed the research project?

My project has been reviewed by the SEED ethics committee at the University of Manchester

What if I want to make a complaint?

**Minor complaints**

If you have a minor complaint, then you need to contact

ERICA BURMAN
ELLEN WILKINSON BUILDING
UNIVERSITY OF MANCHESTER
OXFORD ROAD
M139PL
01612753282

**Formal Complaints**

If you wish to make a formal complaint or if you are not satisfied with the response you have gained from the researchers in the first instance then please contact

The Research Governance and Integrity Manager, Research Office, Christie Building, University of Manchester, Oxford Road, Manchester, M13 9PL, by emailing: research.complaints@manchester.ac.uk or by telephoning 0161 275 2674.

What Do I Do Now?

If you have any queries about the study or if you are interested in taking part then please contact the researcher:

MANDY PIERLEJEWSKI
This Project Has Been Approved by the University of Manchester's Research Ethics Committee [ERM reference number]
Constructing alternative data doppelgangers: Rethinking the assessment of bilingual children in the early years

Consent Form

If you are happy to participate, please complete and sign the consent form below

<table>
<thead>
<tr>
<th>Activities</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>I confirm that I have read the attached information sheet (Version 2, Date 19/07/2018) for the above study and have had the opportunity to consider the information and ask questions and had these answered satisfactorily.</td>
<td></td>
</tr>
<tr>
<td>I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving a reason and without detriment to myself. I understand that it will not be possible to remove my data from the project once it has been anonymised and forms part of the data set.</td>
<td></td>
</tr>
<tr>
<td>I agree to take part on this basis</td>
<td></td>
</tr>
<tr>
<td>I agree to the interviews being audio recorded.</td>
<td></td>
</tr>
<tr>
<td>I agree that any data collected may be published in anonymous form in academic books, reports or journals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I agree that the researchers may retain my contact details in order to provide me with a summary of the findings for this study.</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>I understand that there may be instances where during the course of the interview, information is revealed which means that the researchers will be obliged to break confidentiality and this has been explained in more detail in the information sheet.</td>
</tr>
<tr>
<td></td>
<td>I agree to take part in this study</td>
</tr>
</tbody>
</table>

Data Protection

The personal information we collect and use to conduct this research will be processed in accordance with data protection law as explained in the Participant Information Sheet and the Privacy Notice for Research Participants.

________________________            ________________________  
Name of Participant            Signature            Date

________________________            ________________________  
Name of the person taking consent            Signature            Date
[Insert details of what will happen to the copies of consent form e.g. 1 copy for the participant, 1 copy for the research team (original), 1 copy for the medical notes]
Appendix H. Hungarian Participant Information Sheet and Consent form

Alternatív adatgyűjtők felállítása: A kétnyelvű gyermekek kiértékelésének átgondolása a korai években
Résztvevői adatlap (PIS)

Ezt a PIS-t a The University adatvédelmi nyilatkozatával összefüggésben kell olvasni


Ki fogja végezni a kutatást?
Mandy Pierlejewski
Manchesteri Oktatási Intézet
Manchesteri Egyetem
Ellen Wilkinson épület
Oxford Road
Manchester
M13 9PL

Mi a kutatás célja?
Egy kis csoporttal dolgozom a tanárokat, az oktatói asszisztenseket és a közösség tagjait, hogy új, hatékonyabb módszereket találják a fiatal
kétnyelvű gyermekek befogadására. Ennek részét képezi a kapcsolatok kiépítése a helyi közösségekkel, valamint a szülők és a családok bevonása gyermekeik értékelésébe. Reméljük, hogy kidolgozunk módszereket a gyermekek értékelésére az otthoni nyelvükön, valamint a fejlődő angol nyelvükön. Ebben a tanulmányban a kutató egy évig részmunkaidős önkéntes tanári asszisztensként dolgozik az iskolában. Néprajzi jellegű, ami azt jelenti, hogy a kutatót bevonják az iskola egész életébe, és tükrözik a fiatal kétnyelvű gyermekek tanítási tapasztalatait egy kutatási naplóban.

Miért választották?
Azért választották meg Önt vagy gyermekekét, mert részt vesz abban az osztályban, amelyben a kutatócsoport dolgozik. Lehet, hogy szülő, gyermekek, közösség tagja vagy az iskola alkalmazottja.

Mit kérek tőlem, ha részt veszek?
Különböző embereknek különféle szerepe lesz a kutatásban. Gyerekek, a közösség tagjai, az alkalmazottak és a szülők számára ez magában foglalja a szokásos szerepeinek az iskolában és otthon végzett elvégzését. Egyes tanárok és alkalmazottak esetében a kutatás interjú formájában is megtörténhet, amelyben kérdéseket tesz fel a projekttel és a gyerekekkel kapcsolatban. Egyes kétnyelvű alkalmazottak és a közösség tagjai számára az lehet a szerepe, hogy fordítsd és közvetítsd a közösségeket.

Mi történik a személyes adataimmal?
A kutatási projekt végrehajtásához a következő személyes információkat / adatokat kell összegyűjtenünk rólad:
• Saját vagy gyermeke neve
• Az Ön elérhetősége
• A kutatócsoport üléseinek hangfelvételei. Ezeket átírják és felhasználják adatokként ebben a tanulmányban. Átírás kor a nevek anonimizálódnak.
• Interjúk hangfelvételei. Ezeket átírják és felhasználják adatokként ebben a tanulmányban. Átíráskor a nevek anonimizálódnak.

• A gyermekek megfigyelései. Ezeket papíron rögzítik az iskolában, és beillesztik tanulási naplóikba. Ha idézek észrevételeket, anonimizálom azokat.

• Az iskolai élet megfigyelései. Ezeket az ipadra rögzítik, és titkosított tárolóhelyre továbbítják az egyetemen. Írásom során anonimizálok.

Csak a kutatócsoport és az iskola munkatársai férhetnek hozzá ehhez az információhoz. Csak a kutató fér hozzá a terepi jegyzetekhez.

Előfordulhatnak azonban olyan körülmények, amelyek nyilvánosságra hozatalhoz vezethetnek. Ezek:

• abban az esetben, ha aggályok merülnek fel a résztvevő vagy mások biztonsága miatt, fel kell venni a kapcsolatot a háziorvosukkal / gondozóikkal / családtagjaimmal

• ha szakmai kötelezettség van a kötelességszegés / rossz gyakorlat bejelentésére, akkor erről értesítenem kell a munkáltatójukat / szakmai testületüket

• jelenlegi / jövőbeli illegális tevékenységek bejelentése a hatóságoknak

Ezek a személyes információkat az Általános Adatvédelmi Rendelettel (GDPR) és az Adatvédelmi Törvényvel (2018) összhangban gyűjítjük és tároljuk. Az Ön személyes adatainak jogalapja „közérdekű feladat” és „kutatási célokra”, ha érzékeny információkat gyűjtünk. Az Ön személyes adatainak feldolgozásával és az adatvédelmi törvények betartásával kapcsolatos további információkért olvassa el a kutatási résztvevők adatvédelmi közleményét.

A Manchesteri Egyetem, mint a projekt adatkezelője, felelősséget vállal a személyes adatok védelméért, amelyeket ez a tanulmány gyűjt Önről. A személyes adatainak védelmére vonatkozó jogi kötelezettségek teljesítése érdekében az Egyetem olyan biztosítékokat vezet be, mint például az irányelvek és az eljárások. Minden kutató megfelelő képzettséggel rendelkezik, és adatait a következő módon fogják gondozni:

A Manchesteri Egyetemen dolgozó kutatócsoport hozzáféréssel fog állni az Ön személyes azonosításához szükséges adatokhoz, azaz olyan
adatokhoz, amelyek azonosíthatják Önt, de anonimizálják azokat akár az írás közben, akár az átírás után. Az Ön hozzájárulási űrlapját és elérhetőségét azonban őt évig megőrizes. A nyomtatott példányokat az irodámban lezárt írattartóban tárolják, amíg be nem skennelik. Ezután őrzi a Manchester University Egyetemi Kutatási Adatkezelő Rendszerén.

Az adatait a rögzítéstől számított 2 héten belül továbbítják a rögzítő eszközeire, és azokat a kutatási adatkezelő rendszerben (RDMS) tárolom. Ezután törlődik az eszközeire. Átírom az adatokat. A terepi jegyzeteimet a jelszóval védett ipad segítségével, az Onenote használatával rögzítjük, és a jelszóval védett én Manchester University Onedrive-ben tárolom.

Az adatvédelmi törvény alapján számos joga van a személyes adataival kapcsolatban. Például kérhet másolatot az akár az adatokról, amelyeket mi magunkról tartunk, ideértve a hangfelvételeket vagy fényképeket. Ezt nevezik Tárgy hozzáférési kérelemnek. Ha többet szeretne tudni az Ön különböző jogairól, kérjük, olvassa el adatvédelmi nyilatkozatunkat kutatás céljából, és ha kapcsolatba szeretne lépni velünk adatvédelmi jogairval kapcsolatban, kérjük, írjon e-mailt a dataprotection@manchester.ac.uk e-mailben, vagy írjon az információs kormányzati irodához, Christie Épület, a Manchester University, Oxford Road, M13 9PL az egyetemen, és végigvezeti Önt jogainak gyakorlása során.

Önnek jogában áll panaszt tenni az információs biztos irodájának, Tel 0303 123 1113

A tanulmányban való részvétel bizalmas lesz?

A tanulmányban való részvételét bizalmasan kezelik a kutatócsoport és a fent felsorolt személyes adatokhoz hozzáféréssel rendelkezők számára.

Hangfelvételekhez és fényképekhez:

• A felvételeket átiratok készítésére használjuk, amelyeket átírom.
• A személyes adatokat eltávolíthatják a végleges átiratban
• Az audio felvételeket az RDMS-en 5 évig tárolják
• A kutatócsoport hozzáféréssel rendelkezik a felvételekhez

Mi történik, ha nem akarok részt venni, vagy meggondolom magam?

Ön dönti el, hogy részt vesz-e vagy sem. Ha úgy dönt, hogy részt vesz, akkor megkapja ezt az információs lapot, és felkérést kap arra, hogy írja alá az egyetértési űrlapot. Ha úgy dönt, hogy részt vesz, akkor bármikor
indoklás nélkül és önmaga hátránya nélkül bármikor kiléphet. Azonban nem lehet eltávolítani az Ön adatait a projektből, ha azt anonimizálják és az adatkészlet részét képezik, mivel nem tudjuk azonosítani az Ön konkrét adatait. Ez nem érinti az adatvédelmi jogait.

A hangfelvételhez nem kell hozzájárulást adnia. Ha beleegyezik abba, hogy újra felvételt készítsen, akkor mindig meg kell tudnia a felvételi folyamatot, és bármikor szabadon állíthatja meg a felvételt.

Az adataimat felhasználják a jövőbeli kutatásokra?
Az Ön adatait csak én magam használhatom fel későbbi kutatásokhoz.

Fizetni fogok a kutatásban való részvételért?
A kutatásért nem fizetnek

Mennyi a kutatás időtartama?
Egy évig önként vállalkozom az iskolában. Ezen idő alatt a folyamatban lévő adatokat gyűjtem a terepi jegyzeteim segítségével.

Hol fogják végezni a kutatást?
A kutatást a Bowling Park Iskolában fogják végezni.

A kutatás eredményeit közzéteszik?
A kutatás eredményeit tudományos publikációkban teszik közzé. Könyv formájában is kiadható.

Közzétételi és korlátozási szolgáltatás (DBS) ellenőrzése (ha van)
Van naprakész DBS tanúsítványom.

Ki vizsgálta felül a kutatási projektet?
A projektet a manchesteri egyetem SEED etikai bizottsága vizsgálta felül
Mi van, ha panaszt szeretnék tenni?
Kisebb panaszok
Ha van kisebb panasz, akkor vegye fel a kapcsolatot

BURMAN ERICA
ELLEN WILKINSON ÉPÜLET
A MANCHESTER EGYETEM
OXFORD ROAD
M139PL
01612753282
Appendix I. English Visual Consent Form for parents

Consent form – Thank you for agreeing to take part in this research project.

I understand that Mandy Pierlejewski will be researching in my child’s class.

I understand that Mandy is a researcher at the University of Manchester studying the assessment of New to English children.

I give my consent for my child to be involved with the research.

I understand that the researcher will make notes about her work with my child.

I understand that my role in this study is voluntary. I can refuse to answer any questions. I am free to stop participating in this study at any time.

Stefan

I understand that my child’s real name will not be used in any writing linked to this project.

I feel informed about the research and I have had the chance to ask questions. I understand that I may ask questions at any time.

I understand that my child will be observed taking part in activities at school.

I agree to my child’s words being quoted.

University of Manchester researcher: Mandy Pierlejewski

Name: ____________________________________ Signature ____________________

__________________
date: ________________
<table>
<thead>
<tr>
<th>Formulár súhlasu - ďakujem za súhlas s účasťou na tomto výskumnom projekte.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chápem, že Mandy Pierlejewski bude skúmať v triede môjho dieťaťa</strong></td>
</tr>
<tr>
<td>Chápem, že Mandy je výskumníkom na univerzite v Manchestri, kde študuje hodnotenie nových detí v angličtine</td>
</tr>
<tr>
<td>Súhlasím s tým, aby moje dieťa bolo zapojené do výskumu.</td>
</tr>
<tr>
<td><strong>Súhlasím s citovaním dieťaťa</strong></td>
</tr>
<tr>
<td><strong>Chápem, že moje dieťa bude sledované v škole</strong></td>
</tr>
<tr>
<td><strong>Chápem, že skutočné meno môjho dieťaťa nebudú použité v žiadnom použití s týmto projektom</strong></td>
</tr>
<tr>
<td><strong>Čítim sa vo výskume a mám príležitosť klášť otázky. Chápem, že môžem kedykoľvek klášť otázky.</strong></td>
</tr>
<tr>
<td><strong>Čítim sa vo výskume a mám príležitosť klášť otázky. Chápem, že môžem kedykoľvek klášť otázky.</strong></td>
</tr>
<tr>
<td><strong>Chápem, že moja úloha v tejto štúdii je dobrovoľná. Môžem odmietnuť odpovedať na akékoľvek otázky. Môžem sa kedykoľvek prestať zúčastňovať na tejto štúdii</strong></td>
</tr>
<tr>
<td><strong>Chápem, že moja úloha v tejto štúdii je dobrovoľná. Môžem odmietnuť odpovedať na akékoľvek otázky. Môžem sa kedykoľvek prestať zúčastňovať na tejto štúdii</strong></td>
</tr>
<tr>
<td><strong>Stefan</strong></td>
</tr>
<tr>
<td><strong>Yes</strong></td>
</tr>
<tr>
<td><strong>Stefan</strong></td>
</tr>
<tr>
<td><strong>Súhlasím s tým, aby moje dieťa bolo zapojené do výskumu.</strong></td>
</tr>
<tr>
<td><strong>Chápem, že moje dieťa bude sledované v škole</strong></td>
</tr>
<tr>
<td><strong>Súhlasím s citovaním dieťaťa</strong></td>
</tr>
</tbody>
</table>
Manažérka univerzity v Manchestri: Mandy Pierlejewski

Meno: ____________________________ Podpis ________________

dátum: ________________
Appendix K. Participant Information Script for parents

How can community collaboration improve the assessment of children who are new to English in early years?

Participant Information Script

You are being invited to take part in a research study as part of a student project, which will constitute part of my PhD Degree. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to listen to/read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for taking the time to read this.

Who will conduct the research?

Mandy Pierlejewski
Manchester Institute of Education
University of Manchester
Ellen Wilkinson Building
Oxford Road
Manchester
M13 9PL

What is the purpose of the research?

I am working with a small team of teachers, teaching assistants and community members to find new, more effective ways of assessing young bilingual children in reception. Part of this will involve building relationships with local communities and involving parents and families in the assessment of their children. We hope to develop ways of assessing children in their home languages as well as their developing English. This study involves the researcher spending a year working as a part time volunteer teaching assistant in the school. It is ethnographic, which means that the researcher will be involved in the whole life of the school and will reflect on the experience of teaching young bilingual children in a research diary.

Why have I been chosen?

You have been chosen because you are a part of the school community.

What would I be asked to do if I took part?

Different people will have different roles in the research. For children, community members, staff members and parents, this involves fulfilling your usual roles at school and at home. For some teachers and staff, the research may take the form of an
interview in which you will be asked questions about the project and the children. This may be recorded using a recording device. For some bilingual staff and community members, your role may be to translate and mediate between communities.

What will happen to my personal information?

In order to undertake the research project, we will need to collect the following personal information/data about you:

- Yours name
- Your contact details
- Audio recordings of research group meetings. These will be transcribed and used as data in this study. When transcribed, names will be anonymised.
- Audio recordings of interviews. These will be transcribed and used as data in this study. When transcribed, the names will be anonymised.

Only the research team and school staff will have access to this information. Only the researcher will have access to the field notes.

There may however, be circumstances which may lead to disclosure. These are:

- in the event that there are concerns about the participant’s safety or the safety of others I may need to contact their GP/care team/family member
- reporting of current/future illegal activities to the authorities

What happens to the data collected?

I will make notes on conversations we have had in a diary. This diary will be kept on my ipad in an encrypted form so that only I can see it. It will be backed up onto a safe place in the University system called the Manchester Research Data Management system.

How is confidentiality maintained?

I will maintain confidentiality by replacing all real names with made-up names of people and places in the transcripts and field notes. Nobody would be able to know who was part of the study. It is secret. I may quote what you have said in my work.

What happens if I do not want to take part or if I change my mind?

It is up to you to decide whether to take part. If you want to take part, tell the researcher. If at any time you don’t want to be involved any more you can withdraw from the study by telling me.

Will I be paid for participating in the research?

No, you will not be paid for participation in this research.

What is the duration of the research?

The research will begin in September 2018 and will continue for 1 year until the end of August 2019.

Where will the research be conducted?
Research will be conducted at the school.

**Will the outcomes of the research be published?**

The research outcomes will form part of my PhD, which will be published as a thesis. I may also write academic papers and books which publish the outcomes of this research.

**Disclosure and Barring Service (DBS) Check (if applicable)**

I have an up to date DBS check.

**Who has reviewed the research project?**

My project has been approved by the University of Manchester Research Ethics committee.

**What if something goes wrong?**

If you feel upset during an informal discussion, we will pause and review whether you want to continue. If you are very upset and don’t want to continue we will stop the interview or discussion. I will give you some time and will ensure that you are feeling well enough to travel home.

**What if I want to make a complaint?**

**Minor complaints**

If you have a minor complaint then you need to contact the researcher(s) in the first instance.

**ERICA BURMAN**  
ELLEN WILKINSON BUILDING  
UNIVERSITY OF MANCHESTER  
OXFORD ROAD  
M139PL  
01612753282

**Formal Complaints**

If you wish to make a formal complaint or if you are not satisfied with the response you have gained from the researchers in the first instance then please contact the Research Governance and Integrity Manager, Research Office, Christie Building, University of Manchester, Oxford Road, Manchester, M13 9PL, by emailing: research.complaints@manchester.ac.uk or by telephoning 0161 275 2674 or 275 2046.

**What Do I Do Now?**

If you have any queries about the study or if you are interested in taking part then please contact the researcher(s)

**MANDY PIERLEJEWSKI**  
ROOM C112  
CARNegie HALL  
LEEDS BECKETT UNIVERSITY  
HEADINGLEY CAMPUS  
CHURCHWOOD AVENUE
This Project Has Been Approved by the University of Manchester's Research Ethics Committee
Appendix L . Participant Information Script Children

Helping children learn English at school

Who we are

My name is Mrs Pierlejewski. I come from the University of Manchester and I am working with your teachers to learn about children who speak other languages at home.

Would you like to help me with my work about children who speak other languages at Home? You don’t have to if you don’t want to.

What do you have to do?

I would like you to help me by letting me work in your classroom and play with you. I will write in my iPad about the things we have been doing together.
If you don’t want me to work with you that’s OK. You can just tell me or one of your teachers.

When I write about you I will use a pretend name for you and you can choose this name if you would like to. I may want to write down things that you have said but I will use the pretend name instead of your real name.

**Who gets to know about what we did?**

A group of us at school will meet each week to talk about what we have been doing in the classroom.

I will keep your answers for 5 years and then I will destroy them.

If you want to know more, please ask your mum, dad or the person who looks after you as I have given them a lot of extra information about this.

**What Do you Do Now?**

If you have any questions please ask me, your mum, dad or the person that looks after you.

Let me know if you would like to take part.

**Thank you for reading this!**
Appendix M. Reviewers Comments Resisting Datafication through In The Moment Planning

Reviewer: 1

Comments to the Author

The paper provides some interesting insights into the experiences of teachers who have changed their pedagogy to what I interpret as a play-based and child-centred approach. I enjoyed reading about this journey.

Your title suggests that the aim is to show how this pedagogical approach offers a form of resistance to datafication. This is important work and the paper has the potential to offer strategies that could enhance practice and improve outcomes for children. To realise this potential, I suggest the following revisions:

<b>Analyse ITMP in the context of academic research</b>

A stronger focus on academic literature would enable you to situate ‘in the moment planning’ within the broader field of research regarding child-centred and play-based pedagogies, explain what is different about this approach, and justify the decision to adopt it.

<b>A more balanced analysis of ‘datafication’ is required</b>

Might there be some circumstances where accountability and the collection of assessment data are important? How and why might data become ‘more important than the child’? Can you support this view with research evidence? How do practitioners ‘measure the process of learning’ and how does this measurement resist datafication?


<b>Clarify the aim and make this the central narrative of the paper</b>

You say that this is the first paper to ‘evaluate’ ITMP. Is evaluation your aim or are you demonstrating a form of resistance to datafication? At the end of the literature review, you state a further aim as being to ‘improve children’s educational experience in reception’. It may be that you are trying to achieve too many things at once here.
Consider narrowing the focus to strengthen your argument. The conclusion could then be strengthened so that it clearly addresses this single aim.

<b>Consider some improvements the structure</b>

Consider ways in which the structure of the paper might support the reader’s understanding. Personally, I would separate the findings from the analysis and keep any information about what happened before the intervention in the context section. You could also consider moving the information about a ‘good level of development’ to a separate policy section in the literature review.

It would be helpful to use headings to separate the findings so that the fieldnotes from before and after the change to ITMF can be compared and contrasted.

Consider the usefulness of some of the background information under the heading ‘School Context’. If you feel that this information is important, you will need to support statements about the school’s progress with appropriate evidence. At the moment this section leads me to wonder how much progress could be attributed to the earlier, more formal approaches rather than ITMP.

Reviewer: 2

Comments to the Author

The manuscript presents as a strongly positioned perspective on the use of data in early childhood. The intent of the manuscript is to support resistance to datafication and demonstrate through an ethnographic action research process the value of a “data free” child-led pedagogy. The manuscript addresses important areas of ECE provision that should be of interest to a wide audience, including issues of quality assessment practices, data-use and data-informed decision making, and how these relate to quality practice and pedagogy. While there are several noteworthy points of consideration and argument within the manuscript, my overall appraisal of the manuscript was that the rhetoric used was polarizing in nature, there was lack of clarity and contradiction related to use of the term data, the description of the methodology and resulting themes were underdeveloped, and there is a potential misrepresentation of ITMP practice and the early years foundation stage. Related to these concerns, I have detailed my feedback to the authors in hopes they may be useful for continued work with this research.

Introduction:

- The term data is not described or defined, rather rhetorical phrasing throughout the manuscript is used to imply negative connotations when teachers are “measuring child learning” and using data in negative ways. Data is further associated with manipulation,
control, and behavior that disrespects and dismisses children. The implication is that data is bad.

• For the purposes of the manuscript, defining data would be a useful starting point. For example, the following definitions provide a different perspective on data. These definitions indicate data as information (from a neutral perspective) and that it is collected for use (with use having a neutral position):
  o Cambridge Dictionary - information, especially facts or numbers, collected to be examined and considered and used to help decision-making.
  o America Dictionary – information collected for use

• While the author initially present data as bad, contradictions on the authors positioning of data becomes clear when data are used in the conduct of the present research and reporting of findings and when information (data) that teachers use from their intuition results in positive learning. Somehow, “these data” are good and acceptable but “those data” are bad and lead to bad things.

• At times the author notes the contradiction (e.g., reference to measuring involvement, using outcomes data to report on the success of ITMP – “Using outcome data to justify an attempt to resist datafication however is deeply problematic. The measurement of outcomes was a statutory requirement and as such was very difficult to resist” p. 19, lines 26-32) but leaves the reader to accept this contradiction at face value – some data are inherently bad and unhelpful, and some data are inherently good and useful.

• My concern with this argument is that data are neither; data are pieces of information collected through a process which may or may not result in information that is credible, reliable, valid, and culturally appropriate for the intended purpose. A more balanced perspective would highlight the importance of knowing and understanding the limitations and strengths of the process in which information (data) are collected and then encouraging the use of that information to ensure appropriate use of data.

• In addition to the inherent value positioning of data, the author is also addressing issues of data use and its influence on pedagogy. Datafication as a term is defined and its definition is powerful and should be resisted. A situation in which, collecting and having data that shows some score based desirable outcome becomes more important than the child, their sense of well-being and the quality of their experience and engagement in learning, is certainly problematic and must be guarded against. However, its not the “data” that results in these situations, it is a lack of knowledge about high-quality pedagogy and how to use information from a range of data sources in appropriate ways. Training and support to have access to data and information from a range of sources and to use this information to guide effective and appropriate relational, play-based, and culturally- appropriate pedagogy is needed.

• The authors argument is polarising in that the set up implies that settings must choose between 1) using data and having bad practice or 2) resisting data and having good practice. Somewhat ironically, the study conducted is actually an example of a third option, 3) using data and having good practice, as the authors indicated the teachers statutory requirement to engage with EYFS assessment and data while being supported to use good practice. I strongly suggest the authors consider reframing the manuscript to highlight the ways in which “state” or standardised data systems do not have to result in
datafication if teachers are empowered and supported to use such data in ways aligned with effective and appropriate pedagogy.

Methods/Result details:

• Given the use of ethnographic action research, it would be helpful to understand the researcher's relationship with the team prior to the conduct of the study and who initiated the study.

• Given the study's main action became the implementation of ITMP it would be helpful to have a fuller description of this approach (in introduction, methods, and discussion). The approach is contrasted with highly structured teacher-led lessons in which the teacher might rigidly adhere to activities to achieve learning objectives regardless of child engagement or well-being. While descriptors such as child-led and play-based are used, actions associated with teachers seeking family input/aspirations or being cognisant of the EYFS goals as they interact with and respond to children in play are missing. These aspects seem to be a critical part of the approach and the use of the learning journey planning form. More detail about which aspects of the ITMP were used in the present study is needed to better understand the complexity of pedagogy and assessment practices teachers were using.

• No information is provided on the action research cycles or processes used, this information should be included in the methodology

• Data analysis refers to Foucauldian discourse analysis but there is no description of the processes the researcher used to conduct this analysis. This should be included.

• The authors indicate that results are presented as themes from the Foucauldian discourse analysis with a vignette presented for each theme. Yet, no “themes” per se are described rather a chronical of events associated with two topics, pedagogy and assessment, are provided with select examples drawn from field notes and quotes from teachers.

Discussion:

• Within the discussion there is one source of information that is privileged above all others, this is the role of teacher judgement and knowledge; however, where or how teachers might gain this deep understanding of the child is not clear. There is reference to the intuitive professional based on the value set of the practitioner, in which the practitioner determines what is significant and valued learning. While the role of professional judgement should be supported and respected, the discussion does not include any cautions or caveats to role of teacher judgement. For example, the importance of guarding against any teacher bias implicit or explicit, the importance of teacher judgement being informed from other sources such as community and family values/aspirations and evidence-based practices.

• One of the most interesting points in the manuscript, from the perspective of this reviewer, is the notion of feeling conflicted between data-led and child-led and notion of being two different teachers (page 19, lines 44-60). The comment from Tania on her different approaches to parents might be interesting to further explore – were the different approaches guided by family preferences/aspirations, could the feelings of
tension be resolved if teachers were better supported to see how the two can work together.

• Again, I strongly urge the authors to reconsider the framing of the manuscript such that datafication should be resisted but effective and appropriate use of a range of data sources, paired with effective and appropriate pedagogy (relational, play-based, and culturally appropriate) for young children is possible and should be encouraged and supported.

Thank you for the opportunity to review this manuscript; I hope the authors find the review and suggestions helpful in their continued work with this study.

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