THE SOCIAL ACCOMPLISHMENT OF
A YOUNG CHILD'S DIGITAL LITERACIES IN THE HOME

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CERTIFICATE OF AUTHORSHIP

I, Brooke Emma Scriven, hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Charles Sturt University or any other educational institution, except where due acknowledgment is made in the thesis. Any contribution made to the research by colleagues with whom I have worked at Charles Sturt University or elsewhere during my candidature is fully acknowledged.

I agree that this thesis be accessible for the purpose of study and research in accordance with the normal conditions established by the Executive Director, Library Services or nominee, for the care, loan and reproduction of theses.

Signature:

Date: 11 November 2015
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ABSTRACT

This research examines how a 3-year-old child accomplishes digital literacy practices in interaction with her family at home. Existing research has established that digital literacies are accomplished socially. However, few studies have examined children’s interactions with family members during their use of technologies to establish how digital literacies are socially produced. This research analyses a young child’s interactions during technology use at home to contribute understandings of how her digital literacies are accomplished socially.

The study employed ethnomethodology and conversation analysis to uncover the interactional resources by which the child produced digital literacies. Three sequences of naturally occurring interaction were selected from a corpus of video recordings of the child’s technology use. The sequences were transcribed using the conventions of the Jefferson notation system. Additional symbols were developed to represent embodied actions.

The sequences of interaction were analysed on a turn-by-turn basis to reveal the verbal and embodied resources employed by the young child with her mother, father, and younger brother. The first analytic chapter establishes how the child and her mother accomplished a web search to select a YouTube video. Their interaction indexed their familiarity with using technology to accomplish web searching, the process of selecting a video, and their knowledge about videos. Such familiarity enabled them to construct the video selection; produce it as a mundane, everyday activity; and re-engage and disengage from incipient interaction.

The second analytic chapter shows how the child made meaning of images and lyrics in a YouTube music video to accomplish a pretend
telephone call. The child’s simultaneous orientation to the computer and telephone technologies produced an interplay between them whereby the child’s telephone talk was touched off by the video. The child solicited her mother’s help to select the video, and then made meaning of the video in her telephone conversation. The child’s actions demonstrate how her interactional competency, and emerging understanding of the organisation of telephone calls, enabled her to produce digital literacies through her talk.

The third analytic chapter establishes how the child demonstrated alphabetic literacy knowledge. The child identifies a problem in her younger brother’s letter tracing as he uses an application (app) on an iPhone. She attempts different ways of showing him how to trace letters using the same app on an iPad. The child accounts for the appearance of her actions, and her brother and father’s responses to them, by designing her next actions to be accountable as ‘showing’.

Discussion considers key findings from the analytic chapters: first, the child’s meaning making of digital texts and each turn in interaction; second, that her interactional competency is integral to her digital literacy practices; and third, that her social world is accomplished through digital literacies related to other social actions specific to the home, and produced as “settinged” activities. The conclusion establishes that the child accomplished digital literacies with others, through ongoing practical reasoning of digital texts and interactions, to locally and situatedly produce meaning. These findings enhance understanding of young children’s interactional competencies and social production of digital literacies in the home, which can inform contemporary education policies and teaching.
CHAPTER 1

INTRODUCTION

1.1 Introduction

Chapter 1 situates the focus of this research within the arena of young children’s digital technology use at home. It introduces the research as an investigation of a young child’s social accomplishment of digital literacy practices in the home. First, a brief overview of young children’s use of technologies, and consequential production of digital literacies at home, highlights the necessity for further research examining their home-based digital literacies. Second, the aim and questions informing the research are outlined. Third, definitions of terms used throughout this thesis are explained. Finally, the content of each chapter is detailed in a description of the thesis structure.

1.2 Background Information and Statement of Research Problem

Young children have engaged with digital technologies in the home for some decades. Although the increased mobility of technologies has enabled their use in a myriad of settings, the home remains the primary setting in which children use digital technologies (S.-J. Lee & Chae, 2007; Wellington, 2001). In the home, young children are immersed in family activities whereby they observe and participate in everyday uses of technologies (Marsh, Hannon, Lewis, & Richie, 2015). Children learn particular ways of using digital technologies (Plowman, Stephen, & McPake, 2010a; Stephen, McPake, & Plowman, 2010; Stephen, Stevenson, & Adey, 2013) as family interactions “create patterned ways of thinking about and using the media” (Jordan, 2002, p. 231). Thus, young children’s
digital technology usage at home is mutually appropriated and socially constructed (Facer, Furlong, Furlong, & Sutherland, 2001; Furlong, 1995; Hutchby & Moran-Ellis, 2001).

In constructing particular ways of using technologies at home with their family, young children are socialised into digital literacy practices (Livingstone, 2003; Mills, 2011; Stephen et al., 2010). These practices may include ways of making meaning of written text, images, sounds, and animations in a range of technological activities, such as playing with electronic toys and digital games, taking photos or videos with mobile devices, and communicating using phone technologies (Marsh et al., 2015). In this way, young children produce digital literacies with others in everyday activities with technologies.

Although young children employ digital literacy practices in interaction with family members at home, there is little research that details how it is accomplished. A limited number of studies examine how young children’s interactions socially produce digital literacies at home (Aarsand & Aronsson, 2009a; Davidson, 2009b, 2011; Lankshear & Knobel, 2003b; Marsh, 2010, 2013a; Roberts, Djonov, & Torr, 2008). There is considerable paucity of knowledge of the interactional ways through which children and their family produce digital literacies. The dearth of empirical studies points to the pressing need for research examining how young children socially accomplish digital literacies in the home.

This research examines how a young child accomplishes digital literacies through her talk and interaction with her family at home. It employs ethnomethodology and conversation analysis to show in minute detail how the child and her family produce digital literacy practices in their
turn-by-turn interaction during different occasions of technology use. This thesis establishes understandings of the child’s orientation to meaning making, her interactional competency, and the construction of her social world in settinged activities. It concludes that the child socially accomplished digital literacies through the local and situated organisation of meaning making in sequential interaction with family members.

1.3 Research Aim and Questions

This research project aims to enhance knowledge of how young children accomplish digital literacies in and through their social interactions in the home. The aim will be achieved by addressing the following research question and sub-questions:

How does a young child socially accomplish digital literacies in the home?

- How does the young child orient to digital literacies in the home?
- How are talk and interaction consequential for producing digital literacies?
- How do digital literacies contribute to the construction of the child’s social world?

1.4 Significance of the Research

The focus of this study on a young child’s accomplishment of digital literacies in interaction with her family at home contributes understandings of children’s competencies at a young age. Since the 1970s a field of research known as the sociology of childhood has introduced understandings of young children’s competency in managing their social world (Cicourel, 1970; Mackay, 1974). This study uncovers the oft-taken-for-granted details of children’s everyday interactional accomplishment of digital literacy practices using technologies at home. Emphasis on the
practical methods through which the child organises interactions and produces digital literacies in activity with others will offer further insight into children’s competencies as members of society.

This thesis employs ethnomethodology and conversation analysis to examine a young child’s family interactions at a fine-grained level. The micro-analysis of talk and interaction uncovers the artful vocal and embodied actions by which the child mutually produces digital literacies at home. Detailed analyses of children’s interactions can highlight their capability to manage daily activities and maintain the order of everyday life. This study presents rich descriptions of the child’s interactions during technology use to reveal how digital literacy practices are socially accomplished.

Uncovering how a young child socially accomplishes digital literacies at home can inform policies, curriculum, and practices of technology use in preschools and schools. In recent decades, research has pushed for policy makers and teachers to become aware of young children’s digital literacy practices at home (Marsh, 2013a; Paratore, Melzi, & Krol-Sinclair, 2003). This research contributes rich insight into everyday instances of technology use at home in which talk and interaction between a child and her family produces digital literacies. Thus, this research offers deep understanding of a young child’s competency, her interactional ability to manage daily activities, and her accomplishment of digital literacies which may inform future policy and education practices.

1.5 Definitions of Terms in the Thesis

This section defines terms that are used frequently within this thesis. In particular, terms relating to schooling, which feature predominantly in
sections of the review of literature in Chapter 2, are outlined to avoid confusion caused by location-specific definitions within Australia and internationally.

1.5.1 Digital literacies.

This thesis refers to digital literacies as literacy practices employed using digital technologies. The term originates from a New Literacies Studies perspective. A prominent definition in this research area by Lankshear and Knobel (2011, p. 50) describes digital literacy practices as “socially recognised ways in which people generate, communicate and negotiate meanings, as members of Discourses, through the medium of encoded texts”. In this thesis the terms digital literacies and digital literacy practices are used interchangeably.

1.5.2 Digital technologies.

In this thesis the term digital technologies refers to digital or electronic devices and toy simulations of these devices. The thesis uses a broad definition of technologies to account for how children can treat toy simulations as technologies in their use of them. Inclusive definitions of technologies (for example, Plowman & Stephen, 2005, 2007) acknowledge the variety of devices and objects that children engage with in myriad ways.

1.5.3 Young children.

The term young children refers to children who are newborn to 8 years of age (Barratt-Pugh & Rohl, 2000; UNICEF, n.d.). Though it is acknowledged that children “occupy the status of ‘child’” (Hutchby & Moran-Ellis, 2001, p. 1) for different durations of time, this age-based definition is useful to distinguish the early years of childhood.
1.5.4 Preschool.

*Preschool* refers to the years of informal education for children aged 3 to 5 years prior to compulsory schooling (Fellowes & Oakley, 2010). In Australia this term is used in New South Wales, the Australian Capital Territory, and the Northern Territory. In Victoria, Queensland, South Australia, Western Australia, and Tasmania, the term *kindergarten* is used (Dowling & O’Malley, 2009). Though early years education differs in organisation and description internationally (Georgeson, Payler, & Campbell-Barr, 2013; Tobin, Hsueh, & Karasawa, 2014), it is equivalent to, for example, *nursery school* in the United Kingdom and United States (Georgeson et al., 2013) or *kindergarten* in China and Japan (Tobin et al., 2014). This thesis uses language specific to New South Wales, Australia.

1.5.5 Early primary schooling.

The first three years of primary school are recognised as the “early primary” or “infants” years of school. In Australia, the initial year of primary schooling is labelled *kindergarten* in New South Wales and the Australian Capital Territory; *preparatory* in Victoria, Tasmania, and Queensland; *reception* in South Australia; *pre-primary* in Western Australia; and *transition* in the Northern Territory (Dowling & O’Malley, 2009). Internationally, it is termed *reception* in the United Kingdom, or *first grade* in the United States. This thesis uses the schooling terminology of New South Wales, Australia.

1.6 Structure of the Thesis

This thesis consists of eight chapters. This first chapter has identified the research problem that little empirical research examines how young children socially accomplish digital literacies in the home. The chapter has
Chapter 1: Introduction

presented the research aim, questions, and objectives directing this investigation into how a young child socially produces digital literacies with her family at home.

Chapter 2 reviews literature pertaining to young children’s digital literacies in institutional and home contexts. The chapter begins by briefly reviewing theoretical perspectives on digital literacies applied in the literature. Next, it introduces research conducted in preschool and primary school classrooms that examine young children’s digital literacies. The relationship between young children’s digital literacies in home and school settings is discussed. The review then appraises studies that have examined the production of digital literacies in young children’s homes. The chapter concludes with an overview of studies that examine young children’s accomplishment of digital literacy practices through social interaction. It identifies the need for research to examine young children’s interactions to determine how they socially accomplish digital literacies at home.

Chapter 3 introduces the perspective of ethnomethodology and the analytic approach of conversation analysis. The theoretical position of ethnomethodology as an alternate sociology (Garfinkel, 2007) is discussed. Ethnomethodological approaches of analysis are introduced; specifically, the approach of conversation analysis as the study of talk-in-interaction (Sacks, 1995) is described. Finally, ethnomethodological and conversation analytic research addressing young children’s interactions in the home are reviewed.

Building on the preliminary overview of ethnomethodology and conversation analysis, Chapter 4 describes how these approaches are applied in the design of this study. The chapter begins with an ethnomethodological
respecification of a sociocultural perspective and prominent definition of literacies. It then considers understandings about video recording and transcribing data in qualitative and conversation analytic literature. Next, the chapter provides a detailed account of the process undertaken in selecting, viewing, transcribing, and analysing extracts of data that appear in the analytic chapters. The chapter also introduces the young child and her family as the research participants. Ethical considerations and the dependability and credibility of procedures in the collection, management, and analysis of data are discussed.

The next three chapters, Chapters 5 to 7, present the analysis of extended sequences of a young child’s interactions during her use of digital technologies. Chapter 5, the first analytic chapter, considers how the child and her mother draw upon familiarity in their interaction to produce a web search, co-produce a YouTube video selection, and engage with and view the video. The familiarity of the child and her mother with making YouTube video selections is made interactionally relevant in, for example, the mother’s actions producing a Google search and the child’s talk about a YouTube video. Their familiarity with their activity was a resource for enabling the video selection; producing it as a mundane, everyday activity; and for re-engaging and disengaging from interaction.

The second analytic chapter, Chapter 6, considers the interplay between technological devices achieved through the child’s concurrent orientation to them. The child solicits her mother’s help to co-select an appropriate YouTube video. As the child views the music video, she calls Barbie on a toy mobile phone and produces a pretend telephone conversation. Her telephone talk is touched off by objects in the video
onscreen and named in the song lyrics. Her orientation to the technologies and her meaning making of the video in her telephone call accomplishes the interplay between the technologies.

The final analytic chapter, Chapter 7, examines how the child demonstrates her knowledge of alphabetic literacy practices to help her younger brother trace letters in an iPhone application (app). The child accounts for the appearance of her actions in demonstrating her knowledge so that they are witnessable as showing. Following her showing of her knowledge, the child employs interactional methods to establish joint attention toward her next activity playing a Barbie app.

Chapter 8 presents a discussion of findings that emerged from the analytic chapters and establishes the conclusion of the research. It considers key findings of the research: the child’s orientation to meaning making, and the local production of meaning in family interactions; the importance of the child’s interactional competence in socially accomplishing digital literacies; and finally, the construction of the child’s social world through the relationship between digital literacies and other social actions specific to the home, and in activities that are “settinged” in the home. The chapter establishes that the child socially accomplished digital literacies with her family through the local and situated organisation of meaning in interaction. The chapter closes by acknowledging the limitations of the study, identifying the contributions and implications of the findings, and outlining directions for further research.

1.7 Summary

This chapter has introduced the focus of this research as examining how a young child socially accomplishes digital literacies at home. It
presented the research problem that little is known about how young children accomplish digital literacy practices through interactions at home. This study contributes findings of how a young child produces digital literacies in her interactions at home with her mother, father, and younger brother. The next chapter reviews literature documenting young children’s digital literacies in education and home settings.
CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This literature review examines existing research documenting young children’s digital literacy practices. It provides a synthesis of the literature within the field of digital literacy, focusing on the digital experiences of young children. The review is organised into four sections: first, theoretical perspectives that inform studies of digital literacies are explored. Second, research on young children’s digital literacies in preschool and the early years of primary school are examined. The relationship between young children’s digital literacies across education and home settings is discussed. Third, studies examining young children’s digital literacies at home are appraised. Finally, research showing how young children produce digital literacies through social interactions are reviewed. This survey of literature establishes the need for research investigating how young children’s digital literacies are accomplished through interactions with others at home.

2.2 Theoretical Perspectives on Digital Literacies

The term digital literacies has been used within research related to young children to refer to their literacy practices with digital technologies. It has been applied particularly in studies that draw on the theoretical perspectives of new literacies (Lankshear & Knobel, 2011), multimodality (Kress & van Leeuwen, 2006), and multiliteracies (New London Group, 2000). Because of their influence in the field, the theoretical perspectives of
new literacies, multimodality, and multiliteracies are considered here. Researchers’ varying use of the term digital literacies is also considered.

### 2.2.1 New Literacies and New Literacy Studies.

Research that examines how literacies are employed using digital technologies has been recognised as the New Literacies (Lankshear & Knobel, 2006, 2011, 2013) or New Literacies Studies (Gee, 2010, 2015). Prominent literacy researchers Colin Lankshear and Michele Knobel (2011, p. 50) define new literacies as “socially recognised ways in which people generate, communicate and negotiate meanings, as members of Discourses, through the medium of encoded texts”. This definition refers to Gee’s (1989, 1990, 1999a) term Discourse (distinguished with a capital “D”), which is “a socially accepted association among ways of using language, of thinking, feeling, believing, valuing, and of acting that can be used to identify oneself as a member of a socially meaningful group or ‘social network’” (Gee, 1990, p. 143). Within Discourses members carry out particular “ways of being in the world” (Gee, 1989, p. 484). Lankshear and Knobel’s (2011) application of the term Discourse emphasises the situated context in which members meaningfully engage in literacy practices.

Lankshear and Knobel (2003a) understand new literacies as encompassing two categories. First, “post-typographic new literacies” (Lankshear & Knobel, 2003a, p. 24) are existing literacy practices employed to use new forms of digital technologies. For example, use of the Internet incorporates knowledge and consideration of the multifaceted multimodal representation of information (Burnett, 2010; Snyder, Angus, & Sutherland-Smith, 2004). The second category conceptualises new literacies as those that are recent in chronological terms or newly recognised as being
Chapter 2: Literature Review


The New Literacies stems from a multi-disciplinary collection of research known as the New Literacy Studies which advance a perspective on literacies as socially situated and diverse practices (for example, Gee, 1990, 2010, 2011; Street, 1993a, 1993b, 1995). The research represents a paradigm shift (Lankshear & Knobel, 2006) from an historically overwhelming emphasis on literacy as a set of universal cognitive skills and psychological processes (Bloome & Green, 2015; Gee, 2010, 2011). Much research in the twentieth century examined the technical and cognitive components of literacy separate to their context. Street (1984, 1995) labelled this notion of a single, transferrable literacy the autonomous model. In contrast to the autonomous model, Street (1984, 1995) proposed the ideological model. This model represents the “social turn” whereby literacy is conceptualised as practices (Baynham & Prinsloo, 2001; Bloome & Green, 2015; Gee, 1999b; Lankshear & Knobel, 2006; Mills, 2010a).

Considering literacies as practices,

takes into account knowing and doing, and calls into play the notion of literacies as a way of describing how people negotiate and construct patterned and socially recognisable ways of knowing, doing and using languages to achieve different social and cultural contexts. (Knobel & Lankshear, 2003, p. 55)

Thus, the ideological model endorses a sociocultural perspective of literacies whereby practices are meaningful to their social, cultural, political,
economic, and historical context (Lankshear & Knobel, 2007). This is central to the perspective of the New Literacy Studies.

New Literacy Studies research investigates localised literacy practices of social and cultural Discourses (Gee, 1990) or cultures (Street, 1995) to determine specific ways of reading, writing, and doing things with texts (Gee, 2015; for example, S. Heath, 1983; Scollon & Scollon, 1981; Scribner & Cole, 1981; Street, 1984). Founding ethnographic case studies, namely S. Heath’s (1983) *Ways with Words*, Scollon and Scollon’s (1981) *Narrative, Literacy and Face in Interethnic Communication*, and Street’s (1984) *Literacy in Theory and Practice*, compared reading and writing practices between communities. For example, S. Heath’s (1983) ethnographic study *Ways with Words* described what literacies counted and how they were taken up in family activities across three communities. Similarly, Scollon and Scollon (1981) observed how discourse patterns between an Athabaskan community and European-based education in Anglo-American and Canadian society were tied to opposing cultural identities. These studies problematised the discrepancy between children’s home-based literacies and those endorsed in the school curriculum for children’s success in school.

Critiques of New Literacy Studies have led to recent conceptualisations of literacies as a hybrid of local and global practices. The New Literacy Studies has been criticised for focusing on the “local” at the detriment of canvassing the global context and concerns of literacies (Brandt & Clinton, 2002). Critics argue that literacy originates outside its local context and must be understood from a global as well as local context (Brandt & Clinton, 2002). This has led to observations that literacies are
produced in the relationship between the local and distal (global) contexts (Street, 2012). Consideration of literacies as globally contextualised and adapted to the local context (Street, 2012; see also Kulick & Stroud, 1993) illustrate continuing developments in the New Literacy Studies.

Most recently, researchers who draw on new literacies perspectives have pushed its boundaries to foreground the material and spatial locale of literacy practices (Mills & Comber, 2013). For example, Burnett, Merchant, Pahl, and Rowsell (2014) address “the significance of relationships between space, mediation, materiality and embodiment in literacy practices” (p. 90) to argue that literacy is situated in multiple ways. To illustrate, Burnett et al. (2014) draw on spatial theory (Leander & Sheehy, 2004) to argue for the significance of the relationship between the material and immaterial to meaning making. They argue that applying spatial theory to literacy practices emphasises “the role that literacy practices play in the production of space and also how they are in turn inflected by the kinds of social spaces available” (Burnett et al., 2014, p. 94). Space is constitutive of, and reflexively influenced by literacy in material social relations (Mills & Comber, 2013, 2015).

In addressing the “spatial” turn, Mills and Comber (2015) propose the value of revisiting influential literacies studies from a socio-spatial perspective. They argue that socio-spatial perspectives can inform sociocultural approaches to literacy, such as those found in the New Literacy Studies. Mills and Comber (2015) propose that more research is needed to examine “how literacy practices are transformed as they mitigate to different virtual spaces” (p. 100). As demonstrated by the “social”, “digital”, and “spatial” turns, the New Literacy Studies continues to develop
and expand as researchers take account of the complex ways in which literacy practices are produced.

2.2.2 Multimodality and multiliteracies.

Multimodality is a multi-disciplinary theoretical framing of meaning making across semiotic modes (Kress, 2010, 2011) and has been applied in literacy studies as a description of texts (Bazalgette & Buckingham, 2013). Kress and van Leeuwen (2006) redefined the traditional notion of grammar as one of visual design that could be analysed in the same way as language (Kress & van Leeuwen, 2006). According to their definitions, multimodal texts are constructed using “semiotic means of expression, such as colour, texture, three-dimensionality and movement” (van Leeuwen, 2006, p. 144). Reading multimodal texts involves registering the combination of modes (namely gesture, body posture, sound, music, written text, image, and animation) and the relationship between them to generate meaning (Cope & Kalantzis, 2004; Kress, 2010; Street, 2012). In this way, multimodality extends the New Literacy Studies’ focus on speech and representation in reading and writing practices to a rich array of modes.

Multimodal literacy studies predominantly draw on theoretical perspectives of systemic functional linguistics, founded by Michael A. K. Halliday (1973); and situated literacies, informed by the work of the New Literacy Studies (Anderson, 2013). Although each approach arises from influential understandings of literacies as socially situated meaning making of semiotic modes (New London Group, 1996), their methodological application differs (Anderson, 2013). Systemic functional linguistics approaches literacies through a study of texts to inform understandings of multimodality and teaching pedagogies. It treats the aspects of multimodal
texts, and the learning outcomes achieved through the production of texts, as
the focus of analysis (Anderson, 2013). On the other hand, studies of
situated literacies analyse the practices, actions, processes, and interactions
of producing and using texts. Collectively, these methods of analysis
represent two broad focuses of multimodal research: emphasis on
multimodal texts and learning outcomes; and children’s practices with
multimodal texts. Researchers stress that multimodal studies should
highlight children’s textual practices, as little research has documented how
children make meaning from multimodal digital media in their everyday
lives (Bazalgette & Buckingham, 2013).

The multimodal perspective of texts is drawn upon heavily in the
multiliteracies theoretical perspective (though not every multimodal study
makes use of multiliteracies). In the 1990s an international and multi-
disciplinary network of researchers known as the New London Group called
attention to changes in literacies produced in part by the social and cultural
practices of an increasingly technological society. Both James Gee and
Gunther Kress were members of this group. The group met to consider how
literacy education might acknowledge the changing nature of literacy in a
global and technological society (Cope & Kalantzis, 2000). From their
meeting the concept of multiliteracies was borne.

Multiliteracies proposes a shift in “literacy” as reflected by changes
in society and the ways people engage in literacy practices. Drawing on a
multimodal perspective, multiliteracies considers the construction and
communication of meaning through semiotic modes (Kalantzis, Cope, &
Cloonan, 2010). While the multimodal theoretical perspective traditionally
focused on print texts (Bazalgette & Buckingham, 2013), multiliteracies
recognises the growing use of multimodal digital media and the consequence that meaning making is increasingly multimodal. It relates this argument with the observation that modern realities are also increasingly locally diverse and globally connected (New London Group, 2000). From this position, multiliteracies argues that linguistic and cultural diversity, coupled with the changing nature of texts, has altered the nature of language and literacy learning. It highlights the necessity of “an open-ended and flexible functional grammar which assists language learners to describe language differences (cultural, subcultural, regional/national, technical, context-specific, and so on) and the multimodal channels of meaning now so important to communication” (New London Group, 2000, p. 6). In addressing how this grammar might be realised in the school classroom the New London Group (1996, 2000) constructed a multiliteracies pedagogy. Though not addressed here, the literacy pedagogy has gained traction as a way to account for cultural diversity and the variety of digital texts and technologies in the school curriculum (Cope & Kalantzis, 1997; New London Group, 2000).

2.2.3 Young children and digital literacies.

Some understandings of digital literacies draw on new literacies, multimodality, or multiliteracies theoretical perspectives. However, the literature also shows uses of the term that are informed by other perspectives. Further, some studies focus on the development of print literacy employing terms such as “literacy” or “emergent literacy”.

A significant number of studies analysing children’s digital literacies draw on new literacies (for example, Davidson, 2009b; Edwards, 2013; Merchant, 2013; Wohlwend, 2009b). These studies consider the
sociocultural practices employed in creating and communicating meanings in and through socially accepted ways of encoding text (Lankshear & Knobel, 2011). To illustrate, Davidson (2009b) analysed interactions between two young children and their father to show how they generated shared meanings of lizards displayed in an onscreen image. Analysis showed how meaning making of encoded texts were produced in family members’ interaction. A new literacies perspective supported consideration of children’s “goal-directed, socially-situated, and ideologically layered” (Razfar & Gutiérrez, 2013, pp. 71-72) practices with texts.

In other studies, researchers acknowledge digital literacies but do not necessarily locate their work within new literacies, multimodality, or multiliteracies theoretical perspectives. For example, Plowman and Stephen (2003, p. 155) use the term digital literacies and define it as “the processes by which meanings are created and shared with and through ICT [information and communication technologies]”. At the same time, Plowman, Stephen, and colleagues draw on sociocultural theories of learning (Plowman, Stephen et al., 2010a; Plowman, Stephen, & McPake, 2010b; Stephen & Plowman, 2008). They apply Vygotsky’s (1978) principles of guided interaction and the zone of proximal development to show how children become competent using technologies. Their work particularly focuses on adults’ guided interactions in directing children’s learning, with less emphasis on children’s digital literacies. While these studies document important findings of children’s learning, they are not deeply grounded in theories of digital literacies.

Other research uses the term digital literacies loosely without drawing on new literacies, multimodality, or multiliteracies theoretical
perspectives. Instead, the term is applied in examination of children’s print-based literacy skills during technology use (studies will be addressed further in sections 2.3.1 and 2.4.1 of this chapter). Here technology use is for developing print literacy and alphabetic knowledge. Many studies draw on cognitive and psychological perspectives of literacy. For instance, Neumann and Neumann’s (2013) research on young children’s use of tablet technologies emphasises their development of skills over meaning making and practices. They employed the term emergent literacy and established that children’s alphabetic concepts, such as letters, words, and emergent writing, were improved through tablet technology use. Leading scholars (Burnett, 2010; Lankshear & Knobel, 2003b) have acknowledged the dominance of cognitive and psychological perspectives on young children’s digital literacy and critiqued them for showing a narrow approach to literacy as skills rather than practices.

This review draws largely on research that examines young children’s engagement with digital texts and digital practices, emphasising the richness of these practices and of young children’s meaning making. The term digital literacies is used frequently in relation to these. The review also includes studies that draw on autonomous models (Street, 1984, 1995) of digital literacy and literacy because of their prevalence in the field.

2.3 Young Children’s Digital Literacies in Preschool and Early Years of School

A predominant amount of research investigating young children’s digital literacies has examined their production in preschool and the early years of school. This research is significant in representing what is known about young children’s digital literacies, and is examined to inform
understandings of young children’s digital literacies. First, literature focusing on young children’s cognitive and psychological development of digital literacies are reviewed. Second, since a large body of work investigating children’s digital literacies centres on how they are produced in education settings, factors influencing the extent to which teachers integrate technologies into literacy lessons are considered. Third, children’s meaning making practices with digital texts in the classroom are discussed. Fourth, understandings of how children’s play with technologies enables them to acquire literacy practices are considered. Finally, the relationship between children’s digital literacies in education settings and the home is explored. This review establishes that studies examining children’s cognitive and psychological skills continue to dominate the field. It also acknowledges a small but emerging group of studies investigating children’s digital literacies from sociocultural, multimodal, and multiliteracies approaches.

2.3.1 Young children’s use of digital technologies for cognitive development in education settings.

Since its introduction in classrooms, digital technology has been used as a tool for learning (Floyd, Canter, Jeffs, & Judge, 2008). Some of the earliest studies (for example, R. Atkinson, 1968, 1974; R. Atkinson & Hansen, 1966) trialled computer-assisted instruction programs designed to provide reading instruction to lessen teacher involvement in the classroom (R. Atkinson, 1974). However, these experimental studies found that computer instruction could not replace face-to-face teaching, but could complement it with basic skills-based exercises (R. Atkinson, 1974). The studies proposed the place of technology to reinforce teacher instruction.
With the expansion of microcomputers and instructional programs in classrooms in the late 1980s (L. Goodwin, Goodwin, & Garel, 1986), experimental studies identified program features which improved 3- to 7-year-old children’s cognitive engagement. Such studies gauged that certain kinds of software were effective in improving children’s word recognition and keyboarding skills. Software included the programming tool Logo (Clements, 1991; Clements & Nastasi, 1988; Genishi, 1988, 1989; Genishi & Strand, 1990; Papert, 1987); word processing (Block, Simpson, & Reid, 1987; Cochran-Smith, 1991); and alphabet programs (L. Goodwin, Goodwin, Nansel, & Helm, 1986). Using control and experimental groups, studies determined that programs designed from cognitive development principles (Grover, 1986), or which provided feedback on responses (Spaai, Reitsma, & Ellermann, 1987), enhanced children’s test scores. These findings informed the subsequent development of computer-assisted programs to enhance children’s emergent literacy skills (Clay, 1993; Teale & Sulzby, 1986).

In the decades adjoining the turn of the millennium, classroom instruction programs targeting reading and writing skills greatly increased. Children used computer-assisted instruction and console games to develop vocabulary knowledge, letter and word recognition, phonetic cue reading, comprehension skills, spelling, and story writing (Boone, Higgins, Notari, & Stump, 1996; Brabham, Murray, & Bowden, 2006; Din & Calao, 2001; Karemaker, Pitchford, & O’Malley, 2008, 2010a, 2010b; Montali & Lewandowski, 1996; Moxley, Warash, Coffman, Brinton, & Concannon, 1997; Segers & Verhoeven, 2002, 2004; van Daal & Reitsma, 2000). The software programs used by children employed a diverse range of multimedia
features and semiotic modes. However, multimodality was not a focus for much of this research which maintained an emphasis on print literacy skills.

During this time, the use of “talking” CD-ROM books grew in use. These electronic texts incorporated multimedia and interactive features (V. Cohen & Cowen, 2011) and an embedded audio recording of print text (Holum & Gahala, 2001). Building on previous research considering computer-mediated digitised speech (for example, Reinking, 1988; Reinking & Rickman, 1990; Reinking & Schneider, 1985), experimental studies revealed positive effects on children’s phonological awareness and decoding, word recognition, spelling development, and comprehension (Chera & Wood, 2003; Lewandowski, Begeny, & Rogers, 2006; McKenna, 1998; Olson & Wise, 1992; Olson, Wise, Ring, & Johnson, 1997; van Daal & Reitsma, 1990; van Daal, Reitsma, & van der Leig, 1994; Wise & Olson, 1992, 1994a, 1994b, 1995; Wise, Ring, & Olson, 1999). Despite this, there are concerns that children may rely on talking books to read written text for them, rather than practising decoding skills (Lefever-Davis & Pearman, 2005). Results suggest that children should use talking books in combination with print-based books.

With the recent increase of mobile (portable) technologies, electronic books (e-books) have grown in use. E-books incorporate a range of textual features, including sounds, animation, and images to support children’s cognitive engagement and reading development. Though some studies acknowledge the multimodal features of e-books, they continue to emphasise children’s print-based skills by which they “encode and decode alphabetic print” (Lankshear & Knobel, 2003b, p. 73). Findings of these studies concur that electronic books support early primary school children’s
literacy skills, including their vocabulary, story comprehension, word reading, and phonological awareness (Korat, 2010; Segers & Verhoeven, 2004; Shamir & Shlafer, 2011). Additionally, personalised electronic books (created for a particular person) positively affect preschool children’s literacy development with regard to their display of positive engagement and acquisition of words (Kucirkova, Messer, & Sheehy, 2014; Kucirkova, Messer, & Whitelock, 2013; Sheehy, 2002). Following a meta-analysis of studies examining children’s literacy development from the use of electronic and print-based books, Takacs, Swart, and Bus (2015) concluded that electronic books were more beneficial for children than independent encounters with print books.

Experimental studies have shown that young children’s collaborative use of computer-mediated software and electronic books with teachers and peers provides the same, if not greater gains in their literacy skill development. Through teacher-mediated reading using technologies, children develop word reading and concepts about print (Segal-Drori, Korat, Shamir, & Klein, 2010), phonological awareness, and emergent word writing (Korat, Shamir, & Arbib, 2011). Human-mediation can also adjust to children’s cognitive and emotional needs during reading (Korat et al., 2011), thus reinforcing the earlier observation by R. Atkinson (1974) that teacher instruction cannot be replaced by computer instruction. In addition, primary school children’s performance in reading and completing drill exercises on talking books improves in same gender pairings (Underwood, McCaffrey, & Underwood, 1990). This finding shows how cognitive processing is developed in a social context (Brown, 1990). Collectively, these studies endorse a socio-cognitive perspective of literacy acquisition in
which adult support or peer collaboration is emphasised as being important for young children’s cognitive development (Korat et al., 2011).

This review confirms previous assertions (Burnett, 2009) that studies investigating children’s cognitive development of print-based literacy skills primarily employ experimental or quantitative testing. The majority of studies investigated children’s reading skills acquired using technologies, instruction programs, and electronic books. This shows an emphasis in the literature on children’s emergent reading skills, and a much lesser focus on emergent writing skills. Of these studies in this review, a large number considered literacy skill acquisition of primary school children, with little consideration of preschool children (Floyd et al., 2008). Interestingly, some studies have also acknowledged the importance of teacher and peer interaction during reading. This highlights areas of further research.

2.3.2 Teachers’ use of digital technologies in literacy lessons in the classroom.

In a review of literacy research more than a decade ago, prominent researchers Lankshear and Knobel (2003) reported a proliferation of studies conducted from cognitive and psychological perspectives which examined children’s literacy skills. They established there to be an absence of studies that viewed literacies as practices. Years later, Burnett’s (2010) review of the field indicated the continued dominance of cognitive and psychological literacy research. While literacy studies from a skills-based approach continue to dominate the field, this review of literature establishes that there are strong indications of an emerging body of research informed by sociocultural, multimodal, and multiliteracies perspectives. From these perspectives the term “literacies” is understood as numerous practices rather
than a set of predetermined skills. A significant proportion of these studies examine young children’s digital literacies in preschool and school settings. Hence, sections 2.3.2 to 2.3.5 review children’s digital literacies in education settings to consider developments within the field of literacy research.

A considerable number of studies have investigated teachers’ practices of integrating technologies into literacy learning. They collectively show that children’s digital literacy practices in education settings is related to teachers’ pedagogical practices with technologies. However, as will be shown, teachers’ pedagogical interactions with children in supporting their digital literacies remains under-researched.

Providing opportunities for young children to produce digital literacies remains a challenge for teachers who feel time-poor or consider themselves underqualified to integrate technologies into lessons (Edwards-Groves, 2011; Kervin, Verenikina, Jones, & Beath, 2013; Snyder et al., 2004; Turbill, 2001). In response to concerns about teachers’ use of technologies in early primary classrooms, Turbill (2001) conducted an ethnographic study of factors influencing teachers’ integration of technologies during literacy instruction. Teachers’ implementation was hampered by a lack of time to further their digital literacy practices and assess the value of software programs for children’s literacies. However, it was also suggested that teachers’ perceptions of the value of digital technologies for children’s literacy practices influenced their integration of technologies in literacy lessons.

The advancement of digital technologies and their application in preschool and school classrooms in the last decade has become problematic
for teachers who are uncomfortable using technologies (Sugar, Crawley, & Fine, 2004). Survey research of 133 preschool teachers, in locations of varied socio-economic status, assessed their comfort levels and attitudes to using technologies in the classroom (Thorpe et al., 2015). Results revealed that although preschool teachers reported high comfort levels using digital technologies in their everyday lives, they were less comfortable using technologies in classrooms (Thorpe et al., 2015). Research has reported that when teachers are uncomfortable using technologies to support children’s literacies, they often integrate them into literacy lessons as “tools” and limit digital literacies to technical or operational features of technologies (Lankshear & Knobel, 2003b). Teachers’ low comfort levels pose concerns for the degree to which their inclusion of technologies will support children’s literacy practices.

Research recommends teachers transform pedagogical practices to effectively utilise technologies in literacy lessons. A case in point is primary teachers’ use of interactive whiteboards (P. Jones, Kervin, & McIntosh, 2011; P. Kent & Holdway, 2009; Lòpez, 2010; Maher, 2011, 2012; Martin, 2007; A. Morgan, 2010; Twiner, Coffin, Littleton, & Whitelock, 2010; R. Wood & Ashfield, 2008). A. Morgan’s (2010, p. 102) case study of primary school teachers’ use of interactive whiteboards found that they accommodated whiteboards into existing pedagogies rather than initiating new pedagogical practices. Consequently, children’s “interactive” learning experiences were limited and provided few opportunities to engage in digital literacy practices (A. Morgan, 2010). It was advised that teachers be provided with time and training to further their own digital literacies to inform their pedagogy (A. Morgan, 2010). This reiterates
previous observations of the importance of teachers’ professional development, technical support, and adequate planning for classroom technology use (Hutinger, Bell, Daytner, & Johanson, 2006; Wepner & Tao, 2002). These studies identify teachers’ pedagogical practices with technologies to be an ongoing challenge.

Socioculturally informed studies of literacy in the early years are dominated by intervention studies. In such studies researchers have modelled effective pedagogical practice using technologies to enhance children’s digital literacies (for example, Labbo & Reinking, 1999; Reinking, Labbo, & McKenna, 2000). Initially, intervention studies demonstrated practices of meaningfully integrating technologies in lesson planning and delivery to diversify teachers’ and preservice teachers’ technology use and provide opportunities for children to employ digital literacies (for example, D. Dwyer, Ringstaff, & Sandholtz, 1991; Edwards-Groves, 2011; Sandholtz, Ringstaff, & Dwyer, 1997; Stager, 1995). However, these studies largely emphasise teachers’ technology use rather than children’s digital literacies.

More recently, studies have investigated how teachers employ newly available technologies and determine their benefits for classroom use. Yelland and Gilbert’s (2013) intervention study examined how preschool teachers used iPads to facilitate young children’s exploration and learning. Influenced by the perspective of multimodality (Kress, 1997, 2000), Yelland and Gilbert (2013) observed how iPads provided opportunities for multimodal learning (through vocal, visual, spatial, and aural modes). In interviews teachers reported the iPads were a “stimulus for conversations, a source of collaborations and a location for social encounters” (Yelland &
Gilbert, 2013, p. 5). Drawing on types of learning outlined by M. Cohen, Hadley, and Frank (2011), the iPads facilitated tacit learning (of how to use the technology and apps); mastery of content (such as alphabetic literacy and mathematical knowledge); and generalisation of skills (general skills transferable between apps). These learning opportunities coincide with other studies reporting children’s learning with technologies as operational and knowledge-based (Stephen et al., 2010). Yelland and Gilbert’s (2013) study illustrates that research which considers the learning opportunities presented by technologies, and observes children’s engagement with them, can inform teachers’ pedagogical practices and lesson planning to explicitly support children’s digital literacies.

Notable researchers Plowman, Stephen, and McPake also observed children and teachers using technology in preschools. They used a sociocultural perspective on learning to observe occasions when children received teacher guidance to use computer technology, such as in reading or responding to onscreen instructions (Plowman, Stephen et al., 2010a; Plowman, Stephen et al., 2010b; Stephen & Plowman, 2008). Teachers’ distal (indirect) guided interactions occurred at a distance, such as planning for group or individual activities; and their proximal (direct) guided interactions occurred during collaborative engagement with children using technologies (Plowman & Stephen, 2013). This suggests that types of scaffolding may be encompassed within teachers’ indirect and direct guided interactions.

Though Plowman, Stephen, and McPake indicate teachers’ interactions with children are important for their technology use, relatively absent from the discussion of teachers’ pedagogical practices using
technologies is a specific focus on their interactions with children. Closer examination of teachers’ actual classroom interactions could indicate specific ways by which they support children’s digital literacies.

2.3.3 Young children’s meaning making of texts using digital technologies in the classroom.

In recent decades, research which views digital literacies as social practices has increasingly examined how children make meaning from texts using digital technologies in the classroom. In particular, studies show that children utilise a variety of modes to make meaning from multimodal texts, that they transfer meaning across modes in their text production, and that they draw on digital media and popular culture in their creation of texts. This review also shows how research considers the relationship between children’s meaning making in onscreen and offscreen worlds.

A small but growing body of studies examine young children’s use of digital technologies to create multimodal texts in the classroom, such as emails (Bearne, 2009; Britsch, 2005; Burnett, Dickinson, Myers, & Merchant, 2006; Edwards-Groves, 2011; Merchant, 2003, 2005; Tao & Boulware, 2002) and multimedia CD-ROMs (Damico & Riddle, 2006). These studies employ multimodal perspectives to account for children’s diverse practices in their construction and use of digital texts.

Intervention studies (Burn & Parker, 2003; Marsh, 2006; Mills, 2011) in primary school classrooms have provided opportunities for children to employ digital literacies by creating short films. These studies collectively show that children transfer semiotic content across print and digital modes (e.g., from storyboard to digital film; Mills, 2011); employ different modes of making meaning, such as animation and sound (Burn &
Parker, 2003); and gain understanding of how multimodal texts are comprised (Marsh, 2006) as part of the multimodal writing process (Edwards-Groves, 2011). According to a social semiotic perspective, children engaged in the process of transduction (Kress, 2003), whereby they reshaped meaning according to the affordances of different modes, and produced digital literacies to sequence film scenes, produce voice-overs, and incorporate sound effects.

Research has considered how young children socially construct and engage in popular culture in preschool and the early years of school through play and writing activities (Buckingham, Grahame, & Sefton-Green, 1995; Dyson, 1993, 1999, 2003a, 2003b, 2010; Marsh, 1999; Marsh & Millard, 2000; Rowsell & Harwood, 2015; Willett, 2005; Wohlwend, 2009a). Notable work in this research is Dyson’s (1993, 1999, 2003a, 2003b, 2010) ethnographic study which illustrated the relevance of kindergarten children’s cultural engagement in digital media when learning to write in a multi-ethnic classroom. In the “unofficial” school world (Dyson, 1999, p. 370) children appropriated symbolic resources into their storytelling, dramatic play, and singing (Dyson, 2003b). By showing that children’s cultural interactions were a valuable part of their writing, the study opposed developmental and decontextualised theories of writing (Dyson, 1989). Teachers made use of children’s engagement in digital media by embedding their cultural materials within literacy lessons to produce a “permeable curricula” (Dyson, 1993, p. 51). Thus, children’s use of symbolic resources were utilised in the “official” school world (Dyson, 1999, p. 373) to support their writing. Dyson’s description of the children’s process of constructing narratives drawn from characters in popular culture shows that children
manage literacy tools in their official school world and unofficial worlds (Wohlwend, 2009c). Other studies (for example, Willett, 2005) acknowledging these findings continue to show how children draw on their engagement with digital media to fulfil the stipulations of the school world.

Children’s appropriation of symbolic resources has been studied in recent research as the complex and multi-layered process of syncretisation by which an original text is adapted into new forms in new contexts (Marsh & Bishop, 2013). Though this process commonly occurs through children’s play and improvisation (Dixon & Weber, 2011; Plowman & McPake, 2013), research has begun to consider how digital media are recontextualised into new forms of digital text (Hestermann, 2011; Rowsell & Harwood, 2015). For instance, Rowsell and Harwood (2015) applied a multimodal perspective to consider how preschool children made meaning from the film <i>Frozen</i> as active consumers, producers, and inventors. The children’s “remixing, blending and transforming of texts” (Rowsell & Harwood, 2015, p. 16) was observed, among other activities, in their enactment and re-enactment of scenes from the film which were recorded into a new digital text using an iPad. Children’s naturally occurring engagement with the cultural world of the film generated new texts.

In other studies, the construction of new texts stemming from an original text has been termed <i>paratexts</i> (Burk, 2010). Although these texts were first used by children outside of school for social and cultural purposes to “connect with other fans, to offer critiques, and to create and circulate other media such as videos” (Carrington, 2013b, p. 49), they have recently been made a part of the “official” school world (Dyson, 1999, p. 373) in literacy lessons. Burke’s (2014) ethnographic study showed how the
incorporation of primary school children’s virtual world gaming knowledge in their creation of a paratext resulted in strong connections between their online play and classroom activities. Children wrote a short newspaper article sharing their favourite gaming secrets in Club Penguin™. A multimodal perspective was used to analyse how children used critical, analytical, and problem solving skills to describe the secrets with reference to visual, gestural, spatial, and auditory semiotic modes. Children’s writing showed engagement with multimodal elements and language of the virtual world. There is great potential for further research to consider how younger children draw on digital media cultures in the creation of paratexts utilising what Edwards-Groves (2011) described as the multimodal writing process. However, this is only one way in which teachers or intervention research have integrated children’s engagement with popular culture and digital media into the classroom.

In recent years, literacy education research has considered the social and material context of literacy practices (Scollon & Scollon, 2003), characterised as the “spatial turn” (Mills & Comber, 2013, p. 412) in literacy research. This arena of literacy research attends to “the material locale as integrally connected to literacy practices, rather than to the sociocultural context alone” (Mills & Comber, 2013, p. 412).

A multimodal approach, that is, analysis of semiotic modes (gesture, gaze, body movement, text layout, images, music and sound effects, and animation), has most commonly been used to consider the ways through which children make meaning from digital texts and communicate it to others (Flewitt, 2008) in particular spaces. This approach is well suited to the study of multimodal displays of digital literacies in “social space” (Mills
& Comber, 2013, p. 418), as semiotic modes may be encompassed in the study of the dimensions of space, such as bodily, screen, dialogic, embodied, and architectonic dimensions (Mills, 2010b). These studies challenge approaches to the teaching of digital literacies in the classroom as skills instruction. They contribute to sociocultural thinking about how literacies are situated in social encounters in particular spaces and mediated by material artefacts.

Children’s bodily spaces, that is, body movement, gesture, gaze, and changes in orientation and posture, have been studied during their construction of films (Bemezer, 2008; Mills, 2010b) and stories using drawing software (Klerfelt, 2007) in preschool and primary school classrooms. Other studies (Burnett, 2010, 2014; Burnett et al., 2014; Jewitt, 2006; Wohlwend, Vander Zanden, Husbye, & Kuby, 2011) considering young children’s interactions with on/offscreen worlds (or on/offline worlds) show how these worlds are mediated through interactions enabled by literacy practices that draw upon semiotic modes in each environment. According to Mills and Comber (2013), these studies extend the transdisciplinary application of space and place (Lefebvre, 1991; Massey, 1995, 2005; Soja, 2010) by illustrating how space is utilised in the employment of digital literacy practices. The following studies consider how literacies are situated in the material and social world (Burnett, 2014, 2015; Burnett et al., 2014) and are used to traverse the on/offscreen worlds that inhabit classrooms.

Burnett et al. (2014) theorise primary school children’s meaning making across online and offline contexts as the “(im)materiality” of literacies. The researchers draw from Kress (1997) that children make
meaning from semiotic resources; however, they further this understanding to encompass how the materiality of literacy practices is relevant to meaning making. The connections between space, mediation, materiality, and the embodiment of digital literacy practices in the classroom are illustrated using vignettes developed from observations. For example, a class using Google street view to explore their neighbourhood illustrated how literacies are spatialised in the relationships between the material and immaterial, such as screen-based texts, objects, and artefacts, and how meaning making is embodied through individual experience (Burnett et al., 2014). By showing how the immaterial text of Google street view is mediated by the local context of the classroom, the perspective of (im)materiality supports the approach of locating literacy practices in the “subjective experience of the interconnectedness of space, mediation, stuff, and embodiment” (Burnett et al., 2014, p. 101). There is scope to examine how literacy practices are spatialised in meaning making between material and immaterial texts using other methods, as more detailed forms of analysis could delineate how (im)material meaning making occurs.

produced with the affordances of technologies; however, these did not always coincide with teachers’ anticipated use of, or interactions around, digital texts. Burnett (2015) suggested a focus on what counts for children in their interactions with others and texts to establish and evaluate “new ways of integrating digital texts across the curriculum in ways that encourage children to capitalise on the possibilities they enable” (p. 207). Of course, such a focus is most appropriate to the primary school context, rather than preschool, as lessons are planned by teachers. The ways in which children frame their engagement with digital texts through their interactions and use of material resources and their interactions with others deserves further investigation.

Children’s engagement in virtual worlds encompasses social interactions and practices across online and offline environments. Primary school children’s multimodal interactions when using the virtual world Webkinz™ in an after-school computer club were considered through place and the interactions and modalities afforded by the online and offline environment. A geosemiotics perspective (Scollon & Scollon, 2003) was used to understand video data of virtual play as “discourses in place: fluidly converging and diverging interactions among four factors: (1) social actors, (2) interaction order, (3) visual semiotics, and (4) place semiotics” (Wohlwend et al., 2011, p. 141). Using Goffman’s (1971) concept of interaction order, interactional practices were categorised into patterns of relationships, either “singles”, individuals playing at the computer; “queues”, as children lined up for a turn to play on a computer; and “withs”, wherein children played games in the virtual world together. The “withs” that children maintained in their play required “intense coordination of
relationships between their avatars, computers, and each other” (Wohlwend et al., 2011, p. 154). The children’s interaction foregrounded space-time, speech, gaze, and image modes to coordinate their activities in the virtual world. The real and virtual world converged in children’s play and discourses and taught children particular practices of reading and responding in virtual worlds (Wohlwend et al., 2011).

Research examining children’s meaning making of digital texts in the classroom shows that they engage in complex practices with multiple modes that transverse onscreen and offscreen worlds. Emerging research considering how digital literacy practices are mediated by interaction, artefacts, and their spatial context apply mostly observation methods to examine how meaning making occurs in the classroom. The studies illustrate that “becoming literate is a complex interaction between the learner’s background and language and the context, purpose and discourse of the text” (Walsh, 2010, p. 215) as observed in social practices (Barton, 1994; Street, 1984).

2.3.4 Digital technologies, literacy practices, and play in the classroom.

Young children’s play has been traditionally considered as a primary means of learning about the world and it has an extensive history in early childhood curricula and classrooms (Hall & Robinson, 2000). Literature considering young children’s literacy learning through play is substantial; therefore this review specifically focuses on young children’s literacy practices in their play with digital technologies in classrooms. Researchers (Edwards, 2013; Kennington & Meaton, 2009; Neumann & Neumann, 2013; O’Hara, 2004; Zevenbergen & Logan, 2008) concur that although
research and curriculum documents consider how digital technology can be incorporated into preschool activities and primary school literacy lessons, the use of technological devices in the early years classroom has not been wholly integrated with play-based curricula. It is acknowledged that there is still a way to go until literacies are pursued in play with technologies in classrooms, with traditional forms of play still being preferred (Edwards, 2013; Fleer, 2011).

A small body of research has investigated young children’s literacy practices during play with technologies in classrooms (Edwards, 2013; Gillen, 2000a, 2000b, 2002; Marsh, 2000; Wohlwend, 2008, 2010; Yoon, 2014). Edwards (2013) describes three broad approaches to the investigation of young children’s digital play experiences, first, consideration of the degree to which children’s activities with digital technologies can be described as play using existing definitions (Kafai, 2006; Verenikina & Kervin, 2011). Second, research determines whether different types of play arise from young children’s use of traditional and digital objects (Bergen, 2012; Silvern, 2006). Most recently, the introduction of mobile technologies, such as tablet technologies in classrooms, has increased opportunities for learning literacy practices during play and afforded exploration of new means of play (Merchant, 2014, 2015a, 2015b; Yelland & Gilbert, 2013). Third, there is a focus on the context in which children engage in play, and how the context of play influences how technologies are used (Stephen, McPake, Plowman, & Berch-Heyman, 2008).

However, existing reviews of research on young children’s digital play continue to focus on computers and software and ignore the increasing importance of mobile phones and telephone technology more broadly. In
fact, telephones are often overlooked as a technology with which children employ digital literacies, as research has tended to favour young children’s production of digital literacies using computer technologies (Gillen, 2002). Remedying the oversight in the literature are a number of studies which have examined young children’s language from audio recordings of their telephone conversations during play in preschool and early primary school classrooms (Cameron & Hutchinson, 2009; Cameron & Lee, 1997; Cameron & Wang, 1999; Gillen, 2000a, 2000b, 2002; Gillen, Accorti Gamannossi, & Cameron, 2005; Gillen & Hall, 2001; Gillen, Stone, & Cosier, 2001; Goddard & Gillen, 2004). These studies illustrate how children use technologies as tools for communication, yet this research as a whole has been given little acknowledgement in the wider field of young children’s play.

It has been recognised that children’s play with technologies often exposes them to digital media, where they are treated as consumers by marketers of popular culture (Carrington, 2013b; Carrington & Hodgetts, 2010; Edwards, 2013). Edwards (2013) proposed the Digital Consumerist Context (DCC) to conceptualise how teachers and children could critically consider their consumption of digital media in the early years classroom. Edwards (2013) recommended teachers initiate discussions with children about their “digital consumerist contextual-oriented play” (p. 209) to foster reflective thinking and problem solving skills to critically engage with digital environments and cultures. Through the DCC, digital play is an avenue for learning literacies and reflectively thinking about activities with digital media.
Though little research has considered how young children produce digital literacies in play interactions, studies analysing children’s digital play interactions illustrate that doing so provides understanding of how they construct meaning. Björk-Willén and Aronsson (2014) drew on Goffman’s (1961, 1979) concepts of interaction to identify three levels of 3- to 5-year-old children’s play immersion from video recordings of their computer gaming in preschool. In order from low involvement to high involvement, children’s play immersion included performing game moves in response to game instructions; repeating game character’s dialogue; and initiating dialogue with characters (Björk-Willén & Aronsson, 2014). Their animations were a social activity in which they constructed a shared focus to make “each other aware of what to look for in the game and how to advance it” (Björk-Willén & Aronsson, 2014, p. 331). Though children’s digital literacies was not a focus of analysis, a “reading” of the findings from a digital literacies perspective suggests that children’s animations could represent their meaning making of onscreen actions. Thus, this study reveals the rich and complex interactions of preschool children using technologies and indicates the potential of analysing their interactions for understanding their digital play. For the field of children’s digital literacies it brings new directions of research, specifically by examining children’s digital literacy practices in their animations of computer games and other digital media.

This research illustrates the rich opportunities for children to produce digital literacies in play with technologies in education settings. In particular, children’s critical reflections of their engagement with digital media is being recognised as an important aspect of their play. In a similar vein, it has been suggested that young children could be encouraged to
critically reflect on the literacies they use to accomplish their digital play (Edwards, 2013). These suggestions can forge directions to assist teachers and children to pursue digital literacies in play with technologies.

2.3.5 The relationship between young children’s digital literacies in education settings and the home.

This section discusses the complex relationship between young children’s digital literacy practices across education and home settings. It establishes that little is known about the relationship between young children’s digital literacies in preschool and/or school and home settings. First, research identifying the disconnection between home and school literacy practices are explored. Second, it is shown that sociocultural studies from a print literacy perspective have long documented the disconnection between home and school literacies. Finally, it is concluded that more detailed methods of analysis may show how young children’s digital literacies are socially and culturally situated across contexts.

In comparison to what is known about the association between older children’s digital literacies in school and at home, little is known about the relationship between young children’s digital literacies in education and home settings (Edwards-Groves & Langley, 2009). However, the few studies that have examined children’s digital literacies across contexts show there to be little congruity between their digital literacy practices in school contexts and those they engage in at home (for example, Carrington & Luke, 2003; Edwards-Groves & Langley, 2009; Faulkner, 2004; Kerawalla & Crook, 2002; Stephen et al., 2010). Though studies show the inconsistency between children’s education and home-based digital literacies, previous sociocultural studies from a print literacies perspective
have already established and explored a disconnect between school and home literacies. For instance, founding ethnographic research in the New Literacy Studies by S. Heath (1983) showed how different social and cultural groups’ literacy practices were at odds with what was taught by education systems. Children acquired language and literacy practices as through interactions with their families and participation in their communities they were socialised into particular cultural values and behaviours. S. Heath’s (1983) research and other sociocultural studies (for example, Scollon & Scollon, 1981; Street, 1984) indicate that children’s literacies are shaped by their social and cultural environments. Therefore, sociocultural research on children’s print literacies imply that they will engage with technologies differently between preschool and/or primary school and home (Livingstone, 2003). So then, studies examining young children’s digital literacies across education and home settings illustrate how disconnect between these social contexts is transferred to technology use.

At the turn of the millennium this disparity was attributed to there being a lack of recognition and support of children’s digital literacies in education settings. Carrington and Luke’s (2003) ethnographic case studies of two 7-year-old children found that opportunities to employ digital literacies were unavailable and unsupported in their school environments. It was suggested that the children’s home-based literacy practices with digital texts (such as emailing) would not necessarily enable them to decode print texts at school. Therefore, a divide was established between the literacy practices acknowledged and accepted in each environment.
R. Levy’s (2009) longitudinal study provided greater insight into children’s school and home literacies, showing that as children encountered “schooled” print literacy approaches, they lost confidence in reading strategies previously employed at home. Prior to entering school, children had undertaken complex reading strategies by which they holistically made meaning of modes and applied “trial and error” methods to use digital texts, such as computer games. However, in their early years of school they conformed to schooled reading practices in which strategies other than decoding print text were considered inappropriate, and they increasingly reported reading to be a difficult activity. To address children’s decreasing confidence in handling print text as they entered school, R. Levy (2009) recommended teachers actively encourage children’s home-based reading strategies.

Disparity between children’s home and school digital literacies has also been ascribed to the (limited) availability of human and technological resources in education settings (J. Dwyer, 2007; Stephen et al., 2010; Wolfe & Flewitt, 2010). In ethnographic research on children’s computer use in preschool classrooms, Stephen et al. (2010) observed a lack of teacher assistance. They asserted that there is little opportunity for young children to transfer home-based digital literacies to education settings when there are limited occasions to use technologies and limited availability of teachers to engage in pedagogical interactions with children.

In the last decade there has been an emerging push for teachers to acknowledge children’s home-based digital literacy practices in the classroom. Studies investigating children’s digital literacies at home reiterate the importance of teachers’ knowledge about, and inclusion of,
these literacies in the classroom (Marsh, 2010, 2013a, 2013b; Stephen et al., 2013; Stephen & Plowman, 2013). Research and policy also attribute teachers with the responsibility of developing clear connections between children’s home and school digital literacy practices. Though not referring specifically to digital literacy practices, early childhood policies such as the Australian *Early Years Learning Framework* (Australian Government Department of Education, Employment and Workplace Relations, 2009) and New Zealand early childhood curriculum *Te Whāriki* (Ministry of Education, 1996) emphasise the importance of extending children’s prior learning in preschool. Thus, teachers are expected to plan and implement activities that support children’s digital literacies.

Despite a push for teachers to know and include children’s home-based digital literacies in the classroom, research interviews with early years teachers reveal they are often largely unaware of the diversity of children’s digital literacies (Arrow & Finch, 2013; Hill, 2010). This indicates that with largely print-based literacy curriculums and education settings, teachers are still not supported to recognise young children’s digital literacies or integrate them into classroom activities (Carrington & Luke, 2003). An exception is Hill’s (2010) three year participatory action research project (Kemmis & McTaggart, 2000) with early years primary teachers, which demonstrated how they could discover children’s home-based digital literacy practices and make them explicit in literacy lessons. Teachers built on 4- to 8-year-old children’s reported digital literacies at home in inquiry-based experiences using technologies. The project supported teachers to meaningfully embed digital activities that built on children’s existing digital literacies. However, as of yet, ways in which teachers can incorporate
children’s digital literacies in lesson planning and pedagogical practices as more than simply an “add on” have not been extensively considered.

To conclude, few studies closely examine the relationship between children’s digital literacies in education and home settings (Snyder et al., 2004). In particular, little attention has been directed to preschool children’s digital literacy practices across settings. Significantly, studies examining children’s digital literacies reiterate previous sociocultural research which established literacies to be socially and culturally situated. This calls for research providing greater insight into how the disconnection of education and home digital literacies develops and occurs in real time. More detailed accounts of children’s digital literacies may show how these literacies are made to be socially and culturally situated in various contexts.

2.4 Young Children’s Digital Literacies in the Home

When digital technologies enter homes they introduce opportunities for young children to produce digital literacies (Facer, Furlong, Furlong, & Sutherland, 2003). This section reviews studies of young children’s digital literacy practices at home. First, it reviews the development of emergent alphabetic knowledge and skills through the use of edutainment software, apps, and e-books. Second, young children’s literacy practices using digital media at home are considered. Third, this section examines young children’s digital literacies and their textual and social practices using Internet technologies to write emails and engage in online virtual worlds. Finally, young children’s literacy practices with their parents and siblings in family contexts are reviewed. Collectively, the research shows how children use digital literacies to communicate, construct, and engage with digital texts.
2.4.1 Developing emergent literacy skills using digital technologies in the home.

Digital technologies have existed in homes surpassing two decades. However, young children’s home-based digital literacy practices as a site of examination has largely been overlooked. Most early research investigating children’s digital literacies at home, like that considering children’s digital literacies in the early years of primary school, employed cognitive and developmental perspectives. In this context, the term “emergent” was used as a generic description of children’s development of literacy skills using technology. Young children’s literacy was understood as emergent skills, knowledge, and attitudes; viewed as if on a continuum of literacy abilities and precursors to standard reading and writing (Sulzby, 1990; Sulzby & Teale, 1991; Teale & Sulzby, 1986; Whitehurst & Lonigan, 1998). Children were reported to learn alphabetic skills, namely word and letter recognition, from computer software and gaming devices (for example, Clements & Nastasi, 1993) and educational television programs (for example, Bogatz & Ball, 1971).

Since the 1970s cognitively informed research has followed children’s technology use at home. In particular, a growing body of research investigates children’s use of electronic books (e-books; for example, Chera & Wood, 2003; de Jong & Bus, 2002, 2003, 2004; Ihmeideh, 2014; Willoughby, Evans, & Nowah, 2015). As this research dominates what has been written about young children’s digital literacies at home, notable findings are now discussed.

Studies have analysed the interactive components and live animation in e-books (Hoffman & Paciga, 2014; Roskos, Brueck, & Wildman, 2009;
Unsworth, 2001) and acknowledged that their design features set them apart from print books (Hoffman & Paciga, 2014; Roskos et al., 2009; Unsworth, 2001). These design components may include aural features and sounds, such as the reading of print text, as well as visual animations and movement. Experimental studies have shown that e-books assist young children’s development of reading strategies (Higgins & Hess, 1999; H. Morgan, 2013; C. Wood, 2005) and comprehension skills (Doty, Popplewell, & Byers, 2001; Gong & Levy, 2009). The textual design of e-books suggests they may support children’s early reading skills and enable children’s independent use of them.

Although design features may support children’s reading skills, researchers have observed that parental input is often necessary to assist children to understand icons and graphics (de Jong & Bus, 2003, 2004; Lefever-Davis & Pearman, 2005; Plowman & McPake, 2013). This finding is significant in consideration of previous research which has identified the importance of interaction for children’s conceptual and verbal skill development with print texts (for example, Bus, van Ijzendoorn, & Pellegrini, 1995; Hewison, 1988). The benefit of parental guidance in e-book reading appears great when it is acknowledged that e-book features may impede children’s use of them (de Jong & Bus, 2003, 2004) and their anticipated development of literacy skills. Thus, parental involvement is necessary for children to read e-books at home and possibly more so due to the complexity of some e-books. Additionally, the interaction initiated by an e-book cannot reproduce the interactions between a child and parent during shared reading (Plowman & McPake, 2013; Plowman, McPake, & Stephen,
This suggests that children’s in-the-moment interactions with parents are a valuable means of learning literacy skills using e-books.

Neumann and Neumann (2013) view tablet technology as a scaffolding tool through which children can potentially improve their emergent writing and knowledge about alphabetic concepts. Other research also proposes that the design of tablet technology, being mobile, touchscreen, and easy to share (Neumann & Neumann, 2013; Plowman & McPake, 2013), removes operational obstacles posed by other technologies. There is consensus that tablet technologies are more user-friendly than computers as their design allows children to accomplish everyday tasks with greater ease (Disney, Barnes, McDowall, & Geng, 2013; Radich, 2013). This suggests greater opportunities for children to develop literacy skills as they engage in diverse activities. These observations warrant further research to determine how design features of tablets support children’s emergent literacy skills (Teale & Sulzby, 1986).

In a review of literature documenting young children’s use of e-books and apps with tablet technology at home, Neumann and Neumann (2013) observed that children (aged between 2 and 8 years) apply skills, such as decoding letters, words, icons, images and symbols, both independently and with parental scaffolding. The findings of Neumann and Neumann’s (2013) review informed a theoretical model drawing on sociocultural theory (Vygotsky, 1978), scaffolding (D. Wood, Bruner, & Ross, 1976), the theory of early reading development (Ehri, 2005), and emergent literacy theory (Teale & Sulzby, 1986). The model proposed a trajectory of how children can develop emergent literacy skills, starting with their visual awareness of print and finger-based navigation of the tablet and
apps; their logographic reading (words or morphenes) in print; the development of emergent literacy skills; and the final development of reading and writing skills (Neumann & Neumann, 2013). However, developing reading and writing abilities with tablet technology is dependent upon the quality of apps and the scaffolding received. Thus, even though tablet technology may be an important tool for developing literacy skills, Neumann and Neumann (2013) acknowledged that children’s skill development was dependent on the sociocultural interactions between children and their parents. The model’s emphasis of the development of print literacy skills therefore seems to see these as a precursor to the development of more complex aspects of literacy skills using technologies.

Children’s access to, and use of, tablet technology at home is closely related to their development of emergent literacy skills (Neumann, 2014). Neumann (2014) examined the extent of 3- to 5-year-old children’s access and use of touch screen tablets at home and its relationship to their literacy skills. Children completed four tests measuring their understanding of letter name and sound knowledge, numeral identification, name writing, print concepts, and word reading; and parents detailed children’s home use of tablet technologies in questionnaires. Results showed that children with greater access to tablets at home had higher letter sound knowledge and name writing skills (Neumann, 2014). Though tablet technology can be used to support children’s emergent literacy skills, the quality of experiences, rather than time spent using them, was considered to be an important influence on literacy development (Neumann, 2014). Though unspecified, the quality of experiences was thought to involve parents’ natural scaffolding of children’s technology use.
Although studies recommend parents scaffold children’s use of tablet technologies during engagement with e-books and apps (Neumann, 2014; Neumann & Neumann, 2013), the way in which this happens in interaction remains largely unexplored. Only a small number of studies examine young children’s shared interactions using e-books at home (for example, Kim & Anderson, 2008; Kucirkova, Messer, Sheehy, & Flewitt, 2013). Most notably, Kim and Anderson (2008) conceptualise parents’ mediation in shared book reading as an apprenticeship (Rogoff, 1991). Using sociocultural learning theory (Vygotsky, 1978) they found that the distance (Sigel, 1984, 1993) between a child’s cognition and the “immediate environment of events” (Kim & Anderson, 2008, p. 214) closed through parents’ support. That is, during interaction parents’ sharing of knowledge enabled children to employ literacy skills required by their activity. Though this research shows parental scaffolding to be an important factor in children’s cognitive development, the involvement of children in their own learning should not be overlooked. Further research should also emphasise children’s participation in shared reading interactions using technologies at home.

Thurlow (2009) assessed available websites specifically designed to teach young children emergent literacy skills. The usability of websites was considered with regard to Internet safety (the risk imposed by advertisements or hyperlinks), navigation using webpage features (e.g., voice support, large buttons, and animated links), and advertisements (such as profit-making using advertisements). Websites were recommended if they aimed at enhancing children’s alphabetic and vocabulary knowledge, understanding of story elements, and phonological awareness and other
print concepts (Thurlow, 2009). Websites incorporating usability considerations, and which intended to support emergent vocabulary and reading skills, could be used independently by children. In fact, the independent use of websites was considered “a requirement for useful practices” (Thurlow, 2009, p. 297). Although it is acknowledged that adult supervision is required before children can become independent users of websites, the specific ways through which this can be achieved are not explicit.

Consideration of the literature examining young children’s literacy as emergent skills has shown that many studies consider digital technologies as tools for the acquisition of alphabetic and print-based skills (Hill, 2007). Though parental scaffolding in the home is briefly acknowledged across the studies, the interactions in which this might occur are not considered and the scaffolding role of family members other than parents (for example, older children or grandparents) is not recognised. As previous reviews of children’s use of digital technologies have shown (Burnett, 2010; Lankshear & Knobel, 2003b), there are few studies that consider young children’s literacy using technologies as meaning making practices in the home. In the following studies, digital literacies are theorised as socially and culturally situated practices.

2.4.2 Young children’s literacy practices using digital media in the home.

Survey research has shown that very young children aged 6 months to 3 years (Rideout & Hamel, 2006; Rideout, Vandewater, & Wartella, 2003), and young children from infancy to the age of 8 (Marsh et al., 2005) are frequent users of digital media in the home. A greater number of studies
investigate the digital media usage of children over 8 years of age, while little research has considered the practices of young children. Children’s use of such media, and the knowledge they attain about the media, is closely related to their media education and media literacy (Marsh, 2006; Marsh et al., 2005). Media literacy has been defined as “the ability to access, understand and create communications in a variety of contexts” (Buckingham, 2005, p. 3). Studies considering children’s media use and digital literacies at home are considered here.


Young children’s engagement with popular culture often refers to “cultural, texts, artefacts and practices” (Marsh, 2005a, p. 2) which appeal to, and are consumed and produced by, a large number of children internationally (Kenway & Bullen, 2001). However, children’s production
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of popular culture is case-specific and definitions “depend on a sensitive reading of sociocultural practices in specific contexts” (Marsh, 2005a, p. 2). For example, children’s playing of the trading card game *Pokémon™* varied between locations so that it was played differently in Indigenous communities in Australia than it was in Canada (Vasquez, 2003).

Engagement with popular culture is often expressed through social interactions and fantasy play, such as acting out scenes from films (Plowman & Stephen, 2013). Through their play with digital media, children learn ways in which digital technologies can support their creative activities and communications with other people (McPake, Plowman, & Stephen, 2013). Children’s appropriation and re-creation of digital media also illustrates how their digital activities pervade onscreen and offscreen worlds. For example, Wohlwend (2009b) showed two young boys playing the video game *Digimon® Rumble Arena™* on a piece of paper using crayons and markers. More recently, Kervin, Verenikina, and Rivera (2015) showed how children’s meaning making occurred in the simultaneous use of digital and physical tools. Written observations were made of two 7-year-old children’s interaction in their use of Lego® blocks and the software application *Minecraft™* to create the same city. Drawing on four propositions of meaning making proposed by Burnett et al. (2014)—space, mediation, materiality, and embodiment—it was concluded that the children’s meaning making translated physical and digital spaces and was mediated by their interactions (Kervin et al., 2015). These studies reveal the complexity of children’s engagement with digital media and construction of meanings across onscreen and offscreen worlds.
Children’s play with toy or non-functioning technological devices, such as mobile phones or computers, has received little attention in the literature, though their use of these technologies is important for forming an awareness of cultural practices of technology use at home (Plowman & McPake, 2013). Mixed method research by Marsh (2002, 2004) found that out of 44 children, 82% owned toy mobile phones from an average age of 12 months. Children’s use of toy technologies inducted them into “the sociocultural practices and values of society” (Marsh, 2002, para. 20). However, children’s actual interactions with toy technological devices at home, and the literacies they engage in by using these technologies, have not been well documented. Further detailed observations or video recordings of children’s use of toy technologies might show the ways in which they replicate cultural practices of the home.

2.4.3 Digital literacies and textual and social practices using digital technologies.

Young children’s digital literacies can transform established social practices and mundane routines in the home (Lankshear & Knobel, 2007). The following studies are reviewed to consider the textual and social resources provided by digital technologies for young children’s construction and dissemination of texts and the social practices that children engage in during technology use.

Wollman-Bonilla (2003) conducted a single-case study of a 6-year-old child’s emails to consider her text production. Over a two-month period 77 email messages and 59 replies and 18 handwritten letters by the child were collected. Detailed study of emails and letters produced three categories: style, audience awareness, and mechanics. Stylistically, the
child’s emails resembled informal communication in their form, with phrasing reflective of “chatting” and an expectation of rapid replies (Wollman-Bonilla, 2003). In the structure and format of the email messages, the child consistently used conventions such as greetings and closings; experimented with the format of her messages, such as using different fonts; and played with language by using abbreviated words. She rarely edited her writing however, showing some practices are not so easily transferrable or are valued differently across digital and print mediums. It was concluded that composing email messages fostered different writing conventions to those fostered by print-based writing (Wollman-Bonilla, 2003). Thus, competency in writing and producing texts with technology did not necessarily entail the same competency in other forms of text construction. The comparison between print and digital text construction distinguished the features of new literacy practices using technologies (Wollman-Bonilla, 2003).

Young children’s meaning making of multimodal texts can span both print-based and digital texts, thus demonstrating the “interrelatedness between technologies and texts” (Davidson, 2011, p. 39). Ethnomethodologically informed conversation analysis showed how a 5-year-old child drew upon a range of semiotic modes and simultaneously used print and digital literacies to pursue an interest in lizards (Davidson, 2011). Beginning with viewing images of lizards on the Internet with his father and brother, the child then used an encyclopaedia with his mother to identify an image as a green basilisk lizard. The child later conducted a web search with help from his mother and the researcher to locate further images of the lizard. The child generated talk about the images he located from the
web search, specifically their usefulness for a book he was making about lizards. Through his engagement with print and digital texts the child engaged in meaning making of both written text and images. Importantly, the child’s practices of using and making meaning from both digital and print-based texts was produced in interaction with his parents (Davidson, 2011). This suggests that textual and meaning making practices are supported in interaction with family members.

Yamada-Rice (2014) examined 3-year-old children’s abilities to understand and interact with the visual mode in the “first world”, that is, the world around them, and in the “second world”, being the world of reading (Freire & Macedo, 1987). Though the literacy practices examined in this research were used to decode print-based texts, the findings are pertinent to understandings of how children use semiotic modes to generate meaning. Informed by multimodal social semiotic and interactional analytical theories (Halliday, 1978; Kress, 2010; Kress & van Leeuwen, 2006), visual content analysis was used to examine the children’s photographs of the first and second world in an urban landscape. Findings showed that the children were “strongly grounded” (Yamada-Rice, 2014, p. 182) in “reading” the first world, the physical environment, and particularly engaged with the visual mode in the second world when they interacted with multimodal texts that displayed something of interest to them. Through the visual mode in environmental print, such as signs, children attempted to make sense of the written mode. Further research in this area could examine naturally occurring interactions with digital multimodal texts to consider how young children use the visual mode to make sense of other modes, and vice versa.
Particular digital literacy practices required in using the Internet and web searching have been documented in a small number of studies (Burnett & Wilkinson, 2005; Stephen & Plowman, 2003; Thurlow, 2009). Though informed by sociocultural (Vygotsky, 1978) and emergent literacy (Clay, 1993; Teale & Sulzby, 1986) perspectives respectively, the studies acknowledge claims of multimodal and social semiotic research (Kress, 1997; Mills, 2011; Yamada-Rice, 2014) that young children make sense of other sign-making systems before being proficient at reading print. The studies observed that children made meaning from visual and animated semiotic modes, but required support to understand written language. Stephen and Plowman (2003) and Thurlow (2009) postulated that only websites appropriate to young children’s age range (for example, 3 to 6 years old) were of value to them due to their early reading abilities. However, this view does not account for whether children are using the Internet in the presence of others who are able to read and interpret information for them. Interestingly, later survey research by Stephen et al. (2010) found that two thirds (64%) of children aged 3 to 5 years old who had access to the Internet used it to navigate websites under adult supervision. This finding opens questions about the importance of adult supervision in enabling young children to produce literacies in reading text, as well as in making meaning from a combination of semiotic modes on websites.

Online virtual worlds are “immersive 2D or 3D simulations of persistent space in which users adopt an avatar in order to represent themselves and interact with others” (Marsh, 2010, p. 24). A growing body of research, namely from the United Kingdom and United States of
America, investigates young children’s participation in virtual worlds at home and in after-school clubs (Black, 2010; Black, Korobkova, & Elper, 2014; Burke, 2013; Burke & Rowsell, 2007; Carrington, 2013a, 2013b; Carrington & Hodgetts, 2010; Connelly, 2013; Marsh, 2008, 2010, 2011, 2013a, 2013b, 2014; Reich, Korobkova, Black, & Sumaroka, 2013; Wohlwend, 2010; Wohlwend & Kargin, 2013; Wohlwend et al., 2011). A number of studies evaluate the design of virtual worlds and the opportunities they provide for children’s acquisition of literacy practices and text construction, including sites such as the now defunct *BarbieGirls*™ (Black et al., 2014; Carrington, 2013b; Carrington & Hodgetts, 2010; Connelly, 2013), *Chimpoo.com* (Carrington, 2013a, 2013b), *Webkinz*™ (Black, 2010; Reich et al., 2013), and *Xtractaurs*™ (Black et al., 2014). These evaluations consider the models of childhood underpinning the virtual sites and how children’s identities are constructed through engagement in them.

The textual practices that are modelled and accessible to young children in *BarbieGirls*™ are based on a highly gendered model of childhood (Carrington, 2013b). In the virtual world texts are produced, modelled, and used, but particular dispositions towards texts are also constructed (Carrington & Hodgetts, 2010). Through in-world environmental print and social interactions *BarbieGirls*™ provides a range of texts for users to read and generate meaning from, such as chat bubbles in simulated conversations with shop assistants. However, these texts were extremely gender-oriented and made low demands on children’s decoding and meaning making abilities (Carrington & Hodgetts, 2010). Children were limited in their construction of “critical and effective identities via the production and use of a variety of textual resources” (Carrington &
Hodgetts, 2010, p. 681), with text production limited to written texts and much of this involving pre-set chat messages or emails. Texts produced and modelled “literacy-lite” (Carrington & Hodgetts, 2010, p. 681), that is, a limited amount of textual resources. It seemed that the virtual world emphasised gendered characteristics, such as shopping, over children’s thoughtful interaction with and use of texts (Carrington, 2013b).

By contrast, the model of childhood informing the virtual world Chimpoo.com viewed children as competent users and creators of multimodal texts, and accordingly provided opportunities to support these literacy practices (Carrington, 2013b). The virtual world mainly featured functional and instructional texts, such as catalogues of items on which to spend in-world money, or game instructions (Carrington, 2013b). Limited environmental print restricted children’s textual interaction, though this reflected the site’s purpose providing entertainment and gaming, rather than facilitating interaction with a diverse selection of texts and textual practices (Carrington, 2013b). However, the virtual world connected to a blog encouraging children’s meaning making with, and construction of, paratexts (Burk, 2010) such as stories, drawings, and house designs for avatars (Carrington, 2013a, 2013b). By encountering the virtual world and blog, children were stimulated to “read, create, and display multimodal texts in a range of genres” (Carrington, 2013b, p. 51). Thus, consideration of these models of childhood underpinning the virtual worlds recognises the identities that children construct in their engagement in them.

Though formal opportunities to engage in digital literacy practices in virtual worlds are generally limited (Carrington, 2013b; Carrington & Hodgetts, 2010), studies of children’s participation in virtual worlds such as
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Marsh (2010) observed that older children’s literacy practices using the virtual world *Club Penguin™* created a social order out of its chaotic, multimodal appearance. Interview responses and video recordings of children aged 8 to 11 years revealed that their digital literacy practices included reading environmental print, using synchronous chat and asynchronous postcard messages, and using “ritualised” literacy practices such as emoticons/phrases identical to other avatars (Marsh, 2013a). These literacies comprised “a social glue” (Marsh, 2013a, p. 85) to make social connections within the environment and so, make sense and order of it. Thus, children employed literacy practices as a means of communicating with other users online in socially acceptable ways according to the context of the virtual world.

Survey and interview responses from children aged 5 to 7 revealed that their play within *Club Penguin™* reflected forms of offline play, such as fantasy play (dressing up as imaginary characters) or ritualised play (forming online friendships in group activities). Just like offline play,
children’s virtual world play was constructed through interactions with other players (Marsh, 2010). Play was a social practice through which children created identities, for example, “fighters” by having snow-ball fights or “collector-consumers” who enjoyed shopping activities (Marsh, 2010). Children were socially and bodily (through use of the computer) involved in their activities through which they constructed and produced identities and engaged with other users in the virtual world (Marsh, 2010). In this way, children’s onscreen play and interactions with other players in the virtual world were reflective of their offscreen interactions.

Where digital literacies are defined as competency in using and learning with digital technologies, research (Stephen et al., 2010) has established that young children are aware of the digital literacies they possess, and are aware when they require further digital literacy practices. In their interview responses, 3- and 4-year-old children in the case study Entering e-Society evaluated their performance in various technological activities, such as playing games on the computer or PlayStation™ (Stephen et al., 2010; Stephen et al., 2008). The children distinguished between difficult and uncomplicated operational skills or tasks in their use of games and differentiated between competencies required to complete activities afforded by technologies, such as operational skills and knowledge to understand game instructions (Stephen et al., 2010). If children experienced difficulty undertaking digital literacy practices, they could identify the cause of their difficulties by distinguishing between operational aspects of their activity and the knowledge required. These findings show that young children’s digital literacy practices, defined in this study as competency using digital technologies, may be important for their participation in digital
game play in the home. However, what has not been recognised is that young children’s pursuits require them to produce, and are dependent upon, digital literacies involving meaning making practices.

Though opportunities for young children to produce digital literacies in digital platforms, such as virtual worlds, are sometimes limited, the studies overwhelmingly show that children’s interactions with family members provide an invaluable resource for supporting their meaning making of, and responses to, semiotic modes and digital texts. The next section further considers young children’s literacy learning with family members from the extensive body of research detailing their print-based practices and the few studies of their digital literacy practices. This research conceptualises literacies as social and cultural practices.

2.4.4 Young children’s literacy practices with family members.

Socioculturally informed research has shown that young children learn literacies with their family members, namely their parents and siblings (for example, Cairney, 2003; Gregory, 1999; Hall & Robinson, 2000). Research mostly analyses how young children produce literacies with print materials; very few studies have examined children’s literacies when they use digital technologies with family members. As such, some studies of children’s print literacies with parents and siblings are included in this review to consider how literacy practices are produced between family members. First, parents’ involvement in children’s literacy practices, and concerns with regard to children’s use of technologies, are considered. Second, literature investigating children’s literacy practices in sibling interactions are discussed.
2.4.4.1 Parents’ involvement in young children’s digital literacies.

Parents significantly influence young children’s digital literacy practices at home. Collectively, studies present a spectrum of ways in which parents impact children’s digital literacies, from indirect means such as modelling technology use, to more direct ways such as socially negotiating digital literacies. However, concerns of children’s safety during technology use threaten opportunities to collaboratively produce digital literacies at home.

Interview and questionnaire methods show that parents favour children using technologies in ways that support their literacies (Neumann, 2014; Stephen et al., 2013). Stephen et al.’s (2013) socioculturally (Vygotsky, 1978) and eco-culturally (Tudge, Freitas, & Doucett, 2009) informed case study showed that parents’ views of how technologies can support children’s literacy practices become part of the cultural environment of the home and influence children’s technology use. This suggests that parents who strongly support children’s literacy practices during technology use may increase opportunities for their child to acquire literacies using technologies at home.

Studies drawing on video recordings of naturally occurring interactions, written observations, and interviews show that parents are involved in their children’s digital literacy practices at home (Aarsand, 2011; Aarsand & Assarsson, 2009; Davidson, 2010a, 2011; Kirwil, 2009; Plowman et al., 2008, 2010a; Plowman, Stevenson, Stephen, & McPake, 2012; Stephen et al., 2013). Davidson (2010a), Aarsand (2011), and Aarsand and Assarsson (2009) analysed video recorded interactions between
parents and children in which they made meaning of digital texts in their use of technologies.

In addition to their direct involvement in their children’s digital literacies, parents’ technology use indirectly informs children’s understandings of how devices are employed. Mixed method research by Plowman et al. (2008, 2010a) found 3- and 4-year-old children acquired competency in using devices by observing their parents use a range of technologies at home, though parents were unaware that they modelled ways of using technologies and believed children simply picked up knowledge about the devices. This suggests that parents’ use of technologies indirectly displays understandings of how they are used in everyday life. Together with findings from Davidson (2010a), Aarsand (2011), and Aarsand and Assarsson (2009), this research shows that parents directly and indirectly inform children’s decoding of digital texts and their use of technologies in the home.

As well as parents, the presence of other family members and social and cultural practices of technology use at home inform children’s literacy practices with technology (Plowman, Stevenson, McPake, Stephen, & Adey, 2011; Stephen et al., 2013). Sociocultural theories of learning (Vygotsky, 1978) and eco-cultural perspectives (Tudge et al., 2009) informed the examination of case studies where children used almost identical technological toys and devices (Stephen et al., 2013). It was observed that children’s technology use was mediated by family interactions, siblings’ presence, exigencies on parents’ time (such as scheduling technology use), and children’s preferences and personalities (such as preferred technological devices). Thus, not only do parents influence children’s technology use, but
in addition, the composition of the home context incorporates a myriad of factors which also influence children’s learning with technologies.

Digital competence, defined by Aarsand and Assarsson (2009) as what counts as valid knowledge using technologies, is negotiated and legitimised in families’ collaborative use of technologies. Analysis of video recordings, informed by discourse analysis (Potter & Wetherell, 1987) and actor network theory (Latour, 2005), showed that parents and children negotiated “‘who knows’ and ‘who is to learn’” when undertaking or talking about digital activities (Aarsand & Assarsson, 2009, p. 285). At different times during interactions, parents legitimised children’s knowledge, children relied on their parents’ knowledge, or their knowledge conflicted. During these intergenerational encounters “the family” was an arena in which digital competence was facilitated and restricted according to social and cultural opportunities and expectations (Aarsand & Assarsson, 2009). This suggests that children’s knowledge of digital literacies, defined in this study as competence using technologies, can conflict with that of their parents and is negotiated between them.

Differences in parents’ and children’s knowledge regarding technologies has been further conceptualised as an intergenerational digital divide. Aarsand’s (2007) conversation analysis of children’s interactions with their parents and grandparents examined how the perceived digital divide, a difference in knowledge and competence using technologies, was made relevant between them. Aarsand (2007) showed that the perceived digital divide was used as an interactional resource by a 10-year-old child to extend his bedtime. The child demonstrated his competence in playing a PlayStation™ game and used his grandparents’ basic understanding of his
activity to pursue it further. Apart from these studies, little is known about how children and their parents and grandparents display knowledge and competencies in using technologies to traverse the intergenerational digital divide.

The various ways in which young children and their parents employ digital technologies in the home produces a divide between children who are in a position to take advantage of its benefits, and those who do not possess the same quality or quantity of access (Buckingham, 2005). This digital divide is produced through the culmination of a myriad of factors, including differences in the availability and quality of services in the home; perceptions of young children and their parents regarding the value of technologies and the importance of being able to use them; young children’s preferences for engaging with digital technologies at home; parents’ competencies in using technology to support their children’s digital activities; and opportunities, such as those provided by parents, to produce digital literacies in the home (Facer & Furlong, 2001; Stephen et al., 2010). The digital divide may result in discontinuity between the extents of children’s digital literacies; however discontinuity would still exist despite the recognised digital divide due to individual preferences and pursuits. As this review has shown, children’s engagement with technologies at home is dependent on the family context and the use of even identical technologies varies between families (Stephen et al., 2013). Thus, the digital divide may be considered a natural outcome of the diversity of children’s and parents’ engagement with, and interactions in using, technologies at home (Plowman & Stephen, 2013).
Though children produce digital literacies using technologies, their technology use is a concern for parents (Burnett & Wilkinson, 2005; McPake & Plowman, 2010; Plowman, McPake, & Stephen, 2008; Stephen et al., 2010; Valentine & Holloway, 2001). Children’s operation of digital technologies, particularly the Internet, has emerged as an issue of “moral panic” (Facer, 2012, p. 397) and public debate as dangers of their use have been publicised (Byron, 2008). First, parents are aware that during engagement with technologies children may be exposed to unsuitable content and online advertising (Cai & Zhao, 2010) or may come across or intentionally download material (Burnett & Wilkinson, 2005). Second, parental concern and debate revolves around the amount of time young children devote to using digital technologies (McPake & Plowman, 2010; Plowman et al., 2008; Stephen et al., 2010) and the health effects of their extensive use (Plowman & Stephen, 2003).

However, studies debating the effects of children’s technology use have been criticised for viewing children as passive consumers rather than agents of their digital activities (Plowman & Stephen, 2003). These studies “express views on children and childhood rather than learning about children and childhood” (Qvarsell, 1988, p. 224). If a greater number of studies investigated and celebrated the identities assumed by children in their use of technologies (Facer, 2012) and the digital literacy practices they employed, it is questionable whether concerns about young children’s technology use would stir such debate (Livingstone, 2003).

To conclude, studies indicate that parents are highly influential in shaping children’s digital literacy practices at home. Studies examining children’s digital literacies with parents and other family members largely
conceptualise literacies as competency using technologies at an operational level rather than meaning making practices. Often, children’s technological knowledge and competencies differ to that of their parents’, with the consequence that technology use is socially negotiated and constructed between them. However, parents’ concerns over children’s technology use can impinge on their opportunities to learn and employ digital literacies. Further research highlighting the rich literacy practices that children engage in during activities with technologies at home may abate parental concerns.

2.4.4.2 Siblings’ involvement in young children’s literacies.

Traditionally-held assumptions of parents being the exclusive teachers of literacies in families have been challenged by recent studies showing that siblings construct teaching relationships at home (Barnhill & Halquist, 2010; Frankenberg, Holmqvist, Ruvenson, & Rindstedt, 2012; C. Kelly, Gregory, & Williams, 2001). Though technologies are increasingly ubiquitous items in family homes, there remains a scarcity of research examining how siblings produce digital literacies together. Therefore, this review considers research documenting how children employ print-based literacies in sibling interactions to highlight how older siblings are involved in young children’s literacy learning at home. In addition to this, research has focused on sibling interactions in which older siblings are of school-age, with the consequence that literacy learning between siblings of preschool age has been ignored. The following discussion of siblings’ print-based literacies reflects these observations.

Immigrant school children employ print literacies of their first culture and of their classroom in literacy-related interactions with younger siblings. Ethnographic and ethnomethodological observations showed that
children drew on a variety of literacy strategies from school, community, and home settings in interactions with younger siblings (C. Kelly et al., 2001). For example, a 10-year-old child used a school questioning technique to evaluate her 4-year-old sister’s comprehension in shared book reading. The older child’s sharing of literacy practices from school and her first culture socialised the younger child into these literacies. In this way, older children were found to be mediators of younger children’s literacies (Gregory, 1998; C. Kelly et al., 2001).

Ethnomethodological analysis by Gregory (2001, 2005, 2008) of Anglo-Saxon and Bangladeshi siblings’ role playing of “school” identified interactions in which literacy learning, understood as knowledge of alphabetic concepts, was reciprocal. Older children’s re-enactments of classroom literacy lessons, such as shared reading, consolidated their knowledge and at the same time inducted younger siblings into schooled print literacies (Gregory, 2001). Gregory (2005, p. 25) observed that older siblings (aged 10 and 11) acted as guiding lights teaching younger children (aged 8) “what counts at school” with regard to procedural, academic, and cultural knowledge. Similarly, Gregory (2008) observed that when older siblings mirrored classroom talk and literacy activities, they initiated younger children into a new way of talking while also practising a new language and consolidating literacy knowledge. Therefore, children’s interactions reciprocally supported their literacy knowledge.

Not only do both older and younger children employ literacy knowledge through their interactions, but each child negotiates how the interaction will occur. Frankenberg et al. (2012) studied how asymmetrical and more-symmetrical frameworks of participation (Goffman, 1979; C.
Goodwin, 2000, 2007; C. Goodwin & Goodwin, 2004) were established between siblings as they negotiated positions as teacher and learner in print-based activities wherein literacy pertained to alphabetic knowledge. In an asymmetrical participation framework, an older sibling positioned herself as a teacher and shouted directions for younger children to repeat letter sounds. More-symmetrical participation frameworks were “typified by the younger child’s active agency as well as resistance to older siblings’ and adults’ directives” (Frankenberg et al., 2012, p. 785). For example, an older child’s gentle encouragement during letter writing acknowledged the younger child’s agency in resisting participation. This highlights that older and younger children negotiate the teaching-learning participation framework in collaboratively producing literacy events.

However, when assuming a teaching role older siblings not only collaborate with young children but also with parents. In audio recordings of older siblings instructing younger sibling’s print-based literacies at home, Volk and de Acosta (2004) observed that parents supported older children’s instruction. For example, during reading a 9-year-old child’s instruction focused on basic concepts of print, such as requesting that his younger sibling repeat each word. Parental input prompted the older child to ask comprehension questions based on the content of the text. This input supported his repertoire of literacy teaching strategies so that the younger child produced a greater diversity of literacy practices. On other occasions parents’ input can complicate older children’s interactions with younger siblings. Frankenberg et al.’s (2012) recordings of siblings’ interactions showed that parents often contributed rules, such as caring for a writing board in use. This required older children to organise their interactions with
younger siblings to take account of their parent’s rules. Thus, studies examining siblings’ literacy practices, broadly understood as engagement with alphabetic concepts in print-based activities, show that parents’ guidance of older children’s instruction and their introduction of rules shapes the interaction and the literacy practices that are produced.

Studies of siblings’ technology use emphasise their operational knowledge and use of technologies. Emerging research shows that older children help younger siblings use digital technologies to complete activities (Aarsand, 2007; Burnett & Wilkinson, 2005; Davidson, 2010a, 2012b; Plowman et al., 2010a, 2012b; Reich et al. 2013). Ethnographic and case study research (Plowman et al., 2010a, 2012b; Reich et al. 2013) identified that older siblings who were frequent users of technologies inexplicitly modelled technology use and helped younger children to use them to play games or engage in online virtual worlds. Using conversation analysis, Aarsand (2007) and Davidson (2010a, 2012b) established how older children’s interactions assisted younger children to use technologies. Davidson (2010a, 2012b) showed the methods by which older siblings give help: by suggesting next actions or by controlling a computer mouse and soliciting a younger sibling’s agreement of proposed actions. Like Frankenberg et al. (2012), Aarsand (2007) observed an older child establish an asymmetrical relationship with her younger sister to show her how to play a computer game. These studies show that older children help their siblings use technologies; however, little research has documented how older children interact with younger siblings to produce digital literacies in their use of technologies.
A contrasting argument suggests that older children’s technology use may have an undesirable influence on their younger siblings’ digital literacies (Plowman et al., 2010a). The frequency of older siblings’ technology use can reduce younger children’s opportunities to use technologies (Plowman et al., 2010a). This restriction is significant when considered alongside Neumann’s (2014) finding that young children with greater access to tablet technologies at home produced emergent literacy skills that were more advanced than children with less access. Though this finding is restricted to tablet technology and applies a cognitive and psychological perspective to literacies, the fact that children’s access to a particular technological device strongly influenced their literacy development suggests that older siblings’ restriction of younger children’s technological use could impact on their opportunities to employ digital literacies. This being said, the previously reported findings indicate that siblings use technologies collaboratively and thus jointly engage in literacy practices using technologies.

The review has identified that research predominantly investigates siblings’ acquisition of print literacies. There is a gap in knowledge concerning how young children employ digital literacy practices in their interactions with older siblings, especially in the early years prior to the older child’s commencement of formal schooling.

### 2.5 Young Children’s Digital Literacies and Social Interaction

There is a dearth of empirical research documenting the ways in which young children socially accomplish digital literacies in their everyday lives. Many existing studies emphasise the social nature of digital literacies rather than examining how they are accomplished in interaction. This
discussion directly leads to the focus in this study on the social accomplishment of digital literacies.

Literacies are social practices (Lankshear, 1997); they are socially produced and understood. It is acknowledged that young children interact during their use of, and through, digital technology (Mills, 2011), however this has not been a central focus in existing literature. These interactions have been referred to as a form of socialisation in that young children of preschool age are “socialised into digital forms of communication before they begin formal schooling” (Mills, 2011, p. 57). From this it can be said that young children’s use of technologies for the communication of ideas are digital literacy practices.

Similarly, Burnett and Wilkinson (2005) observed that young children under 8 years acquired web searching behaviours through “apprenticeships” (p. 160) with friends and older family members. These children were assisted to produce digital literacies through help provided by parents, siblins, and cousins as they pursued their interests on the Internet (Burnett & Wilkinson, 2005). Thus, young children are “apprenticed” (Burnett & Wilkinson, 2005, p. 160) or “socialised” (Mills, 2011, p. 57) through interactions to become digitally literate. These terms by Burnett and Wilkinson (2005) and Mills (2011) can be built upon by further research to detail the interactions that constitute “socialising” or “apprenticing”.

Goffman’s interaction order has been applied by a number of researchers to focus on how digital literacy practices are employed in interactions in education settings (for example, Björk-Willén & Aronsson, 2014; Burnett, 2015; Wohlwend et al., 2011). Burnett (2015) drew upon Goffman’s (1974) frame analysis to study the frames (cues to interact in
particular ways) that structured children’s interactions during digital activities. She observed that their interactions spanned multiple frames, for example, the official classroom frame and a playful frame. Though not examining digital literacies per se, Björk-Willén and Aronsson (2014) used Goffman’s work on footing (1979) and play embrace (1961) to show how children produced alignments in their animation of computer game characters. They concluded that animations were not simply part of game mechanics but were “a feature of children’s game practices and interaction in front of the screen” (Björk-Willén & Aronsson, 2014, p. 331). Finally, Wohlwend et al. (2011) applied Goffman’s (1971) interaction arrangements to highlight patterns of relationships between children as they played in a virtual world. Analysis showed that children’s online and offline interactions were organised to collaboratively produce activity. Therefore, Goffman’s (1961, 1971, 1974, 1979) work on the interaction order powerfully uncovers how children produce digital activities interactionally.

Ethnomethodological and conversation analytic studies examine how parent-child interaction produces digital literacies to construct children’s social worlds. These analytic perspectives emphasise young children as competent actors and capable users of digital technologies and literacies (Davidson, 2011, 2012b). In particular, Hutchby and Moran-Ellis (2001) consider the changes digital technologies might bring to children’s social worlds. They frame digital technologies as artefacts that enable and afford users to socially accomplish their desired tasks (Hutchby & Moran-Ellis, 2001). Hutchby and Moran-Ellis (2001) contemplate the affordances of technologies for young children’s interactions,

What are the shapes and the outcomes of specific, situated encounters between children and technologies: how do children
interact with, and in light of, the affordances that technologies have; how do those affordances constrain such interactions; and how is the complex of relations brought about here consequential for our understanding both of children themselves and of technological forms? (p. 3)

These questions highlight how digital technologies enable young children to socially construct and express their social world. In particular, consideration of the affordances of digital technologies for children’s interactions lends itself to examining how interactions with others produces digital literacies.

A small number of ethnomethodological and conversation analytic studies (Danby, Davidson, Given, & Thorpe, 2015; Davidson, Danby, Thorpe, & Given, 2014; Houen, 2012) illustrate how “ways of thinking, doing and saying that might constitute digital literacy practices” (Davidson, 2011, p. 28) are produced in interaction in preschool and school. These studies, which are discussed below, show how preschool teachers produce social and moral work when employing digital literacies with children and consider how preschool children construct digital literacies in interaction.

Conversation analytic studies by Danby et al. (2015) and Houen (2012) show how young children’s digital literacies in preschool settings are produced as “cultural and situated activities” (Danby et al., 2015, p. 16) intricately related to social and moral work in interaction. Sequential analysis by Danby et al. (2015) showed how procedural and moral work of composing an email was accomplished between a preschool teacher and a cohort of 3- to 5-year-old children. The teacher directed focus to procedural aspects of the email by discussing its structure and inviting children’s suggestions for content. She also directed attention toward moral aspects by composing the email for an audience (a former teacher) and selecting materials (such as photographs). In this study, conversation analysis
afforded an understanding of what counted as digital literacies in-the-moment as revealed in the teacher’s and children’s talk (Danby et al., 2015). Thus, application of digital literacy practices and talk about their procedural and moral relevance enabled the situated, interactive construction of the email (Danby et al., 2015).

Houen (2012) produced a detailed description of teacher-child interaction during web searching to show how social orders were constructed in a preschool classroom. The teacher and two children aged 5 and 6 drew on their literacy knowledge, understood in this study as alphabetic knowledge, to progress the web search. Conversation analysis of the interactional sequence revealed that the teacher’s turns recognised the children’s interactional competency, alphabetic knowledge, and “working knowledge of web searching” (Houen, 2012, p. 103). The teacher used prompts and interrogatives (questions) to provide opportunities for children to decide on a search phrase, nominate next-actions in the web search, spell and type the search phrase, and identify words when exploring a search result. The children’s interactional display of alphabetic knowledge, in collaboration with the teacher’s prompts and questions, oriented to a social and pedagogic order of the classroom that supported their active participation and decision-making in the web search (Houen, 2012).

and embodied actions showed engagement with the video, were interpreted and responded to in talk about the video, and were used to manage interaction with the child as a source of information and other children as an audience. The child’s single-word utterances (“yes”) confirmed what had “already been made available verbally and visually” (Davidson et al., 2014, p. 79) in the video, and other children’s questions and gestures to the screen prompted his explanations of events in the video. Therefore, children constructed shared understandings about the video in response to it and each other’s meaning making of it.

A small number of recently published studies investigating young children’s social accomplishment of digital literacies in the home (for example, Aarsand, 2007; Davidson, 2009b, 2011, 2012b) clearly demonstrate how children construct and maintain their social worlds in and through their interaction. Davidson (2009b) showed how talk about an onscreen image of lizards between a father and his two children generated shared meaning. Web searching and talking about lizards was an everyday activity in the family and in this instance the children and father drew on their knowledge to identify lizards in an image. The father and children negotiated their knowledge or lack of knowledge. This revealed that the father did not always possess information; instead, the children also contributed names or descriptions of lizards. Therefore, detailed analysis of talk revealed the methods through which the father and children produced shared meaning about an onscreen image (Davidson, 2009b).

Davidson (2011) analysed a 5-year-old child’s actions in searching for information on basilisk lizards. The child’s activity with texts was achieved through the interactional methods of telling, showing, and
remembering. In interaction with his mother, father, and younger brother, the child located and read the caption of a basilisk lizard image in an encyclopaedia and recalled information about it; typed a web search about the lizard; and selected images of the lizard and initiated talk about them. He oriented to the texts as “an aspect of the context then and there” (Davidson, 2011, p. 39), and in this way, mutually accomplished actions of reading and keying words with his family through talk.

Through close analysis of young children’s naturally occurring interactions with others and digital technologies, ethnomethodological and conversation analytic studies provide empirical evidence of actual digital literacy practices in situ. They show the vocal and embodied methods children, parents, and teachers employ in orienting to, and jointly accomplishing, digital literacy practices. In short, ethnomethodological conversation analysis reveals “how people situate literacy practices on the occasion of their use and how this reflexively constitutes the practice as what it is (on just this occasion)” (Davidson, 2012a, p. 36). In doing so they illustrate how young children’s interactions and digital literacies construct their social world. However, the limited number of studies analysing young children’s everyday interactions during technology use demands that further research study how children socially produce digital literacies. In particular, studies are needed that detail interactions by which digital literacies are produced at home.

2.6 Conclusion

This literature review considered theoretical perspectives on digital literacies and the varying use of the term within the field. It discussed studies investigating young children’s digital literacies in education and
home settings. It reviewed studies that analyse how digital literacies are produced in social interaction. The following conclusions establish the current state of research examining young children’s digital literacies as examined here.

To begin with, much of what has been written about young children’s digital literacies has been conducted in schools. Very few studies investigate young children’s digital literacy practices at home. Not surprisingly then, the majority of studies examine digital literacies practices of school-aged children from 6 years of age. Little research focuses on preschool-aged children’s digital literacies, i.e., children aged 5 years and younger. In addition, of the few studies that examine children’s digital literacies at home, only a limited number analyse their interactions to show how digital literacy practices are employed socially. Research emphasis remains on children’s cognitive and psychological processing of literacy skills despite emerging studies from sociocultural, multimodal, and multiliteracies perspectives. An absence of research showing how young children socially accomplish digital literacies at home calls for further research focusing on their interactions. Therefore, this study expressly targets the deficit of studies of how preschool-aged children accomplish digital literacies at home through social interaction.

The lack of knowledge about how young children’s digital literacies are socially accomplished can be best addressed using a methodology that concerns itself with the practical accomplishment of activities through interactional methods. The approach of ethnomethodology and conversation analysis presents a way to examine the social accomplishment of young children’s digital literacies in the home. The next chapter will introduce and
examine the perspectives and analytic processes of ethnomethodology and conversation analysis.
CHAPTER 3

METHODOLOGY

3.1 Introduction

The previous chapter reviewed literature examining how young children employ digital literacy practices in preschool, primary school, and home settings. It concluded by highlighting the advantages of ethnomethodological and conversation analytic perspectives for analysing how digital literacies are accomplished in interaction.

This chapter introduces the perspectives of ethnomethodology and conversation analysis in a description of their historical development and analytic position. First, the chapter introduces ethnomethodology and considers its critique of sociological perspectives of social action. Second, the chapter presents the ethnomethodological approach of conversation analysis, established by Harvey Sacks as a method of studying social order, and describes its central claims, key concepts, and processes of analysis. Finally, ethnomethodological studies of young children’s social interactions in the home are considered in three areas: their language acquisition and social competency; sibling interactions; and interactions during use of digital technologies.

3.2 Ethnomethodology

The enterprise of ethnomethodology and the epistemologies at its crux are elaborated in the following discussion. First, Harold Garfinkel’s development of ethnomethodology during his doctoral study is considered in relation to the sociological environment of the time. Second, key assumptions underpinning the foundation of the ethnomethodological
agenda are described, including the respecification, accountability, indexicality, and reflexivity of social action. Third, the role of language in accomplishing action in the social world is discussed. Finally, three ethnomethodological approaches for analysing social interaction are outlined.

### 3.2.1 Social actions as taken-for-granted.

Ethnomethodology was jointly borne from Garfinkel’s dissatisfaction with the program of sociology and his consequential pursuit of understanding the social world from members’ perspectives. During his years at the University of North Carolina and Harvard University, Garfinkel encountered influential sociological thinkers who believed that actors’ demonstration of their knowledge produced their social reality (von Lehm, 2014). One such sociologist, Garfinkel’s doctoral supervisor at Harvard University, was Talcott Parsons. His book, *The Structure of Social Action* (Parsons, 1937), applied functional action theory to social life with an emphasis on internalised processes (Sidnell, 2010). Parsons’ theory (1937) that actors’ knowledge encompassed their rationality resonated with Garfinkel. However, Garfinkel did not share Parsons’ theoretical conceptualisation of the social world, which focused on people’s “shared, internalised norms as an explanation of patterned, social behaviour” (Pollner, 1991, p. 371) and overlooked their sense-making practices in their accomplishment of social action (Schegloff, 1996a). Garfinkel evaluated Parsons’ social theory in his doctoral thesis, *The Perception of the Other: A Study in Social Order* (Rawls, 2002), using Alfred Schutz’s (1967) phenomenological account of social life.
Garfinkel met phenomenologist Alfred Schutz while at the University of North Carolina (Heritage, 1984b). Schutz (1962, 1967) had redefined founding phenomenologist Edmund Husserl’s representation of intersubjectivity as an obvious datum in interaction. Influenced by sociologist Max Weber, Schutz (1962, p. 312) projected that “the world of daily life” was intersubjective, and was interpreted by actors as common-sense categories, which were social in nature and routinised social reality (Tuchman, 1973). Schutz (1962) claimed that actors’ use of these categories to organise social life was a significant and daily accomplishment that deserved to be questioned and investigated (Costelloe, 1996), rather than taken-for-granted (McKinney & Tiryakian, 1970). Garfinkel extended the position that the production of social life is taken-for-granted in his doctoral thesis. He understated the phenomenological concern of mental intuition and emphasised the “embodied activity and the practical production of social facts” (Maynard & Kardash, 2007, p. 1484) seen to exist in lived experience. In consideration of the visible nature of social life, key ethnomethodological understandings of the observability of social action began to emerge.

The claim that the production of social life was taken-for-granted was revolutionary in the sociological environment of the 1960s. Although it was assumed that all sociological traditions of inquiry made a study of the social system (Garfinkel, 2007), they varied in their focus and scrutiny of the social structure. Despite the abundance of sociological theories, Garfinkel contended that the sociological environment contained “little data and few methods” (Garfinkel, 1964, p. 225) through which “the essential features of socially recognised ‘familiar scenes’ may be detected and related
to dimensions of social organisation” (Garfinkel, 1967, p. 36). He argued that sociological theories could not properly understand the social world as their subjective view focused on what actors knew and expected in any given situation (Poggi & Sciortino, 2011). Thus, Garfinkel recognised the constraints within which sociological inquiry had impeded itself in emphasising the limits of social organisation on people’s activities.

Garfinkel communicated his misgivings of formal analytic social sciences in the radical proposal that the social organisation of everyday life did not encumber people, but was an asset to them in their accomplishment of action (Heritage, 1998). Garfinkel (1967) introduced this proposal in his book, *Studies in Ethnomethodology*. He argued for an alternate sociology (Garfinkel, 2007) concerned with the “empirical study of social order founded in the detailed observation of what people said and did” (Dingwall, 2014, p. 7). He sought to divorce the social theory of action from the study of the motivation of action (such as in Parsons’ (1937) theory of social action), to show how members’ recognition, production, and reproduction of social actions constructed their reality (Heritage, 1987). Representing Garfinkel’s (1967) “sociological attitude” (von Lehm, 2014, p. 14) towards social theory and analysis, ethnomethodology’s program (Garfinkel, 1967, 1996, 2002) challenged sociologists to relinquish widely held assumptions of the social world, in an original re-analysis of the sociological problems of the theory of action, the nature of intersubjectivity, and the social constitution of knowledge (Heritage, 1984b, 1987).

Though Garfinkel evaluated formal analytic approaches of social science, he maintained that ethnomethodology was not critical of them (Garfinkel, 1996, 2007; Stephen Hester & Francis, 2007). Rather, because
formal analytic procedures ignored “the enacted, unmediated, directly and immediately witnessable details of immortal ordinary society” (Garfinkel, 1996, p. 8), the case for ethnomethodology was made. Ethnomethodology’s alternate enterprise was described by Garfinkel (1996),

Ethnomethodology’s fundamental phenomenon and its standing technical preoccupation in its studies is to find, collect, specify, and make instructably observable the local endogenous production and natural accountability of immortal familiar society’s most ordinary organisational things in the world, and to provide for them both and simultaneously as objects and procedurally, as alternate methodologies. (p. 6)

Thus, the everyday production of order, “neglected” (Garfinkel, 1964, p. 226) in sociological studies of the social world, is made visible in the ethnomethodological consideration of how members themselves make it observable in their actions.

In this way, ethnomethodology identifies the “what more” (Garfinkel, 1996, p. 6) that sociological inquiry fails to consider, that is, the methods by which members make their activities observable or “concrete”. Though sociological approaches consider “order in, about, as, inside with, as of, and within ordinary society” (Garfinkel, 2007, p. 14) as observable concrete facts, an ethnomethodological perspective maintains that concrete activities display a “self-generating order” (Maynard & Kardash, 2007, p. 1483). The concreteness of social action is not interpreted as “fixed, abstract categories” (Wilson, 2003, p. 488) as in sociological theories, but as observable and reproducible “in and as the most ordinary and familiar organisational things in the world” (Garfinkel, 1996, p. 11).

Ethnomethodology asks how members “bring into being” or produce concrete social action, such as culture or identity, in interaction (Moffatt,
In this fashion, ethnomethodology uncovers and makes strange the assumed organisational phenomena of social activities (Garfinkel, 1996). Ethnomethodology’s re-analysis of sociological problems is most clearly observed in the concept of respecification. Ethnomethodology’s agenda is the respecification of sociological understandings of the social world, by recovering what is already known about the social world as observed in members’ “competent mastery of practical affairs” (Sharrock, 2001, p. 258). It respecifies sociology’s “decontextualised descriptions of ‘social structure’” (Stephen Hester & Francis, 2007, p. 4) as members’ “instructably witnessable intelligibility” (Garfinkel, 2007, p. 21) in their organisation of activities “in real time and in detail” (Burns, 1999, p. 29). In this way, phenomena within the organisation of social action are respecified as topics (Psathas, 1980), rather than being framed as resources in sociological traditions (Stephen Hester & Francis, 2000; Peräkylä, 2004b). Though the respecification of activities as practical accomplishments may constrain the focus of ethnomethodological studies (Davidson, 2012a), it reveals taken-for-granted aspects of social interaction and opens up new ways of knowing.

Ethnomethodology’s respecification of social order established the epistemic view (Sharrock & Anderson, 1986) that order is produced through the practical reasoning and methods of its members (Heritage, 1984b). Ethnomethodology is then the study of members’ methods, or ethno-methods (Bergmann, 2004; Psathas, 1980; Silverman, 2001), which are “locally produced, in vivo, locally situated members’ practices as they meaningfully engage with, make sense of and give sense to, the world and others around them” (Jenkings, 2006, p. 958). Ethnomethodology studies
ethno-methods as a type of phenomenon produced and oriented to by members in the doing of social life (Jenkings, 2006). It is through these methods, which “ascertain, classify, evaluate, and interpret other people’s activities, rendering various situations mutually orderly and intelligible” (Poggi & Sciortino, 2011, p. 145), that social order is accomplished.

The way in which members make sense of each other’s methods and their social reality was of particular interest to Garfinkel. His early studies or “breaching procedures” (Garfinkel, 1964, p. 239) made people’s sense-making practices visible when they accommodated out-of-the-ordinary circumstances that opposed the social order. In addition, the assignments that Garfinkel set for his students required them to contradict the ordinary pattern of social action. Garfinkel (1964) exposed members’ sense-making of social order in the following way,

Procedurally it is my preference to start with familiar scenes and ask what can be done to make trouble…and to produce disorganized interaction should tell us something about how the structures of everyday activities are ordinarily and routinely produced and maintained…I have found that they produce reflections through which the strangeness of an obstinately familiar world can be detected. (p. 227)

It was found that when members were presented with unexpected situations that contradicted the social order, they used interactional and cultural resources to interpret their context and make sense of their interactants’ actions (Garfinkel, 1964). In turn, members’ talk and embodied activity provided others with the means of making sense of their actions (Francis & Hester, 2004). Members’ sense-making is therefore a witnessable social phenomenon. In addition, Garfinkel’s empirical explorations explicated members’ social actions as being accountable, indexical, and reflexive, and these characteristics are considered further below.
3.2.2 Social actions as accountable.

Ethnomethodology is in part built upon the phenomenological meditations of the philosopher Edmund Husserl (Liberman, 2007; von Lehm, 2014). The ethnomethodological position that human action is accountable, and can be observed in the accomplishment of everyday activities, can be traced back to Husserl’s philosophical inquiries, in which he questioned the apodictic nature of the world as being. Husserl (1960, p. 17) posed the question, “Does not the existence of the world present itself forthwith as such an evidence?” This, and other meditations by Husserl (1960), justified understanding the world as evidenced through its being. Husserl did not examine concrete phenomena, but instead hypothesised about it (Jenkings, 2009). In contrast, Garfinkel studied phenomena by “chasing down where they can be witnessed, where they come alive with a real worldly coherent practice of thinking reason” (Liberman, 2007, p. 91). Husserl’s (1960) recognition of the importance of “locally situated activity” (Jenkings, 2009, p. 776) as an object of study informed Garfinkel’s (1967) development of a research program that investigated the observable and accountable existence of social action (Liberman, 2007).

Husserl’s phenomenological understandings are manifested in the ethnomethodological assumption that all actions are accountable. Ethnomethodology’s project is to “analyse everyday activities as members’ methods for making those same activities visibly-rational-and-reportable-for-all-practical-purposes, i.e., ‘accountable’, as organisations for commonplace everyday activities” (Garfinkel, 1967, p. vii). Members’ methods are publically witnessable phenomena that “are not independent of the observer and his or her practical relevancies but rather their very
availability is constituted by those relevancies” (Stephen Hester & Francis, 2003, p. 45). Thus, ethno-methods are “reflexive, self-organising, organised entirely in situ, locally” (Livingston, 1987, p. 10). In their achievement and maintenance, they are “manifestly observed and witnessable” (Garfinkel & Livingston, 2003, p. 22) and “visible, recordable, and subject to inspection” (Hilbert, 1990, p. 805). Subsequently, members interpretively forecast and attribute meaning to one another’s actions (Suchman, 1988). Thus, the accountability of methods between members (and the analyst) generates intersubjective knowledge of their social world (C. Goodwin & Heritage, 1990; Heap, 1992; Heritage, 1987).

3.2.3 Social actions as indexical and reflexive.

The studies of sociologist Émile Durkheim were also influential on Garfinkel’s development of ethnomethodology. Durkheim (1982) theorised that “there are ways of acting, thinking and feeling which possess the remarkable property of existing outside the consciousness of the individual” (p. 51). The “ways of acting, thinking and feeling” (Durkheim, 1982, p. 51) become the site of investigation and are assumed. Thus, a Durkheimian perspective presupposes the occurrence of the social phenomena it works to rationalise (Stephen Hester & Francis, 2007). This is encompassed in Durkheim’s (1982, p. 45) aphorism, “our basic principle, that of the objective reality of social facts”. However, Garfinkel (2007, p. 14) redefines Durkheim’s maxim, so that it reads “the objective reality of social facts is sociology’s fundamental phenomena”, and emphasises that social facts are constitutive of the production of phenomena (Lynch, 2009b). In this sense, ethnomethodology proposes that the details of “social facts”, or phenomena, are observed in their orderliness (Garfinkel, 2007). Thus, “the objective
reality of social facts” (Garfinkel, 2007, p. 15) is taken up by ethnomethodology in the analysis of how phenomena are social in their observability.

The observability of phenomena is also considered by philosopher Ludwig Wittgenstein in his study of language. Evidence of the social order, being “mutually produced and made available” (Jenkings, 2009, p. 776) to parties of interaction, is found in language. Wittgenstein (1958, p. 11) used the term “language-game” to locate “the speaking of language” as part of an activity, or as a “form of life”. His position that “what appears as rule-governed behaviour does not belong to the individual but to the community” (Duranti, 1986, p. 239), methodologically suggests that the linguistic system can only be studied by observing the activity of speaking. In this way, language is contextualised; hence its meaning must be understood in its context (J. Lee, 1991). Wittgenstein (1958) postulated that “the shared nature of the communicative system is two-sided: it is assumed, and at the same time must be realised, in concrete acts of verbal communication” (Duranti, 1986, p. 240). Indeed, talk and action is observed to respond to, and manipulate, the social context.

In light of the theoretical standpoints of Durkheim (1982) and Wittgenstein (1958), Garfinkel expanded understandings of the organisation of social structures that impact the social context. Members view their social reality as “the world of daily life known in common with others and with others taken for granted” (Garfinkel, 1967, p. 35). Thus, the social organisation is seen but unnoticed by members, who orient to the social structure without a conscious awareness of its institution (Freiberg & Freebody, 1995; Garfinkel, 1967; C. Heath & Hindmarsh, 2002; Heritage,
Members realise their activities according to social and cultural knowledge exhibited in this social structure (van Dijk, 1997). Their knowledge of the social world is manifested as individual and intersubjective understandings of their interactional context (Heritage, 1987). The resultant way in which members’ activities draw upon this knowledge, and subsequently change what is known about their social context through the consequences of their actions, is central to the study of ethnomethodology (Heritage, 1987).

Through the lens of ethnomethodology, members’ actions are indexical, as they are constructed and interpreted in and through their context (Heritage, 1974; ten Have, 2007b). Indexicality refers to meaning-bearing units of interactional phenomena, including a word, behaviour, or occurrence (Alvesson & Sköldberg, 2009), through which members produce and maintain their social context (Heritage, 1984b). Thus, the order and ordinariness of social interaction is locally occasioned, locally produced, and locally recognised as constitutive of its context (Garfinkel & Livingston, 2003; ten Have & Psathas, 1995). At the same time, social action is reflexive as it alters the context by producing consequences for future actions (Heritage, 1974; van Dijk, 1997). In interaction, members must account for the context for their actions to be suitable within it, while also showing the reconstitution of the context through the local accomplishment of their actions (C. Goodwin, 2000; ten Have & Psathas, 1995). Accordingly, actions are both “context-shaped [indexical] and context-shaping [reflexive]” (Heritage, 1984b, p. 242). Therefore, members actively orient to “frames” provided by their context during the design of
their actions, and implicate the context in the assessment of the actions of others (ten Have & Psathas, 1995).

### 3.2.4 Social actions as language in situ.

Within sociology, the study of language has endeavoured to rectify, rather than understand, the means by which social action is achieved (Garfinkel, 1996, 2007; Garfinkel & Sacks, 1970). Sociological studies separated language from the organisation of social life; however, ethnomethodology approached language as the site of social organisation through which members accomplish everyday affairs (C. Goodwin & Duranti, 1992). Garfinkel (1986) surmised that social order was produced in the organisation of conversation; thus the study of language, or conversation, is central to the ethnomethodological approach (Collier, Moffatt, & Perry, 2015) as a way of “getting at” the orderly production of social action. Hence, members are not the “cultural” (Garfinkel, 1967, p. 68) or “judgemental” (Garfinkel, 1967, p. 71) dopes that sociological theories make them out to be (Coulter, 1974); rather, they use language in meaningful ways to organise and make sense of their social worlds.

As masters of language (Garfinkel & Sacks, 1970) members manage and transform social activities (Heritage, 1974). Thus, social reality is sustained, managed, and acted upon by members’ ordinary description of the social world in and through their talk (Heritage, 1984b). For example, ethnomethodological studies of social order in workplace settings revealed “the competencies involved in doing the work” (Psathas, 1995, p. 148) which involved mastering and using context-specific language (Psathas, 1995). Through language, members’ organisation of social activity and
composition of practical reasoning accomplishes a sense, or description, of the social world (Mehan & Wood, 1975).

In interaction, members recognise “descriptive representations of ordinary everyday affairs” (Heritage, 1974, p. 139) in the talk of others. Garfinkel (1964) was interested in how these mundane descriptions were evaluated, interpreted, and responded to in their respective contexts by other members. It was observed that members “make sense of some particular utterance by seeing it as a part of a larger whole, which includes what has preceded it and what they anticipate is to come” (Sidnell, 2005, p. 2). In this way, language captures and constitutes what is observably everyday life (Heap, 1992). Thus, through their production and sense-making of descriptions of ordinary affairs, members socially organise their activities.

3.2.5 Ethnomethodological approaches to analysing social action.

Ethnomethodology analyses social action through three primary approaches identified by Francis and Hester (2004) as self-reflection, acquired immersion, and the detailed analysis of talk and embodied action. Central to each of these approaches is the concept of immersion in a particular environment, in which the analyst becomes competent in the social phenomena under examination (Francis & Hester, 2004; Rawls, 2002). Ethnomethodologists’ immersion in a particular environment, known as the “unique adequacy of methods” (Garfinkel, 1996, p. 7), treats members’ methods in the production of their activities as “discoverable topics of order” (Lynch, 1999, p. 217). However, the way in which the analyst immerses themself in a setting in acquired immersion, differs to their immersion in the “doing” of an activity in self-reflection, and in the
analysis of recorded talk and action. The following discussion considers the application of the adequacy of methods in influential ethnomethodological studies across different approaches of analysis.

3.2.5.1 Acquired immersion.

Acquired immersion involves the analyst being immersed, for various lengths of time, in a setting wherein members enact particular, or specialist knowledge and competencies (Francis & Hester, 2004). Studying members’ competencies comprises,

learning how members’ actual, ordinary activities consist of methods to make practical actions, practical circumstances, common sense knowledge of social structures, and practical sociological reasoning analysable; and of discovering the formal properties of commonplace, practical common sense actions, ‘from within’ actual settings, as ongoing accomplishments of those settings. (Garfinkel, 1967, pp. vii-viii)

In consideration of how actions are produced “from within” (Garfinkel, 1967, p. viii), studies of acquired immersion often employ ethnographic approaches (Pollner & Emerson, 2001) whereby the analyst collects documentary evidence, such as audio recordings (Rawls, 2002), of members’ accomplishment of everyday activities.

In addition, a deep understanding of members’ specialist knowledge or competence used in the organisation of their activities is required if the analyst is to report on their practical action and reasoning. Settings requiring specialist knowledge include workplaces, such as medical practices. For example, Maynard (2003, 2006) volunteered in clinical workplaces to examine practitioners’ methods of delivering good and bad news to clients. Other areas of social life governed by social and moral orders also require specialist knowledge. For example, Wieder’s (1974a, 1974b) account of the “convict code”, that is, the social order of a half-way house, showed how the
maxims of what residents could or could not take part in governed their actions. Thus, the approach of acquired immersion uncovers the practical methods by which members produce courses of action in socially organised settings (Sharrock, 2001; Turner, 1974).

3.2.5.2 Reflection.

The ethnomethodological inquiry of reflection is a “first person analysis” (Stephen Hester & Francis, 2003, p. 37) wherein the analyst examines their own methods of producing activities in a particular setting (Francis & Hester, 2004; Garfinkel & Wieder, 1992; Lynch, 1999). The analyst often reflects on their methods with the support of audio and/or video recordings, or ethnomethodology-informed auto-ethnography in the collection of journals, logs, and photographs (Rouncefield & Tolmie, 2013).

Analysts are encouraged to become a member in the setting of activity to steadily and increasingly come upon phenomena “via the work in and as of the unmediated details of producing it” (Garfinkel, 1996, p. 6). However, this practice of the unique adequacy of methods has been criticised as an “extreme, and rather convoluted, participant-observation requirement” (Lynch, 1999, p. 218) causing early ethnomethodologists to spend years studying and practising in particular fields (such as law or medicine) to examine their methods as members (Livingston, 2003; Rawls, 2002). Despite this, the unique adequacy of methods supports the validity of analysts’ accounts of “discoverable phenomena of order” (Garfinkel & Wieder, 1992, p. 181) in their production of activities.

Ethnomethodological reflections have historically been separated as analyses of work and play. Ethnomethodological studies of work, also workplace studies (Luff, Hindmarsh, & Heath, 2000) or studies of work
program (Francis & Hester, 2004), are “hybrid” (Garfinkel, 1996, p. 13) studies which combine work and research. For example, ten Have (1999b) analysed his work in creating a website and in particular his use of hyperlinks as an “explicating device” (p. 273) to pre-structure readers’ textual practices. These studies produce respecifications of sociological accounts of the social world.

Studies of play have illustrated the intricate organisation of members’ actions in a myriad of pursuits, including playing music such as jazz piano (Sudnow, 1978, 1979) or in an amateur string quartet (Weeks, 1990, 1996a, 1996b, 2002). Studies have also considered how mundane activities are accomplished; for example, Sudnow (1983) illustrated the work of mastering how to play the video game Breakout in descriptions of where to look on the screen and how to use controls to achieve a high score. These studies demonstrate that play is work in the sense that activities are accomplished through complex interactional work (Rouncefield & Tolmie, 2013). Thus, reflective ethnomethodological accounts of work and play expand awareness of the taken-for-granted methods through which social action is accomplished.

3.2.5.3 The study of talk and interaction.

The study of talk and interaction is the most oft-applied ethnomethodological approach (Lynch, 2009a). It reveals the order of social action as organised in members’ language. The study of talk and interaction is the preferred method of conversation analysis (Francis & Hester, 2004), established by Harvey Sacks with colleagues Emanuel Schegloff and Gail Jefferson. Though conversation analysis has been recognised as an enterprise in its own right due to the specificity of its methods (ten Have &
Psathas, 1995), its origin and sociological standpoint is closely aligned to ethnomethodology. Consequently, conversation analysis is considered here as an ethnomethodologically informed approach.

Conversation analysis was developed from Sacks’ dissatisfaction with how sociological language descriptions took the construction of the social world for granted. Rather than assuming the establishment of the social world, Sacks proposed studying members’ construction of it. During Garfinkel’s sabbatical at Harvard University in 1959, Sacks discussed his intention to study members’ construction of social life. Sacks’ analytic focus stemmed at least partly from Irving Goffman’s promotion of social life as a legitimate research agenda of sociology, as he had been a graduate student of Goffman at the University of California in Berkeley (Pomerantz & Fehr, 1997; Psathas, 2008). In addition, Garfinkel had begun to demonstrate the orderliness of everyday social activity, which had resonated with Sacks’ questions about what constituted forms of interaction (Pomerantz & Fehr, 1997). Garfinkel and Sacks (1970) jointly considered the everyday production of social life, resulting in a co-authored book chapter “On Formal Structures of Practical Actions” in which they proposed an analytic focus on the constructs of members. Their empirical concern with the practices of actors separated them from contemporary sociological thought.

Following this, Sacks continued to question whether sociology “could hope to deal with the details of actual events, formally and informatively?” (1995, Vol. 1, p. 622). He tested the possibility by collecting audio recordings of actual events accessible to him at the time: telephone calls to a suicide prevention centre and group therapy sessions (Sacks, 1995, Vol. 1). He presented analyses of the recordings in his
lectures at the University of California from 1964 to 1972. His analyses established language as socially organised in structure and socially organising since by it members accomplished their activities (Drew, 2005; Sigman, 1995). Importantly, Sacks’ findings acknowledged interaction as “the primordial site of sociality” (Drew, 2005, p. 76) whereby members talk social life into being “in moment-to-moment ways” (Moffatt, 2014, p. 4).

With collaborators Emanuel Schegloff and Gail Jefferson, Sacks developed conversation analysis as “a science of social action” (Drew, 2005, p. 73).

As illustrated in the analytic focus of Garfinkel and Sacks, the relationship between ethnomethodology and conversation analysis was formed by their mutual focus on the local accomplishment of order through socially organised actions (Button & Lee, 1987a; ten Have & Psathas, 1995). Conversation analysis provides “an interactional architecture” (Jacoby & Ochs, 1995, p. 174) to examine how members make apparent their common-sense knowledge through which they interpret their social context (Davidson, 2012a; Forrester, 2010; Garfinkel, 1964; Heritage, 1984b). In this way, conversation analysis’ examination of talk makes possible the ethnomethodological study of members’ orientation to social structures in their shared sense-making and production of their social reality (Heritage, 2004). Thus, each approach uncovers the taken-for-granted organisation of the social world as constructed by its members.

Ethnomethodology and conversation analysis produce fine-grained analysis of sequences of interaction and have been employed in the examination of children’s social accomplishment of literacy practices (for example, Davidson, 2007, 2009b, 2011; Davidson et al., 2014). Currently within the fields of education and technology, close-focused analysis of
interactions in which literacy practices are employed has also been produced by multimodal discourse analysis (Daniels, 2016; Flewitt, 2005b, 2011; Flewitt, Nind, & Payler, 2009; Taylor, 2012, 2014a, 2014b). Of these, only a small number analyse young children’s interactions during technology use. Multimodal discourse analysis, also known as multimodal interaction analysis (Jewitt, 2009; Norris, 2004, 2013, 2014), examines the role of visual, gestural, and kinaesthetic modes alongside the verbal mode in interaction (Flewitt, 2011). Ethnomethodological conversation analysis and multimodal discourse analysis each emphasise the way in which meaning is interactively generated through verbal and multimodal actions (such as gaze, gesture/touch, facial expressions, and body movement/posture).

In particular, ethnomethodological conversation analysis contributes a depth of analysis currently in little evidence in research documenting young children’s digital literacy practices in the home. Using sequential analysis, as demonstrated in Davidson’s (2007, 2009b, 2001) studies, it examines how family members interactively construct meaning across a series of turns; paying attention to how even the smallest utterances are consequential for accomplishing everyday activities. Therefore, the fine-grained analysis afforded by ethnomethodology and conversation analysis enables detailed consideration of how young children socially produce digital literacy practices at home.

This introduction to conversation analysis is extended in the following overview of its claims, key concepts, and literature. Where Garfinkel (1967) used the term *members* to describe people, Sacks (1995) commonly used *actors*, and this latter terminology is adopted in the following section on conversation analysis.
3.3 Conversation Analysis

This overview of conversation analysis provides a comprehensive account of the understandings at its crux and key literature which have advanced its agenda. First, the central claims of conversation analysis are discussed. Second, key concepts of talk and the “machinery” (Sacks, Schegloff, & Jefferson, 1974, p. 725) of its sequential structure are outlined. Third, the structure of two-party talk in telephone calls and multiparty talk are described. Fourth, the organisation of interaction is considered in situations wherein actors are copresent and produce incipient talk. Fifth, Sacks’ (1995, Vol. 1) concept of “settinged” is examined. Sixth, discussion considers how embodied actions contribute to actors’ accomplishment of interaction. Finally, two processes of analysis are explained: corpus analysis and single-case analysis.

3.3.1 Claims of conversation analysis.

A key characteristic of talk is that it is unpredictable, as interaction is rarely planned in advance (Heritage, 2004; Sacks et al., 1974). However, Sacks, Schegloff, and Jefferson (Sacks, 1995; Sacks et al., 1974) stipulated that all talk follows rules (or routines) of interaction. These rules are not theoretically imposed accounts of social conduct, but “situationally invoked standards” (Pomerantz & Fehr, 1997, p. 67) or conversational features to which actors orient in their orderly production of talk (Hustler & Payne, 1985). These rules are identified in the following three claims of conversation analysis,

1. “the responsiveness to context by producing a ‘next’ action that a prior action projected;

2. the creation of a context by the production of that next action; and
3. the showing of understanding by these means” (Heritage, 2005, p. 105).

The claims encapsulate the basic mechanism of organised turn-taking employed by actors in their accomplishment of social action. The first claim refers to the sequential order of interaction managed through the turn-taking system. The “organisation of taking turns” (Sacks et al., 1974, p. 696) is a basic element of the routine of mundane talk wherein the design and placement of a preceding turn provides the context for a next turn (Stivers & Sidnell, 2005). Actors orient to an inherent preference for continuity of conversation (Button, 1988) by situating their turns as closely to the previous turn as possible (Hutchby & Wooffitt, 1998; Sacks et al., 1974). Thus, talk proceeds in a locally situated way “through a series of ‘turns so far’” (Schegloff, 1996b, p. 55).

The second claim of conversation analysis considers how talk and its context are inextricably linked (Heritage, 2004), with talk being a structural feature of the actor’s context, and reciprocally influenced by the context in which it is produced (Cook-Gumperz & Corsaro, 1986; van Dijk, 1997). To begin with, actors orient to “general procedures” (Forrester, 2010, p. 135) of the social structure, by which they make sense of, and manage, the sequential development of talk (Psathas, 1995). In doing so, actors “enjoy, monitor, interpret, and manipulate as they design turns, sort out turn-taking, [and] co-construct utterances and sequences” (Schegloff, Koshik, Jacoby, & Olsher, 2002, p. 15). Thus, actors make use of social structures in the context of their talk, and in this way the context impacts the talk that is produced. Reflexively, each new turn in the production of talk alters the social context, so that as actors accomplish turns of talk, they provide a
context for a next turn. Consequently, actors create and alter the context of their talk in and through their talk (Heritage, 2004; van Dijk, 1997).

In their talk actors also make accountable their sense-making of preceding turns. Herein, the third claim of conversation analysis is demonstrated in the way that actors frame their talk, so as to show what they understood prior turns to mean (C. Goodwin & Heritage, 1990), and be “suitably responsive” (Drew, 2008, p. 137) to them. Actors’ display of understanding provides a “proof procedure” (Sacks et al., 1974, p. 728) for another actor (and the analyst) to ascertain how a prior turn was received and understood (Sacks et al., 1974). This proof procedure is “a systematic consequence of the turn-taking organisation of conversation” (Sacks et al., 1974, p. 728) and allows conversation analysts to explicate the construction of meaning and action across turns (Drew, 2005). Therefore, through the exchange of turns, in which actors make known their understanding of prior talk, social action is accomplished. The following description of key concepts of conversation analysis considers how talk is constructed through particular apparatus.

3.3.2 Key concepts of conversation analysis.

Key concepts of conversation analysis were developed from observations of actors’ interactional practices during talk (Sacks et al., 1974). This discussion of the organisation of talk as relevant to the turn-taking system considers, first, how actors use the turn-taking structure to produce orderly interactions; second, a common turn sequence, the adjacency pair; third, actors’ use of grammatical, pragmatic, and prosodic resources in their construction of talk; and finally, the organisation of repair.
The revolutionary paper by Sacks, Schegloff, and Jefferson (1974), “Simplest Systematics of the Organisation of Conversation”, proposed the turn-taking system (as previously described) as a formal analytic method through which to analyse social phenomena. The turn-taking structure, though “abstractly conceived” (Sacks et al., 1974, p. 727), is interactionally managed by actors in their collaborative “turn-allocation and turn-construction” (Sacks et al., 1974, p. 727). For example, actors’ turn-by-turn talk comprises openings (Schegloff, 1968, 2002a, 2002b), a sequence of turns, and closings (Schegloff & Sacks, 1973). They observe the orderliness of interaction in their turn-taking by talking one at a time (Sacks et al., 1974). They use “turn constructional units” (Sacks et al., 1974, p. 704) such as single words, phrases, or sentences (Drew, 2005) to produce a “possibly complete” (Schegloff, 1998b, p. 55) turn of talk. Their turns are separated by transition relevance places in which the roles of speaker and listener alternate.

One of the most common turn sequences in conversation is the adjacency pair (Schegloff, 2007; Schegloff & Sacks, 1973). Adjacency pairs are coupled turns of appropriately-paired actions, such as questions and answers, summons and answers, and directives and responses, so that “if one speaker does an initial action of a certain type, the other (i.e., recipient) is expected to respond with an action paired with that first action” (Drew, 2005, p. 89). The absence of a second part in an adjacency pair is noticeable, and may prompt the speaker to reissue the first part (Sacks, 1995). Speakers may also design first parts in particular ways to promote a preferred second part being returned. This is referred to as preference organisation (Pomerantz, 1984a), wherein turns responding to a first part (such as an
answer to a question) are signalled by the speaker to be preferred or

dispreferred. Thus, the adjacency pair is a frequently used resource for

accomplishing social action in talk.

Actors draw upon grammatical, pragmatic, and prosodic resources of
talk to determine transition relevance places across turns, and these are

briefly explained here. Grammar is an organising device by which actors

construct turns of talk (Schegloff, 1996b). Although a focus on grammar

originates from the linguistic analysis of grammatical proficiency

(Chomsky, 1959, 1965; Ervin-Tripp, 1973), within conversation analysis the

grammatical construction of a turn projects its completion and a transition

relevance place (Heeschen & Schegloff, 1999). Judging the grammatical

completeness of a turn requires “a context-sensitive inference” (Selting,

2001, p. 250) of its semantic, pragmatic, and sequential qualities. In

addition, turns are understood pragmatically in the action that they

“recognisably” (Schegloff, 1996b, p. 59) implement. In other words,

listeners recognise and respond to the social action initiated by the prior

turn. Using these grammatical and pragmatic resources, actors manage the

turn-taking system.

Prosodic resources are also used to manage turn-taking (Walker,

2013). Actors’ phonetic turn-design can mark its continuation or a turn

relevance place. For example, to hold onto their turn when nearing a

transition relevance place, a speaker may produce a “rush through”

(Schegloff, 1982, p. 76) by speeding up their talk and withholding an in-
breath or a descending pitch (Schegloff, 1982, 1987a, 1998b) until after they

are mid-way through their next unit of talk (Schegloff, 1982, 1987a). Their

use of continuing prosody signals that their turn is not complete (Local &
Walker, 2004; Schegloff, 1996b, 1998b; Selting, 1996, 2005; Wells & Macfarlane, 1998). Actors may also employ rising or questioning intonation to signal the closing of their turn constructional unit and project a turn relevance place (Schegloff, 1998b). Listeners can determine the trajectory of a turn-in-progress by attending to its prosodic cues and judging the ways in which it appears complete (Schegloff, 1996b) to know when to speak (Drew, 2005). As both speakers and listeners, actors use prosodic resources of talk to locally construct turn-by-turn talk.

Despite the systematic production of conversation, its organisation is “susceptible to errors, violations, and troubles” (Sacks et al., 1974, p. 723). The “organisation of repair” (Schegloff et al., 1977, p. 361) is provided for in the turn-taking system to repair trouble that may occur in conversation (Sacks et al., 1974). Schegloff, Jefferson, and Sacks’ (1977) influential paper, “The Preference for Self-correction in the Organisation of Repair in Conversation”, revealed that actors display a preference to repair their own talk. Actors may correct or “self-repair” (Schegloff et al., 1977, p. 363) their talk in the same turn as the trouble source, immediately after it in the turn transition space, or following a subsequent turn to that of the trouble source. Repair initiated by other actors is constrained until after the boundary of the turn containing the trouble source (Sacks et al., 1974; Schegloff et al., 1977). In this way, opportunities for self- and other-initiated repair are relational as they follow sequentially, so that the organisation of repair (Jefferson, 1974, 1987; Schegloff, 1979, 1992; Schegloff et al., 1977) is socially accomplished. Thus, using the machinery of the turn-taking system and grammatical, pragmatic, and prosodic resources, actors collaboratively produce social action. The next section describes the sequential structure of
talk in two-party and multiparty interaction by recounting the trajectory of conversation analytic research.

3.3.3 **Sequential structure of two-party and multiparty interaction.**

Producing a description of the sequential structure of talk is a primary concern of conversation analysts. A substantial number of early studies analysed the organisational structure of two-party telephone conversations. As conversation analytic inquiry expanded, studies also examined the structure of talk in multiparty interactions, whereby three or more actors form multiple parties in talk. This recount of the conversation analytic research trajectory from two-party talk, as analysed in telephone conversations, to multiparty interaction, describes their respective organisational structure and sequential accomplishment. It also shows how pivotal conversation analytic work has attended to technology.

Due to the accessibility of two-party telephone conversations (Sacks, 1984), early work by conversation analysts is dominated by studies of telephone calls. This work contributed to historical and groundbreaking discoveries of the nature of naturally occurring interaction (Mondada, 2008), particularly in relation to two-party talk. Most notably, Sacks’ (1995) analysis of audio recorded telephone calls to a suicide prevention centre contributed to the establishment of conversation analysis. His findings, and those of subsequent studies, demonstrate how actors use vocal resources to negotiate and produce orderly engagements (Schegloff, 1986). The organisational structure of a telephone conversation can be recognised in any context due to it being so well established (Schegloff, 1993b). So much
so, Schegloff (1993b) claims the structure of telephone conversations constitutes “a sociointeractional form or genre” (p. 4547).

Schegloff’s (1968, 2002a, 2002c) seminal study of 500 telephone conversations established openings to be critical components that influence and constrain the conversation body and closing. Opening exchanges constitute a pre-beginning, a telephone-initiated summons-answer sequence, an identification-recognition sequence, and a greeting sequence respectively (Schegloff, 1968). A telephone pre-beginning encompasses a series of actions by which a caller and recipient orient to and prepare for an imminent telephone exchange (Haddington & Rauniomaa, 2011). Audio and video recorded telephone calls show that for the caller, a pre-beginning comprises actions such as dialling a telephone number to cause the recipient’s phone to ring (Haddington & Rauniomaa, 2011; Schegloff, 1968). For the recipient, the pre-beginning constitutes the ringing of their telephone and their receipt of it (Haddington & Rauniomaa, 2011; Mondada, 2008). The ringing is a summons, and like in face-to-face talk, it is used to ascertain the recipient’s availability to engage in talk (Schegloff, 1968, 2002c). The caller’s summons makes relevant the recipient’s answering of the telephone, and this adjacency pair opens the telephone conversation. The ordering of talk in the opening summons-answer sequence is described as the “distribution rule for first utterances” (Schegloff, 1968, p. 1076), whereby the recipient of the telephone call speaks first.

Recipients of telephone calls commonly respond through self-identification, using their name, referred to as an address term (Schegloff, 1968). Following the recipient’s self-identification, the caller may return a self-identifying greeting. The exchange of names between the recipient and
caller constitutes an identification-recognition sequence. The address terms used by the speakers reveal the state of their relationship and the identities by which they recognise each other. Alternatively, the caller can choose not to self-identify but expect the recipient to recognise them by their voice (Schegloff, 2002c). The recipient’s candidate identification makes relevant the caller’s confirmation, or correction through self-identification. On other occasions speakers may immediately orient to who each other are after making contact (Schegloff, 2002a). For instance, the recipient may infer the identity of the caller (Sacks, 1995; Schegloff, 1968), or the caller may recognise the recipient from their answer. The caller can display their recognition of the recipient at the first opportunity, such as by addressing the recipient and making accountable the relationship between them (Schegloff, 1979, 1986, 2002c). Through these methods callers and recipients co-construct an identification-recognition sequence.

Following identification the caller introduces a topic of talk (Schegloff, 1968) as the reason for the call (Button & Casey, 1985, 1988; Sacks, 1995; Schegloff & Sacks, 1973; Schegloff, 1979, 1986). The speakers interactionally organise talk on the topic/s in the body of the telephone conversation (Button & Casey, 1984, 1985; Maynard, 1980; Maynard & Zimmerman, 1984; Whalen & Zimmerman, 1987). Following talk about one or more topics, the speakers carefully and sequentially exit talk through a closing sequence (Schegloff & Sacks, 1973; Schegloff, 1979, 1986; Whalen & Zimmerman, 1987). Like openings, closings comprise a distinctive part of telephone conversation (Schegloff, 1993b). They are reached through speakers’ agreement of organisational tasks and duties
(Whalen & Zimmerman, 1987), and constitute closing adjacency pairs (e.g., “bye”), which lead to the termination of the conversation.

More recently, analysis of video recorded telephone calls has revealed that telephone conversation closings can be extended following the call’s termination, in what is termed a “post-closing sequence” (Mondada, 2008, para. 47). Embodied or verbal actions continue the relevance of the call until the activity set up within it is completed (Mondada, 2008). Thus, using the recognisable structure of telephone conversation, actors mutually organise their social world.

Analysis of telephone conversations remains a strong arm of conversation analytic research, together with the more recent examination of multiparty interaction as organised through actors’ formation of manifold parties. It could be conjectured that analysis of multiparty interaction became increasingly prominent following an interest in institutional talk in the 1970s. During this time, interactional patterns employed within various institutional settings, such as courtrooms (J. Atkinson, 1992; J. Atkinson & Drew, 1979), were analysed to demonstrate the indexicality and reflexivity of the institutional context in actors’ interaction (Heritage, 2004). More recently, studies have specifically analysed the organisation of multiparty talk in institutional settings, such as in children’s paediatric visits (Aronsson & Rindstedt, 2011) and multinational business meetings (Markaki & Mondada, 2012). This description of multiparty interaction considers how it is organised between multiple parties through the turn-taking system (Sacks, 1995).

On the topic of the organisation of talk, Sacks (1995, Vol. 1) famously observed that “numbers matter” (p. 127). By this Sacks meant that the
number of actors bears upon how talk is managed. Subsequently, multiparty talk does not extend the turn-taking structure of two-party talk (Sacks, 1995, Vol. 2). Within multiparty talk actors organise themselves into parties, with the consequence that,

the number of parties into which those participants may be seen to be organised...can change continuously as the contingencies of the talk change, contingencies most centrally supplied by the participants themselves and the nature of the talk which they undertake with one another. (Schegloff, 1995b, p. 35)

For example, in multiparty talk, conversations can “schism” (Schegloff, 1995b, p. 32; see Egbert, 1997) so that different actors speak simultaneously in separate conversations. In this way, parties design their talk according to the number of actors present (Schegloff, 1995b).

Multiparty talk maintains the maxim that one actor speaks at a time through an “ordering of preferences” (Sacks, 1995, Vol. 2, p. 524). The ordering of speakers is determined through the turn-taking system. A current speaker may select the next speaker, such as by producing the first part of an adjacency pair (for example, a question), and directing it to them using an address term. Consequently, address terms (Lerner, 2003; Wootton, 1981) are typically more common in multiparty than two-party talk, as the issue of who is being addressed becomes relevant (Lerner, 2003). The address term is restricted to the beginning (turn-initial place), end (tag position), or between clauses in the utterance (Jefferson, 1973; Lerner, 2003; Schegloff, 1968). When no next speaker is selected, actors may self-select by taking the next turn. In addition, an actor can show their understanding of a prior turn’s completion, and initiate a new turn by gesturing at its outset (C. Goodwin, 1986b). In doing so, they rely on securing the joint attention of recipients to witness and respond to their gesture. Therefore, even when
multiple actors are involved, the production of talk and interaction has “order at all points” (Sacks, 1995, Vol. 1, p. 484).

This overview of the trajectory of research within conversation analysis has described the sequential structure of two-party talk, as exemplified in telephone conversation, and multiparty interaction. Early research focused on the organisation of telephone calls due to their accessibility and ease of recording, when developments in the field led to the study of multiparty interaction, especially in institutional settings. Despite differences in structure, all interaction—two-party and multiparty alike—is organised via the turn-taking system. The next section introduces a feature of interaction spanning two-party and multiparty talk: copresence and incipient talk.

3.3.4 Copresence and incipient talk.

A central focus of conversation analysis is how actors accomplish social action by entering into and withdrawing from turn-by-turn talk (Sacks et al., 1974). Actors may engage and disengage from talk in particular ways when they are aware of their copresence with others. Copresence is an actor’s “interactional state resulting from their awareness of others around them, and from their knowledge that others have the same awareness of them” (Goffman, 1963, p. 17). Copresence makes actors “uniquely accessible, available, and subject to one another” (Goffman, 1963, p. 22). This state of behaviour has been described as “mutually monitoring” (Szymanski, Vinkhuyzen, Aoki, & Woodruff, 2006, p. 394), as actors’ copresence affords a continuing opportunity for interaction in the monitoring of each other’s activity.
Talk is structured between copresent actors as a “continuing state of incipient talk” (Schegloff & Sacks, 1973, p. 325), in which it is initiated, terminated, and re-initiated. That is, actors intermittently produce spates of talk separated by lapses (Schegloff, 2007). The lapses signal disengagement (Szymanski, 1999) from talk (rather than projecting a closing sequence). The incipient pattern of talk displays actors’ understanding of their copresence, that they are “to be together for the duration, a duration set by contingencies and constraints other than those of the talk” (Schegloff, 2002a, p. 284). Actors orient to the contingencies and constraints of their situation, such as being seated together in a train car (Goffman, 1963; Schegloff, 2002a). Their lapse of talk provides the ongoing possibility for it to be re-initiated while they are together. When an actor re-initiates talk they do not use conversational openings such as “hello” (Schegloff, 2002a; Szymanski et al., 2006), but sequentially organise embodied resources, such as gaze, bodily configuration, or walking routes, to publically display attentiveness to further interaction (Mondada, 2009; Mortensen & Hazel, 2014). Thus, an incipient state of talk is not continuous, but actors’ copresence makes relevant an ongoing opportunity for further talk (Szymanski, 1999).

Notable research by Szymanski (1999) and Szymanski et al. (2006) demonstrate how incipient talk is produced in physical and technologically-mediated copresence. Szymanski (1999) studied how copresence between four school children provided resources for re-engaging and disengaging from incipient talk in their completion of writing tasks. The children’s common orientation to “interactively relevant items” (Szymanski, 1999, p. 2), such as the writing tasks, enabled their re-engagement in, and
organisation of, turn-by-turn talk (Szymanski, 1999). They employed questions, noticings, and announcements to make their placement in the writing tasks publicly accountable and to re-initiate talk. During lapses in talk, children displayed their understanding of the status of interaction by orienting to their writing tasks. In the course of their independent activity, children read the tasks and their answers aloud (Szymanski, 1999). Their out-loud reading became a resource for re-engaging talk, proving that “phases of lapse are inter-related with phases of turn-by-turn talk” (Szymanski, 1999, p. 22). This reveals that the children’s copresence and orientation to writing tasks were a resource for resuming incipient talk.

In more recent work, Szymanski has applied the concept of incipient talk to examine conversation occurring via push-to-talk mobile radios. Szymanski et al. (2006) showed that though physically separated, adults’ organisation of talk over mobile radios was similar to an ongoing state of incipient talk in copresence. Rather than initiating talk with a greeting exchange, adults summoned their recipient, which provided a voice sample for their identification, and then initiated a topic of talk (Szymanski et al., 2006). To suspend talk, adults projected the completion of the current sequence by making a lapse in talk relevant. The organisation of their talk, which did not contain greetings or closings in the same way as telephone conversations, reflected the structure of copresent incipient talk (Szymanski et al., 2006). This may suggest that actors oriented to the technological affordances of the mobile radios in organising their talk. Thus, these studies (Szymanski, 1999; Szymanski et al., 2006) identified that incipient talk is accomplished through orientation to others’ physical or technologically-enabled presence.
The home has been recognised as a setting in which actors constantly engage and disengage from incipient talk in ways that reference its social orders (van Dijk, 1997). A small body of research (Busch, 2011, 2012; Danby et al., 2013; Fatigante, Liberati, & Pontecorvo, 2010) shows how young children produce incipient talk in the home. Busch (2011, 2012) illustrated that family members oriented to the ongoing relevance of talk in mealtimes so that, while they engaged in serving and eating food, they were in a continuing state of incipient talk with at least one other member. Danby et al. (2013) showed how young children produced “talk in activity” (Szymanski, 1999, p. 1) in their use of digital technologies. Talk was resumed when a child showed her father an iPad screen, or when the father asked the child questions; and lapsed when the child displayed an orientation to activity using the iPad. Another study revealed that in transitions in and out of games, children displayed “game prefaces” (Fatigante et al., 2010, p. 346) that showed their availability to engage in play. They also enacted “game codas” (Fatigante et al., 2010, p. 346) to signal their disengagement from game playing. Each of these studies show that incipient talk is a significant organisational device by which young children produce interaction and accomplish activities with others at home.

The following section discusses the concept of settinged (Sacks, 1995).

### 3.3.5 Settinged character of activities.

When actors accomplish their activities, they may formulate the setting (such as a meeting) in their talk, and so establish a mutual understanding of it (Sacks, 1995, Vol. 1). However, actors may also share an intersubjective understanding of the setting of an activity without specifying what it is in their talk. Sacks (1995, Vol. 1) used the term
settinged (or settinged-ness) to identify the observable characteristics of a setting to which actors oriented, but did not specify.

The observable character of a settinged activity is a “member’s phenomenon” (Sacks, 1995, Vol. 1, p. 516). By not specifying a setting or when it is relevant, members’ talk displays their “doing the fact that their activities are ‘settinged’” (Sacks, 1995, Vol. 1, p. 516). The “settinged character of activities” (Sacks, 1995, Vol. 1, p. 521) is constructed in members’ use of abstract apparatus and indicator terms. First, actors order their settinged activity using “abstract apparatus” (Sacks, 1995, Vol. 1, p. 521), in which their talk invokes characters of the setting, such as time (being early or late). Developing abstract apparatus in a setting shows it to be made “out of some course of activities” (Sacks, 1995, Vol. 1, p. 521).

Second, indicator terms (such as “here” or “this”), otherwise termed indexical expressions or references (Butler, 2008; Eglin, 2009), are a machinery for referencing an unformulated setting, persons, and activities to invoke and share an unspecified understanding of them (Sacks, 1995, Vol. 1). Indexicality means “that words or isolated statements do not ‘contain’ unequivocal meanings” (Lynch, 1993, p. 101) and understanding them requires their situated use. Actors may employ a stable (or consistent) use of indexical expressions to orient to the settinged character of activities as being important for understanding the interaction, and to privilege particular courses of action (Butler, 2008). As an example, Sacks (1995, Vol. 1, p. 520) showed that patients of a group therapy session used indexical expressions, such as “paying for this”, without specifying what they referred to. The patients designed their language to show that there was a setting in place and that they were “doing” the setting. They used indexical
expressions to formulate the existence of a setting without explicitly formulating what it was (Sacks, 1995, Vol. 1). Thus, indexical references are understood in their context, and invoke a settinged activity.

A small amount of research (Busch, 2011; Butler, 2008) has considered the settinged character of activities. Butler (2008) showed how young children’s activity of “fairy club” in school lunchtime play was settinged in the time, place, and membership categories in which actions were understood. Busch (2011) showed that in the home, family members treated mealtime as settinged by orienting to its temporal order, such as by saying grace before eating and ordering the eating and organising of food. Thus, by orienting to shared understandings of actors’ knowledge, their place and its resources, and the timing of activities, actors invoke the settinged character of activities without specifying them in talk. So far, this description of conversation analysis has primarily considered the verbal accomplishment of action; however, research has also considered how action is accomplished through embodied actions. The following discussion highlights how embodied actions are used in the organisation of interaction.

3.3.6 Embodied actions in interaction.

The conversation analytic approach has developed since its genesis to encompass the analysis of embodied actions in interaction and their relationship to verbal actions (C. Heath & Luff, 2013). Despite criticism saying otherwise (for example, Roger & Bull, 1989), conversation analysts showed early interest in the analysis of embodied actions (Nevile, 2015; see Sacks & Schegloff, 2002; Schegloff, 1998a, 2002a). This interest has increased with the development of video recording in the 1960s (Hammersley, 2012), enabling embodied actions to be studied in detail. This
direction of conversation analytic research focusing on bodily resources has been termed “the embodied turn” (Nevile, 2015, p. 122).

Embodied actions are body movements, such as gestures and head and gaze direction; and body positions, such as the physical proximity of participants, postural configurations, and facial expressions (Jenks, 2011). Conversation analysis treats gaze, bodily configurations, gesture, movement, and the manipulation of objects as resources (Mondada, 2014b) that actors employ and orient to in the organisation of interaction (van Dijk & Kintsch, 1983). Actors’ embodied resources are methods by which they accomplish everyday activities and construe their interaction as being accountable, indexical, and reflexive (Garfinkel, 1967).

Embodied actions are used in numerous ways with verbal actions (Jenks, 2011). However, there is a danger that the classification of actions as either embodied or verbal modalities needing to be put together (Deppermann, 2013; Mondada, 2014b) can impede understanding how they are used simultaneously to accomplish social action. In particular, the language of multimodality, which originates from other domains of interactional analysis, and has not been traditionally used within conversation analysis (Deppermann, 2013; Nevile, 2015), separates interactional resources into vocal and visuospatial (gestures, gaze, and bodily orientation) modes (Luff & Heath, 2015; Stivers & Sidnell, 2005). The terms may unnecessarily divide intricately intertwined resources of interaction (Birdwhistell, 1970; S. Jones & LeBaron, 2002; Kendon, 1972), in place of acknowledging how they are used together. Therefore, analysis should observe how interactional resources are calibrated to achieve social order.
Gestures “are structurally related to language” (S. Jones & LeBaron, 2002, p. 510). Their placement alongside one’s own talk, another’s talk, or in the absence of talk, produces different functions (Berger & Rae, 2012). A speaker may use gesture to support, extend, or modify the meaning of their talk (Stivers & Sidnell, 2005). They may solicit the attention of other actors by gesturing at the outset of their turn (C. Goodwin, 1986b). Actors may also gesture at the outset of another actors’ vocal turn “to solicit a public display of co-participation” (Stivers & Sidnell, 2005, p. 9). Gestures are also used as “responsive actions” (Berger & Rae, 2012, p. 1821) to prior talk, or to replace talk by conveying “information not readily translatable into words” (S. Jones & LeBaron, 2002, p. 510). For example, C. Heath’s study (1984a, 1984b, 1986) of the coordination of body movement and talk in encounters between doctors and patients, showed that gesture was used to respond to and solicit further talk. Gesture is also closely associated with the employment of material resources and objects to accomplish social action (see Llewellyn & Hindmarsh, 2010; Nevile, Haddington, Heinemann, & Rauniomaa, 2014; Streeck, Goodwin, & LeBaron, 2011). Thus, in these ways gesture is integral to the initiation and production of social life.

Gaze refers to the direction in which a participant is looking (Jenks, 2011). A close association exists between actors’ “gaze machinery” (Rossano, 2013, p. 309) and turn-taking practices (C. Goodwin, 1980, 1981). Through gaze a speaker selects the recipient/s of their verbal turn (C. Goodwin, 1979), and by it actors show their recipiency (C. Goodwin, 1979, 1980, 1981; C. Heath, 1984a, 1986; Kendon, 1967; Lerner, 2003). In addition to gaze at another actor or speaker (Jenks, 2011), actors also show their orientation to material artefacts. For example, interaction in the use of
digital technologies means that gaze is also directed at hardware such as screens, keyboards, or touchpads, and actors’ re-direction of gaze to these features can be used to transition out of sequential talk (Danby et al., 2013). Thus, actors’ gaze shows their selection or receipt of recipiency and their orientation to other actors or objects in their social context.

Actors’ postural configuration coordinates their talk with their physical setting (Jenks, 2011) in orienting to and producing a mutual focus of attention (C. Goodwin, 2007; Kendon, 1990). A focus on body postures in conversation analysis and interaction studies has produced concepts such as home position (Sacks & Schegloff, 2002) and body torque (Schegloff, 1998a). Home position or rest position (Kendon, 1972, 1975) is “a spate of movement—whether a single move or a series of moves—being completed by returning the moving body part to the position from which it departed at the outset” (Sacks & Schegloff, 2002, p. 133). Postural deviances from a home position, in which the body twists to orient to two or more directions, produces body torque (Sacks & Schegloff, 2002; Schegloff, 1998a). For example, when an actor’s torso faces frontward and their head is turned sideward, their body torque shows their orientation to, and management of, two simultaneously occurring activities (Schegloff, 1998a). Body torque has been used to describe the bodily orientations and interactional engagement of actors in doctor-patient interactions (Ruusuvuori, 2001) and in offering and receiving food in dinner interaction (Schegloff, 2005).

Within the field of interaction studies, actors’ postural configurations have been considered through the concept of body formations, including the $F$-formation in which actors face each other, and $C$-formation in which actors are positioned asymmetrical to each other (Kendon, 1990). This has
been extended in the concept of participation frameworks, in which actors’ joint alignment to an activity demonstrates their collaborative participation in it (Goffman, 1979; C. Goodwin, 2007; C. Goodwin & Goodwin, 2004). Thus, analytic attention to actors’ deployment of gesture, gaze, home position, and body torque shows how these embodied resources are used to accomplish social action. The examination of interaction is considered in the following explanation of the analytic processes of conversation analysis.

### 3.3.7 Analytic processes of conversation analysis.

Conversation analysts employ two approaches to inductively examine naturally occurring interaction: analysis of a collection or corpus of similar interactional phenomena, or of a single bounded sequence (Drew, 2005, 2008; Pomerantz & Fehr, 1997; ten Have, 2007). The approach of corpus analysis is briefly described before considering the process of single-case analysis.

#### 3.3.7.1 Corpus analysis.

Corpus analysis comprises three general steps identified by Drew (2008). The first step is to identify a possible phenomenon. This involves the conversation analytic practice of noticing whereby a feature or pattern of interaction is observed and “pursued by asking what—if anything—such a practice of talking has as its outcome” (Schegloff, 1996a, p. 172). In corpus analysis this may occur by noticing patterns in talk or embodied action by which actors construct, and respond to, turns in interaction (Drew, 2005, 2008). The second step is the selection of phenomena (such as sequences of turns) that exemplify an identified pattern in interaction to build a collection, or corpus, of examples. In the third step of corpus analysis, the selected phenomena are examined systemically to discover a sequential
pattern and construct an account of it. This involves uncovering “rules, techniques, procedures, methods, maxims…that can be used to generate the orderly features we find in the conversations” (Sacks, 1984, p. 413). The analyst considers each example in the corpus to determine rules that actors “demonstrably orient to as relevant in their interactions with one another” (ten Have, 2007a, p. 150). Thus, in the process that has been described, corpus analysis establishes rules and patterns of interaction.

3.3.7.2 Single-case analysis.

Single-case analysis relies on the process of unmotivated looking (Psathas, 1995; Sacks, 1984, 1995) whereby particular sequences of interaction are “notice[d]” (Francis & Hester, 2004, p. 25) and become of interest to the analyst. Just as interactional patterns are identified in the process of corpus analysis, in single-case analysis interactional sequences are observed as warranting further examination. These are selected as “naturally bounded” (Schegloff, 1987a, p. 101) sequences, meaning that the beginning and end of each sequence is visibly separate from preceding and succeeding talk. Thus, the noticing of interesting phenomena and selection of them is the initial step toward analysis.

Subsequent to data selection, Pomerantz (1990) describes three steps in analysing bounded sequences. First, the analyst establishes that the actors are “doing” certain “social actions, identities and/or roles” (Pomerantz, 1990, p. 231) and engaging in particular activities (Drew, 2008). Characterisations of these actions are developed to provide a way into the data which will lead to analysis (Schegloff, 1987a).

Second, the analyst examines actors’ methods of socially organising their social actions, identities, or roles (Pomerantz, 1990). The analyst will
often refer to specific conversation analytic literature to consider the properties of particular phenomena in order to explicate how their production is managed in the data. In this way, actors’ methods identified within data are analysed with regard to how they sequentially accomplish their activity (Pomerantz, 1990).

Third, the analyst proposes the sequential features of actors’ methods and their interactional consequences (Pomerantz, 1990). Investigating the sequential features of methods requires examination of the turn-taking system (Sacks et al., 1974). In the analysis of a series of turns it benefits the analyst to identify part of a turn and determine its purpose by asking “why that now?” (Schegloff & Sacks, 1973, p. 299). This question is resolved by examining what the surrounding actions accomplish (C. Heath, Hindmarsh, & Luff, 2010a, 2010b). That is, the analyst determines how turns respond to prior turns, such as summons, questions, or requests, and how they influence subsequent interactional turns. After establishing the turn-taking structure of the sequence/s, the analyst identifies its construction in the order of actors’ turns (Peräkylä, 2004b; Pomerantz, 1990). By examining a sequence on a turn-by-turn basis, the analyst gains insight into how actors manage their interaction (Davidson, 2011; Heritage, 2004). Therefore, corpus analysis and single-case analysis provide ways to systematically examine interaction.

3.4 Applying Ethnomethodological Approaches in the Study of Young Children’s Talk-in-interaction in the Home

Ethnomethodological and conversation analytic investigations of young children’s interaction have increased in recent decades to form an important body of research (Forrester, 2013a). This section focuses on three
areas of this research conducted in the home: children’s language acquisition and social competence; sibling interactions; and family interactions during use of digital technologies. Each area of research is relevant to the focus of this thesis on a young child’s social accomplishment of digital literacies at home.

3.4.1 Language acquisition and social competence.

This section considers how children’s embodied communication and language display their understanding of the organisation of talk and their participation in its construction and sense-making. The research illustrates early proposals (for example, by Cicourel, 1970; Speier, 1972, 1982) that young children’s language development occurs concurrently with their demonstrated understanding of the social structure of talk (Coulter, 1974).

A growing body of conversation analytic research shows how preverbal children orient to the sequential organisation of interaction by initiating actions and responding to others through point gestures, gaze, and vocalisations (Filipi, 2001, 2009; Forrester, 2015; Takada, 2012). For instance, children initiate joint attention toward objects by gesturing to them (Filipi, 2009). Children also monitor other actors’ orientations and actions, such as to perform deviant actions outside adults’ focus of attention (Filipi, 2009). In addition, young children orient to trouble in interaction and the need for it to be repaired. They can initiate repair through pointing and develop abilities to produce repair in talk as they learn to use language (Filipi, 2001, 2009, 2013; Forrester, 2008; Forrester & Cherington, 2009; Laakso, 2010). Therefore, preverbal children use embodied actions to orient to the sequence of interaction and accomplish social action.
Longitudinal studies by Anna Filipi (2001, 2009, 2011, 2014) and Michael Forrester (2001, 2002, 2008, 2009, 2010, 2013a, 2015) have shown how individual children develop interactional competency over an extended period. Forrester used a longitudinal approach to video record mealtime interactions with his daughter from ages 1 year and 6 months to 3 years and 10 months. Forrester tracked his daughter’s emerging interactional competence to initiate and respond to prior actions in vocal activities such as talking and singing (Forrester, 2009). Filipi collected video recordings of interactions between four parent-child dyads (including her interactions with her child), when children were aged 9 to 18 months old. Filipi (2009) demonstrated the “workings” of young children’s interactional development “as they emerge in the everyday activities that the child is involved in” (p. 227). Thus, these longitudinal studies emphasise how children display social competencies over time in their embodied and spoken interactions with family members.

Recent examination of parent-child interaction in the home reveals that young children orient to the absence and fulfilment of recipiency. Filipi’s (2009) longitudinal study of four parent-child dyads showed that preverbal children initiated interaction by pointing at something of interest, and continued their action until their parent produced a response. Similarly, corpus analysis by Keel (2015) and Butler and Wilkinson (2013) reveal that children orient to the “conditional relevance” (Schegloff, 1986, p. 1075) of a first action making relevant a second action in the production of first and second assessments and summons-answer sequences respectively. The evidence of these studies reveals that children orient to the rule of there being a first and second pair part in order for there to be a conversation
Young children’s orientation to the relevance of recipiency displays their understanding of social structures governing the production of interaction.

Therefore, ethnomethodological studies investigating children’s preverbal interaction, language acquisition, and social competence have considered how they “learn to participate in meaningful social interaction” (Forrester, 2013a, p. 949). The next section considers young children’s sibling interactions at home.

3.4.2 Young children’s sibling interactions.

Recent conversation analytic research has considered how siblings mutually accomplish everyday activities, organise their interactions to include or exclude one another, and through conflict manage their social worlds. Though few in number, studies collectively show that young children competently employ a range of interactional resources to accomplish actions with their siblings. This section discusses empirical evidence of siblings’ methods of mutually producing activities, organising interaction via inclusion and exclusion, and managing the social order through disputes.

Siblings produce activities together by mutually accomplishing the provision of help. Davidson (2012b) analysed the interactions of an older child helping her younger sister to use a computer program. The older child solved a problem onscreen and continued to help by assisting her sister to read information, instructing her to click on particular words, and helping her type onscreen. Their interaction followed the pattern of questioning, clarifying, and confirming next actions (Davidson, 2012b). This involved the older child delivering directives and using point gestures to direct
actions, which the younger child questioned and clarified, and the older child confirmed (Davidson, 2012b). Using these interactional methods, the siblings mutually accomplished help to produce activity at the computer.

As well as interactively accomplishing activities, two analyses by Busch (2011) show that children organise the involvement of other siblings in interaction. First, interaction at the breakfast table showed how a child arranged his older siblings as an audience for the telling of a joke (Busch, 2011). The child drew the family members together over a succession of turns though the sweeping movement of his gaze, slurring of speech, and prosodic qualities such as elongating words (Busch, 2011). Following a challenge from an older sibling, the child reassembled his brothers as an audience to validate his claim. Using “theatrics” (Busch, 2011, p. 105) he produced a second telling. Busch’s (2011) analysis shows how a child managed his interaction with his siblings to hold the conversational floor. It reveals how young children produce their social worlds through methods of organising their siblings’ participation.

Another means by which young children organise interaction is the exclusion of their siblings. Busch’s (2011) second analysis showed how a young child and her grandmother constructed the category device “had haircuts” and excluded an older child from the interaction. The young child and grandmother listed family members who had received a haircut that day. The older child attempted to gain membership into the category of “haircuts” by first requesting a haircut, and then proposing a hair colour, but each time his sister made relevant his “non-membership of the category, ‘had haircuts’” (Busch, 2011, p. 129). The young child and grandmother’s orientation to the category device, and the child’s membership of it,
attributed her with speaking rights, but the older child’s non-membership limited his right to speak (Busch, 2011). Through the device an unequal conversational status between the younger and older children was created, and the older child was excluded from the interaction.

In the studies considered so far children’s responses to their siblings’ actions resulted in mutually producing activities; being cohorted as recipients; and despite efforts otherwise, being excluded from interaction. Conversely, children’s non-acceptance of their siblings’ actions can result in disputes. As demonstrated in the following explanation, children’s disputes are both socially organised and socially organising affairs (Maynard, 1985b).

The organisation of disputes in two-party interaction comprises three distinct phases (Maynard, 1985a, 1985b). All disputes begin with an “antecedent event” (Eisenberg & Garvey, 1981, p. 151) or “‘arguable’ utterance or action” (Maynard, 1985a, p. 3). This turn is treated as the first turn of a dispute when it is opposed by a proceeding turn on the grounds of objectionable features (Maynard, 1985a). Recognising the arguable move as a verbal or embodied action is important for understanding the structure of the dispute that follows (Maynard, 1985a). An actor’s embodied action, such as taking hold of an object, can be opposed as a possessional violation by another actor.

Following the oppositional move, the turn reverts to the actor who produced the arguable action. In this position, conflict may be resolved if the actor lets opposition pass (Maynard, 1985a) or self-repairs a prior action that is accepted by the opposing actor. However, if repair is rejected then opposition may continue, often verbally through a series of inversions, such
as accusations and denials (Maynard, 1985a). Therefore, children’s orderly design of disputes socially organises their relations and affairs with others.

In comparison to the number of studies that have analysed children’s disputes in preschool and school settings (for example, Björk-Willén, 2012; Danby & Baker, 1998; M. Goodwin, Goodwin, & Yaeger-Dror, 2002; Theobald, 2009; Theobald & Danby, 2012), a relatively small number of studies have investigated children’s disputes at home. These studies examine the organisation of conflict between siblings in home-based quotidian routines, such as during mealtimes (Busch, 2011, 2012; Sally Hester & Hester, 2010, 2012; Stephen Hester & Hester, 2012), fantasy play with a construction play set (Whalen, 1995), and computer use (Davidson, 2012c). The studies used single-case analysis to consider how particular relations between family members are enacted in the escalation and resolution of disputes.

To illustrate, Davidson (2012c) showed the development of conflict between siblings as an older child used a computer mouse to help her younger sister play a computer game. The older child sought her sister’s agreement to pursue onscreen actions, and sequences of questions and weak agreement continued until the younger child opposed a game move. When the older child ignored the opposition, the younger sister upgraded her resistance. She opposed her older sister’s position as the more knowledgeable player, and claimed knowledge of how to play the game. The younger child’s opposition “developed procedurally” (Davidson, 2012c, p. 373) and reoccurred until she claimed ownership of the mouse. Thus, the younger child’s developing and reoccurring conflict terminated her sister’s help, whereby she gained complete ownership of the game play.
Following the establishment of opposing positions, other parties may enter a dispute either by aligning with a principal party’s position, offering their collaboration or accepting a principal party’s offer, or aligning with a counterposition (Maynard, 1986). For example, Sally Hester and Hester (2010) showed how siblings produced a series of action-opposition sequences (Maynard, 1985a) in a mealtime dispute, before their mother intervened to align with the younger sibling. In this instance, the mother’s collaboration confirmed the category relation (the nature of the relationship between the siblings), that the younger sibling was resisting—that she was unequal to her older brother’s “conversational and argumentative skill” (Sally Hester & Hester, 2010, p. 43). The mother’s alignment with the younger sibling actually supported the position of the older sibling by showing she could not argue on her own. This example illustrates how outside parties’ involvement in disputes alters the organisation and trajectory of the interaction.

Busch (2012) showed how children can resist interventions in her examination of the moral and social orders in a dispute between two young children. During the conflict the mother imposed the moral rule of sharing. An older sibling then intervened to reinforce the mother’s moral agenda to work toward resolving the conflict. However, the older sibling’s intervention was opposed and his advice was treated as an antecedent event in a dispute with one sibling. Thus, this analysis shows that children can resist the interventions of their siblings and so direct the trajectory of the interaction away from resolution.

This section has shown that siblings organise their interaction using vocal and embodied methods to accomplish activities together, to include or
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exclude others, and to produce and resolve conflict. Analyses of children’s disputes is a growing area of ethnomethodological and conversation analytic research; however in general, sibling interaction remains under-researched. Further research could consider how very young children display interactional competence in interaction with siblings. The final section considers children’s interactional use of digital technologies at home.

3.4.3 Young children’s interactions during technology use in the home.

Few studies analyse how young children socially accomplish digital literacies in the home (as established in Chapter 2 section 2.5.2). Hence the study reported in this thesis also methodologically fills a gap in ethnomethodological and conversation analytic literature. Ethnomethodological analyses of children’s interactions during engagement with digital technologies is an emerging area (Danby et al., 2013; Davidson, 2012c). These studies reveal children’s and adults’ methods “for doing things in talk” (Coulter, 1974, p. 117) to socially produce activities with technologies. They consider how family members collaboratively accomplish computer games through interaction, how their response cries during game play show their understanding of onscreen action, and how they use technologies as resources to engage in interaction.

Conversation analysis of extended interactional sequences between a father and his two children revealed that “the visibility of activity with technology” was used as a resource to re-engage in or delay talk (Danby et al., 2013, p. 95). As the children produced independent activity with digital devices, the father oriented to onscreen images in their activity and made them the focus of further interaction (Danby et al., 2013). The children
managed interaction and their independent activity by resuming talk when requiring information and delaying their re-engagement in interaction by continuing their activity. Thus, the observability of actions with technologies was used by the children to make witnessable their activity and unavailability for interaction; and with the father, to initiate interaction about their activity.

Davidson’s (2010a) single-case conversation analysis of interaction between a 4-year-old boy, his 6-year-old sister, and father showed they achieved playing a Wiggles computer game by discussing its past, present, and future activities. Talk and gesture “served to mutually accomplish helping the younger child in ‘learning to see ahead’” (Davidson, 2010a, p. 390). The onscreen arrows placed ahead of the Wiggles’ car were identified to the younger child, so that he could join in predicting its destination throughout the game. This suggests that through gestural and verbal actions the family shared understandings of onscreen images to mutually accomplish the game.

Also in the situation of game play, Aarsand and Aronsson’s (2009b) conversation analytic study examined the work response cries achieved in children’s interactional gaming moves. Parents and 5- to 10-year-old children responded to onscreen game activity with response cries (Goffman, 1978), including alert cries and audible glee such as “look!” and “yeah!” (Aarsand & Aronsson, 2009b). When gaming entered a period of rapid tempo, such as when onscreen action increased in speed, the children and parents reacted by articulating response cries at a faster pace (Aarsand & Aronsson, 2009b). Their blurted talk demonstrated their understanding of
the game at particular points in time and enabled joint interpretation of the game’s requirements.

These studies reveal the complex ways in which parents and children engage in interactions during technology use. Though ethnomethodological approaches are under-used in analyses of children’s social use of digital technologies, their rigorous attention to moment-by-moment interaction can generate deep analytic insight into the methods by which digital activities are socially accomplished.

This discussion has considered three areas of ethnomethodological research of children’s interactions at home: their language acquisition and social competence; sibling interactions; and interactions during technology use. Conversation analysis was the most frequently applied approach in studies across these research areas, suggesting it to be a robust method of analysing children’s interaction. Ethnomethodologically informed studies increasingly consider young children’s language acquisition and disputes, however far less document their sibling interactions and social use of digital technologies. Further research examining these taken-for-granted aspects of young children’s social worlds at home can uncover the complex interactional methods by which they locally occasion and accomplish them.

3.5 Summary

This chapter has elucidated the perspective and approaches of ethnomethodology and conversation analysis. Discussion of their origins and programs, and their mutual interest in members’ methods of accomplishing activities through sense-making and language, has demonstrated their compatibility in uncovering the organisation of social life. A brief review of ethnomethodological studies related to young
children’s language acquisition and social competency, sibling interaction, and social interactions during technology use in the home identified commonly used methods in the field and areas requiring further examination. The following chapter considers the process by which ethnomethodology and conversation analysis are applied in this investigation of a young child’s social accomplishment of digital literacy practices in the home.
CHAPTER 4

STUDY DESIGN

4.1 Introduction

The previous chapter explicated the sociological position and approach of ethnomethodology and conversation analysis. This chapter presents aspects of the design of this study as informed by ethnomethodology and conversation analysis. The study examines how a young child accomplishes digital literacies through social interactions in her home. The research process by which this study was undertaken is expounded.

First, the chapter outlines the wider research project in which this study is situated. Second, sociocultural perspectives and definitions of literacies are ethnomethodologically respecified as socially occasioned and locally situated accomplishments. Third, the chapter presents the research aim, questions, and objectives guiding this study. Fourth, video recording as a data collection method is addressed in a review of previous research. The process by which video recordings were produced in the wider research project is documented. Fifth, the chapter considers the process of transcription. It discusses existing literature about transcription in qualitative and conversation analytic research, and describes how data selection, transcription, and analysis were completed in this research. Sixth, the chapter outlines ethical considerations of the study. Finally, the chapter discusses how the research was made rigorous and trustworthy to ensure the dependability and credibility of the findings.
4.2 The Study

The study reported in this thesis is located within an Australian Research Council Discovery Project led by Professor Susan Danby (DP110104227), titled *Interacting with knowledge, interacting with people: Web searching in early childhood*. Chief investigators include Professor Susan Danby (Queensland University of Technology), Professor Karen Thorpe (Queensland University of Technology), and Dr Christina Davidson (Charles Sturt University).

The wider study of web searching involved three data collection phases. The first phase comprised a survey of preschool teachers’ access to, and comfort in using digital technologies in the preschool classroom. Teachers across 400 early childhood programs in Queensland were surveyed.

In the second phase, teachers’ and children’s naturally occurring everyday practices with technologies were video recorded by researchers in nine preschool centres in Queensland, Australia. The second phase also provided information on children’s technology use at home. Fifteen families were recruited from the preschools in which classroom recordings had been made. Parents video recorded their child’s use of technologies at home for one week. In total, 129 recordings were made totalling 28 hours and 39 minutes. Parents also provided two forms of information. First, they recorded all instances of their child’s use of digital technologies in a time-use log, including details such as the duration of technology use, other people involved, and the nature of their activity (for an example, see appendix A). Second, on a technology log, parents selected from a list the technologies that they owned and allowed their child to use. The
information that these logs provided supported understandings of the technological and family context of children’s homes.

The third phase constituted a survey of families reporting their everyday practices with technologies at home. The survey questions were informed by observations of family technology use from the video recordings in the second phase (Danby et al., 2013).

The study reported in this thesis employs ethnomethodology and conversation analysis to examine sequences of video recorded interaction between a young child and her family members as they used digital technologies. The video data of the child using technologies with others in her home were recorded by her parents in the second phase of the wider project. The study distinguishes itself from the wider project by emphasising the young child’s accomplishment of digital literacies and in activities that are not exclusive to web searching. Detailed transcription and analysis of the interactions enabled investigation of how the young child socially accomplished digital literacies in her home.

4.3 Ethnomethodological Respecification of Digital Literacies

Ethnomethodological conversation analysis has been applied in this study to show how a young child interactionally accomplishes digital literacies in everyday activities using technologies at home. An objective of this study is to respecify digital literacies as ordinary, mundane events that are socially situated accomplishments. The ethnomethodological concept of respecification proposes a new way of knowing about the social world through its local, endogenous production in the interactional methods of its members (Stephen Hester & Francis, 2000). This study respecifies the sociocultural perspective of literacies and a prominent definition of
literacies by Lankshear and Knobel (2011) informed by this perspective (see Chapter 2 section 2.2 for a description of the perspective and definition).

An ethnomethodological respecification proposes understanding digital literacies as what they are treated as being, and employed to do, by members themselves. Members negotiate and display digital literacies in interactions with each other and with onscreen texts. Consideration of digital literacies as a members’ matter emphasises how they are produced and understood by members in their practical reasoning and actions. Thus, rather than digital literacies being a theoretical construct imposed on everyday practices, they are considered an investigable topic of inquiry in members’ own practices.

Considering digital literacies as a members’ matter promotes understanding young children’s situated actions with digital texts, their methods of engaging with and responding to them, and their engagement with others. It shows that young children socially construct digital literacies in locally situated ways through family interactions. Their digital literacy practices are not the result of the social and cultural context of their home, but are produced in situ by them and other family members as they draw on the social context and reshape it in their talk. In this way, this study respecifies the sociocultural argument that literacy practices are socially situated in their context by showing how they are socially accomplished by members themselves. As explained in Chapter 3 section 3.2.3, the social context is constructed through interaction, whereby each new turn of talk and/or embodied action reconstructs the context for future actions (Garfinkel, 1967). Therefore, digital literacy practices are practical, concrete actions constructed through vocal and embodied actions using technologies.
In light of these understandings, this research respecifies Lankshear and Knobel’s (2011) socioculturally informed definition of literacies. An ethnomethodological perspective addresses how digital literacies are “socially recognised” (Lankshear & Knobel, 2011, p. 50).

Ethnomethodology investigates the organisation by which social life is made intelligible. Members produce meaning in orderly, concrete actions that are recognisable to others (Garfinkel, 2002). In turn, other members interpret meaning as being recognisable and coherent through understanding its relevance and the action it produces for the ongoing interaction. Thus, ways of generating, negotiating, and communicating meaning can be seen “in action” (Mondada, 2014a, p. 179) as practical, interactional methods of accomplishing orderly and intelligible actions. To conclude, this ethnomethodological respecification shows that digital literacies are a members’ matter and are locally and interactively constructed by them in socially witnessable and recognisable ways.

4.4 Research Aim and Questions

This research project aims to enhance knowledge of how young children accomplish digital literacies in and through their social interactions in the home. This aim will be achieved by addressing the following research question and sub-questions:

How does a young child socially accomplish digital literacies in the home?

- How does the young child orient to digital literacies in the home?
- How are talk and interaction consequential for producing digital literacies?
- How do digital literacies contribute to the construction of the child’s social world?
These questions reflect an ethnomethodological and conversation analytic focus on the social accomplishment of activities. They focus on members’ orientations and interactions, and the ways that practices constitute their social worlds.

### 4.5 Research Objectives

Objectives were identified to guide the research process and achieve the aim of the research. These objectives include:

1. To respecify digital literacies as every day, mundane events that are socially situated accomplishments;
2. To bracket theories of digital literacies until after analytical description has been made of a young child’s digital literacies in the home;
3. To select naturally occurring data in the form of bounded extended sequences of interaction for analysis;
4. To transcribe selected sequences using Jefferson’s notation system (J. Atkinson & Heritage, 1984);
5. To develop analytical descriptions of a young child’s digital literacies displayed in the sequences of data; and
6. To refer to literature within conversation analysis to identify specific language features and analyse their purpose in talk.

Some of these objectives, which consumed a large part of data management, transcription, and analysis, are considered in greater detail throughout the remainder of this chapter.

### 4.6 Video Recording Data

This section reviews literature relating to the video recording of naturally occurring interactions, and documents how the video recordings
used in this research were made by parents. The section opens with a
description of naturally occurring data from a conversation analytic
perspective, details how natural data are video recorded, and considers the
advantages and limitations of video data for analysis. Next, this section
documents parents’ approaches to video recording as observed in the video
data examined in this research. Finally, it comments on information
provided by the parents in technology time-use logs.

4.6.1 Video recording naturally occurring interaction.

Conversation analysts examine naturally occurring interactions
(Heritage & Atkinson, 1984; Hutchby & Wooffitt, 1998; Psathas, 1995; ten
Have, 1999b; Sacks, 1995; Sacks et al., 1974; Schegloff & Sacks, 1973)
which are spontaneous interactions in everyday situations that are assumed
to arise without their intervention or solicitation (Knoblauch, 2012; Laurier
& Philo, 2006; Lynch, 2002). Although use of naturally occurring data has
been criticised as “researcher-prompted and thus contrived” (Speer, 2002, p.
516), critics fail to realise that its use is not a claim that data are untouched
by analysts (Silverman, 2001). Rather, it is a theoretical and analytic
position (Potter & Wetherell, 1995) stipulating that data are naturally
occurring according to the approach of analysis (ten Have, 1999b).

“Naturally organised ordinary activities” (Garfinkel, 1991, pp. 14-15) are
transliterated into data and examined in terms of how they are locally
constructed by members at the scene (Lynch, 2002). Their analysis involves
consideration of the micro-level orderliness of interaction (Sigman, 1995).
Thus, naturally occurring interaction is not “a type of data” (Potter &
Wetherell, 1995, p. 217) but a perspective on data.
Chapter 4: Study Design

Since the origin of conversation analysis, naturally occurring interactions have been recorded first as audio recordings and then as video recordings to preserve a copy of the orderly features of interaction (ten Have & Psathas, 1995), and to facilitate their deep and repeated investigation (Sacks, 1995). The use of video recording equipment, as an alternative to audio recording equipment, has the capacity to capture visual elements of natural interaction, enabling the analysis of verbal utterances in relation to embodied actions (Flewitt, 2006; C. Heath & Hindmarsh, 2002; C. Heath et al., 2010a, 2010b). Video recordings offer exclusive access to the minute details of social action (Danby, 2009; C. Heath et al., 2010b; McLarty & Gibson, 2000) and afford the opportunity to scrutinise the embodied details of ordinary action (C. Heath et al., 2010b). Thus, in the study of video data, conversation analysts present a description of how bodily resources are organised with talk to respond to, and implicate, the emerging social context (S. Jones & LeBaron, 2002).

Video recording is a data collection method increasingly used to capture young children’s interactions. An ethnomethodological perspective acknowledges that actors, including young children, accomplish courses of action (Freiberg & Freebody, 1995) through both verbal and embodied actions. The use of video recording technology enables their vocal and embodied interactional competencies to be captured. Therefore, video recording young children’s talk and interaction shows how they are competent social actors in both their vocal and embodied actions, and thereby presents a richer depiction of how they accomplish their culture in action (Danby, 2009).
Video data are reconstructions of actual interactional events (C. Heath et al., 2010b). Recording involves *in situ* interpretations of interaction through “cinematic choices” (S. Jones & LeBaron, 2002, p. 506). The selection and use of recording equipment shapes how interaction is recorded and thus the version of it that is produced (Mondada, 2007; Psathas & Anderson, 1990). Video data are not neutral or objective representations of interaction, but partial in their view and perspective (Deppermann, 2013; A. Fitzgerald, Hackling, & Dawson, 2013; Psathas & Anderson, 1990; Ratcliff, 2003). Despite this, the analyst can rely on the fact that “at least what was on tape happened” (Sacks, 1984, p. 26). Thus, analysts can be sure that what is recorded occurred in the natural progression of interaction and that their findings originate from actual events produced in real time.

It is common practice in ethnomethodology and conversation analysis for analysts to draw on recordings that were collected in their absence. For instance, video recordings of children’s natural interactions at home are increasingly made by their parents using equipment provided by researchers (for example, Busch, 2011, 2012; Craven & Potter, 2010; A. Kent, 2011). In these instances, parents make decisions about the recording of interaction, such as when and where to record interaction, and what to include through the viewfinder (Busch, 2011).

Despite the researcher’s absence on such occasions, participants can orient to the video camera and the absent researcher (Busch, 2011; Hutchby, 2001; Speer & Hutchby, 2003). In some disciplines the impact of recording on participants’ interactions is a limitation that may call into question the authenticity of the data (Schuck & Kearney, 2006). However, in ethnomethodologically informed conversation analysis, participants’ actions
in response to recording devices (Hammersley & Atkinson, 1983; S. Jones & LeBaron, 2002; Pomerantz & Fehr, 1997) do not raise methodological concerns (Forrester, 2011), but are analysed as orderly sense-making practices “bound up in creatively facilitating a range of activities relevant to the setting” (Speer & Hutchby, 2003, p. 334). In this way, participants’ orientations to recording equipment are not a limitation of data but a phenomenon of interest. Participants’ reactive behaviour to being recorded also lessens quickly (Gobo, 2008; Ratcliff, 2003) so that other interactional phenomena of interest are captured for analysis.

Although it has been noted that video recording provides a more complete representation of interaction than audio recording, it nonetheless provides a restricted view of participants’ activities (Depperman, 2013). For example, video recording does not provide details of the wider setting or an understanding of the events leading up to the recorded interaction. In addition, the video camera cannot capture all actions in their entirety. This can reduce the analyst’s understanding of the interaction as only what is observed through the viewfinder is subject to analysis. However, conversation analysis does not require detailed contextual information for analysis. Therefore, although video recordings do not provide a complete representation of interaction, they produce detail appropriate for the minute examination of interaction through ethnomethodological conversation analysis. To conclude, this discussion has identified video recording as an established data collection method within conversation analysis. The video recording of interaction, and the choices incorporated within it, produces a primary record (Zimmerman, 1993) ideal for detailed examination.
4.6.2 **Parents’ video recording of naturally occurring interaction in this study.**

The video recordings analysed in this research were made by two parents at home. The recordings captured their child’s interactions with digital technologies during one week. The parents decided when to record their child using technology; hence not all instances of the child’s use of technologies were recorded. The parents were entitled to keep copies of the recordings they had made, since the recording of family interaction is a common way to capture and preserve moments. The parents could also delete recordings from the video camera that they did not want to share with the researchers. During the week of recording, the parents documented all instances of the child’s technology use in a time-use log (appendix A), including details about the technologies being used and who the child interacted with.

The parents’ understanding of the analytical interests of the wider project, as documented in the information sheet (appendix B), guided their use of the video camera. Decisions related to the use and placement of the video camera were made by the parents in their *in situ* recording of their child. The video camera was used by the parents in two particular ways. First, the camera was positioned in a particular place and was not moved from its location. Second, the camera was hand-held to record the child’s digital activities and interactions on a bed. From these observations it could be suggested that the way in which the video camera was used depended on parents’ considerations of the child’s activity, the technologies that were used, and the child’s location in the house.
4.7 Transcription

This section discusses noteworthy aspects of transcription as documented in existing literature and considered in the development of transcripts in this research. The section begins with a review of current understandings of transcription in qualitative research. It then considers a conversation analytic perspective of transcription, the representation of embodied action, and the readability of transcripts. Finally, it details important considerations in the process of transcribing the video data presented in this study.

4.7.1 Transcription in qualitative research.

Transcription, as the written representation of recorded interaction, is a taken-for-granted aspect of qualitative research (Brandenburg & Davidson, 2011; Davidson, 2009a; Duranti, 2006; Lapadat, 2000; Lapadat & Lindsay, 1998; Tilley, 2003a, 2003b; Tilley & Powick, 2002), despite being a valuable and integral component of the research process (Lapadat & Lindsay, 1998; ten Have, 2007a; Wrobbel, 1998). Though it is widely acknowledged as a detailed, demanding, and time-consuming process (Lankshear & Knobel, 2004), transcription is also a theoretically informed, interpretive, selective, and partial practice.

Transcription is a theoretically-informed practice (Ochs, 1979). The inclusion of details in transcripts varies according to the theoretical assumptions informing studies and the discipline of research (Jenks, 2011, 2013; Ochs, 1979) and the phenomenon of interest and methodological requirements (Lapadat, 2000; MacLean, Meyer, & Estable, 2004; Sandelowski, 1994). Although transcription has been criticised for reducing the content of recordings, and consequentially constraining information
available to the analyst (Bloom, 1993), the refinement of transcripts according to particular theoretical assumptions (Jenks, 2013; Ochs, 1979) is a necessary step in focusing the analysis.

The process of transcription involves “representational issues” (Jenks, 2011, p. 89) as to the depiction of talk and embodied action in video data. The analyst is selective with what they include in the transcription of the data (Davidson, 2009a, 2010b; Ochs, 1979). They select particular words or symbols to represent features of recorded interaction (Brandenburg & Davidson, 2011; Duranti, 1997; Hepburn & Bolden, 2013; Lapadat & Lindsay, 1998). Consideration of the analyst’s selectivity illustrates the partial nature of transcription. Transcripts are partial representations of recorded interaction, as not every detail can be captured and documented on paper (Davidson, 2010b; Jenks, 2013; MacLean et al., 2004; Mishler, 1991; Sandelowski, 1994). Because of this, transcripts cannot replace recorded data (Luff & Heath, 2015; Mondada, 2007; Wrobbel, 1998; Zimmerman, 1993), but remain a representation of it. Reflexively, readers of a transcript make meaning of the represented interaction so that it takes on new life and meaning (Silverstein & Urban, 1996). With the meaning that can be generated from them, transcripts can also be understood as “expansionist tools” (Jenks, 2013, p. 255). Therefore, transcription is a significant interpretative and theoretical practice in qualitative research requiring the careful selection of words and symbols to represent recorded data.

4.7.2 Transcription in conversation analytic research.

Conversation analysis relies heavily on transcriptions of natural data to consider the sequential order of interaction. Building on the review of transcription in qualitative research, this overview of conversation analytic
transcription considers three chief matters: the transcription method known as the Jefferson notation system; ways of representing embodied actions; and the ongoing management of the readability of transcripts.

4.7.2.1 Jefferson notation system.

The Jefferson notation system, developed by the early conversation analyst Gail Jefferson, is arguably the most commonly employed system in conversation analysis (Ayaß, 2015; Nevile, 2015). The Jefferson notation system provides symbols useful to the interpretation of naturally occurring interaction (J. Atkinson & Heritage, 1984), by depicting the relative timing of utterances and their delivery (Drew, 2008). Specific notation symbols are used to represent the vocal methods by which participants accomplish sequential interaction (C. Heath et al., 2010a). Importantly, symbols portray features of talk to which actors orient in their production of focused interaction (Button & Lee, 1987b). Punctuation marks are used as symbols for representing these notable features of talk (J. Atkinson & Heritage, 1984; Peräkylä & Ruusuvuori, 2011; see appendix C for a complete list of symbols).

Some symbols may be more accurately employed than others (J. Kelly & Local, 1989). For example, using software programs such as Audacity™, audio recordings can be closely examined to time the length of pauses in talk (though a common counting method is also widely employed, see ten Have, 1999a). However, the representation of other features of talk, such as tempo, intonation, pitch, and vowel elongations, has been considered “inconsistent and arbitrary” (J. Kelly & Local, 1989, p. 204). The exact quality of such features of talk is not measured, but estimated according to the analyst’s hearing of the data. This is because, conversation
analytic transcription, although rigorous, does not require perfect measures of talk since it is an interpretive and representational act. Nonetheless, the contemporary use of technological software programs to replay or slow down recordings has enabled greater access to the features of interaction captured in data, and may dim criticism of the application of notation symbols.

For conversation analysts, transcription is a theoretical activity situated in analytic actions (Mondada, 2007), namely, using notation symbols to represent data. Before notation symbols are used in the examination of interaction, showing “precisely what speakers did in the talk, and how they did it” (Leiminer & Baker, 2000, p. 138), they assist the analyst to detect the features of talk that they represent. Thus, the notation system directs the analyst’s detection of interactional features in the data, giving rise to theoretically informed actions.

In conversation analysis, preliminary analysis occurs alongside transcription (Mondada, 2007). Analytic observations develop through the process of replaying a recording and transcribing it. These observations are useful in refining the transcript and the focus of analysis. In this sense, transcription is a significant analytical process (Bolden, 2015; Sidnell, 2010) and “craft” (Psathas & Anderson, 1990, p. 76). Conversation analysts, because of the analytic insights that come from transcribing minute features of interaction, often transcribe data themselves (Ayaß, 2015).

4.7.2.2 Representing embodied actions.

Although conversation analytic transcription has traditionally focused on the representation of spoken data (Ochs, 1979), video data affords consideration of how embodied actions are employed in interaction
(see Chapter 3 section 3.3.6 for a discussion of embodied actions). Where possible, conversation analytic transcripts can include descriptions of gaze, facial expressions, gestures, postural configuration, and body movement (Hepburn & Bolden, 2013).

A common transcription practice is to reconstruct the temporal and sequential attributes of embodied actions through “textual representation” (Mondada, 2007, p. 811) or description. However, descriptions of embodied actions often use more words, and require more space, than the transcription of spoken interaction (Saferstein, 2004). This then depletes the representation of the coordination between verbal and embodied action in the data (Jenkings, 2009). Consequently, long descriptions diminish the import of embodied actions and complicate the reading of transcripts (Saferstein, 2004). Thus, producing written descriptions of embodied actions is a representational challenge, and one that can be supported by using visual media (such as video stills, drawings, or diagrams) within transcripts (Jenks, 2011). Visual media can replace some of the detail of descriptions of embodied actions, and enable a partially visual reading of the transcript.

Conversation analysis is still in the early stages of considering how transcription might address the representation of participants’ embodied use of objects, especially digital technologies. The challenge of representing embodied action, particularly in the use of technological devices, is in devising ways of transferring their three-dimensional production to paper-based transcripts (Jenks, 2011). Unlike the transcription of talk, no shared system of notating embodied action has yet emerged, and there can be great variation between transcription approaches (Nevile, 2015). The ways in
which analysts have approached the transcription of embodied conduct using technologies is briefly considered.

In previous work, conversation analysts studying the accomplishment of concerted action in everyday and institutional settings have incorporated embodied actions and the manipulation of objects into transcripts by using symbols, images, or particular layouts and formatting (see Gardner & Levy, 2010; C. Heath et al., 2010b; Knoblauch & Schnettler, 2012; M. Levy & Gardner, 2012; Luff & Heath, 2015; Mondada, 2006, 2008, 2012). Specifically, some researchers have traced eye gaze on computer screens during the inputting of information in web searches (Moore, 2013a; Moore & Churchill, 2011), and have shown relationships between actors’ talk and keying into a computer (Gardner & Levy, 2012; Luff & Heath, 2000). Some of these transcripts use punctuation marks to map the onset and offset of bodily actions alongside talk (for examples see Luff & Heath, 2000; Mondada, 2008, 2012). However, these notation systems can make great demands of readers, requiring them to become familiar with the meaning of punctuation marks in addition to those of the Jeffersonian system. Furthermore, embodied actions continue to be represented using brief written descriptions. This brief overview of the transcription of embodied actions using technologies reveals there is great need to explore new ways of transcribing such actions.

4.7.2.3 Managing the readability of transcripts.

The readability of conversation analytic transcripts remains an ongoing consideration. On the one hand, conversation analysis has been criticised for sacrificing the readability of transcripts for the sake of capturing the minute details of interaction (Brandenburg & Davidson, 2011;
Ochs, 1979). It has been argued that even everyday social activities can be “made strange by the detail” (Jenkings, 2009, p. 780) through which they are represented. Furthermore, readers’ comprehension of transcripts is complicated by the complexity of notation systems. The extent to which notation symbols are used can overwhelm the readability of transcripts (MacLean et al., 2004).

However, on the other hand, it is argued that the micro-analytic level of conversation analysis requires the full features of interaction be taken into account. It has also been suggested that the “messiness” of transcripts can indicate the complexity of the interactional context in which action is performed (Butler & Wilkinson, 2013). This being said, transcripts can also be adapted and refined (Mondada, 2007) to include the features of talk and interaction most relevant to the analysis (Sidnell, 2005). This practice ensures conversation analytic transcripts are accessible to readers outside the research community. Sacks et al. (1974) acknowledged this when they described their efforts in trying “to get as much of the actual sound as possible” into transcripts, while also “making them accessible to linguistically unsophisticated readers” (p. 734). Therefore, managing the balance between the level of detail in a transcript and its readability is a withstanding priority for conversation analysts.

This consideration of qualitative and conversation analytic transcription literature has highlighted the complexities of transcription. In particular, for conversation analysts, the transcription of video data incorporates a balance between the detail of talk and embodied action, and creating a readable transcript. The next section details data selection, transcription, and analysis in this study.
4.7.3 Data selection, transcription, and analysis in this study.

This section describes important considerations in the development of transcripts in this study. To begin, the process of the selection of data is described. Next, the development of transcripts is recounted with regard to the listening and viewing of data, and the construction of notation symbols representing embodied actions with objects and technologies.

4.7.3.1 Selection of data.

The course of data selection in this project resulted in three extended sequences of interaction being chosen. During the process of data selection all video recordings made by parents in the wider project were viewed. Viewing video recordings for the selection of data involved the conversation analytic practice of unmotivated looking (Psathas, 1995; Sacks, 1995). As explained in Chapter 3 section 3.3.7.2, unmotivated looking requires that interactional phenomena are not selected “on the basis of some preformulated theorising” (Psathas, 1995, p. 45), but rather through noticings. The technical term noticing pertains to the early analytic observation of interesting phenomena and sequences, while maintaining an underlying focus on the aim of the research, that is, in this study to show how a young child socially accomplishes digital literacy practices at home.

The approach of unmotivated looking was supported by adopting an ethnomethodological indifference (Garfinkel, 1967, 1991) toward the data. This attitude of indifference is a precaution against overlooking features of interaction, since “a considerable portion of the analysis is founded, and indeed empirically rests on the noticing of, apparently small and what may be (and typically are) readily taken for granted features of social action” (Beach, 1990, p. 351). Absence from data collection contributed to an
ethnomethodological indifference, allowing biases concerning the video recordings and judgements and presuppositions of digital literacies to be bracketed. Bracketing these in ethnomethodological inquiries focuses analysis on the practices participants use to “produce, accomplish, sustain, reproduce, recognize, and give account of, to and for themselves, social order” (Psathas, 1980, p. 6). In this study, bracketing theories of social conduct and digital literacies enabled the viewing and analysis of video data to concentrate on the child’s methods of accomplishing digital activities with her family.

While viewing video data, the activities and interactions of a particular child, Tina, were “noticed” and became of interest (noting that Tina is the pseudonym for the young child at the centre of this study). The corpus of video data made of Tina included seven recordings totalling 3 hrs and 7 mins. An overview of Tina’s interactions and activities within each video recording were chronicled in two-minute intervals (see appendices D, E, and F). Producing an overview of interactions is a conversation analytic data management tool useful for generating an outline of social actions and assisting the selection of data (Busch, 2011; Theobald, 2009).

Repeated viewings of video data of Tina and reference to written overviews of her interactions identified particular sequences of interest. These primarily included sequences in which Tina and her family members pursued activities relating to her interest in the toy doll Barbie™. Such activities included using a laptop to search for and select YouTube videos, using Barbie-related objects during the viewing of videos, and using a Barbie app on an iPad. Of particular note was how these everyday mundane activities were socially accomplished. Another noticing was how these and
other activities were interactionally produced with a younger sibling. These observations were considered in the selection of bounded sequences of video data of Tina. Importantly, the focus on noticings is consistent with the conversation analytic approach of unmotivated looking.

Three extended sequences of interaction were selected from the corpus of video recordings of Tina. To begin with, a single bounded interactional sequence between Tina and her mother was selected from a video recording (analysed in Chapter 5). This sequence was of interest because of the everyday nature of Tina and her mother’s interaction during technology use. It was considered an appropriate starting point for investigating how a taken-for-granted activity was mutually achieved. Following this, a second extended sequence of interaction was selected from a separate video recording (analysed in Chapter 6). In the sequence Tina’s complex use of objects and technologies was a point of difference from other recordings. Finally, a third extended sequence of interaction between Tina, her younger brother, and father was selected (analysed in Chapter 7). This sequence showed how activities of interest were produced in sibling interaction.

Table 4.1 introduces Tina and her family members who appear in the analytic chapters (Chapters, 5, 6, and 7). As Tina’s parents chose not to reveal their first names they have not been given pseudonyms but are identified as “Father” and “Mother”. Since Tina refers to her parents by their paternal or maternal roles, their identification as “Father” or “Mother” is appropriate in this study. The children are identified by the pseudonyms “Tina” and “Trae”.
Table 4.1
*Tina and her Family Members*

<table>
<thead>
<tr>
<th>Family member</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td></td>
</tr>
<tr>
<td>Tina (pseudonym)</td>
<td>3 years, 11 months</td>
</tr>
<tr>
<td>Trae (pseudonym)</td>
<td>1 year, 11 months</td>
</tr>
</tbody>
</table>

4.7.3.2 *Listening to and viewing video data.*

The selected extracts were subjected to detailed scrutiny through repeated viewing and the development of transcripts in word-processing documents (Baker, 1997; C. Heath & Hindmarsh, 2002; C. Heath et al., 2010a; Psathas & Anderson, 1990). “Perceptive practices” (Mondada, 2007, p. 811), that of observing and appreciating the features of interaction, were engaged in during repeated viewing and listening (Drew, 2008; Schegloff, 1993b). This process increased familiarity with the data, which in turn assisted transcription (Jenks, 2013; Psathas & Anderson, 1990). During the continuous and reflexive process of transcription (Mondada, 2007) many versions of transcripts were generated and were managed through a recording system that identified them by date.

The process of transcription was “technologically mediated” (Mondada, 2007, p. 819) through the use of two software programs. First, Audacity™ was used to access the minute features of spoken interaction. In particular, it was used to soften sound from a technological device that obscured the talk of the child. Professional expertise and training was sought to use functions of Audacity™. Second, Transana™ was used to consider the temporality in which talk and embodied actions were performed together. Transana™ enabled the examination of video and audio representations alongside each other with timestamps to ascertain the
sequentiality of actions. In each program, the ability to slow down and replay data facilitated a high level of precision in representing actions.

4.7.3.3 Development of transcription notation symbols.

This study contributes to the development of conversation analytic transcription by taking account of how embodied conduct is represented in particular actions using digital technologies. As an alternative to representing embodied action through written description, these actions are represented through pictorial symbols. The use of symbols sought to represent the temporality between talk and embodied action by reducing the words required to describe embodied actions and assisting the readability of transcripts. The notation symbols relate to participants’ orientation to, and use of, technologies and other objects through gesture, body movement, and gaze. The inclusion of embodied actions in transcripts was dependent upon their significance to the accomplishment of the interaction at hand (Jenks, 2011). Symbols were selected according to their appropriateness in representing an embodied action. These are presented in Table 4.2.

Table 4.2

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description of action</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>Screen of digital device</td>
</tr>
<tr>
<td>👀→</td>
<td>Direction of gaze</td>
</tr>
<tr>
<td>🖊</td>
<td>Pointing</td>
</tr>
<tr>
<td>🖥</td>
<td>Tapping touch pad/screen</td>
</tr>
<tr>
<td>🖥</td>
<td>Swiping touch pad/screen</td>
</tr>
</tbody>
</table>

Brief representations of embodied actions were developed by the researcher using a combination of symbols as shown in Table 4.3. This was necessary to show how embodied actions were directed toward other participants or were employed to use technologies.
Table 4.3

**Combinations of Notation Symbols Representing Embodied Actions**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bodily actions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>⚫️ ➡️, ⚫️ ➡️ Tr</td>
<td>Direction of gaze to screen or person</td>
<td>Gaze is largely determined by head orientation (C. Goodwin, 1981). An arrow represents gaze direction.</td>
</tr>
<tr>
<td>❌ ➡️, ❌ ➡️ Tr</td>
<td>Pointing to screen or person</td>
<td>The point gesture (Wootton, 1994) is represented in the hand symbol.</td>
</tr>
<tr>
<td><strong>Manipulation of objects and technologies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>⬅️</td>
<td>Tapping touch pad/screen</td>
<td>The downward facing point gesture (Wootton, 1994) represents the action of tapping a touch pad/screen.</td>
</tr>
<tr>
<td>⬅️</td>
<td>Swiping touch screen/pad</td>
<td>The downward facing point gesture and “tail” behind it represents the action of swiping the surface of a touch pad/screen.</td>
</tr>
<tr>
<td>⬅️</td>
<td>Tracing part of a letter on touch screen</td>
<td>The downward facing point gesture and “tail” behind it represents the action of tracing the part of the letter indicated.</td>
</tr>
<tr>
<td>⬅️</td>
<td>Movement of Barbie doll in air</td>
<td>The line tracks the trajectory of Tina’s Barbie doll as it is moved.</td>
</tr>
<tr>
<td>⬅️</td>
<td>Movement of dolphin biscuit cutter</td>
<td>The line tracks the trajectory of a dolphin biscuit cutter as it is moved.</td>
</tr>
<tr>
<td>⬅️ (‘b’)</td>
<td>Typing using keyboard</td>
<td>The keyboard signifies its use, and the letters represent their keying.</td>
</tr>
<tr>
<td><strong>Music and singing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>♪️</td>
<td>Music/lyrics</td>
<td>The music note indicates transcript lines representing music produced by technology.</td>
</tr>
<tr>
<td><strong>I’m playing the</strong></td>
<td>Talk</td>
<td>Talk is bolded to differentiate it from other transcription details (Moore, 2013b).</td>
</tr>
<tr>
<td><strong>Queen of the waves</strong></td>
<td>Singing with the video</td>
<td>Song lyrics are italicised to distinguish singing from talk (Cekaite &amp; Aronsson, 2004).</td>
</tr>
</tbody>
</table>
To give further meaning to the notation symbols and abbreviated descriptions of embodied actions, video stills were included in transcripts. The selection of video stills was contingent on the complexity of embodied actions and what participants oriented to as important actions (Deppermann, 2013). The stills were numbered as figures and labelled according to the transcript line being represented. Participants’ faces were blurred to ensure anonymity. Arrows (previously used by C. Goodwin, 2007) were drawn onto visual stills to show participants’ line of gaze to each other or technologies.

A danger of transcribing video recorded interaction is to fill pauses in talk with descriptions of concurrent embodied actions, and so give the appearance that there are no pauses between turns. To indicate pauses in talk during participants’ embodied conduct, estimated measurements of time were shown followed by a representation of the embodied actions occurring in the pause. For example the transcription, (3.0) ((T )), shows that Tina (T) pointed to the screen for three seconds. This approach was adapted from conversation analytic studies of young children’s use of technologies (Davidson, 2011, 2012c).

Transcripts are to be read as a chronological record of the moment-by-moment turns within the interactional sequence. When reading the separate embodied actions (gaze, gesture, or movement) in a transcript, it is to be understood that a participant continues an action (such as gazing at a screen) until it is altered (such as by moving gaze from the screen to a family member). For instance, in the following excerpt from Chapter 5 section 5.3.1, Tina maintains her gaze to the screen from line 2 to line 8, before focusing specifically on an image of a zebra onscreen at line 10.
(1.0) \[ ([T \overset{\text{3}}{\rightarrow}]) \]
\[(\text{Internet homepage loads})\]
\[([M \text{ walks to table})\]
\[T: \quad [\text{hhh .} \text{hhh } \text{er"} \text{er"}] \]
\[([M \text{ places camera on table})\]
(3.0) \[([T \overset{\text{3}}{\rightarrow} \text{ moves cursor})\]
\[([M \text{ adjusts camera})\]

\textbf{Figure 4.1. Lines 7-8.}

\begin{itemize}
    \item \[9 \quad (1.0) \quad ([T \text{ removes hand from touch pad})\]
    \item \[10 \quad ([T \overset{\text{3}}{\rightarrow} \text{ at zebras})\]
\end{itemize}

As demonstrated in the excerpt, a participant’s gesture, gaze, or movement is assumed to continue until it is replaced by a new action. So then, just as Tina’s gaze direction was altered, so too new gestures replace prior gestures and new movements replace previous movements.

Despite its affordances, the approach to transcription in this study is not without limitations. First, embodied actions are represented on individual lines, creating the impression that they are separate actions when in fact they often occur simultaneously as body movements and as part of a trajectory in extended social events (Jenks, 2011). The challenge of representing temporal features of actions, including “the spatialisation of the flow of talk as well as the multilayered representation of simultaneous and coordinated streams of actions” (Mondada, 2007, p. 813), exists across conversation analytic transcripts incorporating embodied actions. Overlapping actions are represented using notation symbols (e.g., [ ]) to show the relationship between embodied actions and talk.
Second, the inclusion of talk and embodied actions of multiple family members alongside the functions of technologies have resulted in complex transcripts. While numerous revisions reduced the detail of transcripts, the amount of information required still led to an intricate reading of the data. Concerted effort was made to ensure its readability, however readers unfamiliar with conversation analytic notation symbols may require further revision of the transcription system.

Finally, analytic decisions in the transcription of video data in this study may not lend themselves to other data. While local variations between transcripts are important for addressing the distinct properties of interaction (Mondada, 2007), the approach to transcription taken in this study will not be universally applicable. Instead, the transcripts in this thesis present one way in which analysts might address complicated embodied actions during the use of technologies. This explanation of the process of transcription addresses recent calls (Davidson, 2009a, 2010b) to clarify the trustworthiness of transcripts by exposing the method through which they are created.

4.7.3.4. Analysis of extended sequences.

The extended sequences of interaction were sequentially analysed using single-case conversation analysis (see Chapter 3 section 3.3.7.2 for a description of single-case analysis). As explained in Chapter 3, Pomerantz’s (1990) first step of analysis is to determine the actions that participants are producing. Data and transcripts were scrutinised during transcript analysis workshops with other conversation analysts, including the supervisors of this study and researchers in the wider project that this study is located within. Workshop discussions produced analytic insights into turn
construction, the sequence of interaction, and social actions being accomplished (Wrobbel, 1998). This produced an overview of what participants were accomplishing in their interaction.

The second step involved a closer examination of the methods that participants employed in their turns (Pomerantz, 1990). Important conversation analytic studies were referred to in determining the interactional consequences of participants’ verbal and embodied methods. This step explicated the social action produced by participants’ interactional methods as they produced orderly activities with digital technologies.

In the final step of analysis close attention to the turn-taking system produced an overall map of participants’ relations (Heritage, 2004; Pomerantz, 1990). This entailed identifying participants’ orientations and what they made relevant to others (Moffatt, 2011); observing distinct organisational features of their turns, such as their grammatical and lexical decisions (Schegloff et al., 2002); and noticing how each turn responded to prior turns and influenced subsequent turns. This process of analysis produced rich descriptions of the sequential development of participants’ interaction in each extract of data.

As is usual in ethnomethodological research, the respecification of theoretical understandings as members’ activities requires theories and suppositions to be suspended during analysis (see Chapter 3 section 3.2.1). This confines the focus of analysis to members’ own methods of producing their activities and interactions (Heritage, 1984b; Sharrock, 2001). In this study, the sociocultural perspective of literacies and a prominent definition (Lankshear & Knobel, 2011) have been respecified to privilege the young child’s actions by which she produced activities using technologies with her
family (see Chapter 4 section 4.3). This means that the theoretical construct of digital literacies is not considered during the analytic chapters (Chapters 5, 6, and 7). Instead, theoretical understandings of digital literacies are suspended to examine the ways in which the young child interactionally produces everyday activities using digital technologies in her home. Therefore, an ethnomethodological respecification of a sociocultural perspective of literacies renders the digital literacies “invisible” in order to recover the competent, yet taken-for-granted, practical reasoning of the child in socially accomplishing activities with technologies at home.

4.8 Ethical Considerations

The wider research project, within which this study is located, and involvement in the project, was assessed and approved by Human Research Ethics Committees at Charles Sturt University (Reference No.: 2012/40) and Queensland University of Technology (Reference No.: 1100001480). In the study reported in this thesis, the ways that ethical conduct could influence participants’ lives was acknowledged, and responsibility was assumed for ensuring the study was ethically completed (National Health and Medical Research Council [NHMRC], 2007; Ryen, 2011). Thoughtful consideration was given to the consequences of actions during the research process and its impact on participants (Ali & Kelly, 2004; Gallagher, 2009; Ryen, 2011). Measures undertaken to maintain the low-risk impact of this study are explained.

Video recording was unobtrusive as possible, as parents were in possession of the video camera and were given considerable ownership of the collection of data. Parents were empowered to determine how they recorded their child’s technology use by making decisions relating to the
set-up of the video camera, their location in their home, when and for how long they recorded technology use, and what activities they would capture. The video camera represented the presence of the researcher in the home. As such, the collection of video data was less obtrusive than with the physical presence of a researcher to record the data, and subsequently posed little risk to the research participants (Laurier & Philo, 2006).

Though children are conceptualised as competent social actors in this study, they are widely thought to be at higher risk of vulnerability and exploitation in research than adults (Gallagher, 2009; NHMRC, 2007). Subsequently, after reading information about the wider project, parents or caregivers were legally required to give their consent for their child (and other siblings) to be captured in video recorded data (Dockett, Einarsdottir, & Perry, 2009; Ryen, 2011; appendix B). Informed consent entails that participants are aware of the requirements of the research and understand why their consent is necessary and that they have the right to withdraw from the research at any time (Dockett, Perry, et al., 2009; Gallagher, 2009, 2015; Greig, Taylor, & MacKay, 2007).

Through the partnership that was established between researchers coordinating the wider project and consenting parents, young children were appropriately informed about the purpose of the video camera and what the video data would be used for (Ali & Kelly, 2004). It is a common ethical practice that children are also provided with details of the research using simple language so they understand the purpose of their involvement and what they are expected to do (Alderson, 2004; Alderson & Morrow, 2011; Davies, 2008; Gallagher, 2015; Morrow, 2005). An information and consent form was designed to provide information about the wider project at a level
that young children could understand (appendix G). Parents, in concert with their children, gave written consent for their children to participate in the project. Family members also gave permission for visual stills of the recordings to be published (appendix H). In addition, parents received children’s assent—their ongoing agreement to participate in the research (Dockett & Perry, 2011; Dockett, Perry, & Kearney, 2013; Flewitt, 2005a; Gallagher, 2015). Through written consent and ongoing assent the children participated in the project.

The study reported in this thesis incorporated specific ethical practices in the management, analysis, and presentation of data to ensure participants’ anonymity and confidentiality. Data were safely stored on portable external hard-drives and were secured in a locked cabinet and office, and saved under password protected computers (Lune, Pumar, & Koppel, 2010). The anonymity and privacy of participants was respected through the use of pseudonyms (American Sociological Association [ASA], 1999; Coady, 2010). Participants’ faces were blurred in video stills within transcripts to further protect their anonymity. In addition, participants’ confidentiality was maintained (ASA, 1999) by withholding identifying information about them and the location of the research in documentation about the project, in publications, and in transcripts (Ali & Kelly, 2004; Lune et al., 2010; Ryen, 2011). Therefore, the informed consent of participants, their control over what is recorded in the home, and the protection of their anonymity and confidentiality maintained the low-risk nature of the study.
4.9 Dependability and Credibility

In this study, the positivist ideals of validity and reliability, which examine the authenticity of findings, are redefined as the interpretivist concepts of dependability, credibility, trustworthiness, rigour, and quality (Creswell & Miller, 2000; Golafshani, 2003; Lankshear & Knobel, 2004). These concepts are discussed in relation to the data collection and analysis in this study.

Although the parents’ use of the video camera enabled the flexibility of data collection, it was acknowledged that it could also constrain the analysis and claims that could be made about the data (C. Goodwin, 1992). The parents’ use of the video camera required careful consideration of two possible consequences. The first concerned the parents’ possible misinterpretation of the focus of the research, resulting in the recording of data unrelated to the analytic aims of the wider project. The second consideration involved the arrangement of the video camera in the home. Due to the mobility of some technologies, the video camera could be required to move with the child. In addition, parents could decide to focus the camera on a feature of the technology, and consequentially miss the cues of interaction between the child and other family members (C. Goodwin, 1992). To prevent these occurrences, research assistants working within the wider project were available to explain to parents what was to be recorded when they were provided with information sheets. Therefore, the trustworthiness and dependability of the research project was protected, and families’ involvement within it was supported.

A central reason why conversation analysis developed out of Sacks’ (1995) analytic work using audio recorded data was due to the versatility of
a recording to be played numerous times, allowing for constant exposure to
the data, and the opportunity to be critiqued on analysis of it (Sacks, 1984).
Since the inception of conversation analysis, the practice of listening to or
viewing data, and critiquing its analysis, has continued as a method to test
the trustworthiness of analytic claims. The presentation of transcripts
alongside the analysis enables the reader to determine the plausibility of the
analysis (Brandt, 1992; Maynard, 1989). The analysis offered in this study
(Chapters 5, 6, and 7) was delivered to an international audience of
ethnomethodologists and conversation analysts in transcript and analysis
workshops and at international conferences. Through feedback from other
conversation analysts in these arenas, the credibility of the transcription and
analysis was strengthened.

Procedures of trustworthiness are inbuilt into conversation analytic
methods (Peräkylä, 2004a; Sacks et al., 1974). In fact, it is claimed that the
process of conversation analysis addresses issues of trustworthiness and
rigour more than any other qualitative approach (Peräkylä, 2004a).
Specifically, transcription is a rigorous and meticulous process through
which the analyst becomes familiar with data during multiple viewings, and
represents it using a notation system. Inbuilt into the transcripts in this study
are video stills which provide “visual evidence” (Nevile, 2015, p. 133) of
embodied actions represented in the transcript. These stills “vouch for the
‘authenticity’ of the transcript and thus of the events” (Ayaß, 2015, p. 521).
They demonstrate the dependability of the transcript, corroborating and
authorising it (Ayaß, 2015; Nevile, 2015), by showing that embodied
actions occurred as described. Therefore, the video stills in the transcript
validate the credibility and trustworthiness of data on which analysis is constructed.

Another notable means of achieving rigour and quality in conversation analysis is through the next-turn proof procedure. As interaction is organised sequentially (Peräkylä, 2004a), the way in which participants respond to a prior turn of talk shows the analyst what they understood it to mean (Sacks et al., 1974). The accountability of participants’ actions provides a proof criterion to analyse the public meaning of their talk (Sacks et al., 1974). The next-turn proof procedure was used in the analysis in this study, by referring to participants’ treatment of unfolding interaction to check analytic understandings of it. This intrinsic procedure supported the credibility and quality of the analysis.

Single-case analysis (Schegloff, 1987a) is also made credible and trustworthy by referencing existing conversation analytic research proving the existence of particular interactional resources. During analysis, particular interactional resources were identified in the data, for example, a point gesture (Wootton, 1994), and conversation analytic literature was used to consider the interactional importance and consequences of such resources. The examination of identified interactional resources, using existing literature, supported the credibility of the meaning of participants’ actions in the analysis. Therefore, this research maintains its dependability, credibility, trustworthiness, rigour, and quality through the processes that have been undertaken in the collection of data, and those that were undertaken by the researcher during analysis (Creswell & Miller, 2000; Golafshani, 2003; Lankshear & Knobel, 2004).
4.10 Summary

This chapter has presented important considerations in the design of this study. The chapter introduced the wider project within which this study is situated. The ethnomethodological respecification of a sociocultural perspective of literacies presented the focus of analysis as a members’ matter that is locally situated and produced by them. The chapter identified the research aim and questions of this study and the objectives guiding the production of video recordings, the selection of video extracts, and the process of transcription. A review of video recording and transcription methods in qualitative research and conversation analytic literature informed consideration of the parents’ video recording approaches and the development of transcripts. The process undertaken to produce the analysis was explained. Finally, ethical considerations have been described and the dependability and credibility of this research outlined.

The next three chapters (Chapters 5, 6, and 7) present an analysis of selected video extracts and their transcripts. As explained in section 4.7.3.4, theoretical understandings of digital literacy practices are suspended in the analytic chapters to examine the young child’s own methods of socially accomplishing her activities using digital technologies at home. Descriptions of the unfolding interaction between the focus child, Tina, and her family members show how verbal and embodied actions are used in producing digital literacy practices to accomplish activities with technologies. The next chapter, the first of the analytic chapters, establishes how familiarity, made relevant in the occasioned knowledge and previous experiences of Tina and her mother, is used as a resource to accomplish a web search, the selection of a YouTube video, and engagement with it.
CHAPTER 5

FAMILIARITY AS A RESOURCE TO ACCOMPLISH
SHARED ACTIVITY

5.1 Introduction

This chapter examines digital literacy practices employed in the production of a web search and viewing of a YouTube video. It establishes how familiarity is used as a resource to accomplish the shared activity of searching for and selecting a YouTube video. Tina and her mother display familiarity with using technology to accomplish web searching and the process of selecting a video, and to demonstrate knowledge about particular YouTube videos and Tina’s video preferences, to produce their activity. The chapter establishes that familiarity enables the production of the video selection; produces it as a mundane, everyday activity; and is a resource for resuming and exiting incipient interaction in the home.

First, in this chapter Tina and her mother orient to each other’s copresence and transition into shared activity. Second, they repair misunderstanding that develops, while also attending to the production of a web search. Third, they co-produce a YouTube video selection. Fourth, Tina and her mother disengage from talk to transition into individual activities. The concluding section discusses how familiarity is a resource for producing incipient interaction, and through it, accomplishing an everyday activity.
5.2 Setting

Data are drawn from a video recording made by Tina’s mother on a weekday morning. The first moments of the recording show Tina facing a laptop. At Tina’s right hand side is a Barbie doll with ribbons wrapped around it.

Figure 5.1. Setting and participants of Chapter 5.

5.3 Producing Shared Activity

This extract shows how Tina and her mother re-engage in interaction to co-produce a Barbie YouTube video selection and then transition into independent activity wherein Tina accomplishes activity with the video. Central to analysis is how Tina and her mother display familiarity with: the process of selecting a video, the use of technology to accomplish web searching, and the YouTube videos and Tina’s video preferences. The organisational structure of the extract is shown in Table 5.1.

Table 5.1
Organisational Structure of Extract 5.3

<table>
<thead>
<tr>
<th>5.3 Producing Shared Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.3.1 Transition into shared activity</td>
</tr>
<tr>
<td>5.3.2 Addressing trouble in Tina’s noticing</td>
</tr>
<tr>
<td>5.3.3 Co-producing video selection</td>
</tr>
<tr>
<td>5.3.4 Transition into independent activity</td>
</tr>
</tbody>
</table>
Chapter 5: Familiarity as a Resource to Accomplish Shared Activity

5.3.1 Transition into shared activity.

1 (3.0) (M walks into room holding camera)
2 (1.0) (T (\(\text{Internet homepage loads}\))
3 (M walks to table))
4
5 T: hhh hhh er↑°
6 (M places camera on table))
7 (3.0) (T (\(\text{moves cursor}\))
8 (M adjusts camera))

Figure 5.2. Lines 7-8.

9 (1.0) (T removes hand from touch pad))
10 (T (\(\text{at zebras}\))
11 (M walks toward T))
12 M: okay:
13 (M walks toward T))

The video camera moves closer to Tina, as the mother, who holds it, walks into the dining room (lines 1 and 4; Figure 5.2). The mother’s movement to the table brings her into copresence (Goffman, 1963; Szymanski, 1999) with Tina. The mother places the video camera on the table to the right of Tina and adjusts it to focus on her (lines 6 and 8).

Tina sits with her body oriented to the laptop on the edge of the chair. Her position displays a temporary committal stance (Schegloff, 1998a) to the laptop and projects future movement to adjust her body configuration on the chair. The Internet homepage loads (line 3) presenting an advertisement for a laptop featuring zebras on its screen. By bringing up the Internet, Tina displays her familiarity with using it (Tulbert & Goodwin, 2011). At the same time, Tina slightly raises her hand and returns it to move over the touch pad (line 7). With her gaze to the screen (line 2), Tina tracks
the movement of the cursor generated by her actions (Figure 5.2). After three seconds she removes her hand from the touch pad (line 9) and moves her gaze to the zebras onscreen (line 10).

The mother orients to Tina by walking toward her from behind the camera (lines 11 and 13). The mother’s movement projects further actions to come (Fatigante et al., 2010) with Tina. At the same time she utters a free-standing “okay” (Beach, 1993, 2003; line 12), which breaks her silent copresence with Tina. In the recording until this moment, Tina and her mother have displayed an orientation to the individual activities of using the laoptop and setting up the camera respectively. The mother’s turn indicates a “state of readiness” (Beach, 1993, p. 325) by signalling the conclusion of her own activity and the beginning of a new activity (Beach, 1993). It acts as a transition marker (Beach, 1993) to “prefigure movements toward next-positioned matters” (Beach, 2003, p. 122). In this sense, the mother’s turn is interactionally relevant for Tina. It allows the possibility for Tina to respond and thereby re-engage in turn-by-turn talk (Szymanski, 1999) with the mother. This series of predominantly embodied actions shows how the separate activities of two people begin to converge.

5.3.2 Addressing trouble in Tina’s noticing.

```
14 (2.0) ((T ➔ to zebras)) =
15 M: = [wai::tė]
16 ((M stands behind T))
17 (2.0) [((M’s hands hover over touch pad))
18 ((T removes hand from []))
19 (1.5) ((M ➔ cursor to search bar))
```
Chapter 5: Familiarity as a Resource to Accomplish Shared Activity

Tina responds to her mother’s orientation to her (lines 11-13) by initiating further interaction. She points to the zebras on the Internet homepage as she continues to gaze at them (line 14). Tina’s actions indicate a noticing (Schegloff, 2007), which makes the image relevant for her interaction with her mother. Her point gesture (Wootton, 1994) works to orchestrate the mother’s orientation to, and acknowledgement of, the image. The mother responds to Tina’s point gesture (Wootton, 1994) with the directive “wait::” (line 15). The turn is the first part of a directive-response adjacency pair. It directs Tina to conduct herself in a particular way (Ervin-Tripp, 1976), specifically to stop using the laptop. The mother produces the directive as an explicit imperative which strongly implies a preferred response of compliance (M. Goodwin & Cekaite, 2013). The mother’s directive shuts down Tina’s turn and the projected sequence to follow,
displaying asymmetrical interactional rights between adults and children
(Forrester, 2013b).

As the mother issues the directive she moves forward to stand
behind Tina (line 16). In this position, the mother and Tina assume “a state
of converging gaze direction” (Schegloff, 2005, p. 464) to the screen. The
organisation of their bodies in orientation to the screen suggests their
combined use of the laptop. The mother’s position behind Tina creates a C-
formation (Cekaite, 2010; Kendon, 1990), whereby she has greater access to
Tina’s body than Tina does to her. From this position the mother monitors
Tina’s actions. The mother’s access to Tina’s body allows her to approach
the laptop by positioning herself around Tina. She moves her arms round
Tina so that her hands hover over the touch pad (line 17). The mother’s
arms physically enclose Tina in the activity with the laptop and restrict her
movement, thus limiting the possibility of Tina acting contrary to the
directive. The mother’s orientation to the touch pad projects her use of the
laptop as the next activity.

As the mother moves toward the laptop, Tina complies with the
directive by retracting her hand from the screen and moving both hands
under the table (line 18). Tina’s embodied response displays her sense-
making of the mother’s directive and movement around her as directed
toward her activity at the laptop. The mother then swipes the touch pad to
move the cursor upward to the Google search bar (line 19). Tina monitors
these actions by following the movement of the cursor with her gaze (Figure
5.4). The mother’s actions with the touch pad show Tina what she was
directed to wait for and project further action using the laptop. Together, the
verbal and embodied turns by Tina and her mother achieve a shift in activity; from Tina using the laptop to her mother accessing it.

Tina initiates a turn “I can s-” (line 20) but does not complete it. In the second of silence that follows Tina’s incomplete turn, the mother taps the touch pad to select the search bar, and a drop-down list of previous Google searches appears (lines 21). This list becomes visible due to there being a search phrase already entered into the search bar. Following this, Tina breaks the inter-turn gap (Schegloff, 2007) to self-repair the trouble in her talk. She recycles (C. Goodwin, 1980; Schegloff, 1987b) her previous turn “I can” (line 22), indicating that she has not completed it.

As Tina recycles her turn, her mother latches onto it, so that Tina does not continue it. The mother’s utterance “yes you’ve started it up yourself” (lines 23-24) produces agreement in turn-initial place, indicating that she knew what Tina was going to say. This is followed by a formulation of what she is agreeing to; her anticipation that Tina was stating that she could start the Internet. Tina’s incomplete utterance “I can s-” appears to be interpreted by the mother as “I can start the Internet”. Though Tina began her utterances in present tense (“I can”), the mother’s formulation is phrased in past tense to index Tina’s previous actions (lines 3 and 7). Thus, the mother’s formulation of Tina’s incomplete utterances provides an account of Tina’s actions.

The mother’s turn is hearable as addressing the trouble in Tina’s talk. Her other-initiated repair (Sacks et al., 1974; Schegloff et al., 1977) articulates what she believes Tina is having trouble stating. The mother registers Tina’s utterance as an announcement launched to express “news” (Schegloff, 2007, p. 37) of her achievement. Her other-initiated repair is a
candidate announcement (Maynard, 2006) in the sense that it formulates what Tina has done, as if this was what Tina was going to say. The mother’s use of the word “yours:lf” (line 23) complements Tina’s first person accounts (lines 20 and 22) and so emphasises Tina’s independent activity.

The mother types the letters “b”, “a”, and “r” into the Google search bar (line 26). As she does so, Tina formulates a noticing of what she can see on the screen (lines 27, 29, 31, and 33). She uses the turn-initial address term (Lerner, 2003; Wootton, 1981) “mummy::;” (line 27) to solicit her mother’s attention. The device emphasises “the importance of…attention being secured for the delivery of a turn that is in some way significant” (Butler, Danby, & Emmison, 2011, p. 352). Tina then recycles her previous turns (lines 20 and 22) to complete her utterance, “I can see some zebras on the computer::,” (lines 29, 31, and 33).

Tina’s noticing repairs her previous incomplete turns and the misrepresentation of her turn in her mother’s talk. Her noticing shows that her incomplete turns attempted to index her earlier embodied orientation (lines 10 and 14) to the zebras onscreen. Additionally, her verbal turns attempted to achieve what she was unable to do nonverbally—to make the zebras relevant to the interaction. That is, when Tina gestured to the zebras (line 14), her action was halted by the mother’s directive (line 15) and her turn within the interactional sequence was shut down. Thus, Tina attempts (lines 20 and 22) and finally produces her noticing verbally. Her turns throughout the interactional sequence demonstrate her ability to employ new methods and a range of resources, first embodied and then vocal, to initiate talk about the zebras onscreen. Tina completes her noticing with raised intonation, hearable as inviting a response from her mother (line 33).
Tina’s noticing occurs simultaneously to the mother’s actions with the laptop. After the mother types the letters “b”, “a”, and “r” into the Google search bar (line 26) a new drop-down list of related prior searches appears. The mother swipes the touch pad to scroll through the search terms (line 30). She taps to select “barbie youtube” which activates the Google search (line 32). The mother’s continued embodied orientation to the laptop during Tina’s announcement shows that the Google search, and not Tina’s talk, is the focus of her activity. While Tina and the mother each face the screen, they orient to different aspects of it and initiate alternate courses of action, namely talk and a Google search. The search generates a new webpage listing YouTube videos (line 34). At the same time Tina completes her noticing (line 33), making relevant a response from the mother.

5.3.3 Co-producing video selection.

```
35  T:  [.hhh
36  ]((M _ cursor to third video))
37  (0.2)
38  M:  [*o:: kay, *=
39  ]((T raises hand))
40  T:  =[that one ther:e,
41  ]((T _ third video))

Figure 5.4. Lines 40-41.
```

42  M:  yeah?
43  (0.5)
44  T:  that’s my favourite on:e.
45  (1.0) ((M _ cursor over video))
46  T:  [it’s Spanish [Barbie:ć
47  ]((M _ video))
In the turns that follow, Tina and her mother simultaneously orient to the search results to select a video. The mother swipes the touch pad to move the cursor to the third video listed onscreen (line 36), and then utters an elongated free-standing “o::kay” (Beach, 1993, 2003; line 38). The mother’s marker acknowledges her success in locating a video for Tina to view. The marker’s soft volume suggests it is in response to the actions onscreen, rather than responding to Tina’s announcement. Thus, the mother does not provide a second part to Tina’s noticing. Rather, her actions during and following Tina’s turn indicate her attention to her activity at the laptop. By leaving Tina’s noticing unreturned the mother uses her asymmetrical right as an adult (Forrester, 2013b) to control the direction of the interaction.

Tina does not pursue a response to her noticing; rather, her next actions show her orientation to the YouTube videos. As the mother moves the cursor to the third video (line 36), Tina produces an audible in-breath (line 35) indicating a noticing of something onscreen. As the mother utters “o::kay” (line 38), Tina raises her hand (line 39) and stretches it toward the screen. She indicates her selection by pointing to the third video Queen of the Waves (line 41), which her mother had previously selected with the cursor. At the same time, Tina verbally selects the video with “that one there,” (line 40). Her indexical expression “there” (C. Goodwin, 2007) assumes the mother is attending to her gaze and point gesture (Wootton, 1994) indicating the video on the screen. By her actions Tina demonstrates understanding that the appearance of videos makes relevant the selection of one of them. Thus, Tina and her mother each orient to the YouTube videos by making a selection from among them.
Tina’s video selection (lines 40-41) produces the first part of a directive-response sequence. It makes relevant the mother’s selection of the video using the laptop. The mother responds with the first part of an insert-expansion question-answer adjacency pair (Schegloff, 2007) “yeah?” (line 42). The rising prosodic shape of the mother’s minimal turn asks for confirmation of the video selection. Tina’s second part provides the positive assessment (Pomerantz, 1984a) “that’s my favourite on::e.” (line 44). Her assessment discriminates between the videos according to the images in the video thumbnails and indicates her familiarity with them. Interestingly, Tina’s answer in the question-answer adjacency pair provides a reason for selecting the video, namely, it should be selected because it is her favourite. Her indexed experience with the video thumbnails occasions “the interactive organisation of co-experience” (C. Goodwin & Goodwin, 1987, p. 9) through shared orientation to and talk about the video.

Familiarity with YouTube videos enables particular actions by Tina and her mother to co-select a video. Their previous experiences producing web searches are a resource for identifying videos and talking about them. When the mother does not respond to Tina’s assessment in the second of silence that follows (line 45), Tina provides additional information that the video is “Spanish Barbie;:\” (line 46). This information shows Tina’s identification of the content of the video based on its thumbnail image. By producing additional information about the video, Tina “claims knowledge of that which she is assessing” (Pomerantz, 1984a, p. 57), which in turn validates her right to evaluate it (Raymond & Heritage, 2006). The mother responds to Tina’s turn-in-progress with the “sequence-completing action” (Szymanski, 1999, p. 10) of tapping the touch pad to select the video (line
47). The timing of the mother’s action indicates that she treats Tina’s assessment and additional information as the confirmation she was seeking. Thus, the mother’s manipulation of the laptop and Tina’s verbal and embodied actions coproduce the selection of a YouTube video.

5.3.4 Transition into independent activity.

Figure 5.5. Lines 54-56.

57  (1.0)  ((T kneels on chair))
58  "[she’s ready.
59  T:  [she’s ready.
60  [((T \rightarrow Barbie))
61  (0.5)
62  "[she’s steady.
63  T:  [she’s steady.
64  (0.5)
65  "[she’s upon her=
66  T:  [she’s (upona:)=
67  [((M adjusts camera)]
68  "=[feet:]
69  T:  =\underline{\textbf{be}}\underline{\textbf{ti}}
70  [((T \rightarrow Barbie))
71  [((M adjusts camera)]
72  (0.5)
73  "[dancing=
74  T:  [dancing=
75  [((T reaches for Barbie))
76  [((M adjusts camera)]
77  "=[on=
78  T:  =\underline{\textbf{ow}}]=
79  [((T picks up Barbie))
80  [((T \rightarrow left of camera)]
Figure 5.6. Lines 85-87.

In a lapse of action (Schegloff & Sacks, 1973) following the video selection, Tina and her mother visibly disengage from their collaborative activity to orient to individual activities. The mother “exploits the natural ending” (Fatigante et al., 2010, p. 362) of the shared activity to exit sequential talk with Tina. As the webpage loads onscreen (line 48), the mother removes her hands from the touch pad and steps away from Tina (line 49). At the same time, Tina maintains an orientation to the laptop through her gaze in waiting for the video to load (line 50). Tina’s continued gaze to the laptop screen indicates her sustained attention to the video. In overlap with the beginning of the music video (line 51), the mother orient
to the camera by walking toward it (line 53). Thus, the mother’s orientation to the camera and Tina’s continued activity at the laptop produce uncoordinated actions toward independent activities that close their turn-by-turn talk (Szymanski, 1999).

The imminence of the lyrics projected by the opening bars (Broth & Keevallik, 2014) of the music video is reflected in Tina’s actions. At the commencement of the music video’s second opening bar (line 54), Tina orients to the Barbie doll through her gaze and gesture (lines 55-56). She stretches out her hand as if to grasp the doll (Figure 5.6); yet before she does so, she shifts her body in the opposite direction to kneel on the chair (line 57). The movement of her knees onto the chair increases her height and adjusts the angle at which she views the screen. Her full occupancy of the chair also observably displays her use of the laptop. The sequential order of Tina’s embodied actions in preparing for the lyrics suggests that she terminated her gesture to the Barbie doll in preference for adjusting her seating position. Her actions are timed to the music video in such a way that immediately after she sits on the chair, the lyrics begin.

To achieve the fine timing of her actions to the opening bars, Tina shows by her movement that she is listening and responding to the music (Weeks, 1996b), and using her familiarity with it to gauge the length of time available to perform her actions. Tina organises her actions to the music; orienting to the time in the opening bars as the time available to prepare for viewing the video. With the second opening bar nearing its end, Tina selects her seating and by extension viewing of the screen as a “dominant involvement” (Goffman, 1963, p. 44). Subsequently, her interest in the Barbie doll becomes a “subordinate involvement” (Goffman, 1963, p. 44).
Tina monitors her actions against the progression of the music and re-organises her embodied involvement in the remaining time of the opening bars. Although Tina’s gesture to the Barbie doll is superseded by the adjustment of her seating position, her orientation to the doll shows it to be connected to her viewing of the video.

As the lyrics begin (line 58; Figure 5.8) the video shows a close-up image of Barbie riding a wave on her surfboard, thus representing her as the foci of the lyrics. The music video is based on the film, *Barbie in a Mermaid Tale*, in which Barbie plays a character who is both a surfer and a mermaid. Tina commences singing in time with the lyrics (line 59), evincing her attention to the “local practical contingencies” (Weeks, 1990, p. 353) of the music. In her singing she listens to, and follows, the rhythm and delivery of the lyrics to establish and maintain synchrony (Weeks, 1996b, 2002) with the music. She keeps time with the fast tempo of the music by running her words together (as represented in the transcript, lines 66, 69, 86, 89, and 93). In addition, she reproduces the emphasis and elongation of vowels in the lyrics, such as “reedy” (line 59) and “(:↑wa↑)” (line 82). Even when producing vocalisations of hearable sounds in the lyrics, such as “to:r” for “to her” (lines 85-86), Tina elongates them for the same duration as lyrics in the video to maintain temporality with the music. Tina also maintains synchrony with the music by observing half-second pauses (lines 61, 64, and 72) so that she commences the next line at the correct time (Weeks, 1996a). This practical accomplishment (Weeks, 1990) indexes her familiarity with the music video and indicates her continued monitoring of the music. Through her orientation to the temporality of the music, and her familiarity with it, Tina accomplishes synchrony with the video.
Tina coordinates her orientation to the music with her use of the Barbie doll. Singing the end of the first line (line 69), Tina re-oriens her gaze to the Barbie doll (line 70). This movement produces body torque, that is, a twisted postural configuration (Schegloff, 1998a) whereby her body orients to both the laptop and doll. Her movement projects a course of action (Schegloff, 1984) wherein she pursues further activity with the doll. While singing “dancing” (line 74) Tina reaches toward, and grasps, the doll. As she sings “ow” (line 78), she lifts the doll upwards (line 79). Tina uses the doll as an affiliative object (Suchman, 2005) to mirror the action of Barbie onscreen. Together with her singing, which is in synchrony with the music, Tina’s movement of the doll accomplishes an offscreen representation of the music video.

Additionally, in orienting to her mother as she begins to move the doll Tina performs a showing (Kidwell & Zimmerman, 2007; Lerner, Zimmerman, & Kidwell, 2011) to occasion attention to her actions with it (though the mother does not audibly respond). By constructing her movement of the doll
as a showing, Tina attempts to solicit her mother’s attention economically without interrupting her ongoing activity with the video.

Tina engages with the music video by coordinating her singing and embodied orientation to the Barbie doll and camera. Her curved movement of the doll (as represented in the transcript in lines 84, 87, 91, and 94; Figure 5.7) reproduces the movement of Barbie in the video. In singing “(:↑wa:↑)” (line 82), Tina extends her arm to lift the doll above her head (line 84), and in turning her neck to look at the camera (line 83), she situates it as another audience to her activity. She maintains her gaze to the camera as she curves the doll (line 87) and vocalises “to:r” (line 86); however re-oriens to her mother (line 90) in singing “ownkin:” (line 89) and “::be” (line 93) as she lowers the doll (lines 91 and 94). Tina draws on her familiarity with the video to recreate it without continued orientation to the screen. This enables her to establish her activity as interactively relevant through her gaze to her mother and the camera. Thus, Tina engages in discontinuous vocalisations in synchrony with the lyrics, uses gesture and body movement to mirror onscreen actions with the doll, and constructs her activity as an interactional event.

5.4 Conclusion

This chapter has established how familiarity was used by Tina and her mother to produce a web search, co-select a YouTube video, and engage with the video as it played. Tina used her experiences and knowledge of previous Google searches, video selections, and viewings of YouTube videos in viewing and making meaning from images to assess and select a video with her mother. The analysis suggests that Tina’s meaning making of the onscreen images, and her communication of this meaning, was integral
to accomplishing the web search and with a family member who knew and could predict the videos that Tina would want to view.

The analysis also demonstrated that familiarity was used by Tina and her mother to occasion their re-engagement and disengagement from incipient interaction. They oriented to the projected reason for the mother’s copresence, and displayed an awareness of the conclusion of their interaction following the video selection. The mother’s use of the laptop indexed previous experiences using technology to conduct web searches for YouTube videos. Tina and her mother drew on their familiarity with how they accomplish web searching together to produce it on this occasion as a routine, even mundane, home activity. Thus, familiarity was used as a resource to accomplish the video selection, by producing meaning about onscreen texts to select and engage with the video; to produce the interaction as an everyday activity; and to re-engage and disengage from incipient interaction. The next chapter considers Tina’s orientation to, and management of, telephone and computer technologies.
CHAPTER 6

ACCOMPLISHMENT OF A

PRETEND TELEPHONE CONVERSATION:

THE INTERPLAY BETWEEN TECHNOLOGIES

6.1 Introduction

The previous chapter established how familiarity was used as a resource to accomplish a YouTube video selection, treat it as a routine and mundane activity, and enable re-engagement and disengagement from incipient interaction. This chapter considers how digital literacy practices of web searching and viewing a YouTube video inform a pretend telephone conversation. Analysis establishes that Tina’s orientation to the YouTube video touches off her telephone call. The chapter shows how interplay between technologies is embodied in Tina’s dual orientation to them in her telephone conversation.

First, in this chapter Tina solicits her mother’s help to select an appropriate YouTube video. Second, the mother conducts a web search for a video. Third, Tina and her mother jointly select a video. Fourth, Tina announces she is going to call Barbie. Fifth, Tina’s call is touched off by what she can see in the video and hear in the song lyrics. Sixth, Tina transitions into singing in a timely way. Finally, the conclusion establishes that Tina’s actions produce an interplay between the computer and telephone technologies and display her understanding of how viewing can inform other activities.
6.2 Setting

Data are drawn from a video recording made by Tina’s mother on a weekend afternoon. Tina sits at a table facing a laptop. The mother positions the video camera on the table at Tina’s right hand side. Also at Tina’s right hand side is a dolphin biscuit cutter and toy Barbie mobile phone. Tina has been viewing YouTube videos when the recording commences.

Figure 6.1. Setting and participants of Chapter 6.

6.3 Finding an Appropriate Barbie Video

This extract establishes the interactional methods by which Tina solicits and then manages her mother’s help to select an appropriate YouTube video. In particular, Tina’s assessments are an important resource for achieving help and negotiating how it is given. The organisational structure of the extract is shown in Table 6.1.

Table 6.1
Organisational Structure of Extract 6.3

<table>
<thead>
<tr>
<th>6.3 Finding an Appropriate Barbie Video</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3.1 Identifying a problem</td>
</tr>
<tr>
<td>6.3.2 Producing an accountable solution</td>
</tr>
<tr>
<td>6.3.3 Co-producing selection of an appropriate video</td>
</tr>
</tbody>
</table>
6.3.1 Identifying a problem.

<table>
<thead>
<tr>
<th>Line</th>
<th>Event(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(7.0) ((M walks into room))</td>
</tr>
<tr>
<td>2</td>
<td>(5.0) [((M places camera on table))</td>
</tr>
<tr>
<td>3</td>
<td>[((T (\downarrow) 'i' (\times) 16))</td>
</tr>
<tr>
<td>4</td>
<td>[((T (\oplus) - (\square)))</td>
</tr>
</tbody>
</table>

Figure 6.2. Lines 3-4.

<table>
<thead>
<tr>
<th>Line</th>
<th>Event(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>(0.5)</td>
</tr>
<tr>
<td>6</td>
<td>(3.0) [((T (\downarrow) 'i' (\times) 7))</td>
</tr>
<tr>
<td>7</td>
<td>(0.5) [((M takes a footstep))</td>
</tr>
<tr>
<td>8</td>
<td>T: (\text{ese}: [\text{ar:e not appropriati:()}\text{ate} \text{.hhh.}}</td>
</tr>
<tr>
<td>9</td>
<td>[((T (\oplus) - (\text{M})))</td>
</tr>
<tr>
<td>10</td>
<td>(1.0) [((M walks toward T))</td>
</tr>
<tr>
<td>11</td>
<td>[((T (\oplus) - (\square)))</td>
</tr>
<tr>
<td>12</td>
<td>M: (\text{what are [they,}}</td>
</tr>
<tr>
<td>13</td>
<td>[((2.0) ((M walks toward T))</td>
</tr>
<tr>
<td>14</td>
<td>M: (\text{yea:h! they're a:ll (0.2}}</td>
</tr>
<tr>
<td>15</td>
<td>[all appropriate hhh?°</td>
</tr>
<tr>
<td>16</td>
<td>[(\oplus) ((M brings hand to touch pad))</td>
</tr>
<tr>
<td>17</td>
<td>T: (\text{ut |I</td>
</tr>
<tr>
<td>18</td>
<td>[((M (\oplus) (\text{circles cursor)}})</td>
</tr>
</tbody>
</table>

Tina scans a list of YouTube video thumbnails on the right hand side of the webpage (lines 3-4 and 6; Figure 6.2). She views video thumbnails by pressing the down arrow key (\(\downarrow\)) to view half a thumbnail at a time. She views eight videos in five seconds (line 3). She then pauses on a particular video thumbnail (line 5), suggesting her interest in it and her possible selection of it. However, she views another three and a half video thumbnails (line 6). Her actions suggest her familiarity with the video thumbnails as she requires little time to view them.

While Tina scans the video list, the mother walks to the dining table and sets down the video camera (lines 1-2). After setting up the camera the
mother is heard walking away (line 7). Tina orients to her mother’s movement when she chooses this moment to resume an incipient state of talk with her (line 8). The timing of her turn indicates her sense-making of the mother’s movement and prediction of her trajectory from the table. Tina begins her utterance with a raised pitch and emphasis to solicit her mother’s attention. Her utterance, “↑ese↑ ar:e not appropri(ate)”, proffers an assessment of a referent identified with the indexical expression “↑ese↑” (these). Tina’s continued gaze to the YouTube videos indicate them as the referent of her assessment. She assesses the videos as inappropriate, thereby indexing her prior actions viewing them and claiming knowledge of them. Through her assessment she makes the problem of video selection a fault of the technology and positions herself as a knowledgeable user.

Tina’s assessment produces a complaint which enlists the mother’s help without directly requesting it. Partway through her assessment Tina turns her head to the mother (line 9). Her coordinated gaze and verbal complaint makes her problem of the video selection interactionally relevant. By her actions Tina seeks a preferred next action of an agreeing assessment (Pomerantz, 1984a) from the mother. As such, Tina’s assessment sets up “a framework of collaborative mutual orientation” (M. Goodwin & Goodwin, 2012) to the YouTube video thumbnails. Tina employs minimal resources to interrupt the mother’s current course of action and direct her attention toward the laptop screen.

The mother’s subsequent actions display the procedural rule of second assessments (Pomerantz, 1984a). As the recipient of an initial assessment, the mother directs her attention to the video thumbnails and proffers her own assessment of them. She begins by walking toward Tina
and standing near her (line 10). The mother’s new position affords a better view of the screen so as to assess the videos. This embodied action indicates to Tina that her assessment successfully gained the mother’s attention and altered her projected movement from the table. Her assessment has successfully reshaped the context of interaction to attend to her problem. In response to the mother’s attention to the screen, Tina also turns her gaze to it (line 11).

The mother’s lack of immediately forthcoming talk suggests the possibility of her disagreement through the provision of a conflicting assessment (Pomerantz, 1984a). She inserts the first part of a question-answer sequence “what are they,” (line 12), which seeks further information before possibly producing agreement or disagreement. She calibrates her question with further movement toward the screen (line 13). Her body positioning produces a cooperative stance (C. Goodwin, 2007) to assess the videos and her attention to the screen facilitates the answering of her own question. Tina’s silence treats the mother’s actions as constitutive of assessing the videos.

In her next actions the mother produces a second assessment of the YouTube videos. She proffers the dispreferred response (Pomerantz, 1984a; Schegloff, 2007) “↑yea:h↑ they’re all (0.2) all appropriate” (lines 14-15) which disagrees with Tina’s assessment. The mother manages the delivery of her disagreement using an “agreement + disagreement” package (Schegloff, 2007, p. 70) and prosodic and vernacular tools. Her agreement token “↑yea:h↑” (line 14) in turn-initial position intervenes between the first and second assessments so that the dispreferred part is “positioned non-contiguously” (Schegloff, 2007, p. 70). The mother also elongates the
agreement token “↑yea: h↑” to forestall her actual turn. In this way, the
dispreferred turn is considered as a modification of the initial, seemingly
preferred response (Schegloff, 2007). The mother’s pause and repetition of
“all” delicately confirm the videos are appropriate and her raised intonation
contour invites Tina to respond (lines 14-15).

The mother’s assessment suggests that she will not take up further
action to help Tina, but that Tina should reconsider the thumbnails. At the
same time, however, the mother moves her hand to hover over the touch pad
(line 16). This gesture makes relevant the expectation for future action and
suggests that despite her own opinion, the mother is going to pursue further
activity with the laptop.

Tina responds to the mother’s assessment by clarifying her initial
assessment in another attempt to enlist the mother’s assistance. Her turn “ut
↑I↑ do:n’t like schese one:s,” (line 17) produces a negative formulation
(Schegloff, 2007) of the videos and treats her mother’s assessment as
misunderstanding why they are inappropriate. Her formulation justifies her
assessment by stating the reason why the videos are inappropriate; that is,
that they are not suitable or right for her activity. Tina’s turn shows her
orientation to the mother’s hand movement (line 16) and her interpretation
of this action as possibly addressing the problem of video selection. Partway
through Tina’s restated problem (line 17) the mother pursues activity with
the laptop (line 18). She moves her finger on the touch pad to circle the
cursor over the video thumbnails, which suggests her to be further
considering the videos. Thus, without directly requesting it, Tina achieves
her mother’s input in her activity.
6.3.2 Producing an accountable solution.

19 (0.2) \((M \uparrow \text{cursor upwards})\)

Figure 6.3. Line 19.

20 \(M:\) [“alright,“
21 \(((M \uparrow \text{cursor upwards}))\)
22 (0.3) \(((M \uparrow \text{cursor upwards}))\)
23 \(M:\) [“we'll. “ (0.2) “let’s=
24 \(((M \uparrow \text{cursor to search bar}))\)
25 \(M:\) = \text{go back},“
26 \(T:\) [.hhh ]
27 (0.4)
28 \(M:\) [to this,
29 \(((T \rightarrow \text{search bar}))\)
30 (0.7) \(((M \uparrow \text{to select search}))\)
31 (2.0) \(((M \rightarrow \text{‘Enter’}))\)

The mother seeks a solution to Tina’s problem of locating an appropriate video. She acknowledges Tina’s negative formulation of the videos with the token ““alright,“” (line 20). By the token the mother responds to the current state of activity, indexes a transition within it (Bangerter & Clark, 2003), and projects a new activity to come (M. Goodwin, 2006; M. Goodwin & Cekaite, 2013). At the same time, the mother produces the transition in activity by swiping the touch pad to move the cursor upwards (lines 19, 21, and 22). Tina does not respond to the mother’s acknowledgement in the pause in talk (line 22), but orients to the movement of the cursor onscreen (Figure 6.4). As such, Tina monitors the mother’s actions in response to her assessment and complaint. As the mother moves the cursor to the Internet search bar (line 24), she prefaces a
new turn (line 23) with the discourse marker “we’ll” (Schegloff, 2007) to indicate that further talk (Schiffrin, 1987) addressing the problem is to come. The mother’s elongation of the marker and the subsequent pause (line 23) produce a turn-initial delay (Schegloff, 2007) that postpones the turn itself, and possibly provides her with time to organise her talk and actions in locating an appropriate video.

In what follows, the mother coordinates her talk and embodied actions to account for her use of the laptop. Following the turn-initial delay (line 23), the mother proposes the course of action, “let’s go back, to this.” (lines 23, 25, and 28). The action, “go back to this”, suggests revisiting something encountered prior to the commencement of the recording. It is proposed as a shared activity as the form “let’s” (line 23) implies collaborative engagement (M. Goodwin & Cekaite, 2013). The mother frames her use of the laptop as a joint activity with Tina. Her turn suggests her acknowledgement of Tina’s involvement in the activity.

Tina’s embodied actions demonstrate her continued involvement in the mother’s use of the laptop. Via orientation to the screen she monitors the mother’s unfolding course of action to solve her problem. Her in-breath (line 26) suggests a noticing of something onscreen and she orients to the cursor in the search bar (line 29; Figure 6.5). Meanwhile, the mother continues her activity with the laptop by tapping the touch pad to select search terms already present in the search bar (line 30). She presses the enter key to produce another search (line 31).
6.3.3 Co-producing selection of an appropriate video.

32 T: I don’t \[\textit{like}\] th(h)a:-
33 [(search results appear)]
34 T: \[\textbf{[top video]}\]
35 M: \[\textit{how about} we open= \]
36 M: \[\textit{this >and then we=}\]
37 M: \[\textit{can,}\]
38 M: \[\textbf{[top video]}\]
39 M: \[\textbf{[top video]}\]
40 M: \[\textbf{[top video]}\]
41 T: \[\textbf{[top video]}\]
42 T: \[\textbf{[top video]}\]
43 T: \[\textbf{[top video]}\]
44 T: \[\textbf{[top video]}\]

Figure 6.4. Line 46.

46 T: \[\textit{that o::[ne]}\]
47 T: \[\textbf{[top video]}\]
48 M: \[\textbf{[top video]}\]
49 M: \[\textbf{[top video]}\]
50 T: \[\textbf{[top video]}\]
51 T: \[\textbf{[top video]}\]
52 M: \[\textbf{[top video]}\]
53 M: \[\textbf{[top video]}\]

While the web search is being generated, Tina responds to her mother’s actions using the laptop to manage her next actions. Tina’s turn “I don’t \[\textit{like}\] th(h)a:-” (lines 32 and 34) recycles (Schegloff, 1987b) her previous negative formulation (line 17) to disagree with the mother’s actions in producing a web search to locate a video. She positions her talk in a lapse in activity to influence what the mother does next. Her turn reinforces that the solution to the problem must provide YouTube videos that she likes. However, Tina cuts off her utterance as she orients to the
appearance of search results onscreen and directs her gaze to the top video thumbnail *Queen of the waves* (lines 32-35). Through her utterance, though unfinished, Tina continues to assert an influence over the video selection.

In the turns that follow, the mother and Tina co-construct (Jacoby & Ochs, 1995) the selection of a YouTube video. The mother accounts for Tina’s disagreement by proposing “>how about< we open this” (lines 36 and 38). Concurrent to her proposition the mother moves the cursor to the top video thumbnail *Queen of the Waves* (line 37), to indicate it as the referent of her talk. Her calibrated turn requires Tina to view her onscreen actions to identify her proposed video selection. By nominating a video selection the mother suggests that she knows what Tina might like to watch.

By suggesting a possible solution as a joint accomplishment with the inclusive “we” (M. Goodwin, 1980), the mother continues to establish the search for an appropriate video as a collaborative activity. The mother extends her proposal with the suggestion “>and then we can,<” (lines 38 and 40). She uses the modal verb (M. Goodwin, 1980) “can” to treat Tina’s compliance as dependent on her “ability or willingness to comply” (Craven & Potter, 2010, p. 425). Her proposal provides the opportunity for Tina to disagree. In doing so the mother displays an orientation to Tina’s earlier assessment and formulation (Extract 6.3.1, lines 8 and 17), that Tina must approve the video as being appropriate for her.

At the same time as the mother proposes a video, Tina also indicates a video selection. The mother does not complete her turn, but orients to Tina’s video selection. Partway through the mother’s video suggestion Tina lifts her hand toward the top video thumbnail (line 39; Figure 6.7) and produces an in-breath indicating her attention to it at the apex of her gesture.
Chapter 6: Accomplishment of a Pretend Telephone Conversation

(lines 41-42). Tina’s orientation to the video selects it as being appropriate for her. Her actions demonstrate her knowledge of, and familiarity with, YouTube videos and her preference among them. Thus, both Tina and her mother orient to the same video thumbnail as being appropriate.

With the cursor already resting on the top video thumbnail, the mother taps the touch pad to select it (line 43). The mother’s selection of the video acknowledges Tina’s preference while acting on her proposed course of action to open it. The mother then verbally acknowledges and clarifies Tina’s selection with a prosodically upward rising question “œyea::h?œ” (line 44). Tina responds by pressing the screen to indicate the video as the referent of her turn “that o:::ne” (lines 45-46; Figure 6.8). Her pressing action, as opposed to a point gesture, emphatically confirms her selection. The mother minimally acknowledges Tina’s selection with “o:kay.” (line 49). The falling intonation of her turn works to close the interactional space between herself and Tina. At this point the video loads (line 50) which Tina marks with an in-breath (line 51). The mother removes her hand from the touch pad (line 52), thus withdrawing from the activity with the laptop. Her turn “there you go::,” (line 53) recognises that Tina’s problem has been solved by selecting an appropriate video and signals the end of her involvement. The lapse in talk provides the ongoing opportunity for it to be resumed at any moment. The mother then exits the frame of the video camera as the YouTube video plays (line 54).

6.4 Tina’s Telephone Conversation with Barbie

In the recording prior to this extract, Tina began moving a dolphin biscuit cutter and singing lyrics with the YouTube music video Queen of the Waves. In this extract Tina produces a pretend telephone conversation
touched off from the video. Her orientation to the computer and telephone technologies establishes an interplay between them. The organisational structure of the extract is shown in Table 6.2.

Table 6.2
Organisational Structure of Extract 6.4

<table>
<thead>
<tr>
<th>6.4 Tina’s Telephone Conversation with Barbie</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4.1 Tina announces a new activity</td>
</tr>
<tr>
<td>6.4.2 Tina talks with Barbie on the toy mobile phone</td>
</tr>
<tr>
<td>6.4.3 Tina ends her conversation with Barbie</td>
</tr>
</tbody>
</table>

### 6.4.1 Tina announces a new activity.

... 
76  \[ to her own= \]
77  \[ to er own= \]
    [ 

Figure 6.5. Lines 77-78.

79  \[ kind of= \]
80  \[ kind of= \]
    [ ((T \( \rightarrow \) phone)) ]
81  [ 

82  \[ beat. \]
83  \[ bee. \]
84  [ 

... 
89  \[ she’s rockin’ the ;ski];lls;, \]
90  \[ she’s rockin the skil\(i\) \]
91  (0.3) ((T picks up toy mobile phone, then puts down dolphin))
92  \[ tearing up the curr= \]
93  T:  \[ I’m gonna ca;ll= \]
94  \[ (((T \( \rightarrow \) phone)) \]
95  [ 

96  \[ ent= \]
97  T:  \[ Barbie= \]
Figure 6.6. Lines 121-122.

Tina produces actions that recreate the onscreen action of the YouTube video *Queen of the Waves*. While singing the lyrics in synchrony with the music (lines 76-77), Tina orients to the dolphin biscuit cutter as she exchanges it between her hands at the peak of its jump (line 78; Figure 6.10). She continues to sing the lyrics in time (lines 79-80, 83-84, and 89-90) as she lowers the dolphin (lines 82 and 85) and orients to the screen (line 81). In her next actions Tina alters her engagement with the video.
During a pause in the lyrics Tina picks up the toy mobile phone (line 91) and lowers the dolphin to the table (line 92). These actions display a transition in activity and project further use of the phone. The timing of Tina’s actions suggests she makes use of the pause in lyrics to end one activity and commence another with the next onset of lyrics. With this orderliness Tina organises her engagement with the YouTube video and accomplishes the transition between activities.

Tina announces the transition in her activity, “I’m gonna ca:ll Barbie mU::M,” (lines 94, 97, 99, and 103). Her announcement resumes talk with her mother, which had lapsed following the video selection. She addresses the news of her new activity to her mother with “mU::M” in tag position (Jefferson, 1973). This identifies the news as being relevant (Wootton, 1981) to the mother and situates her as an audience of the projected telephone conversation. Tina’s elongation and raised volume of the address term works to ensure her announcement is hearable by the mother.

During her announcement Tina’s gaze alternates between the screen and the phone as they relate to her talk. Her gaze shifts to the phone as she announces she’s “gonna ca:ll” (lines 94-95); and then returns to the screen, where Barbie is portrayed, as she names Barbie as the recipient (lines 97-98); and finally shifts again between the phone and screen as she opens up the phone and addresses her mother (lines 99-101 and 103-104). In this way, Tina’s gaze correlates with her reference to the phone and Barbie, and works to monitor both the action onscreen and the developing activity of her telephone call.

Tina’s next actions produce the telephone call pre-beginning (Haddington & Rauniomaa, 2011; Zimmerman, 1992). Tina puts the phone
to her ear, but quickly removes it (lines 106-107). Her actions indicate trouble in making the call and she “repa"r"s” her act of calling by dialling a number. Tina taps the dial pad six times with her gaze toward it (lines 109, 112, and 116), and twice more with her gaze re-oriented to the screen (lines 118 and 122). As she does so she makes the high-pitched sound “do” to represent the sound of a telephone registering the selection of numbers (lines 111, 115, and 121). Tina’s “repair” of dialling a telephone number displays her understanding of the organisation of telephone calls—that the caller dials the recipient’s number before communicating with them. Tina shows her familiarity with the activity of making a call, which contributes to the authenticity of her pretend call. By recognisably producing the distinct routine of a telephone call pre-beginning, Tina accomplishes “doing” being a caller.

6.4.2 Tina talks with Barbie on the toy mobile phone.

126 T: \[hello\]
127 \[((T puts phone to ear))\]
128 T: \=[lo Barbie:]\]
129 \[go for a ri:]\de\]

![Figure 6.7. Lines 128-129.](image)

130 (0.5)
131 \[catch that cur:1,\]
132 (.)
133 \[get >into the tu[:be,]<\]
134 T: \[\o:::]w::h::\?
135 \[do the mahi mahi.\]
136 T: \[Barbie.\]
137 \[make ] your ta[il fi:n] mo:::ve?\]
138 T: \[I j\ust,\]
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Chapter 6: Accomplishment of a Pretend Telephone Conversation

139
140 T: [wan:=
141 [((T ®→table))]
142 T: =[ted=
143 ⃝ [she’s the=
144 T: =[to::,
145 [((T ®→)])
146 ⃝ =queen of the
147 wa::[:: ]:::[v::es.]
148 T: [to see,] [do you want to] come [have a Bar:bie] in a=
149 ⃝ [check it ou:t]_
150 T: = [mermaid tale and,< ]
151 ⃝ [she’s spinnin tha:t b]oar:d
152 a[r:ou::nd. — ]
153 T: [and bring your] doi[phin]
154 ⃝ [queen of the]
155 wa[::::::: ]:::[v::]:es.
156 T: [and take a surfboard,] [s-]
157 ⃝ no one’s gonna take [away] her
158 T: [.hhh]
159 ⃝ crow[:n.]
160 T: [an ]::d,
161 (0.1)
162 ⃝ her majesty, (0.1) is dropping in.
163 (.)
164 ⃝ w[:oa:: ]:H
165 T: [and°]
166 T: I [(wonder?)]
167 ⃝ [surf’s up?] (.) bow down.
168 (.)
169 T: s[ee: ya,]
170 ⃝ [she’s the queen of the
171 w[a:::ves,]
172 T: [see: ya ]:::¢

After producing the telephone call pre-beginning, Tina lifts the
phone to her ear and utters the first part of a greeting sequence “hello
Bar:bie:¢” (lines 126 and 128). Typically, a caller will only speak first if re-
initiating a summons when a recipient does not respond (Schegloff, 1968).
However, Tina’s caller initiated greeting (R. Fitzgerald, 1999) is not heard
as a response to an absence of recipiency. Rather, Tina’s greeting follows
directly after her dialling of the telephone number, so that when she initiates
the greeting she is still lifting the phone to her ear. The quick succession of
these actions shows a lack of trouble in the opening of the telephone
conversation and instead suggests that Tina is orienting to the availability of
Barbie pictured on the cover and inside of the phone. In this way, Tina produces a telephone conversation opening that is not reliant on the summons-answer sequence to establish Barbie’s availability (Schegloff, 1968). So then, given the taken-for-granted availability of Barbie, Tina’s telephone call bypasses the distribution rule (Schegloff, 1968) ordering speakers’ turns in telephone conversations.

Tina’s construction of the greeting sequence establishes her as having a close relationship with Barbie. Her greeting “hello Barbie:)” provides the opportunity for Barbie to recognise her as the caller (Schegloff, 2002c). The absence of her self-identification produces a “voice recognition test” (Sacks, 1995, Vol. 2, p. 161) requiring Barbie to recognise her by her voice. Voice recognition tests are typically used between people who know each other so that the caller can expect the recipient to recognise them (Schegloff, 2002c). Tina makes apparent that Barbie passes the voice recognition test by organising the conversation so that Barbie does not require confirmation that Tina is the caller. In this way, Tina establishes that Barbie knows her well enough to recognise her by her voice (Schegloff, 1968). Thus, by drawing on her entitlement as the caller to be recognised (Schegloff, 2002c), Tina constructs the appearance of a close relationship with Barbie.

In the following utterances Tina responds to imagined turns by Barbie to construct a pretend two-party telephone call. After her greeting Tina pauses to allow time for Barbie to “respond” (lines 130-133). According to the rule of two-party talk (Sacks, 1995; Schegloff, 1995b, 2002b) the conversational floor returns to the caller following a response. So, it would be in this position that Tina would introduce the first topic of
talk. However, Tina produces the change-of-state token (Heritage, 1984a) “o:::w:::h” (line 134) to receipt some new information. The acknowledgement token indicates that Barbie took an extended turn following her responding greeting, in which she introduced a topic of talk informing Tina of something. The raised intonation of Tina’s token indicates that what Barbie has said is pleasing to her. Therefore, Barbie “displays” recipient design by showing “an orientation to who-in-particular the other [Tina] is and what is going on in the life of that other” (Schegloff, 2002c, p. 260). Tina’s construction of responding turns in her pretend conversation with Barbie establishes the opening of the telephone call and continues to frame their relationship as one of close friends.

Following the extended greeting exchange, Tina takes the conversational “floor” and reflecting the interactional structure of telephone calls, organises her next turn by producing the reason for her call. A pause (line 135) suggests a turn relevance place where the interactional turn reverts to her. She begins the turn addressing Barbie in turn-initial position (line 136). Her address term not only projects further talk of relevance to Barbie (Wootton, 1981), but the emphasised vowel and fall in intonation suggest it is a “topic initial elicitor” (Button & Casey, 1985, p. 47) used to command Barbie’s attention and attribute the projected talk as noteworthy and the reason for calling (Button & Casey, 1985; Sacks, 1995; Schegloff & Sacks, 1973; Schegloff, 1979, 1986). Following the address term, Tina extends an invitation to Barbie (lines 138-167). Table 6.3 presents a simplified transcript of Tina’s pretend telephone conversation.
### Table 6.3

*Tina’s Utterances in the Pretend Telephone Conversation*

<table>
<thead>
<tr>
<th>Transcript lines</th>
<th>Tina’s telephone turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>126, 128</td>
<td>hello Bar:bie:¿</td>
</tr>
<tr>
<td></td>
<td>(3.0)</td>
</tr>
<tr>
<td>134</td>
<td>↑o:::w:::h↑?</td>
</tr>
<tr>
<td></td>
<td>(1.2)</td>
</tr>
<tr>
<td>136, 138</td>
<td>Barbie. (0.3) I just,</td>
</tr>
<tr>
<td></td>
<td>(2.7)</td>
</tr>
<tr>
<td>140, 142, 144</td>
<td>wanted to:::,</td>
</tr>
<tr>
<td></td>
<td>(1.2)</td>
</tr>
<tr>
<td>148</td>
<td>to see,</td>
</tr>
<tr>
<td></td>
<td>(1.1)</td>
</tr>
<tr>
<td>148</td>
<td>&gt;do you want to come have a Bar:bie in</td>
</tr>
<tr>
<td></td>
<td>a mermaid tale and,&lt;</td>
</tr>
<tr>
<td></td>
<td>(0.5)</td>
</tr>
<tr>
<td>154</td>
<td>and bring your dolphin</td>
</tr>
<tr>
<td></td>
<td>(0.4)</td>
</tr>
<tr>
<td>157</td>
<td>and take a sur::fboar:d,</td>
</tr>
<tr>
<td></td>
<td>(0.7)</td>
</tr>
<tr>
<td>157</td>
<td>s-</td>
</tr>
<tr>
<td></td>
<td>(1.6)</td>
</tr>
<tr>
<td>158</td>
<td>.hhh</td>
</tr>
<tr>
<td></td>
<td>(1.1)</td>
</tr>
<tr>
<td>161</td>
<td>an:::d,</td>
</tr>
<tr>
<td></td>
<td>(2.5)</td>
</tr>
<tr>
<td>166</td>
<td>°and°</td>
</tr>
<tr>
<td></td>
<td>(0.5)</td>
</tr>
<tr>
<td>167</td>
<td>I (wonder?)</td>
</tr>
<tr>
<td></td>
<td>(1.0)</td>
</tr>
<tr>
<td>170</td>
<td>see: ya,</td>
</tr>
<tr>
<td></td>
<td>(0.7)</td>
</tr>
<tr>
<td>173</td>
<td>see: ya:::¿</td>
</tr>
<tr>
<td></td>
<td>(1.5)</td>
</tr>
<tr>
<td>175, 178</td>
<td>to be (.) a mermai:d as well?</td>
</tr>
<tr>
<td></td>
<td>(1.4)</td>
</tr>
<tr>
<td>183</td>
<td>I:’ll see t-</td>
</tr>
<tr>
<td></td>
<td>(0.4)</td>
</tr>
<tr>
<td>188, 191</td>
<td>to::? (. ) to be:::,</td>
</tr>
<tr>
<td></td>
<td>(0.5)</td>
</tr>
<tr>
<td>192</td>
<td>a (0.2) mermaid.</td>
</tr>
</tbody>
</table>

The beginning of Tina’s invitation “I just wanted to:::, to see,” (lines 138, 140, 142, 144, and 148) produces a possible incomplete pre-invitation (Schegloff, 2007). The shape of Tina’s pre-invitation indicates her trouble in producing it. She begins the pre-invitation by indexing herself as the one extending it with “I just,” (line 138). The word “just” is used as a hedging
device (Schegloff, 2007) to downplay the invitation. Her elongated words (lines 140 and 144) and pauses (while the song lyrics continue, lines 139 and 146) form a series of word searches that enable her to produce the pre-invitation (M. Goodwin, 1983; Sacks, 1995). She produces a “thinking face” gesture (C. Goodwin, 1981, p. 130) when she looks down at the table (line 141) to search for the words “wanted to::,” (lines 140, 142, and 144). The return of her gaze to the screen (line 145) suggests the success of the word search, while her elongation of “to::,” (line 144) implies that she is searching for another word. After a pause and the recycling of “to” in “to see” (lines 146-148), Tina launches into the invitation. Using hedging devices and word searches Tina manages the trouble in her talk to produce an incomplete pre-invitation (Schegloff, 2007).

Tina’s invitation indexes shared understanding between herself and Barbie, as touched off by the music video. Tina asks Barbie, “>>do you want to come have a Barbie in a mermaid tale and,<” (lines 148-149 and 151). Tina’s event “Barbie in a mermaid tale” is touched off from the video that Tina views, and which originates from the film Barbie in a Mermaid Tale. Her description of the event as a “Barbie in a mermaid tale” is a “relation to members” locational formulation (Schegloff, 1972, p. 97) as it indexes where Barbie surfs and swims underneath the waves in the video. Tina invites what she sees onscreen to happen again, and so her invitation to have a “Barbie in a mermaid tale” also refers to a “course of action” place wherein it is identifiable “by virtue of what goes on there” (Schegloff, 1972, p. 101). In this way Tina’s description of the event as a “Barbie in a mermaid tale” is a “right” term, wherein selection of such a term and hearing it as adequate involves “sensitivity to the respective locations of the
participants and referent” (Schegloff, 1972, p. 114). Tina draws on her knowledge of the video and Barbie’s actions in it and selects descriptions of the event that will be intelligible to Barbie to produce her invitation. Thus, Tina’s invitation to Barbie draws upon shared understanding of what a “Barbie in a mermaid tale” constitutes.

Tina’s orientation to the YouTube video is “interactively relevant” (Sacks, 1995, Vol. 2, p. 7) to her construction of the pretend telephone conversation. Her request for Barbie to “bring your dolphin” (line 154) and “take a surfboard,” (line 157) draws on the temporal unfolding (Schutz, 1976) of the lyrics and onscreen video. Tina’s request for Barbie to bring a dolphin is touched off by video scenes of Barbie and a dolphin swimming in the ocean. In addition, Tina’s request for Barbie to take a surfboard follows after song lyrics referencing Barbie’s use of the surfboard (Table 6.4). Tina constructs the invitation by naming an event and objects touched off from the video and that are directly related to Barbie’s actions.

Table 6.4

<table>
<thead>
<tr>
<th>Video lyrics and Tina’s telephone talk</th>
</tr>
</thead>
<tbody>
<tr>
<td>152 ♫ [she’s spinnin thaat b]oar:d</td>
</tr>
<tr>
<td>153 a[r:ou::nd]</td>
</tr>
<tr>
<td>154 T: [and bring your] dol[phin]</td>
</tr>
<tr>
<td>155 ♫ [queen of the]</td>
</tr>
<tr>
<td>156 wa[:::::::::][:v::]e:s</td>
</tr>
<tr>
<td>157 T: [and take a surfboard,] [s-]</td>
</tr>
</tbody>
</table>

The way in which Tina’s talk is touched off by the video parallels how actors can produce a second story that is recognisably similar to, and touched off by, a first story (Sacks, 1995). The second storyteller tells a story in which there is a similar event to that named in the first story, and around which is assembled an ordered list of characters (Sacks, 1995). In a
similar way, Tina organises her invitation around the video by first stating the event “Barbie in a mermaid tale”, and lists characters and objects related to it, the dolphin and surfboard. Therein, Tina uses her viewing and listening to the video as a resource to socially organise (Sacks, 1995) her invitation to Barbie.

Tina’s next actions indicate trouble in constructing the pretend telephone conversation and she brings about its closure. Following Tina’s invitation, a possible transition relevance place for Barbie to respond ensues (and which is partly filled by Tina’s discontinued restarts, lines 157, 159, and 161). It is “hearable” that Barbie has not taken a turn when Tina says “and” (line 161). Tina’s turn-continuing device (Sacks, 1995; Sidnell, 2012) holds onto her turn and suggests that she has more to say related to her invitation. After a significant pause of 2.6 seconds, in which Tina appears to listen to the lyrics (lines 162-164), she recycles (Schegloff, 1987b) the turn-continuing device to produce an incomplete request, “I (wonder)” (lines 166-167). Tina’s talk and continued gaze to the screen suggest she is trying to coordinate her extended utterance (C. Goodwin, 1981) to the actions onscreen, yet no further talk is forthcoming beyond her restarts. Tina then engages in a closing sequence to end her telephone conversation. She produces the farewell “see: ya,” and leaves a short pause for Barbie to respond (lines 170-171). Tina’s organisation of the sequence displays her understanding of the alternating turn-by-turn structure between speakers in two-party closings. She elongates a repeated farewell (line 173) which indicates the imminence of the closing. Tina’s consecutive farewells suggest that she has exchanged two closing adjacency pairs with Barbie to end their telephone conversation.
6.4.3 Tina ends her conversation with Barbie.

174 (1.6) ((T picks up dolphin))
175 T: to be a mermaid as
176 >> she’s floating<.
177 >> she’s flying.<
178 T: we'll?
179 (0.1)

Figure 6.8. Lines 177-178.

180 >> she’s so out of reach
181 [(T picks up dolphin)]
182 T: I’ll see you=
183 >> zooma to La[goo:=
184 >> ((T puts dolphin)]
185 >> [ma?]
186 >> to::?
187 T: [((T picks up dolphin)]
188 (.)
189 >> she’s [the best] on the beach.
190 [to be::,]
191 T: a (.) mermaid.
192 T: [(T puts dolphin)]
193 >> [high] ti:de,
194 (.)
195 >> low ti:de;
196 (.)
197 >> and rip ti[:de=
198 >> [i:de=
199 T: >> [too?
200 T: =doo,
201 (T takes phone off ear)
202 (0.2)
203 >> s[he’s=
204 >> she’s=
205 T: in it
206 T: =in it
207 (T leans forward)]
208 (T puts phone on table))
Tina continues the telephone conversation following the closing sequences. Though her closing and gesture to the dolphin biscuit cutter (line 174) project a transition in her engagement with the video, her next utterance “to be a mermāːd as weːll?” (lines 175 and 178) shows that she has been listening to Barbie speaking as she picked up the dolphin. Barbie’s post-expansion turn (Schegloff, 2007) re-opens the channel of talk. Tina’s question “to be a mermāːd as weːll?” (lines 175 and 178) shows her to be responding to an invitation from Barbie. Tina’s design of “as weːll?” in tag position indexes Barbie’s identity as a mermaid and suggests that she is being invited to be a mermaid like Barbie. Tina’s turn suggests that Barbie produced an extended turn in which she accepted Tina’s invitation, and was subsequently placed to show interest in the talk, and pursued it by extending an invitation of her own. By constructing further talk by Barbie following the closing, Tina designs a way to continue the telephone conversation. Tina’s construction of this part of the conversation is touched off by her orientation to a scene in the video showing Barbie as a mermaid. Thus, Tina uses her orientation to the video to continue her pretend telephone call.

The mother’s continued presence in the room suggests that Tina’s actions are always potentially visible to her. Although the mother does not speak, her copresence means that she may resume interaction with Tina at
any point. Therefore, Tina’s question “to be a mermaid as well?” (lines 85 and 88) makes Barbie’s invitation interactionally accountable. By it Tina produces an identity of herself as someone who receives invitations from Barbie. In this way Tina’s relationship with Barbie is potentially witnessable to her mother.

Tina’s question (lines 175 and 178) produces an insertion question-answer pair (Schegloff, 1972) within the standing invitation-response sequence. Following Schegloff’s (1972) structure of inserted question-answer pairs (Qi and Ai) within base question-answer pairs (Qb and Ab), Figure 6.20 shows how the sequence between Tina (T) and Barbie (B) could be understood (where Barbie’s suggested turns are bracketed). Tina’s inserted question makes an answer from Barbie conditionally relevant (Schegloff, 1972). Tina’s next turn shows that Barbie responded affirmatively to her question, and this response makes her answer to the invitation relevant. Tina’s response “I’ll see t- to: to be a mermaid.” (lines 183, 187, and 191-192) delays and avoids giving a dispreferred response (Pomerantz, 1984a) by indicating she will need to think about her answer. Her pauses (lines 189-190) and restarts (lines 187 and 191) suggest her to be pausing for time to design her turn, weakening the disaligning position of her response (Pomerantz, 1984a). Tina’s turn and the falling inflection of its delivery work to shut down the sequence of talk.

**Figure 6.10.** Invitation-response and insertion question-answer pairs.
Chapter 6: Accomplishment of a Pretend Telephone Conversation

Through a combination of actions Tina accomplishes the end of her pretend telephone conversation and produces a transition in her engagement with the video. As Tina presumably listened to Barbie’s “response” to her inserted question (lines 179-181), and as she responded to Barbie’s invitation (lines 183-192), she moved her gaze between the dolphin and the screen twice (lines 182 and 185; 188 and 193). The movement of Tina’s gaze, combined with the pauses and restarts of her response (lines 183-192), suggest a transition in her attention and project the end of her telephone conversation. A significant pause of 1.6 seconds follows and is broken by Tina when she begins singing the end of the second verse of the lyrics (lines 199). The timing of Tina’s return to singing just prior to the bridge suggests she began singing in preparation for the chorus, with which she has demonstrated her familiarity (though not included in the transcript). Accordingly, Tina treats the chorus as an important part of the video and positions it as her new dominant involvement (Goffman, 1963).

As Tina begins to sing, she removes the phone from her ear (lines 201-202) and places it on the table (line 209) as she leans toward the screen (line 208). Tina’s continued grasp of the dolphin, and her earlier orientation to it (lines 182 and 188), suggests that she may use it to engage with the video. This demonstrates the complexity of Tina’s viewing of, and interaction with the video, that she engages and disengages (Szymanski, 1999) from different activities that are informed by her orientation to it. Thus, Tina accomplishes her engagement with her preferred YouTube video by transitioning between the use of different objects in activities.
6.5 Conclusion

This chapter showed how Tina managed her interaction with her mother to search for and co-select a YouTube video and how she organised a pretend telephone call as the video played. It established that Tina made meaning from her listening and viewing of the video to construct talk over the phone. The temporality in which Tina referenced objects or lyrics showed how the video was intricately tied to her organisation of the telephone conversation. The interplay between the computer and telephone technologies was developed in Tina’s orientation to them in her talk. Tina used the YouTube video as a resource for constructing her relations with Barbie. In turn, her use of the phone showed her understanding of how social worlds are organised using digital technologies in everyday life. She drew on interactional resources to produce a socially recognisable telephone call. Therefore, Tina’s meaning making encompassed the interplay of technologies through interactional resources known to her. The next chapter considers how literacy knowledge is produced in sibling interaction.
CHAPTER 7

SOCIAL PRODUCTION OF LITERACY KNOWLEDGE
IN SIBLING INTERACTION

7.1 Introduction

The previous chapter explained the interplay between technologies in Tina’s telephone conversation. This chapter considers Tina’s demonstration of alphabetic literacy practices using an iPad app. It establishes that Tina’s sharing of knowledge is closely related to her organisation of the interaction. Tina produces knowledge to help her younger brother Trae trace letters by accounting for how her actions appear to him and the father. She displays understanding that her showing of letter tracings must be observable as showing.

First, in this chapter, Tina announces she is using the same app on an iPad that Trae is using on an iPhone. Second, Tina takes the iPhone from Trae and responds to Trae’s opposition and her father’s intervention. Third, Tina displays her knowledge through showings of the iPad screen. Fourth, the chapter considers an extract in which Tina constructs her use of a Barbie app as a joint activity. Finally, the conclusion establishes that Tina’s demonstration of alphabetic literacy knowledge is intricately connected to her organisation of the interaction.
7.2 Setting

Data are drawn from a video recording made by Tina’s father on a weekend morning. In his bedroom, the father lies on a bed facing Tina and Trae. Tina sits with an iPad against her knees. Trae sits between the father and Tina with an iPhone on his lap.

![Image](image.png)

*Figure 7.1. Setting and participants of Chapter 7.*

Tina plays a solar system app on the iPad while Trae plays an edutainment (Buckingham & Scanlon, 2002) alphabet app. The alphabet app requires the player to trace lower and upper case letters and it repeats the names of letters to reinforce recognition of them. The app incorporates a “recognizable task completion” (Lerner et al., 2011, p. 46) function following each letter tracing to assess it as correct or incorrect.

7.3 Accomplishment of Showing How to Trace Letters

In this extract Tina accounts for the appearance of her actions to demonstrate alphabetic literacy knowledge. When her first attempt at showing her letter tracing solicits opposition from Trae and intervention from the father, she alters her actions to be observable to others as showing. The organisational structure of the extract is shown in Table 7.1.
Table 7.1

Organisational Structure of Extract 7.3

<table>
<thead>
<tr>
<th>7.3 Accomplishment of Showing How to Trace Letters</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3.1 Trae has problems playing an app</td>
</tr>
<tr>
<td>7.3.2 Tina announces activity with a new app</td>
</tr>
<tr>
<td>7.3.3 Tina extends her announcement</td>
</tr>
<tr>
<td>7.3.4 Tina shows the similarity in the apps</td>
</tr>
<tr>
<td>7.3.5 Tina enters into Trae’s activity with the app</td>
</tr>
<tr>
<td>7.3.6 Tina and Trae escalate and resolve a dispute</td>
</tr>
<tr>
<td>7.3.7 Tina summons Trae’s attention to her activity</td>
</tr>
<tr>
<td>7.3.8 Tina produces a showing of her tracing for Trae</td>
</tr>
<tr>
<td>7.3.9 Tina produces a showing for Trae and her father</td>
</tr>
</tbody>
</table>

7.3.1 Trae has problems playing an app.

1 iPh:  
2    (0.3)  
3 Tr:  
4    (0.5)  
5 iPh:  
6    ((app response sound))  
7 Tr:  
8    (1.0)  
9 iPh:  
10    (0.2)  
11 Tr:  
12    (0.8)  
13 iPh:  
14    (((app incorrect response sound)))  

Figure 7.2. Lines 12-13.

14 iPh:  
15    (1.7)  
16 Tr:  
17    (((Tr  iPh))))  

Tina and Trae complete independent activities on the iPad and iPhone respectively. Tina engages with the iPad through her sustained gaze to, and tapping on, its screen (lines 12 and 17). Trae’s actions on the iPhone
screen cannot be seen in the recording at this point, however his activity playing an alphabet app is hearable through the sounds it produces. The sounds indicate a problem with his actions using the app. The app signals “dee::,” (line 1), which makes accountable that Trae is undertaking the tracing of the letter “D”. The response sound (line 5) makes hearably witnessable that he has tapped the screen. A second later the app repeats the vocalisation “dee::,” (lines 7-8), which signals Trae’s turn to trace the letter.

Next, the app signals an incorrect response (line 13). This indicates that Trae took his turn, but incorrectly. After a significant pause the app repeats “dee::,” (lines 14-15) to indicate that it is again Trae’s turn to trace the letter. At the same time, Trae, now visible in the recording, takes his turn by tapping the screen (line 16). Collectively, the app response sounds and repetition of the letter name indicate that Trae’s actions are not those required. Together with the notable absence (Sacks, 1995, Vol. 2) of positive assessment sounds or progress onto another letter, the sounds generated by the app indicate a problem in Trae’s activity with it.

7.3.2 Tina announces activity with a new app.

18 T: (0.2) I’m! >playing=
19 T: (((T leans forward)))
20 T: (((Tr ↓ iPh↑))
21 T: =|the= (((Tr ↓ iPh↑))
22 T: =|ey bee= (((Tr ↓ iPh↑))
23 T: =|cee::s<, (((T leans forward))
24 T: =|peepee (((app opens on iPa↓))
25 T: ((T sits up))
26 T: (0.2)
27 Tr: |ehhh (((Tr ↓ iPh↑))
28 T: |one as :w|e:ll. (((T ↑w→iPh))
29 T: (((Tr ↓ iPh↑))
30 T: (((Tr ↓ iPh↑)))
Tina breaks the silent copresence between herself, Trae, and the father by announcing “↑I’m↑ >playing the ey bee cee::s< one as ↑we:ll.” (lines 19, 22, 24, 27, and 34). Tina’s announcement makes relevant her listening and orientation to the sounds produced by Trae’s use of the alphabet app (lines 1, 5, 8, 13, and 15) and accounts for her prior actions (Extract 7.3.1, lines 12 and 17) in commencing use of the same app. It is evident that Tina draws on her familiarity with the app (such as its sounds) to identify it as the app that Trae is playing.

Though she does not nominate a recipient, her announcement resumes incipient talk (Szymanski, 1999) with her father, which had lapsed for some time. By directing her announcement to her father, Tina also seeks to ensure that it will be responded to (Schegloff, 2007); Trae is not treated by Tina as an accomplished speaker since he produces only “proto-word” vocalisations (Lerner et al., 2011, p. 48). By organising her telling as an announcement (Schegloff, 2007), Tina makes newsworthy (Maynard, 1980, 1985a; Sacks, 1973) her change of activity to play the same app as Trae. Tina’s stress on “↑I’m” (line 19) and change of pitch in “↑we:ll.” (line 34) emphasise the noteworthiness of her change of activity to align with Trae’s activity. Tina’s prosody also works to solicit the father’s attention since she does not shift her gaze to him.
Simultaneously to announcing her new activity, Tina moves from her position resting against the pillows to sitting up on the bed opposite Trae and her father. Her change of home position (Sacks & Schegloff, 2002) displays her orientation to Trae’s activity with the app and enables the opportunity for further interaction. With the iPad in her hands, Tina leans forward and sideways to use her elbow to push her body off the pillows (line 20). As she leans forward she moves her gaze to the iPhone screen (lines 25-26) to corroborate her announcement, and returns it to the iPad when the app opens on it (lines 28-29). As Tina sits upright (line 32), she returns her gaze to the iPhone screen to identify Trae’s alphabet app as the referent of her announcement (lines 34-35) and to direct the father’s attention to it. In this way, Tina’s new home position (Sacks & Schegloff, 2002) establishes a facing formation with Trae and the father, in which they have “equal, direct and exclusive access” (Kendon, 1990, p. 209) to each other’s actions. Tina’s new body position reduces the body torque (Schegloff, 1998a) required to orient to Trae and the father, and therefore increases opportunities to engage with them. Thus, Tina’s movement enables access to Trae’s iPhone screen to produce her announcement, and opens up an ongoing opportunity for interaction.

7.3.3 Tina extends her announcement.

38  F:  a::[::h,(.) "goo":[d₄°]
39  T:  [>this is< ] [g]oin
40        [>to be< the sa:me one=
41         [(T leans forward)]
The father receipts Tina’s announcement with an elongated change-of-state token (Heritage, 1984a) “a:::h,” (line 38) in turn-initial position. The token treats Tina’s announcement as an “informing” (Schegloff, 2007, p. 118). The father then assesses the news as “ºgoo:dº” (line 38), so that his complete utterance takes an “oh-plus-assessment turn structure” (Heritage, 1984a, p. 302). His assessment displays a positive analysis (C. Goodwin, 1986a) and preferred stance (Maynard, 2003; Schegloff, 2007) toward Tina’s news, which ratifies it “as interesting news” (Maynard, 1985a, p. 13). In this way, the father’s turn projects his incipient speakership (Jefferson, 1984) to Tina’s activity.

Tina extends her announcement in response to the father’s turn-in-progress (lines 38-39). She treats her father’s acknowledgement token as a continuer (Schegloff, 2007) indicating his recipiency (Schegloff, 1982) of her announcement and signalling its continuation (C. Goodwin, 1986a). Her extended announcement provides the additional information “>this is< goin >to be< the sa:me one jus like Trae:č” (lines 39-40, 42, 44, and 47). Her turn
explicitly confirms that her activity is aligned with Trae’s through the commonality of their apps.

In her sequence of talk with the father, Tina interacts with Trae through her gaze and movement. Though Trae lacks equal status in the talk (Danby & Baker, 1998), he contributes to the interaction nonverbally and Tina’s orientation to him acknowledges him as part of the multiparty interaction. As Tina announced the likeness of her activity to Trae’s activity on the iPhone (lines 19, 22, 24, 27, and 34), and oriented to his app (lines 25 and 35), Trae oriented to Tina’s talk by looking at her iPad screen (line 37; Figure 7.3). Tina maintained her gaze to Trae’s screen as she extended her announcement and leant toward him (lines 40-41; Figure 7.4) and when Trae is next seen in the recording he returns Tina’s embodied orientation (Extract 7.3.4, line 61). Trae’s timely re-direction of his gaze, and his sustained orientation to Tina, demonstrates how he engages “in orderly, recognisable conduct” (Lerner & Zimmerman, 2003, p. 441) by responding to the observability of Tina’s actions. By his gaze Trae tracks the course of Tina’s actions in their relation to him and engages in the interaction so that he is a member of the multiparty interaction, though not ratified as a member of the talk.

### 7.3.4 Tina shows the similarity in the apps.

48 (0.9) ((T brings hand to iPa\textsuperscript{a}))
49 [((T \textsuperscript{a} iPa\textsuperscript{a}))]
50 iPa: [((app response sound))]
51 (0.5)
52 Tr: hhh=
53 F: ="that’s ↑gre\textsubscript{a}: t,"
54 (1.0) ((F zooms camera out))
55 [((T \textsuperscript{a} iPa\textsuperscript{a}))]
56 iPa: [((app response sound))]
57 ((new screen appears on iPa))
58 T: [SEE::?]
59 [((T \cancel{a} F))]
60 [((T \cancel{=}Tr))]
Figure 7.5. Line 63.

As Tina resumes independent activity with the iPad (lines 48-50) the father produces the delayed response “°that’s ↑great,°” (line 53) to Tina’s extended announcement. The assessment upgrades the father’s first assessment (Pomerantz, 1984a), so that Tina’s change of activity to use the same app as Trae was “good” (line 38) and is now “great” (line 53). The father also responds by using the video camera to zoom out to capture a wider aspect (line 54), suggesting Tina’s talk is consequential in informing his use of the video camera. Tina continues her independent activity by tapping the iPad, which results in a new screen appearing (lines 55-57). Tina responds by loudly uttering the directive “SEE::?”, re-directing her gaze to the father, and pointing to Trae (lines 58-60). Her raised volume re-engages
the father’s attention, as her gaze situates him as the recipient of her directive, and her gesture directs him to what he is to “see”. Tina’s multimodal turn directs the father to view the app that Trae is playing on the iPhone. Tina next produces a showing (Kidwell & Zimmerman, 2007; Lerner et al., 2011) of the iPad screen by swivelling it toward the father (line 63) to re-direct his attention to it. Her multi-step directive requires the father to look at the iPad and iPhone screens and acknowledge that she is playing the same app as Trae. Before the father complies with the directive an alphabet song begins on the iPad app to which Tina immediately orients (lines 64-66). She directs her gaze back to the iPad as she turns it toward herself.

In the following turns the father responds to Tina’s directive. The father first responds by turning his gaze and the video camera toward Trae (line 61). His inclusion of Trae in the recording continues his earlier manipulation of the camera (line 54) and further acknowledges Trae as a member of the multiparty interaction. The father next draws an in-breath (line 69) signalling talk to come. Tina orients to her father’s turn-in-progress by re-directing her gaze to him (line 70). Her closely aligned action suggests her orientation to the fulfilment of the second part of the directive-response pair. The father produces a change-of-state token (Heritage, 1984a) “ah↑:::r.” (lines 71 and 75) which receipt the comparison implied in Tina’s directive and makes accountable his understanding that she is using the same app as Trae. Tina orients to the father in response to, and during, his elongated token by turning the iPad screen to him again (line 73). Her showing (Kidwell & Zimmerman, 2007; Lerner et al., 2011) makes available the evidence of her extended announcement, and enables her to
acknowledge with her father that the apps are the same. As the father ends
his token and the alphabet song continues (lines 75-76), Tina returns to her
independent activity using the app (lines 77-78).

7.3.5 Tina enters into Trae’s activity with the app.

79  ((‘E’ appears on iPh□))
80  iPh: [ee::,=
81  (((T leans forward))
82  (((T reaches to iPh))
83  T:  =.hhhh
84  (0.3) ((T pushes Tr’s hand from iPh))
85  T:  [°Trae::¿
86  (((T moves finger to iPh□))

Figure 7.6. Lines 85-86.

87  (((iPh falls between Tr’s knees))
88  Tr:  [eh::
89  (0.2)
90  T:  [°jus::t°
91  (((Tr lifts iPh onto lap))
92  T:  Trae::[:?
93  (((T grasps iPh))
94  Tr:  [a::::=

Figure 7.7. Lines 93-94.

Following independent activity using the app (omitted from the
transcript), Tina’s next actions intercede in Trae’s use of the app. The letter
“E” appears on the iPhone screen (line 79) and Trae’s turn to trace it is
signalled by the app (line 80). Simultaneously to this, Tina orients to Trae’s activity by leaning toward him and reaching for the iPhone (lines 81-82). Her timely orientation to the iPhone and in-breath (line 83) indicate her interest in it. With her outstretched hand, Tina pushes Trae’s hand from the iPhone screen (line 84). Her gesture displays interpersonal dominance (Cekaite, 2010; Guerrero & Floyd, 2006) to gain control of the iPhone. Trae’s hand falls onto his lap as his other hand holds onto the device. Tina moves her finger, in a point gesture (Wootton, 1994), to the iPhone screen suggesting her tracing of the letter (line 86; Figure 7.6). Her soft and elongated address term (Wootton, 1981) “°Trae:::°” (line 85) solicits Trae’s attention to manage his actions and make space for her projected gesture to the screen. In this way, Tina’s actions project her use of the iPhone.

In what follows, Tina and Trae negotiate the possession of the iPhone and a dispute escalates between them. As Tina moves her finger to the iPhone screen (line 86) the device falls between Trae’s knees (line 87). Tina follows its movement with her finger to maintain control of it. However, Trae also registers the movement of the iPhone (line 88) and lifts it onto his lap (line 91). At the same time, Tina produces an incomplete utterance, “°jus:::r°” (line 90), to manage Trae’s movement of the iPhone. Though Tina continues to hover her hand over the iPhone, Trae’s handling of it displays his repossession of it. Tina’s next elongated address term (Wootton, 1981) “Trae:::?” (line 92) manages Trae’s actions as she grasps one end of the iPhone with both hands (Figure 7.7). Trae begins an elongated proto-word vocalisation (Lerner et al., 2011) “a:::” (line 94) responding to Tina’s gesture and “a foreseeable possible course of action”
(Lerner & Zimmerman, 2003, p. 100) wherein she will take the iPhone.

Trae’s nascent cry opposes Tina’s “incipient take attempt” (Lerner & Zimmerman, 2003, p. 443) as an arguable move violating his “‘possessional’ territory” (Maynard, 1985a, p. 4) and establishes the iPhone “as worth having and worth taking” (Lerner & Zimmerman, 2003, p. 445).

Trae displays the ability to predict from Tina’s actions a likely course of action and to mobilise vocal and embodied resources in an attempt to prevent it.

7.3.6 Tina and Trae escalate and resolve a dispute.

95 Tr: = [A::ːː= ]
96 T: [I show, ]
97 [((T pulls iPh from Tr))]
98 Tr: = [A::ː?
99 [((Tr  iPa))]
100 (0.2) ((Tr leans forward))
101 Tr: [..hhh= ]
102 [((Tr reaches toward iPa))]
103 [((T hovers finger over iPh))]  
104 Tr: = [A::ː= ]
105 [((Tr pulls iPa toward him))]

Figure 7.8. Lines 104-105.

106 Tr: = [A::ː?
107 [((Tr pulls iPa toward him))]
108 [((T  iPa))]
109 [((T reaches for iPa))]
110 (0.6) ((T pulls iPa onto lap))
111 F: T[ina::ː]
112 [((T lowers iPh onto Tr’s legs))]
113 ((Tr  iPh))
114 Tr: [a::ː.
115 [((Tr grasps iPh))]

116
Tina matches Trae’s resistance and challenges his oppositional move (his cry) by pulling the iPhone from him (line 97). She accounts for her actions with the utterance “I show” (line 96). Her account displays understanding that her actions are upsetting Trae, and formulates that she is going to “show” him how to use the app. Her actions display her orientation to the previous app sounds that signalled a problem in Trae’s activity as he tapped, rather than traced, the letters. Tina holds the iPhone screen to her face, and hovers her finger over it to project further actions using the app.

Tina’s positioning of the screen to her face, where it cannot be seen by Trae, excludes him from her activity.

Trae produces vocalised and gestured resistance to Tina’s possession of the iPhone. His vocalisation (Extract 7.3.5, line 94) increases in volume to become a complaint cry (Lerner et al., 2011; lines 95 and 98). Trae’s upgraded vocalisation shows that he does not honour Tina’s account of her actions (Scott & Lyman, 1968), but treats her actions as a “complainable matter” (Lerner et al., 2011, p. 53). During his cry Trae orients to the unused iPad on Tina’s lap (lines 98-99). He projects his use of the iPad by leaning.
forward, reaching toward it, and pulling it onto his lap (lines 100, 102, 105, and 107). By taking the iPad Trae works to manage the consequences of Tina’s possession of the iPhone. He can continue to use the alphabet app (visibly displayed on the iPad screen and at which he gazes) but on a different device. However, Tina orients to the iPad’s movement, reaches toward it, and pulls it back onto her lap (lines 108-110) to maintain possession of both devices. The verbal and embodied moves by Tina and Trae produce a reaction phase (Maynard, 1985a) in their dispute.

The father intervenes to bring about a resolution to the dispute. He addresses Tina (line 111) in a quasi-interrogative manner (Bolinger, 1958), in which his low intonation, producing a stern tone, gives rise to a prosodic upturn soliciting Tina’s attention and aligned recipiency (C. Goodwin, 1981). His turn provides the first part of a possible summons-answer pair (Schegloff, 1968, 1979). The father’s summons is a timed intervention in response to Trae’s vocalisations. He produces it “for cause” (Kidwell, 2013, p. 240) to prompt Tina to abandon her activity with the iPhone by responding to him. His summons also projects a directive-response sequence, following Tina’s recipiency, to resolve the dispute. His summons suggests that his projected directive will take a “collaborative intervention approach” (Kidwell, 2013, p. 239) by calling on Tina to observe and change her behaviour. The father’s facing formation (Kendon, 1990) to Tina and Trae, which has provided direct access to their conflict, positions him to directly invoke Tina’s accountability and compliance (Cekaite, 2010). By acting on his roles and responsibilities as a parent to intervene in the dispute, the father alters his participation status (Goffman, 1974, 1979; C.
Goodwin & Goodwin, 1996) from mere onlooker to participant (Maynard, 1986).

Tina’s next actions resolve her dispute with Trae. She responds to the father’s summons with a second pair part that treats it as a directive. Tina produces immediate compliance by lowering the iPhone in her open palm. The temporality in which she performs the gesture, and in particular “the duration of the ‘freeze’ that occurs at its completion” (Streeck, 2009, p. 175), acts as a concrete offer (Kärkkäinen & Keisanen, 2012) in handing over the iPhone. Tina tilts her palm and slides the iPhone onto Trae’s legs (line 112) as he orients to it and grasps it (lines 113 and 115). To accomplish the object transfer Tina and Trae “engage in a collaborative adjustment of their physical behaviours” (Takada & Endo, 2015, p. 60) whereby they direct their bodies and gesture toward the iPhone and each other. The falling intonation of Trae’s vocalisation “a:::.” (line 114), and his handling of the iPhone, signal the resolution of the dispute and his re-engagement in the alphabet app.

Tina, by responding to the father in this way, acts on a working understanding of summons-answer sequences. She is responsive to the summons as “the start of a course of action” (Kidwell, 2013, p. 242) designed for her to alter her actions. By refraining from answering her father’s summons, she avoids situating herself as the recipient of it or the projected directive (Kidwell, 2013; Schegloff, 1968). Rather, she orients to the cause of the summons and the projected directive by resolving the conflict before the directive can be delivered. By performing the action while it is only suggestive, Tina’s actions imply that they were not elicited by the father. In doing so, Tina does not orient to the father’s projected
entitlement (Craven & Potter, 2010; Curl & Drew, 2008) to direct her actions, but maintains control, or autonomy (A. Kent, 2012), over her actions in resolving the dispute. Additionally, Tina avoids a “face-threatening situation” (Takada, 2013, p. 435) by acting on the projected directive to alter the frame of conversation.

Though Tina does not respond to the summons as projected, her action makes relevant further talk by the father. His assessment “h[a:re th[at’s a gir:l]” (lines 116 and 118) treats Tina’s actions as a preferred response (Pomerantz, 1984a; Schegloff, 2007) as it resolves the dispute (despite being a dispreferred action in a summons-answer sequence). Tina rotates the iPad to alter the orientation of the app (lines 117, 119, and 121), while Trae pulls the iPhone onto his lap (line 120). The re-engagement of Tina and Trae in their independent activity further signals the resolution of the dispute.

7.3.7 Tina summons Trae’s attention to her activity.

122 T:  [Tra:e,  
123 ][(T rotates iPa))  
124 (0.2) [((T ->Tr))  
125 ][((T rotates iPa))  
126 T:  [Tra:e::?  
127 ][((T ->iPa))]  
128 ][((T moves iPa onto lap))  
129 (0.8) ((T brings hand to iPa))]  

Figure 7.10. Line 129.

130 [((T →B))]  
131 Tr:  [.hhh]
Tina prepares to involve Trae in her activity to show him how to trace letters. As she rotates the iPad, she summons Trae (lines 122-123). Timing her summons in preparing her activity shows that soliciting and attaining Trae’s gaze is part of such preparation. Her summons makes interactionally relevant that her actions to come using the app are for him (Lerner, 2003; Wootton, 1981). Her calibrated actions display her preferred response of embodied attention, so as to create a framework of mutual attention (Cekaite, 2010; Tulbert & Goodwin, 2011) toward her projected actions. By preparing to show Trae how she traces letters on the app, Tina displays a continued orientation to Trae’s use of the app as incorrect. She positions herself a competent player and Trae as the novice lacking understanding of how to trace letters.

In her next actions Tina pursues the tracing of letters on the iPad. Tina’s gaze to Trae (line 124) anticipates his gaze as a forthcoming “go-ahead” response (Schegloff, 2007, p. 51) to commence her activity. However, Trae’s continued gaze to the iPhone screen shows his commitment to an alternate activity (Filipi, 2009) and consequential unavailability (M. Goodwin & Cekaite, 2013) to attend to Tina’s summons. Trae’s non-response demonstrates his agency as a member of the social context to organise his engagement in interaction and independent activity. In the absence of a response from Trae, Tina repeats the summons with elongation and upward prosodic rising indicating the relevancy of his
attention (line 126). At the same time she projects her imminent activity by looking at the iPad and moving it onto her lap (lines 127-128). She then brings her hand to the screen and traces the letter “B” (lines 129-130, 133, and 136).

7.3.8 Tina produces a showing of her tracing for Trae.

```plaintext
138  Tr:  hhh=
139  iPa: =bee::, (. ) [((app correct response sound))
140  [((cartoon fades in on iPa□))
141  (0.6) ((T angles iPa to Tr))
142  ((T ⊳-Tr))
```

Figure 7.11. Line 142.

```plaintext
143  ((Tr ⊳-iPa□))
144  F:  [.hhhar
145  [((T ⊳-iPa□))
146  (0.3)
147  F:  [good=
148  [((Tr ⊳-iPh□))
149  [((Tr puts iPh on bed))
150  [((‘C’ appears on iP□))
151  F:  =[jo::b Ti::n=
152  [((T puts iPh on lap))
153  F:  =[a?]}
154  Tr:  [er]=.hhh
155  [((T )})
156  [((Tr ⊳-F))
157  [((T )})
158  F:  [om
159  [((F reaches for iPh))
160  (1.3) ((T )])
```

Tina uses the sequential structure of the app to produce a showing (Kidwell & Zimmerman, 2007; Lerner et al., 2011) of her letter tracing. The
app affirms Tina’s actions by vocalising “bee”, producing a chime sound indicating her correct response, and displaying a cartoon (lines 139-140). Together, the responses signal a “task transition space” (Lerner et al., 2011, p. 49) in between the tracing of letters. Tina uses the task transition space as a “resource for action” (Lerner et al., 2011, p. 56) by initiating interaction with Trae. She tilts the iPad screen toward Trae (line 141) to produce a showing (Kidwell & Zimmerman, 2007; Lerner et al., 2011) of her correct letter tracing. The affirmation responses occurring during her showing make interactionally relevant Tina’s position as a competent player. Thus, Tina’s showing of the correct tracing of letters is affirmed by the app.

The showing is Tina’s second attempt at soliciting Trae’s attention toward her activity; this time nonverbally through her mobilisation of the iPad. Her movement of it is recipient-designed to make the screen accessible to Trae and make accountable that an embodied response is required. Tina does not require Trae to respond verbally but nonverbally in accordance with his preverbal interactional abilities. In this way, Tina accounts for Trae’s interactional abilities in her design of the interaction. Tina’s showing is a first part of a potential directive-response sequence which, directed to Trae, makes relevant his attention. Tina’s gaze to Trae (line 142; Figure 7.11) further nominates him as the recipient of the showing and awaits his response.

In the actions that follow, Trae and the father respond to Tina’s showing. Trae displays understanding that Tina’s turns require a corresponding action by turning his gaze to the iPad screen in a timely way (line 143). His sustained gaze toward the screen accountably shows that he recognises the project of Tina’s showing as inviting his engagement in her
tracing activity. Trae’s orientation to the screen suggests he actively participates in “co-creating meaning” (Filipi, 2009, p. 226) of Tina’s competency in tracing letters. Upon gaining Trae’s attention to the iPad screen, Tina also moves her gaze to it (line 145). Their aligned gaze to the screen locates it as the locus of attention (Kendon, 1985).

The father also orients to Tina’s showing through his in-breath (line 144) and assessment “good jo::b Tī::na?” (lines 147, 151, and 153). The assessment reinforces Tina’s position as a competent player of the app. Tina does not respond to the father, but orients to the appearance of the letter “C” signalling the next task (line 150). She moves the iPad onto her lap (line 152) and traces the letter (lines 155, 157, and 160). Her re-engagement in independent activity with the iPad signals a lapse in interaction with Trae and her father (Szymanski, 1999).

As Tina traces the letter “C”, Trae solicits the father’s help to use the iPhone. Tina and Trae’s prior handling of the iPhone (Extract 7.3.6, line 97) resulted in a new window appearing on its screen. Trae re-directs his gaze to the iPhone and puts it on the bed next to the father (lines 148-149). He directs the father’s attention to it by producing a vocalisation (line 154) and using his gaze (line 156) to nominate the father as the recipient. The father registers Trae’s actions (line 158), and interprets them as a concrete offer (line 159; Kärkkäinen & Keisanen, 2012; Streeck, 2009) in a request for help.

7.3.9 Tina produces a showing for Trae and her father.

161  iPa:  cee::, (. (app correct response sound))
162    (0.4) [((T lifts and turns iPa))
163       [((T ⤼→F))
164   ((T ⤼→Tr))
165   (0.5) [((Tr ⤼→iPa□))
166   [((T ⤼→iPa□))
In the next task transition space affirming her letter tracing (line 161), Tina produces a showing of the iPad screen and with her gaze, identifies the father (line 163) and Trae (line 164) as recipients of it. Tina’s actions make relevant their attention to the iPad screen. Trae positions himself as the subject of Tina’s showing by turning his gaze to it (line 165; Figure 7.13). Again, Trae displays “an orientation to the accountable nature” of interaction (Forrester, 2013b, p. 195) by responding to Tina’s actions. At the same time as Trae gazes to the screen, Tina also re-directs her gaze it. Their aligned gaze establishes her tracing on the iPad as the spatial and temporal locus (Kendon, 1985) of their interaction. However, as the father returns the iPhone to Trae’s lap, Trae turns his gaze to it (lines 167-168). Tina’s gaze remains on the iPad screen so that she witnesses the appearance of the letter “D” (line 169) signalling the next task. She returns the iPad to her lap (line 170) to trace the letter. The orderly manner in which Tina and Trae orient to and engage with their respective devices achieves the transition into independent activity (Szymanski, 1999).
Chapter 7: Social Production of Literacy Knowledge in Sibling Interaction

7.4 Producing Joint Attention

This extract commences almost three minutes after the previous extract. In this part of the recording Tina initiates talk about a Barbie doll app and establishes joint attention toward her activity with it. The organisational structure of the extract is shown in Table 7.2.

Table 7.2
Organisational Structure of Extract 7.4

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7.4.1 Tina commences activity with a Barbie app.

```
1 (1.0) ((T app))
2 (1.0) ((app opens))
3 iPa: (1.1) [[[((app sound))]
4 [[[((Barbie dolls appear on iPa))]]
5 iPa: (1.3) [[[((app sound))]
6 [[[((T rotates iPa))]]
7 iPa: (0.5) [[[((app sound))]
8 [[[((T hovers hand over iPa))]]
9 T: [Trae]::::?:
10 iPa: [[[((app sound))]
11 (.)
12 Tr: [wa:::==
13 T: =TRAЕ:::
```

Figure 7.13. Line 13.

```
14 (1.5)
15 T: Traei::
16 (0.3)
17 F: (what’s) she do::ng (now) ð°= 
18 =((T top left Barbie doll))
19 iPa: (1.6) [[[((app response sound))]
```
Tina organizes her use of a new app and attempts to solicit others’ attention toward it. She selects a new app on the iPad which opens up to display four Barbie girls (lines 1 and 4). Tina rotates the orientation of the iPad (line 6) and hovers her hand in a point gesture (Wootton, 1994) above the screen (line 8). She then summons Trae with an elongated address term (line 9). Its rising intonation signals the relevancy of a response. With her projected gesture to the screen, Tina’s summons suggests a preferred response of embodied orientation to her actions. She situates Trae’s attention as a relevant requirement for the success of her gesture (Filipi, 2009). When it appears that Trae does not respond (being off-camera at this point), Tina repeats the address term (line 13). The falling intonation and shorter duration of the second summons suggests her impatience, which treats Trae’s non-response as insufficient (Filipi, 2009). Trae’s non-response undermines “the very possibility of joint social action” (C. Goodwin, 2007, p. 65) proposed by Tina.

Tina’s summonses (lines 9, 13, and 15) and gesture to the screen are socially meaningful as requiring Trae’s embodied attention before continuing activity with the iPad. The father demonstrates his sense-making of Tina’s actions as such when he aligns with her to solicit Trae’s attention by uttering “(what’s) ˘she dœi::ng (now)˘” (line 17). His turn produces a question indexing Tina’s activity with the iPad to direct Trae’s attention to it. By indexing Tina’s actions with “now”, the father frames Tina’s current and projected action as one in a line of actions, and therefore constructs Tina as a competent user of the iPad. The prosodic rise of his question invites
Trae’s interest in making Tina’s activity a relevant interactional matter.

Thus, the father aligns to the accountable design of Tina’s actions and her projected activity by soliciting Trae’s attention toward them.

Tina’s next turns suggest that Trae responds to her summons, giving the “go-ahead” response (Schegloff, 2007, p. 51) for her projected action. Immediately following the father’s utterance Tina brings her pointed finger to the screen to tap the top left Barbie girl (line 18). The app registers Tina’s selection with sound (line 19; later hummed by the father in line 21) and by displaying a larger image of the selected Barbie girl (line 20). Tina orients to the appearance of the image by hovering her finger over it (line 22).

7.4.2 Tina produces a showing and pursues a response.

```
23 (0.4) [((T sits up))
24 [((T turns iPa□ to F))
25 T: [look a:t=
26 [((T ⇑-F))
27 T: =↓dis↑ [fun=
28 [((T brings legs in))
```

![Image](image1.png)

*Figure 7.14. Lines 27-28.*

29 T: [=ga::me,
30 [((T ⇑-ahead))
31 [((1.0) ((T stands up))
32 T: [.hhh
33 (1.1) ((T walks to pillow))
34 T: dad[dy:::↑
35 [((T ⇑-iPa□))
36 (0.2) ((T sits down))
37 T: look ↑a:t↑ [dis ]=
38 F: [ºhmº]
39 [((T ⇑-F))
40 [((T angles iPa to F))
41 T: [=ga:m:e=
Tina sits up and turns the iPad screen toward the father to produce a showing (lines 23-24; Figure 7.15; Kidwell & Zimmerman, 2007; Lerner et al., 2011). Tina’s showing produces a potential embodied directive requiring the father to orient to the iPad. Her gaze to the father further nominates him as the recipient (line 26). At the same time she produces the verbal directive “look at dis fun ga:me,” (lines 25, 27, and 29). Her directive assesses the app as “fun” (line 27), which makes relevant a preferred response of a second positive assessment (Pomerantz, 1984a). Tina delivers the directive as an explicit imperative, “an action that demands immediate compliance” (M. Goodwin & Cekaite, 2013, p. 125). Framing her turn in this way, Tina displays entitlement (Craven & Potter, 2010; Curl & Drew, 2008) over the father’s actions and restricts his ability to do anything other than orient to the app.

The father’s initial lack of response or “clearance cue” (Schegloff, 2002b, p. 336) suggests it to be a harbinger of a dispreferred response (Pomerantz, 1984a; Schegloff, 2007). The father’s non-response provides the environment (Craven & Potter, 2010) for Tina’s next actions which address the trouble of his lack of recipiency. Her actions demonstrate Pomerantz’s (1984b, p. 156) datum that “if there is some question as to why the recipient has not responded, a speaker may try an easy solution first”. Tina’s solution is to summon the father’s attention as the next relevant action (Sacks et al., 1974) with the address term “daddy:::;;” (line 34). Her elongated, rising intonation displays her affective stance and impatience. Making relevant the father’s display of availability provides “an optimal interaction space” (Kidwell, 2013, p. 248) for the forthcoming interaction.
Tina next repeats her directive with “look ↑a:t↑ dis ga:m:e” (lines 37 and 41) and upgrades it using sound stretches and volume shifts (Kidwell, 2013) to solicit the father’s acknowledgement of the app. Her turn shows high entitlement (A. Kent, 2012) by orienting to a projected response of compliance. In addition, Tina produces the repeated directive without her prior assessment of the app, so that the father’s second assessment is no longer interactionally relevant. By eliminating the requirement of a second assessment Tina reduces the complexity of the father’s reply, and the time required to make it, to achieve a timely response. Using these resources Tina’s second directive (Craven & Potter, 2010) effectively heightens the need for the father’s response.

Tina’s second directive is supported by simultaneous embodied actions which pursue a directive trajectory (Cekaite, 2010; M. Goodwin, 2006; Tulbert & Goodwin, 2011). Following on from altering her postural configuration (lines 28 and 30), Tina changes her seating position (lines 31, 33, and 36) as she produces the repeated directive. Her movement onto the pillows (line 36) brings her closer to her father’s head where he also holds the video camera, so that she positions her next showing of the iPad screen (lines 40 and 42) where it can be best viewed. Embodied in her movement of the iPad is the understanding that the father requires a view of the screen to respond to her directive. Her close proximity and careful positioning of the iPad screen enables her to monitor his actions and elevates the accountability of his recipiency. Together, Tina’s actions produce a conjoined directive in which “her physical and verbal actions work together to create a sense of force” (Tulbert & Goodwin, 2011, p. 83) and reshape the context for interaction.
7.4.3 Tina and her father orient to the app.

<p>| | |</p>
<table>
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<th></th>
<th></th>
</tr>
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</table>
| 43 | F:  
| 44 | =ye:::s¿

((T пед→iPa[]))

Figure 7.15. Line 44.

<p>| | |</p>
<table>
<thead>
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<th></th>
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</table>
| 45 | (0.4)  
| 46 | (0.6)  
| 47 | (0.6)  
| 48 | F:  
| 49 | aw↑::↑oh::.

((T пед→iPa[]))

<p>| | |</p>
<table>
<thead>
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<th></th>
<th></th>
</tr>
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</table>
| 50 | (0.9)  
| 51 | T:  
| 52 | it (0.2)  
| 53 | T:  
| 54 | [BAR:↑bie:↑doll::s:].

((T пед→F))

<p>| | |</p>
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<th></th>
</tr>
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</table>
| 55 | ((T turns iPa[] to herself))

The father aligns in a participant framework (C. Goodwin, 2007) with Tina by responding to her directive. He produces the preferred response (Pomerantz, 1984a) “yes” (line 43) which acknowledges her new app and her assessment of it. Tina responds by turning the iPad screen further toward him to provide a better view of it (line 47). Her response displays “the concrete evidence that was the basis for the judgement” (Fasulo & Monzomi, 2009, p. 375). At the same time she orients to her father (line 46), so that with her gaze and movement of the iPad, she sustains the relevance of her directive.

The father produces a vocal appreciation “aw↑::↑oh::.” (line 48) to show his attention to the screen and respond to Tina’s showing. Through his incipient speakership (Jefferson, 1984) tokens and the absence of negative
assessments, the father is heard to be aligning with Tina’s assessment of the app as a “fun gaːːme,” (Extract 7.4.2, lines 27 and 29). Tina’s subsequent movement of the iPad screen toward herself (lines 50, 52, and 55) displays her acceptance of the father’s responses. As she moves the iPad she responds to the father’s tokens with the information “it it’s ABOUT BARːɭbːɭ dollːːsː.” (lines 51 and 53). This information displays her prior use of the app and continues the topic of their interaction. Thus, by constructing her turns utilising a combination of vocal and embodied resources, Tina attains the father’s engagement in interaction and works to construct the context for turn-by-turn talk.

7.5 Conclusion

This chapter revealed how Tina helped her younger brother Trae by showing the actions employed to trace letters on an alphabet app. Her actions displayed her attempts at showing, which first resulted in a dispute with Trae. To show Trae how to accomplish tracing, Tina accounted for how her actions were responded to by him and the father. Tina’s demonstration was dependent on her social competency to organise her actions in a way that solicited Trae’s alignment. Therefore, the chapter establishes that Tina’s production of literacy practices to help her brother was dependent upon her awareness of how her actions appeared to others. Through Tina’s showings of the iPad screen, her family members jointly oriented to her letter tracing and her following activity with a Barbie app. The next chapter presents a discussion of the main findings of this study drawn from the three analytic chapters.
8.1 Introduction

The previous three chapters analysed Tina’s interactions with family members during her use of digital technologies. This chapter discusses findings of the analysis and establishes the conclusion. First, the chapter reviews the aim and questions which have directed this research. Second, a summary of the analytic chapters is provided. Third, the chapter discusses three key findings, revealing Tina’s orientation to meaning making; her interactional competence; and how digital literacies contributed to the construction of her social world. Finally, the chapter establishes the conclusion and limitations of the study, identifies implications and methodological contributions, and suggests further directions of research.

8.2 Research Aim and Questions

This research aimed to enhance knowledge of how young children accomplish digital literacies in and through their social interactions in the home. It employed ethnomethodology and conversation analysis to analyse a young child’s digital literacies at home. To address the aim, the following research question and sub-questions were asked:

How does a young child socially accomplish digital literacies in the home?

- How does the young child orient to digital literacies in the home?
- How are talk and interaction consequential for producing digital literacies?
- How do digital literacies contribute to the construction of the child’s social world?
8.3 **Summary of Analytic Chapters**

The analytic chapters examined the sequential organisation of the child’s family interactions during technology use. The chapters considered how the child and her family used digital literacy practices in their interactions to accomplish their activities. This summary returns to the analytic focus of each data chapter to re-establish the interactional methods by which digital literacy practices were produced.

Chapter 5 established how familiarity was used as a resource by Tina and her mother to search for and select a YouTube video. Prior experiences using technology to conduct web searches, and knowledge of the videos and Tina’s preferences, were indexed and made interactionally relevant to occasion the web searching moment-by-moment. Tina’s meaning making of images and communication of meaning was vital to its accomplishment. Tina and her mother’s familiarity with web searching together enabled them to re-engage and disengage from incipient interaction. They treated their Internet activity as a mundane, everyday interactional event because of their familiarity with web searching and YouTube videos.

Chapter 6 showed how Tina’s orientation to telephone and computer technologies created an interplay between them. To begin with, Tina managed her mother’s actions in producing a web search so as to select an appropriate YouTube video. Next, Tina used a toy mobile phone to socially organise a pretend telephone conversation touched off by her YouTube viewing. Her reference to objects that were observed in the video and heard in the song lyrics was temporally related. Tina’s meaning making of the video images and lyrics informed the topics of conversation during her call.
Chapter 8: Discussion and Conclusion

Tina also drew on her emerging understanding of how people interact over the telephone to sequentially organise her call.

In Chapter 7, Tina helped her younger brother Trae learn alphabetic literacy practices by producing showings (Kidwell & Zimmerman, 2007; Lerner et al., 2011) of her tracing of letters. By presenting the screen to her family members, Tina demonstrated knowledge that her actions of showing must be observable as such. She continued to use her showings as a method of constructing joint attention toward her playing of a new app.

This summary of the analytic focus of each data chapter has commented on the interactional methods through which Tina and her family pursued digital activities together. With her family, Tina managed web searches, selected and viewed YouTube videos, constructed a pretend telephone conversation, and demonstrated how to trace letters. In each instance, Tina’s family interactions produced the digital literacy practices by which activities with technology were performed. The following discussion of the analytic chapters outlines the findings of this research.

8.4 Findings and Discussion

The three key findings discussed below consider the social accomplishment of Tina’s digital literacies in the home. These findings address the research questions of this study by discussing Tina’s orientation to meaning making; her interactional competence; and digital literacies in the construction of her social world.

8.4.1 Tina’s orientation to meaning making.

Following the paradigm shift initiated by studies comprising the New Literacy Studies (for example, S. Heath, 1983; Scollon & Scollon, 1981; Scribner & Cole, 1981; Street, 1984), literacy research has considered
how children produce literacy practices in meaningful ways in social and cultural contexts. This thesis contributes further understandings of children’s meaning making by establishing how it is locally produced in family interactions. This discussion considers, first, Tina’s meaning making of multimodal digital texts; second, Tina’s meaning making of onscreen texts in her actions and interactions; third, the production of shared meaning making in talk and interaction with family members; and finally, Tina’s meaning making of her family members’ actions in interaction with them.

8.4.1.1 Tina’s meaning making of multimodal texts.

This research shows that Tina made meaning of a variety of semiotic modes simultaneously as witnessed in her engagement with multiple onscreen texts. For example, Tina made sense of a number of visual modes by orienting to changes in the layout of webpages and identifying and discriminating between YouTube video thumbnails. In her engagement with audio-visual texts, namely a Barbie™ YouTube video, Tina simultaneously made meaning of aural and visual modes by producing actions that replicated physical movements and aligned with the timing of the music. Again, where digital texts employed multiple modes to communicate something to the user, such as the appearance of a cartoon and a correct response sound on the iPad app (Chapter 7), Tina made meaning of, and responded to, these aural and visual modes as indicating a transition space in the app. In this way, Tina’s meaning making of multimodal digital texts showed her engagement with a combination of modes, and these meanings directed her further engagement with the onscreen texts.

This description of Tina’s locally situated orientation to semiotic modes has shown how they are made relevant to her embodied actions with
others and her activities with technologies. It contributes findings to an emerging body of work informed by social semiotic, multimodal, and multiliteracies perspectives emphasising that children draw on multiple semiotic modes or sign symbols to make meaning of multimodal texts (Burke, 2014; Marsh, 2013a). This research implies that making meaning of digital texts involves decoding through comprehending a combination of cues, modes, or semiotic resources (Cope & Kalantzis, 2004; Kress, 2010; Street, 2012), such as aural, visual, and textual modes. It shows that children make meaning of an assemblage of modes from a young age (R. Levy, 2009; Mills, 2011; Yamada-Rice, 2014) and that making meaning of some modes, such as images, assists in decoding and recording others, such as in written text. However, much of the existing research has considered children’s multimodal practices in primary schools. Comparably less is known about how young children accountably orient to a combination of modes in multimodal texts when using digital technologies at home, nor how they make their meaning making of the texts salient in their home-based activities with family members. This consideration of Tina’s meaning making of semiotic modes illustrates how she observably attended to particular modes in her interactions with others and used digital technologies to accomplish activities at hand.

8.4.1.2 Tina’s meaning making in her actions and interactions.

Tina displayed multimodal meaning making in both her actions and interactions. Tina engaged in meaning making independently through actions by which she displayed interpretations of onscreen texts. In her independent engagement with texts she made her meaning making socially witnessable through actions that reproduced or mirrored onscreen sounds
and actions. She responded to aural and visual modes of texts by reproducing them, such as using a Barbie doll or dolphin biscuit cutter to mirror Barbie onscreen (Chapters 5 and 6); or completing actions made relevant by them, such as tracing letters on the iPad app as directed by aural cues and visual prompts (Chapter 7). Additionally, Tina made meaning of texts in interactions with family members. In being helped by a more expert other, Tina communicated her meaning of texts so as to collaboratively accomplish activities with technologies (Chapters 5 and 6). Likewise, Tina acted as a more expert other to help another family member by displaying meaning making of onscreen texts and how they were to be used (Chapter 7). Thus, in independent actions and interactions with family members, Tina accountably displayed and negotiated meanings of texts and how they were to be responded to or used in her activity with technologies.

**8.4.1.3 Production of shared meaning in interaction.**

This research shows how Tina’s meaning making and use of texts reflected their personal purpose and import. Tina witnessably treated particular Barbie™-related images, videos, and apps as being important, which informed her family members’ understanding of particular texts that she liked to engage with using technologies. For example, Tina initiated talk about YouTube videos to communicate their appropriateness or inappropriateness for her (Chapter 6), and in talking about iPad apps she suggested their importance to her and to others (Chapter 7). Her meaning making of texts made them relevant to others who were interactionally involved in her activities with technology. Tina’s talk about texts communicated their meaningfulness to her, so that shared meanings were
generated between her and others about them. In this way, talk about digital texts was informed by their personal importance to Tina and her activities.

This finding provides considerable insight into how children bring their own meanings to understand onscreen texts. Existing literature shows that readers produce meaning by decoding and interpreting texts and bringing their own perspectives to bear on them (Black et al., 2014). Like Davidson’s (2009b) findings, the study reported in this thesis shows how meanings about digital texts, such as YouTube videos, were interactionally produced by drawing on prior knowledge about them. This study adds to the little that is known about children’s meaning making of digital texts in the home by showing that meaning was produced in-the-moment to occasion further action, as demonstrated in the selection of a video using the laptop in Chapter 5. In this way, Tina’s interactional meaning making of texts demonstrated their meaning for her at particular moments. The production of shared meanings facilitated opportunities for ongoing talk about them with her family members. Therefore, this study reveals that meaning was attributed to texts according to their importance for the activities being undertaken with technologies.

As previously considered in Chapter 2 section 2.2.1, Lankshear and Knobel (2011) define literacies as the generation, communication, and negotiation of meanings of encoded texts. Just as prior turns are given their public meaning in others’ corresponding turns (Brandt, 1992), so too meaning making in turns of talk is given its public understanding by next turns that interpret and respond to it. Corresponding turns make meaning of the prior so that meaning is collaboratively produced on a turn-by-turn basis. Thus, the New Literacy Studies position that literacy practices are
given their meaning in social and cultural contexts (Lankshear & Knobel, 2011) can be observed in how meanings of digital texts are interpreted and responded to in talk. Studies have not yet considered the significance of how the public meaning of digital media and texts is finely constructed in interaction.

Meanings were not only produced by Tina in response to digital texts, but were also constructed with others. Tina’s responses were questioned, negotiated, or affirmed by others so that meanings were socially constructed and shared understandings. Therefore, meanings were not only generated, but were treated as valid or invalid by others’ responses. For example, the mother’s disagreement with Tina’s assessment that YouTube videos onscreen were inappropriate for her (in Chapter 6) showed that she did not share Tina’s meaning making. At other times (in Chapters 5 and 6) the mother’s use of the laptop to select YouTube videos affirmed Tina’s prior selection of them. Thus, meanings were negotiated across turns through actions that disagreed with or affirmed others’ meaning making.

8.4.1.4 Meaning making of embodied actions in interaction.

The findings reveal that Tina and her family not only made meaning of multimodal onscreen texts, but that they employed, and made meaning of, the multimodal or embodied aspects of their interactions. Tina made meaning of other family members’ embodied actions and use of technologies, and her responding actions displayed her sense-making of these. Her talk, and sometimes calibrated embodied actions, managed the use of technologies. Likewise, family members also made sense of Tina’s embodied actions with technologies, such as her point gestures (Wootton, 1994) to screens and showings (Kidwell & Zimmerman, 2007; Lerner et al.,
The analysis shows that the combination of face-to-face interactions among family members, and their joint use of technologies, resulted in interactions that largely involved embodied actions. Thus, meaning making is not restricted to the multimodal nature of texts interpreted as what is viewed, heard, or read. This study reinforces that human communication is multimodal and shows that family members’ multimodal actions included actions oriented to each other and digital technologies.

These findings contribute to the growing body of conversation analytic research showing how multimodal (or embodied) conduct constructs social action in orderly ways. For example, conversation analysis has revealed that through gaze, actors select their interactional recipients (C. Goodwin, 1979) and display recipiency to others’ actions (C. Goodwin, 1981; Kendon, 1967). Additionally, gestures are employed alongside one’s own talk, another’s talk, or in the absence of talk to acquire recipiency (C. Goodwin, 1986b); to support, extend or alter talk (Stivers & Sidnell, 2005); or to replace talk (S. Jones & LeBaron, 2002, p. 510). This study shows that the young child and her family employed embodied actions which included gaze, gesture, body movement, tapping and swiping touch screens and touch pads, and showings (Kidwell & Zimmerman, 2007; Lerner et al., 2011) to occasion and produce digital literacy practices. They made their meaning making of each other’s embodied actions public in responding turns to co-construct digital literacies. Furthermore, analysis indicated that talk about onscreen texts was often calibrated with gaze and gesture. For example, Tina’s verbal selection of YouTube videos (as presented in Chapters 5 and 6) employed indexical expressions which were only understood by orienting to her gesture to the texts onscreen. Therefore, this research contributes to
the conversation analytic discussion of embodied actions by showing that their use enabled Tina and her family to orient to, and communicate, shared meanings of texts and accomplish actions using technologies.

In the field of digital literacies, a small collection of studies also establishes that meaning making encompasses more than the multimodality of onscreen texts, but also includes making meaning of embodied interaction, since all human communication is multimodal (Bearne, 2009; Burnett, 2015; Davidson et al., 2014). Understandings of the multimodal nature of communication follows decades of strong emphasis on spoken language in sociology and literacy research (S. Jones & LeBaron, 2002; for example, Kress, 2010; Kress & van Leeuwen, 2006). However, within the field of digital literacies the emphasis on multimodality remains on children’s construction of multimodal texts using a variety of semiotic modes afforded by digital media. Although multimodality relates to the modes comprising digital texts, and from which meaning is made, this thesis shows that it also strongly relates to children’s interactions around texts. Therefore, this study aligns with research (for example, Bearne, 2009; Burnett, 2015; Davidson et al., 2014) considering young children’s multimodal interactions by showing how meaning is made of embodied actions in situ.

8.4.2 Tina’s interactional competence and digital literacies.

A substantial body of conversation analytic research has strongly shown young children to be interactionally competent actors who socially organise their relations with adults and peers (for example, Björk-Willén, 2012; Busch, 2012; Danby & Baker, 1998; Davidson, 2012c; Filipi, 2009, 2014; Forrester, 2008, 2009, 2015; Sally Hester & Hester, 2010, 2012;
Stephen Hester & Hester, 2012; Whalen, 1995). The studies illustrate the position that has become known as the sociology of childhood or competence paradigm (Danby, 2002; Hutchby & Moran-Ellis, 1998; Prout & James, 1997), that young children are social agents who employ interactional resources to orient to and engage in interaction. This study contributes knowledge of a young child’s interactional competency in her production of digital literacy practices at home. It presents evidence of how the child produced orderly and sensible interactions with others; a consideration which has been largely overlooked in research examining young children’s digital literacies.

First, discussion considers how Tina managed the trajectory of activity with digital technologies through interaction; second, how interaction was accomplished by orienting to digital technologies; third, how Tina enabled others to give help; fourth, how Tina enabled help to be received by others; and finally, that future digital literacy practices were informed through interaction.

8.4.2.1 Managing the trajectory of activity with digital technologies through interaction.

This study shows that Tina’s interactional competence was integral to her production of digital literacies with others at home. Tina’s turns initiated, managed, and responded to others’ talk to direct the trajectory of the interactions and the action being accomplished. She employed specific interactional resources, such as first parts of directive-response pairs or summons-answer pairs, which utilised the turn-taking system and required recipients to respond in particular ways. For example, Tina’s meaning making of, and gestures to YouTube videos indicated her selection and
made her mother’s use of the laptop pending (Chapters 5 and 6). In Chapter 7, her talk and movement of her iPad produced summonses and directives to make relevant Trae and her father’s attention to her onscreen activity. In this way, Tina organised her activity in interactions with others by shaping her turns so as to generate specific actions from them. She made relevant particular digital practices in her talk to manage the trajectory of the interaction and the social action being accomplished by it. Tina’s purposeful use of interactional resources to make things happen using technologies shows her construction of digital literacies with others in real time.

Findings from this study recognise Tina’s part in socially accomplishing digital literacy practices with others by showing how she employed interactional resources to make digital literacies relevant as next actions. This is significant as collectively, existing research has not adequately acknowledged the importance of young children’s interactional competency. Rather, socioculturally informed research about learning (for example, Plowman, McPake, & Stephen, 2010; Plowman, Stephen et al., 2010b; Plowman et al., 2011; Stephen et al., 2013) stresses that young children’s digital literacies and technology use are influenced by their social and cultural context. Their interactions at home have been predominantly viewed in terms of how parents socialise them into particular ways of using digital technologies and employing digital literacies (for example, Stephen et al., 2013). This emphasis risks children’s interactions being viewed simply as acts of conforming to the social context, rather than as agentic actions in co-constructing the social context with others.

However, the evidence of this study clearly illustrates Tina’s interactional competency in accomplishing digital literacies at home. Tina’s
interactions were not simply influenced by her social and cultural context; instead her turns indexed prior actions and altered the context for subsequent turns. Her talk and embodied actions responded to others’ actions and their activity with digital technologies, and managed the trajectory of interaction and technology use by making next actions relevant. This illustrates Tina’s active participation in socially producing digital literacy practices with her family by managing the trajectory of their activities with technologies. Therefore, this study shows that the young child’s interactional competency was evident in how she used interactional resources to employ digital literacy practices with her family.

8.4.2.2 Accomplishing interaction by orienting to digital technologies.

Tina’s interactions with her family members and their sense-making of each other’s talk and embodied actions was accomplished through their orientation to digital technologies. Actions were often oriented to technologies and required recipients’ orientation to them to be understood. Accordingly, family members designed their talk or embodied actions (such as gestures) to make relevant others’ orientation to technologies. In doing so, Tina and her family members displayed actions that were accountable to others as literacy practices; that is, as generating, communicating, and negotiating meanings of digital texts (Lankshear & Knobel, 2011). For example, in Chapters 5 and 6 Tina’s indexical references and simultaneously produced actions related to YouTube videos could only be understood with reference to the screen. Her talk about the videos displayed her reading of the layout of the Google search results webpage, identification of videos on the webpage, her reading of video thumbnail
images, and discrimination of the images as related to particular videos. In light of the technology, Tina’s talk about onscreen texts made her actions understandable as making meaning of them. In this way, the technology was a resource for making sense of others’ talk and embodied actions as digital literacy practices.

This discussion of how Tina indexed digital technologies and texts in making meaning of them illustrates her interactional competency in the social production of digital literacies. Few studies currently consider children’s interactional competency in their technological activities at home and education settings. This research contributes to the small number of studies that highlight the importance of children’s social agency to their unfolding interactions and literacy practices (for example, Aarsand, 2007; Davidson, 2012b). In the tradition of conversation analytic studies which have established young children’s interactional competency in organising their interactions, this study shows a young child’s competency to socially produce digital literacies by orienting to technologies and also occasioning others’ orientation to them. It is not simply that young children develop competencies in operating digital technologies, but that they competently make meaning of them and onscreen texts in-the-moment to accomplish their activities. Therefore, Tina and her family members used the technologies and the texts onscreen to produce actions, and make sense of each other’s actions, to accomplish activities with technologies.

8.4.2.3 Enabling others to give help.

This study reveals that young children are significantly involved in enabling more expert others to provide help. The analysis showed that Tina interacted to successfully solicit help from a more expert other in using
technologies. For example, in Chapter 6 Tina made interactionally apparent her interests and what she did or did not like on a laptop screen to enable her mother to support her using the technology. She did this over a series of turns by producing assessments that indexically referenced YouTube videos onscreen. Her turns made relevant an aligning assessment from her mother and subsequent actions to solve the problem. She then monitored and managed how the mother’s help was provided through assessments. Her turns negotiated what she did and did not like so as to orchestrate how the technology was used to locate and select a preferred video. This reveals that young children do not simply receive help from more expert others, but through their talk and action create interactional spaces for help to be provided, and in particular ways to solve problems using technologies.

This finding illuminates the interactional work achieved by Tina in what is an oft-taken-for-granted exchange between parents and children. In existing literature, the home has been described as a setting wherein young children have access to help from a range of people (for example, parents, siblings, and friends) to overcome challenges using technologies (Plowman, Stephen et al., 2010b). In particular, help by parents has been shown to support children’s cognitive development of literacy (Kim & Anderson, 2008) and their social production of digital literacies through guided interactions (Plowman, Stephen et al., 2010b). However, by emphasising the support provided by others, existing research overlooks the agency of young children and suggests them to be merely recipients of the help they receive. How technological challenges are identified and help is initiated in the interactions between children and their family has not been greatly addressed in the literature.
Only a small number of conversation analytic studies examine naturally occurring interactions to show how young children request and refuse help from others at home to manage their digital activities (for example, as shown in Davidson, 2012b, 2012c). This study adds to the little that is known about how young children produce help in interactions with others. The study brings a new perspective to the discussion of how help is provided to produce digital literacies in the home by showing that young children enable help to be given through their talk and embodied actions.

**8.4.2.4 Enabling help to be received by others.**

This study shows that young children monitor interactions to help others use technologies. In Chapter 7 Tina identified that Trae lacked the knowledge needed to trace letters. In order to help him, she acknowledged the social consequences of her actions. She overcame her dispute with Trae and followed her father’s suggested directive in order to help without taking over Trae’s activity. Tina showed her understanding that her actions in helping Trae had to be accountable to him as “doing” showing. Tina’s showings of her letter tracing displayed her competence to account for the appearance of her actions and their interactional consequences. In addition, Tina’s showings accounted for Trae’s preverbal interactional competency. In this way, Tina’s response to Trae’s opposition and her father’s intervention showed her ability to move the interaction beyond the dispute and employ a way of showing her digital literacies to which Trae would be responsive.

This discussion brings new understandings of how young children employ digital literacies in sibling interaction. The limited number of studies that analyse siblings’ digital literacy practices merely comment that
older children provide help to younger children (for example, Burnett & Wilkinson, 2005; Plowman et al., 2010a, 2012b; Reich et al., 2013). With the exception of conversation analytic research by Aarsand (2007) and Davidson (2010a, 2012b), very few studies illustrate the interactional methods by which young children help their siblings to accomplish digital literacy practices. By showing how Tina responded to Trae and the father by accounting for her actions to demonstrate digital literacies, this study highlights the interactional competency of young children. It reveals the importance of their interactional competencies to produce help in a way that will be taken up by the recipient.

Furthermore, little if any research currently shows how older siblings of preschool age demonstrate literacy knowledge to an even younger child. This study shows how a child as young as 3 years old identified the literacy knowledge that a younger sibling lacked and demonstrated it in a way that elicited the younger sibling’s attention. Therefore, this discussion reveals that help, in the way of showing literacy knowledge, is a joint, practical accomplishment co-constructed by children with their family.

8.4.2.5 Informing future digital literacies through interaction.

This study illustrates Tina was learning about digital literacies and developing physical capacities of using technological devices at home in her engagement in family interactions. Her everyday orientation to onscreen texts and others’ actions using technologies allowed her to develop experiences of producing digital literacies in a mundane, commonplace way that would be formative for her future accomplishment of digital activities. For example, Chapter 6 showed Tina’s understanding that her mother was
able to help her use technologies to find an appropriate video. Tina’s monitoring and management of her mother’s help illustrated her orientation to, and participation in, digital literacy practices which would inform her growing capacity to use technologies. In fact, Tina’s use of the laptop to bring up the Internet in Chapter 5 shows her capacity to employ digital literacy practices in making meaning of onscreen icons and texts to use technologies.

This study emphasises that it is through mundane, everyday interactions using technologies with family members, particularly parents, that young children develop capacities in digital literacy practices. However, existing research shows that parents take for granted their involvement in children’s learning of digital literacies and technological competences (Plowman et al., 2008; Plowman, Stephen et al., 2010a). The research reported in this thesis suggests that this may be due to the taken-for-granted nature of everyday interactions between parents and children. Though taken-for-granted by those who produce them, these interactions are important to children’s future production of digital literacies. Attention to children’s interactions with family members at home shows that their talk-in-interaction (Sacks, 1995) contributes to their competencies and production of digital literacies. Thus, this study suggests that interactions between parents and children are a taken-for-granted aspect of children’s everyday accomplishment of digital literacies. It highlights that children’s interactions, in which they witness and co-produce digital literacies, are integral for developing capacities for the future employment of digital literacies.
As discussed, Tina’s interactional competency was evident in how she managed the trajectory of activity with digital technologies through interaction; accomplished interaction by orienting to technologies; enabled others to give help; enabled help to be received by others; and finally, in constructing digital literacies in family interactions to inform future technology use. Tina’s ability to socially organise her activities with others was integral to her in situ production of digital literacies and meaning making practices. Her interactional management of digital literacies and technological competencies demonstrates how children, as “members” of society, are masters of language (Garfinkel & Sacks, 1970) and “practically competent in the lived order” (ten Have, 2005, p. 49) of social life. Therefore, this study contributes understandings of young children as being not only “active agents” (Stephen et al., 2008, p. 112) in their use of technologies, but also in their interactions with others through which they socially accomplish digital literacies in everyday activities.

8.4.3 Digital literacies in the construction of Tina’s social world.

The term social world refers to the “local everyday worlds” (Danby & Baker, 1998, p. 169) that actors, and in this instance, children, are members of. This discussion considers how Tina’s digital literacies contribute to the construction of her social world. It begins by identifying how the digital literacies socially produced between Tina and her family were related to other social actions specific to the home. The discussion closes by revealing how Tina constructed her social world by producing digital literacies as a settinged activity.
8.4.3.1 Accomplishing digital literacies and other social actions.

Analysis of Tina’s interactions with others during technology use illustrates how digital literacy practices are closely related to the accomplishment of other activities and social actions specific to the home. Actions involved in producing digital literacies in a family setting drew on other social actions, namely, being a family member. These actions are constructed in the ongoing course of interactional events in the home which are a part of being a daughter and older sister, or a mother, father, or younger brother. These are embedded in talk and embodied actions using digital technologies with others.

For instance, the mother’s particular way of web searching was closely related to her “doing” of being a mother as she drew on her knowledge of Tina’s YouTube viewing and searched for something that Tina might like. Likewise, at the same time as accomplishing digital literacies across a sequence of turns, Tina is “doing” making a telephone call and being Barbie’s good friend (Chapter 6); getting help from her mother (Chapters 5 and 6); and being a helpful sister to her younger brother (Chapter 7). These actions, witnessable through family members’ talk and embodied conduct, accompanied occasions wherein digital literacies were produced.

The finding that digital literacies occur with other social actions is consistent with the sociocultural perspective of Discourses as “forms of life” (Gee, 1989, p. 484). As outlined in Chapter 2 section 2.2.1, Discourses encompass particular localised and situated digital literacy practices. These have been defined as socially recognised ways of using texts for the generation, communication, and negotiation of meaning (Lankshear &
Knobel, 2011). Digital literacies are related to “words, acts, values, beliefs, attitudes, and social identities as well as gestures, glances, body positions and clothes” (Gee, 1989, p. 484) that are integrated within a Discourse. They are a part of the “saying (writing)-doing-being-valuing-believing combinations” (Gee, 1989, p. 484) that comprise a Discourse. As such, children’s digital literacies practices are not isolated but are produced alongside other ways of being in a Discourse. The finding that young children’s home-based digital literacies are closely related to other social actions of the home can inform sociocultural understandings of Discourses by showing how literacies are interconnected with other social actions.

8.4.3.2 Producing digital literacies as settinged activities.

The following discussion brings together the conversation analytic concept of settinged-ness (Sacks, 1995, Vol. 1) with a young child’s digital literacies. It shows that the child’s social world was constructed through the mutual production of digital literacies and meaning making as settinged activity. As explained in Chapter 3 section 3.3.5, actors invoke the orderliness of settinged activities without specifying what they are or the actions that accomplish them (Sacks, 1995, Vol. 1). The discussion of the settinged activity will consider how it was accomplished through first, a stable use of indexical references; second, through establishing a course of activities; third, in members’ actions (including digital practices); and finally, in establishing times to produce the settinged activity. Discussion draws on the web searches and video selections accomplished between Tina and her mother in Chapters 5 and 6.

First, the machinery of indexical expressions was used to invoke a setting, its members, and their activities (Schegloff, 1995a, Vol. 1). Tina and
her mother employed a stable use of indexical, or “context-dependent”
(Eglin, 2009, p. 45), references to refer to YouTube videos and webpages in
the course of web searching and selecting a YouTube video (Chapters 5 and
6). Indexical expressions referred to videos as “that one”, “these ones”,
“they”, and “they’re”; and referred to a Google search webpage as “this”.
Sometimes, gestures or onscreen cursor movement were used with indexical
expressions to refer to unspecified videos or webpages. Accordingly, talk
revolved around webpages and videos without specifying them as such.
Talk was understood to be about particular videos onscreen, or the webpage
on which they were displayed. Meaning making about the videos and
webpages onscreen indexed understandings about them, based on familiarity
with them and previous viewings of them. Thus, talk about videos and
webpages was understood by drawing upon prior understandings and
experiences with them.

Second, Tina and her mother witnessably made “a setting out of
some course of activities” (Sacks, 1995, Vol. 1, p. 521), comprising an
ordered set of digital literacy practices, in accomplishing the web search and
video selection (Chapters 5 and 6). The course of activities involved the
mother moving the cursor to the Google search bar, to then select a previous
search phrase using the Enter key, resulting in the appearance of YouTube
videos. Her method of producing the activities indexed familiarity with, and
prior experiences of, the web search (i.e., by using the search history
function to select a prior search). Tina was involved in co-construction of
this process through her orientation to, and monitoring of, the appearance of the
mother’s actions onscreen. With the appearance of the search results, Tina
and her mother observably made meaning of the video thumbnails to negotiate and select a video.

This observable course of events was a settinged method of accessing YouTube videos, and in particular, a certain video, through a “distinct order” (Butler, 2008, p. 189) of actions. Tina and her mother invoked their familiarity with the settinged activity in occasioning its production through the order of digital literacies. Reflexively, the orderly production of digital literacies made them to be sensible as the settinged activity. Thus, Tina and her mother invoked and constructed the settinged activity, comprising a particular course of digital literacies, to accomplish the social world of the home.

This routine of actions shows that Tina’s co-production of web searches and YouTube video selections with her mother were produced as settinged activity in their unformulated sense-making of them. In addition, the settinged web search and video selection was observably an oft-produced and familiar activity, and this familiarity supported their sense-making of it. This sheds light on how particular ways of using technologies, engaging with onscreen texts, and socially producing digital literacies are created through generating settinged activity.

Third, the settinged activity of web searching and selecting a YouTube video was achieved through the separate actions of Tina and her mother. They produced different, though complementary, actions: the mother used the keyboard and touch pad to generate a web search and Tina oriented to and monitored her onscreen actions. In making video selections, Tina indicated her preference which the mother selected using the laptop. Tina and her mother also oriented to the other’s actions. For example, the
mother acknowledged Tina’s video selections, and Tina solicited her
mother’s help to conduct the web search. Vocal and embodied orientation
to, and acknowledgement of, the other’s actions and onscreen actions
produced shared meanings and the consequential accomplishment of the
activity. Importantly, Tina and her mother also oriented to onscreen action
as generated by prior actions of the mother, to occasion next actions. This
highlights the occasioned nature of the production of the settinged activity;
that although Tina and her mother displayed familiarity with the actions
required by themselves and the other, they produced their actions according
to the local temporality of the other’s and onscreen actions in real time.
Thus, Tina and her mother oriented to their own and each other’s
complementary actions, and the result of their actions using the laptop, to
produce the settinged activity.

Fourth, particular times for the settinged activity were established in
the interactions between Tina and her mother. It was observably taken-for-
granted by them that the settinged activity occurred when the Internet was
first opened to establish Tina’s activity using YouTube. For example, the
mother initiated minimal talk with Tina to transition into the settinged
activity. Tina observably accounted for the mother’s actions as breaking the
silent copresence between them and commencing their settinged activity.
The settinged activity also occurred amidst Tina’s activity with the laptop as
a way to select a particular video. For example, Tina invoked a time for the
settinged activity when she solicited her mother’s help to view a particular
video when she did not like those displayed onscreen (Chapter 6). Her
actions suggest that she proposed a time for the settinged activity, as a point
of departure after not being able to select a video to view. This time for the
activity was negotiated and produced by Tina and the mother through their
meaning making of the videos. Each initiation of the settinged activity was
unformulated. By invoking the settinged activity and “requiring a recipient
to provide its sense, they [the speaker] recruit the recipient into the
speaker’s project; they make the recipient complicit in forming up its sense”
(Schegloff, 1995a, Vol. 1, p. xlix). In this sense, whether taken-for-granted
or negotiated, times for the settinged activity relied on members’ sense-
making of others’ actions.

This discussion of settinged-ness (Sacks, 1995, Vol. 1) introduces a
new way of understanding how young children’s digital literacy practices in
the home construct their social world. Though socioculturally informed
studies emphasise children’s socialisation into particular social and cultural
digital literacy practices (for example, Plowman, McPake et al., 2010;
Stephen et al., 2013), this discussion of settinged activity has shown how
web searches and video selections were collaboratively invoked and
negotiated in interactions. Attention to the family context in the home
(Stephen et al., 2013) has been refocused in this discussion as attention to
what is taken up and made to be what happens “in the home” in children’s
interactions with their family. In this study Tina’s social world was
constructed in her interaction with her mother by producing a settinged
activity. This involved particular actions being implicitly understood as
associated with the activity, and making meaning of onscreen texts without
formulating what they were, by drawing upon each other’s sense-making
practices. This suggests that the home is constructed by interactions that
continually achieve activities and do so in particular ways, of which the
production of settinged activities is one. In this thesis, digital literacies were
produced as part of the settinged activity, and its accomplishment
constructed the child’s social world by achieving actions, and making
further actions possible with technologies.

This study contributes new insight into how a young child’s social
production of digital literacies in a settinged activity constructed her social
world. A rich body of conversation analytic studies have established
children to be active members of society who construct their social worlds
through verbal and embodied actions with others (for example, Busch,
2011; Butler, 2008; Cobb-Moore, Danby, & Farrell, 2008; Hutchby &
Moran-Ellis, 1998; Theobald, 2009). Their social worlds comprise their
interactive participation and construction of peer culture with other children
and adults (Cobb-Moore et al., 2008; Corsaro, 1997). However, little
research has shown how young children’s digital literacies come into play in
the construction of their social worlds. This study showed that Tina
constructed her social world in her co-production of digital literacies in
settinged activities at home. Tina and her mother drew on their familiarity
with a web searching activity, and its production in a particular setting (the
home) with particular objects (technologies), to invoke and produce it as
settinged. In turn, they accomplished the selection of YouTube videos and
enabled Tina’s engagement with them using objects at hand (a Barbie doll
in Chapter 5 and a dolphin biscuit cutter and toy mobile phone in Chapter
6). Therefore, young children’s social worlds involve the joint
accomplishment of settinged activities, which in this study involved
employing digital literacies to accomplish a web search and video selection.

This discussion of the settinged character of a digital activity in the
home, and the digital literacies that comprise it, makes a methodological
contribution to the minimal body of conversation analytic research uncovering how settinged activities are invoked and created. Although the concept of settinged-ness is much broader than a setting, encompassing “any conception of scope-of-context” (Schegloff, 1995a, Vol. 1, p. xlix), it is suggested that settinged activities may be produced in a particular setting when its members are familiar with what is interactionally accomplished in the setting, and how it is done (its “distinct order and set of time, place” (Butler, 2008, p. 189)). That is, activities can be invoked and created as settinged (being mutually understood, but unformulated) when members are familiar with particular activities in a setting and what they entail, and understand that other members are also familiar with them.

Therefore, this discussion of settinged-ness has shown that in the home particular activities with technologies are produced as settinged, where their production and aspects of it (i.e., digital literacies) are negotiated and performed without explicit reference to them due to a mutual understanding of the course of activities. It enlightens New Literacy Studies perspectives that “every literacy is learnt in a specific context in a particular way” (Street, 1995, p. 140) and “may be regular repeated activities” (Barton, 1991, p. 5), by showing that family members’ familiarity with a repeated digital activity can enable them to invoke and interactionally produce it (in a particular way) as settinged. Therefore, the web searching and video selection was produced without formulation of it or the actions comprising it, showing that digital literacies can be produced in mutually understood ways to construct a young child’s social world.
8.5 Conclusion, Limitations, and Suggestions for Further Research

In light of the discussion of Tina’s orientation to meaning making, her interactional competence, and the construction of her social world, the conclusion of how she socially accomplished digital literacies in the home is established. Following this, limitations of the study are acknowledged, implications and methodological contributions of this research are outlined, and directions for further research are suggested.

8.5.1 Conclusion.

This thesis aimed to show how a young child accomplished digital literacies in her social interactions at home. The findings emphasise the agency and competency of the child in orienting to, and organising, meaning in and across turns in ways that were locally relevant to socially situated interactions. The child’s collaborative meaning making involved the ongoing practical reasoning of onscreen texts and interactions in situ, and by which ways of using texts and technologies were socially constructed to pursue interests of importance. Thus, this research establishes that the child socially accomplished digital literacies through the local and situated organisation of meaning in sequential interaction with family members.

8.5.2 Limitations of this study.

The limitations of this study include the specific, micro-analytical focus of ethnomethodology and conversation analysis; the limited focus in using single-case analysis to examine a small number of extracts; and the limited focus on the interactions of one family. These limitations are acknowledged, while arguing that they enable the detailed analysis of interaction as presented in this research.
Conversation analysis has been criticised for its lack of “big picture” perspective with wider concerns of society. Close conversation analytic descriptions of interaction may be accused of overlooking longer-term perspectives of interaction, of which other research methodologies, such as case study or ethnography, make a study (Billig, 1999). Instead of considering macro issues within interactions, such as class, power, and gender (Wooffitt, 2005), conversation analysis investigates what is made relevant in the interactions by members themselves. This study, too, could be criticised for its “naivety” (Billig, 1999, p. 572) of, and a lack of engagement in, wider political and cultural topics of literacy. Though this study does not consider broader topics associated with children’s literacy learning, it concerns itself with the topics that members make salient in their talk to uncover their situated production of digital literacies.

This study is limited in its focus due to the application of single-case conversation analysis to examine extracts of video data. A common conversation analytic argument against criticisms of its limited focus stipulates that one case (whether in corpus or single-case analysis) is sufficient to illustrate the order of social life (Schegloff, 1993a). Single-case analysis provides a depth of insight into the organisation of social life often unattainable through other more widely-focused methodologies. In this study, the rigour of analysis adds depth to the field where alternate methodologies might add to its breath. The application of single-case conversation analysis provides needed insight into how a young child’s digital literacies are socially produced.

This research is also limited in its focus with regard to the selection and analysis of interactions in one family. Examination of digital literacy
practices of a single child and her family reduces the breadth of this study. Accordingly, findings are not generalisable. This being said, the findings remain suggestive of the types of activities and digital literacies that may be employed by young children in their homes. In addition, analysis of interactions in one family provides consideration of how situated family culture and interactional practices contribute to their accomplishment of social life (M. Goodwin, 2007). This study contributes depth rather than breadth to understandings of how family interactions socially accomplish young children’s digital literacies. Therefore, despite limitations, this study provides a close ethnomethodological description of a young child’s socially situated digital literacy practices at home.

### 8.5.3 Implications of this study.

The research findings enhance what is known about young children’s interactional competencies and social production of digital literacies at home, forming pertinent considerations needed for the development of relevant, contemporary education policies about preschool and primary school teachers’ practices teaching digital literacies. The implications of this ethnomethodological and conversation analytic study are elaborated below.

An obvious implication of this research is the new knowledge about how young children produce digital literacies at home with others and independently. The findings are significant since little is known about what children’s digital literacies consist of or how they are socially achieved. In particular, there is sparse empirical research analysing young children’s interactions with family members in their use of digital technologies, and how it achieves digital literacies at home (Danby et al., 2013). This project
satiates this identified gap through the detailed analysis and rich description of a young child’s social accomplishment of digital literacies in her home. It has shown that the child solicited the help of more expert family members to accomplish activities using technologies, and that she was competent at managing her interactions and the trajectory of her activities through her meaning making with family members.

This study presents new understandings of young children’s interactional competency. Specifically, it emphasises the competency of the child to make relevant particular literacy knowledge and practices to achieve digital activities. Her complex interactional work co-constructed digital literacy practices with her family members. The study provides insights into the nature of family interactions at home by which digital literacy practices are produced, and highlights children’s agency in interactionally producing digital literacies. It redirects current thought to consider, rather than overlook, young children’s agency and competency in everyday interactions.

In studying a young child’s social accomplishment of digital literacies at home, this thesis bears implications for how young children’s digital literacies are taken up and acknowledged in education settings. Researchers have emphasised the importance of teachers being aware of children’s digital literacy practices at home to incorporate and build on them in the classroom (Marsh, 2013a; Paratore et al., 2003). However, little is still generally known about young children’s digital literacies at home. Without understanding how young children employ digital literacies in social interactions, it is difficult for teachers to facilitate learning experiences in which talk is used to support young children’s digital literacies. Thus, the
findings that this thesis contributes to understanding young children’s digital literacies are significant in informing teachers’ knowledge, and inclusion of, children’s digital literacies in the classroom. The emphasis of this research on interactions highlights the importance of social interaction to young children’s meaning making, and can encourage teachers to plan for and capitalise on in-the-moment interactions with young children to talk about, and make meaning of, onscreen texts. With greater knowledge of the digital literacies that children employ in the home, and how they are accomplished through interaction, teachers can be better informed when planning and facilitating learning experiences to support children’s digital literacies.

The findings of this research provide knowledge for the improvement of policies concerning young children’s digital literacies in preschool and primary school. Current policies about young children’s digital literacy practices in their use of technologies in preschool and the early years of school fail to acknowledge their diverse digital literacies constructed at home. Understanding of the richness of the home context and family interactions in technology use is frequently lacking in previous research and education policies. Knowledge of family interactions and technology use at home, provided by this research, may be drawn on by education policy makers.

Therefore, this research widens the parameters of what is currently known about young children’s digital literacies in the home, and makes a valuable contribution to the field of digital literacy and to understandings of young children’s digital literacy practices in wider society. It can also inform teachers’ acknowledgement of, and planning for, children’s digital
Chapter 8: Discussion and Conclusion

literacies in preschool and the early years of school, and advise future policy concerning young children’s digital literacies in education settings.

8.5.4 Methodological contributions.

This study makes a significant contribution to ethnomethodological and conversation analytic inquiry by first, uncovering the order of everyday interaction and treating it as significant; second, producing an ethnomethodological respecification of digital literacy practices as a members’ matter; third, expanding ethnomethodological study in the field of digital literacies; fourth, contributing to the small body of conversation analytic research on the organisation of sibling interaction; fifth, considering the social-ness of an individually produced activity; and finally, developing new notation symbols to account for and represent embodied action in conversation analytic transcription. These contributions to the study of talk-in-interaction (Sacks, 1995) are considered in turn.

Talk and interaction is a significant, yet often overlooked phenomenon of daily life. Studying the “practices and structures” (Peräkylä, 2004b, p. 8) of commonplace interaction in its own right makes significant the routine accomplishment of social life. Additionally, it furthers the dimensions of conversation analytic thought (Button, 1977) by revealing “practices of interaction not previously described, and transform[ing] our understanding of practices that we thought well in hand” (Schegloff, 1999, p. 145). In this study, analysis of a young child’s talk and embodied action highlighted the taken-for-granted sense-making methods employed to produce quotidian interactions in the home. The treatment of interaction as a noteworthy phenomenon furthers understanding of its production in the accomplishment of situated activities at home, such as distinguishing how
settinged activities are invoked and constructed. Thus, by analysing interaction as a significant phenomenon in its own right, this study contributes understandings of its local and collaborative production.

This study contributes to the ethnomethodological tradition of respecifying sociological descriptions of the structure of the social world as a member’s matter. It produced an ethnomethodological respecification of the sociocultural perspective and a prominent definition of literacies. Respecification highlighted the taken-for-grantedness of interaction in sociocultural perspectives by revealing that literacies are locally and socially situated in members’ sequential exchange of talk and embodied action. It uncovered members’ agency and social competence in orchestrating their social world to produce digital literacies. Thus, this study adds to the domain of studies which provide an ethnomethodological alternate (Garfinkel, 2007) to show that digital literacy practices are practical actions of reasoning which can be found in members’ talk and interaction.

The application of ethnomethodology and conversation analysis in this study has extended its use in the field of digital literacies. Only a small number of studies have examined young children’s digital literacies from an ethnomethodological or conversation analytic perspective (for example, Aarsand, 2007; Davidson, 2009b, 2010a, 2011). This study contributes to the limited ethnomethodological research on young children’s social accomplishment of everyday digital literacies at home. It provides evidence of how a young child made meaning of onscreen texts and interactions to socially pursue activities using technologies with family members. Therefore, this study makes a valuable contribution by expanding ethnomethodological inquiry in the field of digital literacy.
This research contributes knowledge about sibling interactions at home. Arguably, as a collective body, conversation analytic research has only recently focused on the family home as a site of rich interactions through which mundane activities and routines are produced (for example, Aarsand & Aronsson, 2009a, 2009b; Aronsson & Cekaite, 2011; Busch, 2011, 2012; Davidson, 2012b, 2012c; M. Goodwin, 2006; M. Goodwin & Cekaite, 2013). Of these studies, few analyse siblings’ interactions. Therefore, this study is significant for showing how young siblings display understandings of the structure of interaction by taking account of each other’s actions. For example, it demonstrated that an older child constructed interaction to account for a younger child’s preverbal competency. The study promotes analysis of sibling interaction as a means of revealing children’s social competency and local construction of relations.

This study has pushed the boundaries of ethnomethodological and conversation analytic research by considering the social-ness of an individually produced activity, namely, a pretend telephone call (Chapter 6). Analysis showed that the call was produced through the recognisable structure of telephone conversation to a possible overhearing audience. Although the child’s telephone call was an individual activity, in the sense that she did not produce talk with another physically present member, her interaction was nonetheless socially oriented toward real and pretend people. This showed how young children orient to copresence in the home in producing individual, and potentially social, activities. There is potential to continue investigation of how young children’s independent activities in the home are socially oriented.
This study demonstrated how conversation analysis can take account of embodied actions in transcription. The child and her family performed actions with digital technologies in response to each other’s talk-in-interaction (Sacks, 1995) and cues from technologies. Notation symbols were developed to represent their manipulation of digital technologies. These newly developed symbols simplified the documentation and reading of embodied conduct in transcripts. The symbols propose an important way forward in transcribing frequently occurring embodied actions, such as tapping touch screens. They highlight the importance of taking account of embodied actions as turns progressing interaction (Björk-Willén & Aronsson, 2014). Therefore, this study advances directions in conversation analytic research to represent embodied conduct within transcription and analysis. To conclude, the methodological contributions of this study extend the application of ethnomethodological and conversation analytic inquiry.

8.5.5 Suggestions for further research.

Empirical research investigating young children’s digital literacies in the home are few in number (Lankshear & Knobel, 2003b). This research suggests directions for further research on young children’s digital literacies to extend this field of study and increase what is known about how children employ digital literacies.

This study has applied sequential analysis of three extended sequences of interaction to uncover a young child’s digital literacy practices in her everyday technology use. The conversation analytic approach of corpus analysis could be applied to study particular digital literacy practices identified in this study. By drawing on the home (and even preschool) video data from the wider project, a collection could be developed of, for example,
keying web searches into a search engine, YouTube video or game selections, or the indexing of prior experiences. Analysis of the collection of episodes could reveal a sequential pattern whereby participants orient to a rule or method as being relevant to accomplishing their social activity. Identifying and producing an account of a sequential pattern methodically used to socially accomplish digital literacy practices will further uncover the means by which young children acquire and employ digital literacies.

This research has shown that children younger than 3 years are using digital technologies with their family members, and that parents and older children show them how to accomplish different activities with them. There is great potential for further research to investigate very young children’s social interactions with other family members using digital technologies. In these instances, and it is anticipated that very young children’s social actions would comprise mostly embodied communication and vocalisations. Studies could show very young children’s display of social competencies in using digital technologies with family members.

Though this research contributes knowledge of how digital literacies are socially accomplished by a young child at home, little is known about how young children learn digital literacies with their family. Further research can study how young children learn new digital literacies and develop their competencies through their interactions with others at home over a length of time. Longitudinal conversation analytic research could investigate young children’s digital literacies over months or years. There may also be scope to show young children’s longitudinal production of digital literacies across settings, such as home and preschool. This research
would reveal how young children’s digital literacy competencies grow in complexity as they increase in age.

Case study research is proposed as a useful approach to examine the complexities of young children’s digital literacies from a variety of data sources. Previous case study research has provided rich insights into young children’s use of technologies at home and preschool (for example, Plowman et al., 2008, 2012; Plowman et al., 2011; Stephen et al., 2013). In particular, case studies would enable deep consideration of how young children use technologies and produce digital literacies at home and preschool. Data sources could include interviews with parents, preschool teachers, and children to show similar and differing perspectives of using technologies and digital literacies; video recordings of technology use at home and preschool; logs of children’s technology use and digital activities; and screen captures (images and/or video) of activities or digital texts that are constructed using technologies. Case study research of young children’s digital literacies across settings could highlight the complexity of their practices and how they are employed in different settings and interactions.

This thesis has shown that there is great potential for siblings to learn digital literacies from each other in their mutual engagement with technologies. It has identified the need for further research to show how literacy learning occurs in siblings’ naturally occurring interactions using digital technologies at home. In particular, little is known about how children prior to school show their younger siblings their literacy knowledge and digital literacy practices. Further research in this area can extend previous research (for example, Gregory, 2001, 2005) of how older children share literacy knowledge in their interactions with younger siblings.
This study showed how a young child collaboratively produced web searches with another family member at home. Within the field of digital literacies, few studies have considered young children’s literacy practices in actual instances of web searching at home. Further research about young children’s web searching could encompass how they accomplish web searching using the functions of different devices, such as producing Google “voice searches” (whereby the user speaks a search phrase into inbuilt microphones in mobile devices). Thus, there is wide scope for studies to consider young children’s web searching experiences and how they accomplish web searches using digital literacies.

Though young children most frequently use technologies at home (S.-J. Lee & Chae, 2007; Wellington, 2001), they are increasingly using them in settings outside the home. Young children’s social use of technologies and their production of digital literacies has hardly been investigated in public and community settings. Studies could explore young children’s digital literacies in their use of technologies in different arenas in community settings, such as in electronic stores where children can play with displayed devices, or on extended family car trips. These studies could show how literacies are produced with different people and in different settings using technologies. Therefore, these suggested directions of further research examining young children’s digital literacies can enhance knowledge of how they produce digital literacies.
REFERENCES

References


References


Bloom, L. (1993). Transcription and coding for child language research: The parts are more than the whole. In J. A. Edwards & M. D. Lampert (Eds.), Talking data: Transcription and coding in discourse research (pp. 149-166). Hillsdale, NJ: Lawrence Erlbaum.


References


References


References


References


References


References


References


References


Moffatt, L. (2014). I hope it still counts as reading: The cultural production of reading(s), social relations and values in a research interview. Journal of Language and Literacy Education, 10(2), 1-16.


References


References


References


Sheehy, K. (2002). The effective use of symbols in teaching word recognition to children with severe learning difficulties: A


References


References


References


References


Wohlwend, K. E. (2010). A is for avatar: Young children in literacy 2.0 worlds and literacy 1.0 schools. *Language Arts, 88*(2), 144-152.


## APPENDIX A

### TECHNOLOGY TIME-USE LOG

**Table A1.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time (start–finish)</th>
<th>Activity</th>
<th>What Using?</th>
<th>Participants and details</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurs. 16th June, 2012</td>
<td>5:30am – 6:00pm</td>
<td>Web search, Game, Email</td>
<td>Desk top computer, Laptop Top</td>
<td>Tina (3 yrs 11 months)</td>
<td>Tina wanted to watch Barbie, movies on YouTube. We started the computer in standby mode and let her choose which movie she wanted to watch. She changed modes many times (viewing, YouTube).</td>
</tr>
<tr>
<td>Fri. 15th June, 2012</td>
<td>7:40am – 8:30am</td>
<td>Web search, Game, Email</td>
<td>Desk top computer, Laptop Top</td>
<td>Tina (3 yrs 11 months)</td>
<td>Tina wanted to watch ‘Nick Jr.’ on the computer. We opened YouTube and let her choose between movies. (saw ‘Olive the Other Reptile’). She started the internet here.</td>
</tr>
</tbody>
</table>

**Table A2.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time (start–finish)</th>
<th>Activity</th>
<th>What Using?</th>
<th>Participants and details</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sat. 14th June, 2012</td>
<td>6:40am – 7:30am</td>
<td>Web search, Game, Email</td>
<td>Desk top computer, Laptop Top</td>
<td>Tina (3 yrs 11 months)</td>
<td>Tina opened and started to watch ‘Barbie as a Princess’ on YouTube. We started the computer in standby mode and let her choose which movie she wanted. (Unfortunately didn’t save this version).</td>
</tr>
<tr>
<td>Sun. 15th June, 2012</td>
<td>7:40am – 8:30am</td>
<td>Web search, Game, Email</td>
<td>Desk top computer, Laptop Top</td>
<td>Tina (3 yrs 11 months)</td>
<td>Tina opened 3 videos in the window to watch ‘Barbie &amp; Her Brother’, ‘Tracy’ and ‘Barbie’s Sisters’. She opened and closed them all by herself. (Mom helped add everything themselves).</td>
</tr>
</tbody>
</table>
Table A3.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time (start – finish)</th>
<th>Activity</th>
<th>What Doing?</th>
<th>Participants and details</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>17th June</td>
<td>3:30pm – 4:15pm</td>
<td>Web search</td>
<td>Desk top computer</td>
<td>Tina</td>
<td>Tina opened the computer. We started YouTube for her &amp; then she continued controlling all YouTube clips.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Game</td>
<td>iPad (or equivalent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Email</td>
<td>Laptop</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td>Smart phone</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Television</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Game console</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Child's Name: Tina
APPENDIX B

INFORMATION AND CONSENT FORM: PARENT/GUARDIAN

PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT
Phase 2–Parents/Guardians and Child–classroom

Interacting with knowledge, interacting with people: Web searching in early childhood
QUT Ethics Approval Number 1100001480

RESEARCH TEAM
Principal Researcher: Professor Susan Danby, Chief Investigator, Queensland University of Technology
Associate Researcher: Professor Amanda Spink, Loughborough University, UK; Professor Karen Thorpe, Queensland University of Technology; Dr. Christina Davidson, Charles Sturt University.

DESCRIPTION
This project is being undertaken as part of Australian Research Council funded study, by Professor Susan Danby, from the School of Early Childhood at Queensland University of Technology. The research team includes Professor Amanda Spink, Professor Karen Thorpe and Dr. Christina Davidson.

Today’s generation of children have never known a world without digital technology. Increasingly, we know that children are using digital technology to access knowledge, and we do know that children as young as two are Web searching and engaging with digital technologies. However, we know little about what young children actually do with Web searching, and what young children do on the Internet. In this study we aim to document the ways in which Web technologies are used by young children, how young children use the Internet to find out information, and how they interact with others when using this technology, within the context of their everyday lives.

This study investigates the extent of young children’s Web searching as part of their everyday home and school experiences. We will investigate what they are accessing, and in what social contexts, through videorecording their everyday interactions with the Web and digital literacy. Findings will provide new knowledge about issues that might impact on young children’s knowledge and well-being when Web searching and will contribute to informing practices in early childhood education and home contexts and early years education policy, which identify through digital literacy use as essential for attaining knowledge, educational success and social equity. This phase of the study focuses on children’s Web searching interactions with digital technology and with their peers and adults (including teachers, group leaders, teacher assistants and others) in Crèche & Kindergarten.
We are inviting your agreement for your child’s participation in this project because you are the parent of a child who currently attends Crèche & Kindergarten program in Queensland.

PARTICIPATION
We would like to invite you to agree for your child to participate in a study of young children’s web interactions and information behaviour. The study involves the research team observing and video-recording young children using digital and web technology in school and home settings. We seek your permission to video-record their interactions while they are using digital technologies in the classroom.

Yes, you can withdraw your child from the study at any time and do not have to give a reason for doing so. There would be no pressure to continue. Your participation in this project is entirely voluntary. Any identifiable information already obtained will be destroyed. Your decision for the centre to participate, or not participate, will in no way impact upon your current or future relationship with QUT or with C&K.

Your participation will first involve taking the time to read this information and providing consent for your child to participate in the study, and then reading the parent consent script to your child. Your child’s participation will involve being video-recorded over a three-week period by researchers in their classroom during school periods. The aim of the video-recording is to capture, as naturally as possible, the children’s interactions with each other and the adults, including teachers/group leaders and teaching assistants, as they engage with the computer and other technologies in web search activity. These activities will be video-recorded by a member of the research team, with researchers wishing to pose as little intrusion as possible into the routines of the children during classroom time, and will adopt the role of the ‘quiet observer.’ In addition, a software program will track the web-searching, including the screen and search pathways. The teacher will also be making notes in a time log showing what children are doing when they use computers and other technologies to access the Web and the Internet.

The children’s interactions will be video and audio recorded discreetly so that there will be minimal impact. They are free to withdraw at any moment without penalty and to stop the recording if ever they wish to do so. Participants are ensured confidentiality through secure storage of data and de-identification of transcribed data.

As a token of appreciation for participating, each classroom and each participating family will be provided with a book voucher to compensate for their time and to thank them for their involvement. This will be provided at the conclusion of the data collection on-site.

EXPECTED BENEFITS
This project may not directly benefit your child directly. However, it may benefit your child indirectly by improving understandings in the field of early childhood by providing new insights into the processes and possibilities for young children engaging in Web searching. It will advance knowledge of preschool children’s social interactions with peers, siblings, and adults as they engage in Web searching and will inform understandings and strategies for teachers’ involvement in Web searching with children. Further, your child may benefit indirectly from teachers’ professional renewal and teaching development to facilitate teachers’ recognition of how their interactions can influence classroom interactions involving Web
searching.

**RISKS**

There are minimal risks associated with your child’s participation in this project. This is considered a ‘low risk’ study because your child’s participation will have no further risks than the potential risks your child faces during participation in the classroom. However, should your child become distressed during video-recording, your child will have the option to have the camera turned off and withdraw from the study. All school protocols will be followed by the researchers at all times. If the researcher is approached by the children, the researcher will respond as an early childhood teacher would. The researchers each hold a “Positive notice Blue Card” issued from the Commission for Children, Young People and Child Guardian.

Minor risks may be related to:

1. **Confidentiality.** To manage this, video-recorded data of the participants will be handled ethically. Interactions will be video and audio recorded discreetly so that there will be minimal impact. Participants’ anonymity will be maintained by assigning pseudonyms in the transcription process and by de-identifying the school by blurring school logos that appear on school uniforms and other identifiable items. Informed consent will be obtained before collecting video-recorded data. Participants will be given the option to request their faces be blurred and voices altered.
2. **Persons who have not given consent could inadvertently be filmed during video data collection phase.** To manage this, if for any reason that person happens to come into frame of the video-recorded footage, their picture will be blurred out, and any interaction that involves this person will be discarded. Participants are free to withdraw at any moment without penalty.

QUT provides for limited free counselling for research participants of QUT projects who may experience discomfort or distress as a result of their participation in the research. Should you wish to access this service please contact the Clinic Receptionist of the QUT Psychology Clinic on 3138 0999. Please indicate to the receptionist that you are a research participant.

**PRIVACY AND CONFIDENTIALITY**

Individual Crèche & Kindergarten centres will not be identified. The video-recorded data will be analysed and transcribed for the study. Consent forms and raw data (i.e., video-recordings) will be kept in securely locked cabinets and on computers with passwords. These will only be able to be accessed by the research team. When the recordings are transcribed, all identifying information (such as personal names and place names) will be changed. The findings will be written up for publication in academic and professional journals, and presented at academic and professional conferences. Teachers and parents will be able to request that the visual records are distorted so that participants are unrecognisable when excerpts are presented for educational, professional teaching or research purposes.

This project involves video-recordings. Confidentiality will be maintained and participants must be aware that:

- Only the researchers on the project will have access to the video-recordings during the transcription and analysis phase.
- The electronic copies of raw/original video-recordings and transcripts will be stored on a password protected computer, which can only be accessed by the researchers on the project.
• Hard copies of the raw/original video-recordings and transcripts will be stored by members of the research team in locked filing cabinets at the university.

• The video-recordings may be used after completion of the project as instructional aides. This includes using the video-recordings for conference presentations, teacher professional development, research training and research and teaching publications. You and your child will have to option to request that their face be blurred or their voice digitally altered to maintain anonymity.

• Other identifying images such as school logos will be blurred to maintain the school’s anonymity.

• It is not possible to participate in this study without being video-recorded.

CONSENT TO PARTICIPATE

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement for your child to participate. We also would like to ask your child to sign a written consent (attached) to confirm your child’s agreement to participate in the project. Could you please take the time to read through the consent script, included below, with your child and provide them with the opportunity to indicate their consent by colouring in the smiley face.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT

If you have any questions or require any further information about the project please contact one of the research team members below.

Professor Susan Danby
School of Early Childhood
Faculty of Education, Queensland University of Technology
Phone: 3138 3547
Email: s.danby@qut.edu.au

CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECT

QUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Unit on [+61 7] 3138 5123 or email ethicscontact@qut.edu.au. The QUT Research Ethics Unit is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

Thank you for helping with this research project. Please keep this sheet for your information.
Interacting with knowledge, interacting with people: Web searching in early childhood

QUT Ethics Approval Number 1100001480

RESEARCH TEAM CONTACTS
Professor Susan Danby
School of Early Childhood
Faculty of Education, Queensland University of Technology
Phone: 3138 3547
Email: s.danby@qut.edu.au

STATEMENT OF CONSENT
By signing below, you are indicating that you:

- have read and understood the information document regarding this project
- have had any questions answered to your satisfaction
- understand that if you have any additional questions you can contact the research team
- understand that you are free to withdraw your child at any time, without comment or penalty
- understand that your child is free to withdraw at any time, without comment or penalty
- understand that you can contact the Research Ethics Unit on [+61 7] 3138 5123 or email ethicscontact@qut.edu.au if you have concerns about the ethical conduct of the project
- have discussed the project with your child and what is required of them if participating
- understand that the project will include video-recording and consent to this
- agree to participate in the project

Name  

Signature  

Date  

If you have any concerns regarding the video-recording, and wish to have your child’s face blurred or voice digitally altered in the video-recordings, please contact the researcher on (07) 3138 3547 or s.danby@qut.edu.au.
APPENDIX C

CONVERSATION ANALYSIS TRANSCRIPTION SYMBOLS

*Jefferson notation symbols*

[to] Indicates where participants’ speech and/or embodied action overlaps

= Indicates where participants’ speech follows on from each other without a pause

(.) Indicates a micro-interval during interaction

(0.4) Indicates the length of a pause (in approximate seconds)

:: Indicates a prolonged sound in a word (i.e., to::)

- Indicates where a word is cut off (i.e., t-)

>to< Indicates that speech inside the symbols is said by a participant at a faster rate than surrounding speech

? Indicates rising inflection

? Indicates rising inflection weaker than ?

, Indicates continuing intonation

. Indicates falling inflection

↑ Indicates where the intonation in a participant’s speech rises

downwards Indicates where the intonation in a participant’s speech falls

TO Uppercase words indicate that a participant’s speech is loud

to Underlining indicates emphasis on a syllable or word

°to° Indicates that speech inside the symbols is spoken softly

.hhh Indicates a participant’s audible inhalation

hhh Indicates a participant’s audible exhalation

(h) Indicates breathiness in a participant’s speech that could be laughter

(( )) Provides a description of participants’ verbal and embodied actions

( ) Indicates where participants’ speech could not be heard

... Indicates intervening interaction not included in transcription and analysis
Additional transcription symbols developed by the researcher

- Screen
- iPad
- iPad screen
- iPhone
- iPhone screen
- Gaze
- Focus of gaze (e.g., to screen, another participant or camera)
- Pointing (e.g., to screen or another participant)
- Tapping touch pad/screen
- Swiping touch pad/screen
- Swiping touch screen to trace part of a letter
- Music/lyrics generated from technology, such as a music video or song
- Typing using keyboard
- Movement of Barbie doll in air
- Movement of dolphin biscuit cutter in air

I’m playing  Participants’ speech bolded
Queen of the  Participants’ singing italicised
**APPENDIX D**

**TIMING AND EVENTS OF VIDEO DATA IN CHAPTER 5**

**Recording:** 20120615071635

**Title and date of video recording:** Barbie in Mermaid Tale, 15-06-2012

**Recording length (in hrs):** 1.23.47

**Context:** Tina sits at the dining table facing a laptop. The video camera is set up on Tina’s right hand side. Also at Tina’s right side is a Barbie doll with ribbons wrapped around its body. Tina’s mother comes in and out of the room.

<table>
<thead>
<tr>
<th>Time</th>
<th>Keywords</th>
<th>Description of what’s happening</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00.00</td>
<td>Dining room, Laptop, Mother, Talking with others (mother), Watching/listening others (mother), Watching/listening technology, Pointing at technology, Mouse/keyboard manipulation, Dolls/cars/other</td>
<td>The mother commends Tina on turning on the Internet. She types a search term into Google. The results show YouTube videos and their title and a thumbnail picture. Tina points to the music video <em>Queen of the Waves</em> (from the film <em>Barbie in a Mermaid Tale</em>). She says it is her “favourite” video and that it is “Spanish Barbie”. The mother selects the video and it begins to play.</td>
</tr>
<tr>
<td>0.01.22</td>
<td>Watching/listening technology, Talking/singing with screen, Orientation to camera, Dolls/cars/other, Dramatic play</td>
<td>Tina adjusts her seating position and sings with the video. She holds her Barbie doll and plays with its hair. When the video finishes Tina looks at the list of suggested videos, scrolls through them, and selects a new video.</td>
</tr>
<tr>
<td>0.03.00</td>
<td>Watching/listening technology, Talking/singing with screen, Mouse/keyboard manipulation, Dolls/cars/other</td>
<td>The video begins; it is a scene from the film <em>Barbie in a Mermaid Tale</em>. Tina says lines from the film as they occur in the video. She plays with the Barbie doll as she views the video.</td>
</tr>
<tr>
<td>0.05.55</td>
<td>Mother, Talking with others (mother), Watching/listening</td>
<td>The mother gives Tina a bottle of milk. Tina puts down the Barbie to drink the milk while viewing the video. The mother picks up the camera</td>
</tr>
<tr>
<td>Time</td>
<td>Action</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>0.08.03</td>
<td>Talking/singing with screen, Watching/listening technology, Pointing at technology</td>
<td>Tina puts the bottle down, points to a character in the video, and says something inaudible. She drinks from the bottle again as she views the video. She then picks up her Barbie and looks at it while talking with the video.</td>
</tr>
<tr>
<td>0.09.54</td>
<td>Watching/listening technology, Talking/singing with screen, Orientation to camera</td>
<td>Tina moves the video camera and puts her Barbie in front of it as if she is swimming in the ocean. She talks with the video at different points.</td>
</tr>
<tr>
<td>0.13.17</td>
<td>Mother, Talking with others (mother), Display of emotion</td>
<td>The mother reprimands Tina for moving the video camera and restates the rule that she should not use it. Tina tells her mother not to move things and she counts to 10. The mother asks Tina if she wants the laptop turned off and then attends to Tina’s younger brother Trae in the lounge room. Tina begins to count to 10 again as she plays with the ribbons wrapped around her Barbie.</td>
</tr>
<tr>
<td>0.16.36</td>
<td>Talking with others (mother), Watching/listening technology, Talking/singing with screen</td>
<td>Tina leaves the dining table to show her mother that the ribbons have unravelled from her Barbie’s mermaid tale. When she returns (at 0.17.09) she looks at the list of videos and sings (using words from a language other than English). She scrolls through the videos while her mother adjusts the video camera. Tina selects the music video <em>Barbie. De la solas la reina ellas</em> (fan-made video of <em>Queen of the Waves</em> in Spanish). The mother picks up the camera to show the video name close-up. Tina tells her mother to move the video camera from the screen and then sings with the lyrics of the music video.</td>
</tr>
<tr>
<td>Time</td>
<td>Activity Details</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td><strong>0.19.35</strong></td>
<td>Tina leaves the dining table with her Barbie. When she returns (at 0.19.57) she views the video and sings with it. She sings words (in a language other than English) as she looks at the list of videos. She selects the music video <em>Queen of the Waves</em>. She sings along to the video as she selects the video, <em>Barbie. De la solas la reina ella es.</em> She sings along to the lyrics and selects a new video, <em>Queen of the waves</em>. Tina says “What?” as the video begins and selects a new video (fan-made music video in a different language). She sings along to the lyrics in the video. She moves the Barbie like she is swimming underwater.</td>
<td></td>
</tr>
<tr>
<td><strong>0.20.45</strong></td>
<td>Tina leaves the frame of the video camera. The mother is heard threatening to turn the video off (at 0.21.30). Tina tells her mother not to and sits back at the dining table (Trae is also seen trying to climb onto the chair). Tina scrolls through the video selections. She scrolls down the videos again and selects a video (a scene from the film <em>Barbie in a Mermaid Tale</em>).</td>
<td></td>
</tr>
<tr>
<td><strong>0.23.46</strong></td>
<td>Tina scrolls through the video selections. She looks at the videos that have appeared in the video screen space. Tina scrolls down and selects a video (a scene from the film <em>Barbie in a Mermaid Tale</em>). She then selects a music video for a Barbie film in a language other than English.</td>
<td></td>
</tr>
<tr>
<td><strong>0.25.52</strong></td>
<td>Tina leaves the camera frame with a light pink ribbon and returns at 0.26.00. She picks up her Barbie and moves it in the air as she sings along to the lyrics. She plays with Barbie’s hair and views the video.</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Activity Description</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| 0.28.12 | Watching/listening technology  
Mouse/keyboard manipulation  
Orientation to camera  
Dolls/cars/other  
Tina leans under the table with her Barbie and comes into view again at 0.28.16. She scrolls through the list of videos. She selects a video, which is the same song as the previous music video but in a different language. Tina selects another video, which is also the same song as before. Tina selects another video and moves Barbie as she sings along to the lyrics. She makes her Barbie swim in the ocean again. |
| 0.31.12 | Watching/listening technology  
Dolls/cars/other  
Tina turns her back to the laptop to watch Shaun the Sheep on the television in the lounge room. |
| 0.33.50 | Mother  
Talking with others (mother)  
Watching/listening others (mother)  
Watching/listening technology  
Mouse/keyboard manipulation  
Orientation to camera  
Display of emotion  
Dolls/cars/other  
Tina leaves the dining table and returns at 0.34.07. She flips the video camera over and talks as she picks up Barbie. The mother re-enters (at 0.34.49) and tells Tina not to touch the video camera. Tina tells her mother where to put the camera and counts to 10 as the mother uses the camera to show the video name close-up. Tina scrolls through the list of videos and selects a video. |
| 0.36.04 | Watching/listening technology  
Mouse/keyboard manipulation  
Dolls/cars/other  
The video begins and Tina talks aloud and selects a Barbie music video in a language other than English. She views most of the video and then selects and views a new Barbie film preview. |
| 0.39.05 | Watching/listening technology  
Talking/singing with screen  
Mouse/keyboard manipulation  
Orientation to camera  
Dolls/cars/other  
Tina looks at the screen (as videos appear) and drinks from her bottle. She looks at the camera as she places her Barbie in front of it. She talks as she scrolls through the list of videos and selects one that is a scene from the film Barbie in a Mermaid Tale. |
| 0.42.30 | Watching/listening technology  
Talking/singing with screen  
Mouse/keyboard manipulation  
Tina repeats what a character says on-screen in the video. |
| 0.44.15 | Watching/listening technology  
Tina explains what is happening on-screen as she views the video. |
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.46.35</td>
<td>Talking/singing with screen&lt;br&gt;Dolls/cars/other</td>
<td>Tina picks up her Barbie and leaves the dining table. At 0.27.00 she handles the light pink ribbon and at 0.27.30 she views the video.</td>
</tr>
<tr>
<td>0.48.20</td>
<td>Watching/listening technology&lt;br&gt;Doll/cars/other</td>
<td>Tina plays with the pink ribbon again as she continues to view the video. Tina lifts up her Barbie (at 0.49.25) which shows that she is wrapping the light pink ribbon around its ankles. She continues to adjust the ribbons on the Barbie’s legs as the video plays. Tina’s activity then moves outside the camera frame.</td>
</tr>
<tr>
<td>0.53.53</td>
<td>Dolls/cars/other</td>
<td>The video ends and Tina continues to adjust the ribbons around Barbie’s legs. She places the ribbons on the table at 0.54.53.</td>
</tr>
<tr>
<td>0.55.29</td>
<td>Mother (not seen)&lt;br&gt;Watching/listening others (mother)&lt;br&gt;Display of emotion&lt;br&gt;Watching/listening technology&lt;br&gt;Touching screens</td>
<td>The mother tells Tina that her time using the laptop will end soon. Tina does not verbally reply and she is not seen in the camera frame.</td>
</tr>
<tr>
<td>0.56.23</td>
<td>Mother&lt;br&gt;Talking with others (mother)&lt;br&gt;Watching/listening others (mother)&lt;br&gt;Watching/listening technology&lt;br&gt;Mouse/keyboard manipulation&lt;br&gt;Dolls/cars/other</td>
<td>The mother talks to Tina and Tina asks her to put the ribbons on the Barbie. The mother agrees and tells Tina she can use the laptop for five more minutes. Tina scrolls through the list of videos and selects a video of bloopers from <em>Barbie in a Mermaid Tale</em>.</td>
</tr>
<tr>
<td>0.58.47</td>
<td>Talking/singing with screen&lt;br&gt;Watching/listening technology&lt;br&gt;Mouse/keyboard manipulation</td>
<td>Tina repeats what a character says onscreen in the video of bloopers. Tina selects the <em>Moxie girl</em> mermaid doll advertisement. As she views the video she says “that’s a Barbie mermaid”. She selects the <em>La la loopsy</em> magic mermaid doll advertisement. She selects the video <em>Barbie in a Mermaid Tale 2</em> doll advertisement.</td>
</tr>
<tr>
<td>1.00.45</td>
<td>Talking/singing with screen</td>
<td>Tina selects the <em>Moxie girl</em> mermaid...</td>
</tr>
<tr>
<td>Time</td>
<td>Description</td>
<td>Action</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>1.02.12</td>
<td>Mother talking with others (mother)</td>
<td>Watching/listening technology, Mouse/keyboard manipulation</td>
</tr>
<tr>
<td></td>
<td>Watching/listening others (mother)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mouse/keyboard manipulation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Watching/listening technology</td>
<td></td>
</tr>
<tr>
<td>1.02.12</td>
<td>As Tina looks for a new video, her mother is heard walking toward her. Tina looks at her mother and tells her not to turn the laptop off. The mother takes the bottle and leaves. Tina selects and views the <em>Barbie in a Mermaid Tale 2</em> doll advertisement. She then selects and views the <em>Barbie in a Mermaid Tale 2</em> doll advertisement in a different language. Tina drags her mouse across videos and selects the <em>Barbie in a Mermaid Tale 1</em> doll advertisement.</td>
<td></td>
</tr>
<tr>
<td>1.04.02</td>
<td>Mouse/keyboard manipulation</td>
<td>Watching/listening technology</td>
</tr>
<tr>
<td></td>
<td>Talking/singing with screen</td>
<td></td>
</tr>
<tr>
<td>1.04.02</td>
<td>Tina looks at the screen and says “Barbie is a mermaid”. She views the videos and selects the <em>Barbie in a Mermaid Tale 2</em> doll advertisement. Tina scrolls down and selects another video. The mother is heard in the background.</td>
<td></td>
</tr>
<tr>
<td>1.05.56</td>
<td>Mother talking with others (mother)</td>
<td>Watching/listening technology, Mouse/keyboard manipulation</td>
</tr>
<tr>
<td></td>
<td>Watching/listening others (mother)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mouse/keyboard manipulation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pointing at technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Watching/listening technology</td>
<td></td>
</tr>
<tr>
<td>1.05.56</td>
<td>The mother brushes Tina’s hair. Tina asks her mother if she can have a doll and points to a video onscreen. The mother tells Tina to show her and Tina selects the <em>Moxie girl</em> magic streak hair colour studio doll advertisement. The mother puts a headband in Tina’s hair and walks away. Tina selects the <em>Barbie loves glitter</em> doll advertisement. Tina views an advertisement (for a Polly mini-toy play area) in a language other than English.</td>
<td></td>
</tr>
<tr>
<td>1.07.50</td>
<td>Mouse/keyboard manipulation</td>
<td>Watching/listening technology</td>
</tr>
<tr>
<td>1.07.50</td>
<td>Tina drags her mouse across videos and selects an advertisement of a <em>Barbie fairy mermaid Elina doll</em>. Tina selects a fan made Barbie music video.</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 1.13.50 | Watching/listening technology  
Dolls/cars/other                 | Tina turns away from the video and picks up ribbons. She turns back to the video while it shows pictures of dolls. Tina sucks on a ribbon and selects and views a home video of a girl swimming with a mermaid tale *Swimming mermaid Ashley.* |
| 1.14.56 | Mother  
Talking with others (mother)  
Watching/listening others (mother)  
Watching/listening technology | The mother picks up the video camera and shows the video title close-up. Tina puts her hand in front of the video camera to stop her mother’s actions. The mother moves Tina’s hand and tells her how much longer she can use the laptop. Tina continues to view the video. |
| 1.17.09 | Mother  
Talking with others (mother)  
Watching/listening others (mother)  
Watching/listening technology  
Mouse/keyboard manipulation | Tina scrolls through the list of videos, looks at mother, and then continues to scroll. The mother tells Tina to change the video as it is inappropriate. Tina points to a Barbie video, a scene from *Barbie in a Mermaid Tale*, and the mother says she can view it. The mother instructs Tina to tell her when videos are inappropriate. Tina scrolls through the list of videos and selects an episode of *Peppa Pig*. Tina tells her mother she found *Peppa Pig*. Tina repeats words that Peppa says and snorts with the characters. Tina talks during the opening credits. |
| 1.20.53 | Watching/listening technology  
Mouse/keyboard manipulation | Tina views the video selection and continues to view *Peppa Pig*. |
| 1.22.13 | Mother  
Sibling (Trae)  
Talking to others (Trae)  
Watching/listening others (Trae)  
Touching others (Trae)  
Watching/listening technology  
Mouse/keyboard manipulation  
Orientation to camera  
Dolls/cars/other | Pig noises are heard in the closing credits of *Peppa Pig*. Tina makes pig noises with her mouth against her arm. Tina’s younger brother Trae comes up next to her and she wraps her arms around him while looking at the camera. Tina leaves her chair (at 1.22.29) to follow Trae into the lounge room. Tina returns to the dining table at 1.22.43. She moves the camera and sings the Moxie girl mermaid doll advertisement song and moves her |
Barbie in front of the camera. She then sings “Barbie’s swimming in the ocean”. On the laptop new Internet pages appear and Tina responds “what, oh Trae” and closes the laptop. She moves the laptop away as she talks to Trae. The mother enters the room, picks up the video camera, and turns it off. The video recording ends at 1.23.47.
APPENDIX E

TIMING AND EVENTS OF VIDEO DATA IN CHAPTER 6

Recording: 20120617151813

Title and date of video recording: Talking to Barbie, 17-06-2012

Recording length (in hrs): 0.10.30

Context: Tina sits at the dining table facing a laptop. Her mother places the video camera on her right side. Also on Tina’s right side is a toy Barbie mobile phone and a dolphin biscuit cutter.

<table>
<thead>
<tr>
<th>Time</th>
<th>Keywords</th>
<th>Description of what’s happening</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00.00</td>
<td>Dining room, Laptop, YouTube (throughout video), Mother, Talking with others (mother), Watching/listening others (mother), Watching/listening technology, Pointing at technology, Dolls/cars/other</td>
<td>Tina uses the arrow buttons to scroll through videos. Her mother places the camera on her right hand side. Tina says to her mother “isn’t appropriate” and her mother uses the computer to go to the Google search results. Tina points to a video and her mother selects it.</td>
</tr>
<tr>
<td>0.00.36</td>
<td>Talking with others (mother), Watching/listening technology, Dolls/cars/other</td>
<td>The music video <em>Queen of the waves</em> begins and Tina makes the dolphin biscuit cutter swim through pretend water. She picks up her Barbie mobile phone and pretends to talk to Barbie about the film <em>Barbie in a Mermaid Tale</em>.</td>
</tr>
<tr>
<td>0.01.37</td>
<td>Watching/listening technology, Talking/singing with screen, Dolls/cars/other</td>
<td>Tina puts down her Barbie mobile phone to sing along to the song lyrics. She picks up her Barbie mobile phone and holds it as she sings along to the song.</td>
</tr>
<tr>
<td>0.02.37</td>
<td>Watching/listening technology, Talking/singing with screen, Orientation to camera, Dolls/cars/other</td>
<td>Tina sings to the song lyrics looking into the camera. As the video ends she moves the camera and sings lines of the song while showing a picture of Barbie in her mobile phone to the camera.</td>
</tr>
<tr>
<td>Time</td>
<td>Activity Details</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>0.03.27</td>
<td>Tina’s mother walks into the room and tells Tina not to touch the camera. Tina sits back in her chair and sings <em>Queen of the waves</em> lyrics as she scrolls through videos.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.04.17</td>
<td>Tina selects a video and views a surfing advertisement. She looks at the list of videos and plays with her Barbie.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.05.50</td>
<td>The advertisement finishes and the music video <em>I'm a Barbie girl</em> by Aqua plays.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.06.38</td>
<td>Tina sings along to the music video.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.07.38</td>
<td>Tina scrolls through a list of videos.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.08.22</td>
<td>Tina continues to watch the music video. When the video finishes Tina drags her finger on the laptop until she locates the touch pad. She moves the mouse across onscreen videos.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.09.46</td>
<td>Tina tries using the arrow keys and then uses the touch pad again. She selects a video.</td>
<td>Watching/listening technology, Dolls/cars/other</td>
</tr>
<tr>
<td>0.10.11</td>
<td>A music video for another Barbie song begins as Tina’s mother asks her if she wants to see a friend. Tina asks questions about what her mother has told her. The video recording ends at 0.10.30.</td>
<td>Mother, Talking with others (mother), Watching/listening technology, Dolls/cars/other</td>
</tr>
</tbody>
</table>
### APPENDIX F

**TIMING AND EVENTS OF VIDEO DATA IN CHAPTER 7**

**Recording:** 20120617074023

**Title and date of video recording:** iPad in bed, 17-06-2012

**Recording length (in hrs):** 0.12.04

**Context:** Tina sits on one side of her parents’ bed. Her father lies on the other side and her younger brother Trae sits between them. Trae plays an application (app) about transportation on an iPhone and Tina uses a planets app on an iPad.

<table>
<thead>
<tr>
<th>Time</th>
<th>Keywords</th>
<th>Description of what’s happening</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00.00</td>
<td>Bedroom (iPad) iPhone Mother Father Sibling (Trae) Talking with others (mother) Watching/listening others (mother) Watching/listening technology Touching screens</td>
<td>The mother walks into the bedroom holding the video camera. Tina shows Jupiter on the iPad to her father, mother, and the video camera. Tina waves her hand and leg in front of the camera and the mother gives her a warning. The father asks Tina what the planet on her iPad is called and they work out that the planet is Jupiter. The father responds to Trae by telling him the sound from the iPhone is a plane.</td>
</tr>
<tr>
<td>0.01.00</td>
<td>Mother Father Sibling (Trae) Watching/listening technology Touching screens</td>
<td>The father corrects himself to say the planet is Saturn. He responds to Trae again and Tina selects the planet Saturn. The app gives commentary about Saturn and Tina shows her mother and the camera. The Father tells Trae the sound from the iPhone is a jet plane.</td>
</tr>
<tr>
<td>0.01.37</td>
<td>Mother Father Sibling (Trae) Talking with others (father) Watching/listening others (father and mother) Watching/listening technology</td>
<td>Tina selects the sun on the iPad. The father asks her questions about the sun as the mother hands him the video camera. Tina turns the iPad to show the sun to her father and the camera. The mother leaves the room. Tina asks her father if the camera can see the sun and the</td>
</tr>
<tr>
<td>Time</td>
<td>Father</td>
<td>Sibling (Trae)</td>
</tr>
<tr>
<td>-------</td>
<td>---------</td>
<td>----------------</td>
</tr>
<tr>
<td>0.02.21</td>
<td>Father</td>
<td>Sibling (Trae)</td>
</tr>
<tr>
<td>0.03.32</td>
<td>Father</td>
<td>Sibling (Trae)</td>
</tr>
<tr>
<td>0.04.27</td>
<td>Father</td>
<td>Sibling (Trae)</td>
</tr>
<tr>
<td>0.05.20</td>
<td>Father</td>
<td>Sibling (Trae)</td>
</tr>
<tr>
<td>0.06.21</td>
<td>Father</td>
<td>Sibling (Trae)</td>
</tr>
<tr>
<td>Time</td>
<td>Participants</td>
<td>Activity Details</td>
</tr>
<tr>
<td>-------</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>0.07.23</td>
<td>Father, Sibling (Trae)</td>
<td>Tina traces letters on the iPad and shows Trae. She says his name repeatedly and Trae watches Tina trace letters on the app.</td>
</tr>
<tr>
<td>0.08.21</td>
<td>Father, Sibling (Trae)</td>
<td>The father pats Trae’s head while he continues to watch Tina trace letters on the app.</td>
</tr>
<tr>
<td>0.09.27</td>
<td>Father, Sibling (Trae)</td>
<td>Tina sits back against the pillows and continues to trace letters. Trae looks at the iPhone and at Tina. The father comments on how well Tina traces letters. Tina recognises that the letter tee is in her name. Trae gives the iPhone to the father. Tina counts and says the names of letters. Trae says the letter aye.</td>
</tr>
<tr>
<td>0.10.21</td>
<td>Father, Sibling (Trae)</td>
<td>The father returns the iPhone to Trae with a <em>Memory</em> game app onscreen. The father shows Trae how to tap on the cards, which swivel to reveal a picture. Trae taps the iPhone while Tina traces the last letters of the alphabet. Tina corrects the pronunciation of zed. The iPad initiates the tracing of lowercase letters, starting with aye. Tina says that the lowercase aye is not the letter aye, and is told by father that it is the “little aye”.</td>
</tr>
<tr>
<td>0.11.10</td>
<td>Father, Sibling (Trae)</td>
<td>Trae moves towards the father. The father adjusts the position of the video camera as Tina selects a new app. Tina repeats Trae’s name and then turns the iPad around to show...</td>
</tr>
<tr>
<td>Watching/listening technology</td>
<td>the app. She then shows father the app and says it’s about Barbie dolls. The video recording ends at 0.12.04.</td>
<td></td>
</tr>
<tr>
<td>Touching screens</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hello,
We are from Queensland University of Technology (QUT).
We are doing a project. We want to find out about kids using computers and doing web searching.
We would like to bring a video camera and film the things kids and teachers do when using the web and Internet and track the web search choices you make.
We will show the video-recordings, and write about things that children do and say when they are on the computer, to people who are interested. We will tell and show other people what we find out about children using the web and Internet.
We will only film you if you say it is okay. You can ask us to stop filming whenever you want.
Please tell us if you are happy to be in the project.
Tick YES or NO

YES [ ] I want to be in the project.
   It is okay for you to film me and track my web search choices.

NO [ ] I don’t want to be in the project. Please don’t film me.

Please write your name:


Thank You!
APPENDIX H

INFORMATION AND CONSENT FORM:

PARTICIPANT IMAGE RELEASE

A photographic image (including a video recording) which is sufficiently clear to enable you to be identified as an individual is personal information. Queensland University of Technology seeks to comply with the Information Privacy Principles as set out in the Information Privacy Act 2009. QUT shall, from time to time, endorse a privacy policy (see www.mopp.qut.edu.au) to ensure that personal information is used and disclosed only in ways which are consistent with privacy principles and will otherwise comply with QUT’s privacy obligations under statute. In general, personal information is not disclosed or published except where an individual’s consent has been obtained.

- QUT is seeking your consent to use an image of you in the study: *Interacting with knowledge, interacting with people: Web searching in early childhood*
- Participation in this release is voluntary
- Your decision to participate or to not participate will in no way impact upon your current or future relationship with members of the research team or with QUT, or with the Crèche and Kindergarten Association.

If you have any questions please ensure you have discussed them and are comfortable with the response before providing consent. You may choose to discuss participation with Professor Susan Danby, Chief Investigator.

**What is the release about?** We are conducting a study about children’s everyday Web searching in early childhood and home settings. The video-recordings will produce images that we would like to use in papers and educational documents, and presentations, relating to this topic. It is important for us to see and hear what children, educators and other participants are saying and doing when they are using the technologies, and so are asking if we can use your image. However, you may elect to have your image, or your child’s image, be blurred and voices altered.

**Why do you want to include me?** Little is known about Web searching and its practices in early years education and home contexts. The video-recordings of teachers, parents and children’s interactions as the young children use the Web will provide important knowledge about what young children actually do as they search online.
**What will you ask me to do?** Over a six-week period, the interactions of children in the classroom as they engage with the screen and others in search activity will be video-recorded by a member of the research team. From each classroom, two children will be invited to participate by having their Web-searching at home be video-recorded by the parents/caregivers.

**Are there any benefits for me in taking part?** It is expected that this project may not directly benefit you. However, the findings will provide new insights into the processes and possibilities for knowledge searching on the Web for young children. It will advance knowledge of preschool children’s social interactions with peers, siblings, and adults as they engage in Web searching and will inform understandings and strategies for teachers’ and parents’ involvement in Web searching with children, supporting home-school collaboration and partnerships.

**Are there any risks for me in taking part?** There are no risks beyond normal day-to-day living associated with your participation in the video-recording associated with this project. The focus of the video-recording is on everyday experiences and so we are not asking you to do anything different to what usually happens. The video-recording will take place in the everyday contexts of home and school, with the school video-recording done by experienced early childhood professionals with expertise in early education and family contexts and who are holders of positive notice blue cards. The interactions will be video-recorded discreetly so that there will be minimal impact. The video-recordings in the home contexts will be managed by the parents who can decide when and when not to video-record. You are free to stop the video-recording or request to withdraw from the study at any moment without penalty.

**Confidentiality** We would like to see the faces and talk of all video participants as this will help us understand what is happening in the interactions. If this is not possible, you may request that we blur the face on your image or your child’s image or alter the voices in the clips. We will not use any images where people can be identified by name or location. Video-recordings will be securely stored, with only the research team having access for transcription purposes. Participants will be de-identified and confidentiality will be ensured through the use of assigned pseudonyms. Changing all names and omitting all identifying details at the point of transcription will ensure confidentiality and anonymity.

**Who will see the video?** All video-recordings will be viewed by members of the research team and also transcribers. The transcribers will have signed confidentiality agreement in relation to this. Short segments of the video-recordings may be used for educational and research purposes, such as professional development programs.

**Can I change my mind?** You can decide to withdraw at any point during the video recording.

**I am interested—what should I do next?** All persons appearing in the video will be required to sign the attached Consent Form, acknowledging that they have read and understood the Image Release Information Sheet, and agree to allow the use of their image and voice in the video for the research purposes of this study and educational purposes.
If you have any questions about this video, please do not hesitate to contact:
Professor Susan Danby
School of Early Childhood
Faculty of Education, Queensland University of Technology
Phone: 3138 3547
Email: s.danby@qut.edu.au

Thank you for helping with this research project.

Please keep this sheet for your information.
Image Release: Research Participants

PLEASE RETURN THIS COMPLETED FORM TO Professor Susan Danby, Chief Investigator

A COPY WILL BE PROVIDED FOR YOUR RECORDS

If you agree to give consent regarding the use of your image in the study: *Interacting with knowledge, interacting with people: Web searching in early childhood*, please read and complete the consent below.

**Consent**

- I agree to the University using, reproducing and disclosing photographic or video images of me as explained in this Image Release: Research Participants Information Sheet and Consent Form.
- I agree that I will make no claim against QUT for any payment or fee for appearing in promotional material or advertisements and release QUT from any other claims arising out of the University’s use of the images of me.
- I understand that the anonymity afforded me as a participant in the research project, *Interacting with knowledge, interacting with people: Web searching in early childhood*, will be rescinded if I appear in this video and choose not to have my image blurred and voice changed.
- I agree to be video-recorded and: (please tick the appropriate box)
  - I would like my image to be blurred
  - I would like my voice to be changed
  - I do not require my image or voice to be changed

Name

______________________________________________________________

Signature

______________________________________________________________

Date

__________________________
For involvement of children

- I agree for my child to be video-recorded and: (please tick the appropriate box)
  - I would like my child’s image to be blurred
  - I would like my child’s voice to be changed
  - I do not require my child’s image or voice to be changed

Name of Child

Signature of Child

By signing below, you are indicating that you have discussed participation in the video-recording with your child and you are the legal guardian to provide consent to participate.

Name of Parent/Guardian

Signature of Parent/Guardian

Date

*Please return this sheet to the investigator.*