MEANING-MAKING PRACTICES OF EMERGENT ARABIC–ENGLISH BILINGUAL KINDERGARTEN CHILDREN IN CAIRO

JULIA ROY CAPELL

BA Hons. (Brighton); PG Dip in Professional Studies in Education (OU); M.Ed. (OU)

Wellbeing, Education and Language Studies (WELS)

Doctorate in Education

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ABSTRACT

The number of British Schools in the Middle East and North Africa (MENA) region is growing. The National Curriculum of England is used by an increasing number of such schools. As well as exporting a culturally-specific curriculum, these schools usually adopt an ideology of monolingualism, thus potentially limiting communication for emergent bilinguals and failing to acknowledge the multiple ways of meaning-making.

Current studies of translanguaging are moving the focus to multimodal forms of communication as a resource for thinking and communicating (García and Wei 2014, Wei 2018). Building on the work of Kress (1997, 2010) I explore pre-school emergent bilinguals’ wider signifying practices and create an analytical framework, which I call MMTL (multimodal translanguaging), used as a lens to illustrate meaning-making.

Valley Hill in Cairo, Egypt is a British school which encourages ‘English-only’ as the medium of instruction in the kindergarten. Using a case study methodology, this research explores the meaning-making practices of eight emergent bilingual children aged 3–4 during child-initiated play, later reduced to four in the thesis to provide a detailed multimodal analysis. The principal aim is to explore their speech, gaze, gesture, and their engagement (layout/position) with artefacts during play.

The findings of this study suggest that although there is an ‘English-only’ approach, these young emergent bilingual children are meaning-making in a variety of ways. Children are translanguaging but it is never in isolation from other modes of communication. Emergent bilinguals use a range of modes to mediate their understanding and communication with others. They use gesture, gaze, and artefacts alongside translingual practices to move meaning across to more accessible modes, enabling communication and understanding. The implications for schools should be to embrace such hybrid practices and for teachers to be more responsive to young children’s meaning-making to enable learning.

KEY WORDS
Emergent bilingual, kindergarten, meaning-making, multimodality, translanguaging, MENA.
DEDICATION AND ACKNOWLEDGEMENTS

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PREFACE

By the time I had decided to embark on this study, protests and demonstrations had already started in Tunisia in December 2010. These spread rapidly to the neighbouring countries of Oman, Yemen, Egypt, Syria, Morocco, and Libya. On 25 January 2011, protests started in Tahrir Square in Cairo. Protesters drew close to the British school where I was working/researching. For a month, the Internet was cut and there were curfews. The country was in a state of emergency and President Hosni Mubarak resigned.

As I gathered my data, a further turbulent period arose with the first presidential election. Mohamed Morsi became president in June 2012. Soon after, he granted himself unlimited powers to legislate without judicial oversight, creating a new constitution, legitimised through a referendum. There were regular gas and electricity cuts, no petroleum, and bread shortages, creating further protest across Egypt. The economy was in crisis and the army intervened. Morsi was ousted in July 2013 and the country was on the threshold of civil war. Subsequently, a national election was held and in May 2014, Sisi was sworn in as president.
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List of acronyms

AoL  Areas of Learning
A-Levels  Advanced Levels
BERA  British Educational Research Association
BSO  British Schools Overseas
COBIS  Council of British Independent Schools
DfE  Department for Education
DfES  Department for Education and Skills
ELGs  Early Learning Goals
EMI  English-medium instruction
ENC  Egyptian National Curriculum
EPPE  Effective Pre-School and Primary Education
EYFS  Early Years Foundation Stage
IGCSE  International General Certificate of Education
IPC  International Primary Curriculum
KS  Key Stage
MDA  Multimodal Discourse Analysis
MENA  Middle East and North Africa
MIA  Multimodal Interactional Analysis
MMTL  Multimodal Translanguaging
MoEE  Ministry of Education Egypt
MSA  Modern Standard Arabic
NCE  National Curriculum of England
Ofsted  Office for Standards in Education
QTS  Qualified Teaching Status
TA  Teaching Assistant
ZPD  Zone of Proximal Development
CHAPTER 1  Introduction and overview

This research took place in Egypt where I had lived for a number of years before I became a teacher at a very large British School Overseas (BSO) in Cairo, Egypt – known as Valley Hill (a pseudonym). Attached to this school was a kindergarten where English was the medium of instruction. I was one of four English-speaking early years professionals, although we were known as teachers, employed to teach a class of approximately 21 young children (3–4 years).

I was curious at first to observe children at this kindergarten speaking both Arabic and English during play. I therefore decided to explore pupil-directed translanguaging (Lewis et al. 2012a, García and Wei 2014). I also noted how children engaged with artefacts such as their toys (Vygotsky 1967, 1978), and how simultaneously with speech they deployed gesture and gaze. These practices appeared to me to be meaningful to the child. As a teacher I thought such practices could be beneficial to children’s learning, so I decided to explore this further as a researcher.

This is a small-scale qualitative case study (Stake 1995) based on an interpretative design to explore the meaning-making practices of the emergent bilingual children at the Valley Hill kindergarten. This study is ethically driven to safeguard children and which is designed to deploy methods that were ethical and flexible so that the research did not impinge on children’s play.

My epistemological position has been reflected in the choices I have made and by my beliefs. For I believe meaning-making is motivated by the sign-maker and is subject to multiple realities related to one’s context. My perspective does not prioritise speech over
other communicative semiotic modes (hereafter referred to as just ‘mode’) and I believe meaning-making is both a social and a cognitive construct.

Most existing research on multimodality has been conducted in monolingual contexts and most research on translanguaging has been limited to the spoken mode. I propose to link these concepts together in a bid to explore young emergent bilingual children’s meaning-making practices.

In this chapter, I highlight the educational context of my study (Section 1.1), my motivation and rationale (Section 1.2), the scope and focus of the study (Section 1.3) and overall thesis structure (Section 1.4).

1.1 Educational context

Valley Hill, a well-known BSO in Cairo, was opened in 2000 by a property development company at a time when the number of international schools across Egypt increased due to a buckling state education system (see Appendix A for an account of education and BSOs in Egypt). The school is governed by a senior board of directors and prominent Egyptian citizens. It is situated in an affluent residential suburban compound, where the Egyptian elite reside among expatriate English-speaking communities. English in this area of Cairo is often heard and seen, written publicly on most shop fronts and on road signs, and spoken in areas of business, tourism, academia, medicine and engineering (Al-Khatib and Mustafa 1994). Many of the Egyptian elite desire their children to speak English because they hope this will enable them to gain professional employment, develop international access and enhance their status as the social elite (De Mejía 2002, Hayden and Thompson 2013).
Valley Hill is affiliated to the Council of British Independent Schools (COBIS) and provides education for children from 2 to 18 years. It is an accredited inspected school listed in the official Ofsted register of BSOs (DfE 2020). Valley Hill employs aspects of the National Curriculum England (NCE) (DfE 2014), the Early Years Foundation Stage (EYFS) Statutory Framework of England (DfE 2017) with additional aspects of the International Primary Curriculum (IPC 2012). It also follows the Key Stages found in the NCE and these are:

- Early Years Foundation Stage (EYFS) – ages 2–5 (pre-school, kindergarten and reception – a full description is found in Section 4.2)
- Key Stage 1 – ages 5–7 (Years 1–2)
- Key Stage 2 – ages 7–11 (Years 3–6)
- Key Stage 3 – ages 11–14 (Years 7–9)
- Key Stage 4 – ages 14–16 (Years 10–11)

This school is overseen by the school principal along with the senior management team heading each Key Stage. There is one head teacher and one deputy to manage KS-3 and KS-4. There are two other deputy head teachers: one overseeing EYFS and one managing KS-1 and KS-2. This is not an open-entry school; parents are interviewed, and their children take part in an entry assessment. At the time of the data collection for this study (2012–2013), there were approximately 972 pupils enrolled at Valley Hill.

Valley Hill is principally run by international expatriate teaching professionals who are familiar with the NCE (qualified via the Postgraduate Certificate Education [International] – PGCEi). However, most teachers hold two years of qualified teacher status (QTS) in
England (or similar status from Wales, Scotland and Northern Ireland) from reception class upwards. Teachers follow Teachers’ Standards Guidance (DfE 2011), defined as the minimum level of practice expected of teachers in England. I have used the term ‘English-speaking teacher’ in an inclusive way to encompass all those teaching, including early years professionals working in this school.

The overall language approach, as with most BSOs, is ‘English-only’. This is monitored by the senior management team and is upheld by the English-speaking teachers. Evidence of such monitoring can be seen in an email from the school principal (Appendix B). This school caters for all nationalities, but children are expected to speak English, guided by their English-speaking teacher. In this educational setting most local children speak Arabic at home and outside of school. Therefore, children are not exposed to English to any significant degree other than at school. As García (2009a) points out, this is the case for most international schools, because most are designed to be ‘national schools away from home’ and usually serve as ‘linguistic and cultural islands’ (p.237). This contrasts with teaching in countries of inward migration like the UK and elsewhere, where the exposure to English is both in and out of school.

1.2 Motivation and rationale

This section outlines my personal interest and professional motivation for conducting this research, as it arose while teaching in the kindergarten at Valley Hill.
1.2.1 Personal interest

I am a British-educated, white, western woman, with an interest in bilingualism. This interest grew while at university learning French and working in France. I married an Egyptian man and settled in Egypt for 15 years, raising three bilingual children. Having bilingual children of my own partly educated in a BSO in Cairo, I have also first-hand experience of the schooling as a parent. I began to question the way my own children were meaning-making. They found it normal to use two languages to communicate with each other and express themselves. My son Adam would speak English fluently, but his gestures were locally influenced. I also noticed that I spoke Arabic while living in Egypt, particularly with my Egyptian colleagues, as the language of preference when talking about our social life. Even now, while settled back in the UK, I still use loan words and phrases in Arabic (see Bassiouney 2006) with my family because it feels appropriate when we refer to situations related to Egypt.

1.2.2 Professional interest

I began working as a TA and early years teacher in Egyptian national schools around the Sinai Desert region, before finally settling in Cairo at Valley Hill (2009–2017). At the time of this study, I followed the EYFS Statutory Framework (DfE, 2012) of England with elements of IPC (2012) (Section 4.2.3). Part of my practice was to observe children as a teacher and make informed decisions about their learning. From these observations I began to reflect and question how the young children in my class began meaning-making. Children at first found it very difficult to communicate with their English-speaking teacher, as many joined the kindergarten with limited spoken English. As within the wider school, Valley Hill’s ‘English-only’ approach is also followed in the kindergarten. I found, through my observation as a teacher, children spoke Arabic, their home language, during play. I
I surmised that this occurred because the adults did not monitor some aspects of the child’s speech in all play. I did hear English, though this was usually related to the context of school. Parents had high expectations as they had made a conscious decision to enrol their child into Valley Hill, so there was a great deal of emphasis on speaking English at school.

As a teacher, I observed in my own classroom how children could adapt and negotiate their own meanings in an environment which did not reflect their wider community, and this interested me. They sometimes held their body slightly differently while talking to me, which I had experienced with my own children. I could see that although they were uttering some English words and phrases, their physical gestures were often more locally influenced. I also noticed how difficult this environment was for young children as they tried so hard to respond to my questions in English when I could have easily asked them in Arabic. This truly motivated me to seek answers and explore how they were communicating.

I noticed children were still able to communicate their meanings with other children and with English-speaking teachers, but without speech. I began to observe the children’s gaze, gesture, and their engagement with artefacts, particularly during play, away from adults. I considered the artefacts and resources that children were provided with (many were imported from England) and I thought this would influence them. I also wondered how they may be influenced by the images and display boards on the walls of their classroom, and of the school generally, considering the physical environment was so unfamiliar to them.

I also questioned how English-speaking teachers, without speaking Arabic, could understand the children and identify what these children already knew. Research suggests
children start school with knowledge gained from their home-life (Wood and Attfield 2005, Moyles 2014), but this seemed to be ignored by Valley Hill and opportunities were lost because the focus was on what children knew in English. The school was highly selective in terms of which parts of the EYFS Statutory Framework it chose to implement (for example, not providing observations and assessment in the home language, which is part of the EYFS Statutory Framework. DfE 2017, p.6). How could teachers really be informed of what the next steps would be for a child if they themselves could not speak Arabic?

1.3 Scope of the research

At Valley Hill kindergarten, most child-initiated play occurs during a timetabled slot designated for ‘free-play’. However, I will use the term ‘child-initiated play’, as stipulated in the EYFS Statutory Framework (DfE 2017, p.6), unless specifically referring to the timetable, where it seems more appropriate to use ‘free-play’. My research is based on emergent bilinguals. Valley Hill does not use this term to describe its bilingual students, but I prefer it because it does not explicitly refer to language proficiency and suggests young learners are on a journey towards bilingualism.

The majority of emergent bilingual children at this kindergarten speak a variety of Arabic known as Egyptian-Arabic, but for simplicity I will refer to this as Arabic throughout this thesis. That said, some young children in the kindergarten originate from Syria, Libya or the Sudan and their variety of Arabic may slightly differ, so where appropriate I indicate this.
The school operates in the medium of English, but there is no overall variety of English spoken (due to the various nationalities of operational and teaching staff). Therefore, I acknowledge the notion of global Englishes (Graddol 2019, Crystal 2012) and for practicality I will refer to the language spoken around the school as English. However, I do on occasion use the term ‘classroom English’, as spoken by the English-speaking teacher and used by children at school. This term encapsulates the English curriculum vocabulary learnt in class and the formulaic English expressions associated with classroom routines.

Where I observe children during child-initiated play, I hear children deploy both Arabic and English and I refer to this as ‘pupil-directed translanguaging’ or ‘translingual practices’ (sometimes shortened to just ‘translanguaging’). This is to highlight the fluid and unfixed nature of spoken language in a bilingual context (Garcia et al. 2011, Lewis et al. 2012a, explored in Section 2.3.5).

I use the term ‘meaning-making’, drawn from Kress’s (2010) social semiotic multimodal perspective, to explain how the bilingual child (the sign-maker) deploys multiple modes as they ‘orchestrate’ an ‘ensemble of meaning’ (p.169). In other words, meaning-making is enacted in the purposeful multimodal orchestration of modes. Bilingual children are motivated to use their full semiotic communicative repertoire in the act of meaning-making.

Meaning-making always leaves traces of the sign-maker’s agency and motivation, created during both social/interpersonal and cognitive/intrapersonal engagement. These acts are of equal importance, and I explore these practices by paying particular attention to the
semiotic chain which bilingual children create in moments of meaning-making during child-initiated play.

1.3.1 Research aims and research questions

Based on my interest and experience as a mother of bilingual children and as an early years professional, I follow a case study methodology (Stake 1995) which is descriptive in nature (Denscombe 2014) used to explore young emergent bilingual children’s meaning-making practices and the context within the Valley Hill kindergarten in Cairo.

There are eight participating young emergent bilingual children in this case study selected according to a broad set of criteria, subsequently reduced to four children with the application of further criteria (Section 4.4.2). My overall research aim was to explore what were the meaning-making practices of these emergent bilingual children attending the kindergarten during their child-initiated play. The research questions specifically explored how meanings are made by asking:

- **RQ1** How do these 3–4-year-old emergent bilingual children use spoken English in meaning-making?
- **RQ2** How do these 3–4-year-old emergent bilingual children use their gaze, gesture, and engage with their play artefacts in meaning-making?

I set out to capture multimodal data relating to the emergent bilingual child’s speech, gaze, gesture and their engagement (layout/positioning) with their play artefacts in child-initiated play. I also explored in detail the cultural context of the setting, the kindergarten, while children were in child-initiated play.
1.4 Thesis structure

Following this introduction, Chapter 2 is the literature review. This begins with a discussion of literature of early years pedagogy and play, then international schools – particularly in relation to language policy and bilingual pedagogy. This is followed by an exploration of literature concerning translanguaging, meaning-making and multimodality, with a particular focus on ‘transformation’ and ‘transduction’ in meaning-making.

Chapter 3 considers the research paradigms for social research and their suitability for this study. I discuss a case study approach and the reason for this choice. I discuss the notion of ethnographic-tools as methods and steps to multimodal analysis. This chapter ends with ethical considerations concerning working with children in research and developing researcher reflexivity.

Chapter 4 provides salient aspects of the pilot study, the recruitment procedure, data collection methods and the difficulties of transcribing speech, as well as the process of mapping multimodal data for transcription. This is followed by a discussion on how multimodal data were coded to form my analytical framework MMTL (multimodal translanguaging).

In Chapter 5, I present the case study data and also data from interviews with teachers and parents. I include selected multimodal transcripts based on the observations of the kindergarten children made over three terms (Terms 1, 2 and 3 – 35 weeks), which is then followed by the data analysis.
In Chapter 6, I revisit the research questions and discuss the themes (derived from the coding and analysis) against criteria. I then outline some features found in the cultural context and provide a headline summary of the meaning-making practices of the emergent bilingual children found in this study.

Finally, Chapter 7 is a reflection on the research process, key findings and possible shortcomings of this study. I suggest likely implications of the language approach adopted by a BSO and of local teaching practice. The final sections provide a proposed future research direction and my final thoughts.
CHAPTER 2   Literature review

2.1  Introduction

I had originally planned to conduct research exploring emergent bilingual children’s spoken language accompanying their mark-making and drawings made during child-initiated play. However, it became clear to me from my observations that the meaning-making practices of bilingual children usually do not rely on singular modes, rather that bilingual children use multiple modes. To make sense of this, I began to trace the research and literature iteratively as my study evolved. My literature review became for me a conceptual endeavour highlighting research and literature that was relevant to my thesis. I also decided to drop any lines of inquiry that were no longer relevant to my research questions.

In this chapter, I will define three areas of literature that support this study. I begin by highlighting the pedagogical principles in early years education and the role of children’s play for learning and development (Section 2.2). I explore the literature on international schools, aspects of language approaches, the term translanguaging and a new direction in the literature on translanguaging (Section 2.3). Finally, I explore the literature on meaning-making as a multimodal practice (Section 2.4).

2.2  Early years pedagogy, play and meaning-making

In this section I explore early years pedagogical principles (Section 2.2.1); the role of play for learning and development (Section 2.2.2); play in an early years setting (adult-led and child-initiated) (Section 2.2.3) and play and meaning-making (Section 2.2.4).
2.2.1 Early years pedagogical principles

The principles of early years pedagogy refer to curricula, teaching techniques and strategies which may lead to effective teaching and learning (Siraj-Blatchford 2010, Wood 2010, Fleer 2013). Curricula and frameworks are often framed by a particular approach which may reflect the cultural values and beliefs of those who create them (Rogoff et al. 1993, Payler 2007). According to Edwards (2003), ‘the creation of curriculum is a human endeavour, and like all human endeavours involves the cultural values, beliefs, assumptions, theories and languages of its developers in its very construction’ (p.251). This suggests that although there may be many commonalities in curricula and teaching methods in settings across the globe, they may reflect a range of different beliefs and practices.

An example of an approach which offers a sociocultural perspective to learning is the Te Whāriki curriculum, which attends to the bicultural nature of New Zealand’s national identity. The focus is not only on the relationships and the cultural diversity of its people but also equal importance is given to places and artefacts (Soler and Miller 2003, Synodi 2010). Similarly, the educational philosophy and pedagogy of the Reggio Emilia approach, which emerged in Italy after the Second World War, also adopts a sociocultural approach, but here the curriculum places high value on learning through a child’s local community and on the various ways children express themselves – referred to as the ‘hundred languages’ (Gandini 1993). The word ‘hundred’ is not literal, but Malaguzzi (2012), a founder of the Reggio Emilia approach, suggests these are the endless ways in which children communicate their meanings in play, in the space known as the atelier (a creative physical space). In these examples the philosophy places a high value on human
relationships, but each framework places a slightly different perspective upon places and artefacts children engage with.

In England, the EYFS Statutory Framework also suggests early years professionals should create supportive and ‘enabling environments’ (DfE 2017, p.6) and the provision of an adequate physical environment to encourage children’s creative and physical development. The EYFS places value on the ‘unique child’, ‘positive relationships’ and ‘learning and development’ (DfE 2017, p.6). Like the Reggio Emilia and Te Wha ţikki approaches, the EYFS Statutory Framework also places particular emphasis on family values and on the cultural diversity of various communities.

Following on from the Tickell Report (2011), the EYFS Statutory Framework was streamlined to 17 early learning goals (ELGs), covering three ‘prime’ areas of learning (AoL) – communication and language; personal, social and emotional development; and physical development and four ‘specific’ AoL – literacy; mathematics; understanding the world; and expressive arts and design. The EYFS Statutory Framework, by comparison to the Reggio Emilia and Te Wha ţiki approaches, could be thought of as a structured approach, driven by outcomes to be met by the child. It provides a consistent approach for all early years providers and educational workers who are recognised as professional facilitators of learning.

Drawing on the evidence from the EPPE project (Effective Provision of Pre-school Education), a European longitudinal study of young children’s development between the ages of three and seven years, Siraj-Blatchford (2010) suggests children benefit from interactions with adults who question their ideas without dominating their activities, thus
creating ‘sustained shared thinking’ (pp.157–158). She goes on to say that an effective pedagogy must benefit children by empowering them to gain ‘opportunities for the acquisition of knowledge, skills, attitudes and dispositions’ (p.150). Therefore, while a framework and/or curriculum provides the contents and guidance (through its theoretical underpinnings and values) on how to support and extend children’s learning, it is the early years professionals who put curricula into practice through the building of a shared language, and by drawing on their knowledge and understanding of how young children learn. Most early years professionals recognise that learning is not based solely upon a framework or curriculum, but on meaningful interactions as they interpret and engage with young children’s learning. Rogoff (2003) emphasises that for pedagogy to be successful, it must be culturally meaningful to the participants that use it.

The learning outcomes of children may be mediated by the way early years professionals interpret the framework or curriculum based on localised expectations, needs of the child and the environment in which they practise. A child’s experience at school is determined by how well the curriculum or framework is interpreted by the child (Wood 2010, Fleer 2013). Success is dependent on how children interpret or make sense of the teaching they receive to form their own meanings. In the early years most teaching comes about through engaging with children’s play. The following section explores why play is considered vital for a child’s learning and development.

2.2.2 The role of play in learning and development

The Convention on the Rights of the Child (UNICEF 1989) Article 31 recognises that every child has the right to play, including the right to relax and take part in a wide range of cultural and artistic activities. However, there is no universal definition of play (Fleer}
2013, Rautio and Winston 2015) because of the way it can be viewed from multiple perspectives. Play may be described in terms of a child’s health and well-being because it promotes physical development (Ginsburg 2007, Goldstein 2012), whereas play may also be considered the foundation for learning for children (Duncan and Tarulli 2003, Elkonin 2005, Bodrova and Leong 2015).

To understand the role of play in a young child’s learning, I draw upon the work of Vygotsky. He wrote many papers early in the twentieth century, but his perspectives are often drawn upon today and have influenced the development of current pedagogy, policy, frameworks and curricula. Vygotsky’s theory on play for learning (1967, 1978) is connected to his overall sociocultural view of cognition – based upon a child’s development through learning with others. Vygotsky (1978) suggests children are active agents who, during the various social opportunities which play offers, will develop ‘higher-order thinking’ (p.86), a fundamental source of their cognitive development providing them with the opportunities for their gradual independence.

Vygotsky remarked that children use their imagination in play, and this is reiterated across the literature (Gajdamaschko 2005, Bodrova and Leong 2015). Often children’s imaginative play is closely linked to a real-life situation, already known to the child, and guided by the child’s memory. The importance of imagination, according to Vygotsky, is that it develops abstract thought, which profoundly impacts intellectual development, personality, behaviour, and ways of understanding and making sense of the world.

The child’s imaginative play may be assisted by their use of objects and this appears throughout the literature (Morgenthaler 2006, Hennig and Kirova 2012). In child play,
objects may support imaginative play, increase language use and carry symbolic meaning. Vygotsky recalls:

A child who sits astride a stick and pretends to be riding a horse; a little girl who plays with a doll and imagines she is its mother; a boy who in his games becomes a pirate, a soldier, or a sailor, all these children at play represent examples of the most authentic, truest creativity.

(Vygotsky 2004, p.11)

Here, Vygotsky illustrates a child’s use of objects and imagination to create a social symbolic activity – a concept developed from Vygotsky and Luria’s (1930) notion of the use of cultural tools, used as a conduit to transfer ideas from person to person, but here children use symbolic objects in play to ignite their imagination and create opportunities for spoken language.

Spoken language in play, according to Vygotsky (1967) is governed by spoken rules along with the roles children choose to play. This all becomes part of the game, underpinned by their imagination. Games that children play together require them to listen and respond to complex stories, master the rules of a game and fulfil their roles as they play (John-Steiner 2014, Wohlwend 2017). Spoken language, according to Vygotsky (1934), connects to our thoughts – a process which represents a “unit of thinking”, shaping our thoughts as an intentional transmission of experience’ (p.46). Play therefore creates a space where language skills are practised, rules and roles of the game are created between children, and where artefacts are used to elaborate the game. Play therefore develops a child’s future literacy and problem-solving skills (Mercer and Littleton 2007, Siraj-Blatchford 2009). Children also learn how to manage a range of emotions and their relationships with other
children, thus also developing their interpersonal skills (Goldstein 2012, John-Steiner 2014). Therefore, play may enable children to develop a range of skills and attributes for their adult life.

2.2.3 Play in early years settings

In the EYFS Statutory Framework (DfE 2017), early years professionals are encouraged to prepare ‘planned, purposeful play and through a mix of adult-led and child-initiated activity’ (p.9). With adult-led play the adult chooses the resources and activities for the children to play with, often guiding the child as both adult and child co-construct their meanings together. Vygotsky’s (1978) concept of the ‘zone of proximal development’ (ZPD) has influenced this pedagogical approach. The ZPD is the gap between what a child already knows, and the new knowledge gained from social interaction with a more knowledgeable other, a feature regularly observed during adult-led play. Vygotsky (1978) posits that ‘every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological)’ (p.57). Here, Vygotsky refers to both the social and the cognitive aspects of the child’s learning, and he argues that these occur through the co-construction of knowledge in social engagement with others.

The notion of the ZPD has led to several pedagogical practices used by early years professionals, who may incorporate elements of scaffolding, apprenticeship learning, guided participation and joint attention, to support children’s learning (Dennen 2004, Siraj-Blatchford 2009). Adults provide successive levels of temporary support to the child so they may reach higher levels of understanding (Wood et al. 1976). Bruner (1996) identifies this as ‘scaffolding’ to support the child’s learning because learning is an active process in
which children can discover complex concepts. Adults may provide minimal scaffolding for an older child, but for a three-year-old the adult may provide scaffolding through the form of suggestions and questioning. Adults may provide guided participation during play where the child actively learns from the adult. A shared activity between adult and child may be considered as ‘apprenticeship learning’, which may enable the child to understand the accepted practices, norms, customs and values of their community (Rogoff 1990, Rogoff et al. 1993). As with ‘joint attention’, this occurs in dyadic relationships with the adult and child during play.

In an educational setting, dialogic teaching occurs when the child and adult use talk to discuss their ideas (Mercer and Littleton 2007); but in joint attention, speech along with gaze and indexical gesture or with the positioning of objects may support children’s learning and facilitate speech development (Tomasello and Farah 1986, Baldwin 1995, Carpenter et al. 1998). Play involving adults may significantly benefit the child and raise the child’s performance level (Hakkarainen et al. 2013). These pedagogical approaches characterise a sociocultural approach, supporting the child towards a specific learning objective during play, until the child can independently achieve their goal.

Research has tended to focus on the role of the adults in supporting and enhancing children’s play. However, child-initiated play in educational contexts is less well documented (Woods 2017, Neaum 2018), although it is understood there are opportunities for learning among children which may not be dissimilar to those in adult-initiated play (Gray and Feldman 2004, Andresen 2005). Vygotsky (1978) suggests that pre-school children, while negotiating shared pretend play, will act in the ZPD. Children may watch other children during an activity and then try it for themselves. Children may offer peer
scaffolding to other children while playing away from the adult, as seen by Kirova and Jamison (2018). They demonstrated how children’s multiliteracy practices at home and at a Canadian pre-school led to the role of a more capable peer in supporting other children’s use of iPads. Their series of video observations indicate that children model, cooperate and collaborate using physical gesturing and questioning to support their peers in creating multiliteracy texts about dinosaurs using the iPad. This example illustrates how children are able to facilitate the knowledge of others. As Vygotsky wrote: ‘Play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself’ (1978, p.102). In child-initiated play, children may act independently and confidently because, according to Aras (2016), play gives the power back to children.

Moyles (2012) points out children will invest long periods of time in child-initiated play, due to their intrinsic motivation and their empowerment to make choices. Miller et al. (2005) concur, suggesting ‘children set the scene, the pace, decide the context and lead and control the action, [whereas] structured play is play that may have been initiated and planned by adults’ (p.92). Given the time and space for play, children will begin to work things out for themselves, build on their previous knowledge (learnt from others) and develop their own (and jointly with others) imaginative ways of thinking (Robinson et al. 2003, Craft et al. 2012). Child-initiated play therefore not only provides numerous possibilities for social engagement, but also creates a space to allow opportunities for children to be imaginative; in other words, allow them to think (Craft et al. 2012, Mourão 2014) but in ways which develop their own understanding about the world. The concept of child-initiated play is important to this study, because although my research follows a
social semiotic multimodal approach to communication and learning, it also acknowledges

2.2.4 Play and meaning-making

From a social semiotic multimodal perspective, a child draws upon multiple modes while
they play to communicate their ideas. Usually this is achieved with spoken language, gaze,
gesture, and engagement with artefacts, although this is not a definitive list of modes
(Flewitt 2005a, Bengochea et al. 2018). Children are engaged in meaning-making using
multiple modes (Kress 1997, 2010), while also making sense of their world (Vygotsky
1978). This process can be viewed as operating both externally or socially (drawing
together modes for communication; Kress 2010, pp.93–94) and internally or cognitively
(Vygotsky 1978, p.57) as the child interacts with the world around them. During child-
initiated play a child has agency because they are motivated through their own actions –
drawing together certain semiotic resources of their choice to communicate their ideas to
others and to themselves. For example, Carruthers and Worthington (2005) observed a
three-year-old boy using chalk to draw crosses on the nursery playground floor to prevent
other children from invading his space. During play, children may interact with other
children or act alone, and do so with many activities, artefacts and materials provided by
early years professionals to create opportunities for meaning-making.

Artefacts appear in children’s play and have many physical features attached to them, such
as colour and texture (Pahl and Rowsell 2010), and this may influence the way children
behave or how they use them. As noted by Caldas-Coulthard and van Leeuwen (2001),
children’s artefacts – plastic toy figurines for example – may influence the kind of stories
related by children, because all artefacts carry signifying factors. Manufactured artefacts
carry signs of gender, ethnicity and age, and this may influence children’s use of the resources during child-initiated play (Dyson 1994, Kress 1997). A study by Marsh (1999), in an inner-city nursery in the north of England, observed boys and girls – from a variety of socio-economic, cultural and linguistic backgrounds – in the role-play area using all kinds of artefacts and materials to form a ‘Batman HQ’. According to Marsh, children generated artefacts and drawings and written lists based on popular culture they enjoyed, which mobilised their enthusiasm and sparked their imagination to take part in various literacy practices, including children who were often reluctant to do so.

Created artefacts and spaces have the potential to transmit meaning and may be used by the child to expand their meaning-making activities during their play (Vygotsky 1934, Wohlwend 2008, 2011). MacNaughton (2000) in her study on gender, made the following observation, which relates to the role and artefact as used by the child: ‘Sam was another boy in Carlie’s group who had a constant interest playing in home corner, regularly sought out one of the sparkly home corner skirts to wear’ (p185). MacNaughton suggests that the young children were aware of the gender role they wanted to play but as seen through this observation, Sam was eager to cement that role using the artefact – in this example the ‘skirt’. Artefacts have the potential to create meanings (sometimes symbolic as already seen) and these meanings may be enhanced with spoken language in interesting ways. Craft et al. (2012) observed a group of four-year-old children in a nursery using puppets (previously used by their teacher) to convey a story. Children played separately from their teacher and spoke through these puppets to take on different roles and create a narrative. Mukherjee (2016) observed reception-class children (aged 4–5) during their role-play in a school in England and noted the artefacts used generated certain language choices and registers. Mukherjee suggests the object ‘microscope’, as used by Philip during role-play at
the ‘baby clinic’, prompted a question asked by another child. According to Mukherjee, this created an opportunity to learn the word ‘microscope’. Artefacts have the potential to create meanings when combined with speech.

Activities led by artefacts and spoken language contribute to children’s meanings as do other vocal sounds (onomatopoeia and singing) often used during play. While exploring the meanings of children’s spoken language, Kim and Yun (2017) found children aged 3–5 make a great number of verbal utterances while playing with artefacts. In their study of a day-care centre in Seoul and Seongnam, the children used onomatopoeia to make their meanings because it created further play opportunities with other children. There are also examples of children singing while playing. Hennig and Kirova (2012), in an intercultural early education pre-school centre in Canada, observed children from various ethnic backgrounds who enjoyed playing with artefacts found in their country of birth. One child originally from Somalia was singing using a ‘kal and mooye’ (mortar and pestle), which Hennig and Kirova describe as a Somali cultural artefact placed in the play centre. The children sang ‘the crushing song’ and Hennig and Kirova suggest that this:

… [d]emonstrates how the cultural practice of singing while crushing grain was blended in Nansi’s play with her new language–English. This blending of cultural tools, both material (the kal and mooye) and symbolic (singing a song and the English language), shows children’s creative ability to appropriate cultural tools in the different worlds in which they live, and to use those tools masterfully when they need them.

(Hennig and Kirova 2012, p.236)
Children’s play seems to be a fusion of imagination, spoken language and engagement with their artefacts. Vivian Gussin Paley’s (1990) seminal work on recounting children’s imaginative and fantasy stories is often illustrated through children’s play. She suggests children’s activities are not only an important part of their development but also of their stories. It is only when the listener engages with this knowledge that they will begin to understand the complexity of the child’s hidden meanings. Since this study is about emergent bilingual children, I go on to review bilingual education and communication.

2.3 Bilingual education and translanguaging

In this section, I will review the language approach in international schools (Section 2.3.1); bilingual pedagogy (Section 2.3.2); the emergent bilingual (Section 2.3.3); evolving definitions of translanguaging (Section 2.3.4); pupil-directed translanguaging (Section 2.3.5) and the emerging direction of multimodal translanguaging (Section 2.3.6).

2.3.1 Language approach in international schools

Hayden and Thompson (1995) report, ‘for the most part the body of international schools is a conglomeration of individual institutions which may or may not share an underlying educational philosophy’ (p.332). There is no unified global language policy for international schools, as schools work independently from each other, but most are accredited by representative bodies (COBIS 2017, AoBSO 2020). They also do not need to comply with the language policy of their host country, although they must follow its laws. They operate alongside the state schools of their host country but usually follow the ethos and understanding of international schools, reflecting western ideologies. The curricula chosen by international schools may vary but tend to be based on western models (Murphy
2003, Carder 2006). The NCE, American Curriculum, International Baccalaureate (IB), the International Primary Curriculum (IPC) and the Cambridge International Programmes (CIP) are examples of the more popular choices, according to Brummitt and Keeling (2013). English-medium instruction (EMI) is widespread across international schools, according to Dearden (2014), and most have an ‘English-only’ language policy. This echoes the ‘English-only’ policy in mainstream schools in the United States (Hornberger 1990). Although there is no overall national language policy in the UK (Lamb 2001) on account of devolved governance, the language of instruction is usually English in the National Curriculum of England (NCE).

Most international schools are based in Asia, followed by Europe and the Americas (Brummitt and Keeling 2013, ISC Research 2021). They are found in countries with or without connections to the host country, although most international schools have some historic ties with the English language. In Hong Kong, for example, the English Schools Foundation (ESF), established in 1967 by the colonial government of that time, allows children to obtain IGCSE and GCSE qualifications (Yamato and Bray 2002, Ryan and Slethaug 2010) although state funding is declining. Also, the Taaleem group of international schools and the Global Education Management Systems (GEMS) in the Middle East and North Africa (MENA) region employ both the IB and the NCE, but usually tailor them to suit the needs of this region (Al Farra 2012). Another group of international schools is run by the company Cognita. Using a British-style education, Cognita is rapidly spreading across the world, with schools in Spain, Singapore, Hong Kong, Thailand, Vietnam, Brazil and Chile (Hayden 2011).
International schools were originally developed because of the increasing mobility of families working for global businesses, the United Nations or the armed forces. In 2000, Chesworth and Dawe (2000) suggested, ‘An international school is specifically established to cater for students from a wide variety of cultures who are likely to be internationally mobile as their parents move from country to country’ (p.x), but this need is rapidly changing. The local affluent elite of the host country are beginning to send their children to international schools in the hope it will facilitate future opportunities for their children.

While there is a wide variation in how international schools now operate, they usually share several common characteristics and fall into three main subgroups, according to Hayden and Thompson (2013):

‘Type A’ international schools: established principally to cater for globally mobile expatriate families for whom the local education system is not considered appropriate.

‘Type B’ ‘ideological’ international schools: established principally on an ideological basis, bringing together young people from different parts of the world to be educated together with a view to promoting global peace and understanding.

‘Type C’ ‘non-traditional’ international schools: established principally to cater for ‘host country nationals’ – the socio-economically advantaged elite of the host country who seek for their children a form of education different from, and perceived to be of higher quality than that available in the national education system.

(Hayden and Thompson 2013, p.5)
Historically, international schools were not conceived as bilingual institutions, but rather adopt an ideology of monolingualism – usually to allow nationals to return home and rejoin the educational systems of their country – and expatriate teachers were usually hired. However, more recently, international schools have been transitioning to ‘Type C’ to cater for local populations, according to Brummitt and Keeling (2013). This is a phenomenon recently seen in China, where the growing middle class regards education in international schools as a way of achieving status and removing their child from the pressures of a traditional national education system. The local elites thereby obtain ‘cultural capital’ (the accumulated cultural knowledge that confers social status and power; see Bourdieu 1986). Graddol (2013) explains, ‘By opting for an alternative education route, parents may also be able to spare their children the pressure of the dreaded gaokao exam’ (p.49 original italics).

In addition, the official school language is usually English, which is more ‘marketable’ to these populations, according to De Mejia (2002). These schools that market to the elite claim to offer a monolingual standard variety of either British or North American English. Nonetheless, most international schools are obliged by the laws of the host country to conduct some lessons for local children in their home language. This is the case in Egypt, but the degree to which this is implemented is often left to the international school. Receiving host country children with a home language other than the official school language changes the original rationale for the existence of international schools. Although some international schools may market a bilingual education to parents, the pedagogy may vary from school to school.

2.3.2 Bilingual vs monolingual pedagogy

International schools following a culturally-specific curriculum usually adopt an ideology of monolingualism. However, as aforementioned (Section 2.3.1), many local children attend
these schools. The home language (L1) of such children is usually the majority language of
the host country, whereas the medium of instruction at the international school is the
minority language (L2). This is quite different to state mainstream schools in many parts of
the world, where the school operates in the majority language of a country. To explain
bilingual pedagogy, I turn to Lambert (1984), whose two-model concept first made the
distinction between ‘additive’ and ‘subtractive’ bilingualism (p.246). For instance, when a
migrant child arrives at a state mainstream school they may be encouraged to speak and learn
in L2. This may have a subtractive impact on the migrant child’s language development of
L1 and it may be replaced or displaced if the school does not offer teaching in the child’s
L1. However, an additive bilingual situation occurs where the L1 of the child is not replaced
or displaced, because the state mainstream school will offer teaching and learning in both
L1 and L2.

Lambert’s concept is not always applicable to the language pedagogy of international
schools because these schools are diverse and may offer different opportunities to their
bilingual students, and so children’s experience usually lies along a continuum. Baker (2006)
tries to reflect this continuum by highlighting monolingual forms of education for bilinguals
as either ‘weak, strong or monolingual’ (see Baker’s ten broad forms of education for
bilinguals, pp.215–216). Weak forms tend to have some L1 and L2 language teaching,
although one language usually dominates, resulting in limited bilingualism. Strong forms of
bilingual pedagogy consist of relatively equal use of L1 and L2 in the classroom, which
develops bilingualism and biliteracy. In most countries, state mainstream schools are
principally monolingual. García (2009a) reflects on this situation in state mainstream schools
across the US where the medium of instruction is English. Some Spanish-speaking children
may not get the opportunity to learn in Spanish (L1) and García comments: ‘when
monoglossic ideologies persist, and monolingualism and monolingual schools are the norm, it is generally believed children who speak a language other than the state should be encouraged to abandon [their] language’ (p.51). This is a subtractive approach towards bilingualism, which creates the loss of L1 leading to monolingualism (García and Torres-Guevara 2010).

International schools which create an ‘English-only’ approach in the classroom, where the medium of instruction is English along with the day-to-day running of the school, run the risk of offering an ‘English only’ pedagogy which has a subtractive impact on language development. Some international schools may be forced by the laws of the host country to offer limited teaching in the child’s L1, but at best this is a token effort and so, according to Baker’s categorisation, these international schools offer ‘weak’ forms of bilingual pedagogy. Children will not be able to use their full linguistic repertoire in the classroom and in different contexts for learning. Different situations require different registers, and without the child being able to use both languages interchangeably there may be a loss of bilingual competence. Murphy (2003) recognises this of international schools where the medium of instruction is English and points out the difficulty for young children when they are prevented from using L1: ‘The elusive difficulties of language displacement and cultural deprivation or confusion, the silent enemy, may lead to more serious deficits later on, but in the early years they are seldom evident as they are masked by this rapidly acquired surface acculturation’ (pp.29–30).

Traditionally, this is the experience of the migrant child in most English-dominant countries. The only way a migrant child may access L1 is through speaking with their extended family or linguistic community, or by attending a weekend complementary
school (Creese and Blackledge 2010). However, children may never reach academic competence in L1 because they will not have gained sufficient language input (Tse 2001, Wu et al. 2014). Similarly, this is the case for local children in other parts of the world who attend an international school representing a weak bilingual pedagogy, since they too will need to attend out-of-school tutoring to maintain L1. The impact of a school’s language approach is quite clear: where an ideology of monolingualism or weak bilingual pedagogy predominates, this has a subtractive impact on the language development of children. The measure of success for these schools is that a child will reach academic competence in L2, with final examinations in L2. The kind of weak bilingual pedagogy may be seen as discriminatory because it fails to develop the child’s full linguistic repertoire (Gallagher 2001, Carder 2002) and the L1 of the child is not fully developed.

Some international schools, especially in Europe, are beginning to recognise this form of discrimination and are beginning to promote a language approach that strives for stronger forms of bilingual pedagogy, where both the L1 and the official school language used for teaching and learning are taught side-by-side. García (2009a) calls this a ‘poly-directional’ method (p.129) – also known as a two-way or dual language method (Carrera-Carrillo and Smith 2006, Soderman 2010). This kind of bilingual pedagogy may lead to a heteroglossic environment, where teachers and learners move between texts, reading, writing and speaking. Both languages are of intrinsic value, and they are recognised as being equal in learning, which benefits the child. The child has agency, and they are empowered to make their meanings through both languages. This is vital to those children beginning their journey to bilingualism. To illustrate this journey, my next section explores the term ‘emergent bilingual’.
2.3.3 The emergent bilingual

The term ‘emergent bilingual’ was first widely used by García (2009b), who describes migrant bilingual students from Latino communities entering English mainstream schools in the US. It was a term generated because of US language policy, suggesting English as the dominant discourse for all learning, which did not recognise that some students came from diverse linguistic communities. In García’s view, students should have the right to communicate and learn in their home language. Her intention was to change the language approach, based on her desire for social justice. A student’s diverse linguistic background brings knowledge and understanding derived from their home language (Canagarajah 1999). The current approach of some international schools shows little regard for the home language, rendering it subordinate to English. The term ‘emergent bilingual’, on the other hand, makes no value judgment about hierarchy and proficiency in individual languages, but rather encompasses the child’s whole linguistic repertoire.

There is a prevailing view in some international schools with an ‘English-only’ approach that children should start kindergarten with a good understanding of English. This does not seem reasonable for those children who are starting to learn English, who will be at various stages on the journey to bilingualism. At the simplest level, learning a language includes the skills of listening, speaking, reading and writing, but extends to many layers of deeper and more specialised genres like writing poetry or writing a letter of complaint. Romaine (1995) clearly points out that proficiency in either language is not one-dimensional: ‘a person might, for example, have no productive control over a language, but be able to understand utterances’ (p.11). Each emergent bilingual may face different issues and have varying areas of competence in the languages they speak, reflecting their different social and learning experiences. Such varying proficiency is normal for most bilinguals, but the
term ‘emergent bilingual’ makes no presupposition about levels of development or proficiency.

International schools will provide very different linguistic contexts for bilingual children, depending on the school’s language approach. With that said, those international schools which claim to be BSO tend to follow aspects of the curriculum of England, where children who are officially identified as having a first language other than English are referred to as ‘English as an additional language’ (EAL) learners. However, in a BSO the linguistic context varies significantly. Children attending BSOs often belong to the majority community, and it is the official school language of English which is the minority language.

In this thesis, I use the term ‘emergent bilingual’ because I want to recognise that children are only part-way along the journey of learning English. In other words, I recognise that all languages spoken are of value. The emphasis here is on meaning-making (a social semiotic multimodal approach, Section 2.4) rather than traditional notions of language separation or ‘named languages’ (Wei and Ho 2018). However, in some cases, there is the need to differentiate between spoken languages, so I have chosen to describe a child’s spoken-Arabic as their ‘home language’ or just ‘Arabic’ and English as taught by their English-speaking teacher as ‘classroom English’ or just ‘English’ (Section 1.3).

2.3.4 Origins of translinguaging in pedagogic contexts

Bilinguals of the same speech community with similar cultural understanding may share the same languages and mix them during conversation (Labov 1972), at the level of whole clause or a word or phrase. Scholars have tried to capture the complexity of bilingual
language use, suggesting bilinguals rarely engage in practices that appear to treat their two languages as autonomous. Terms used in the literature to encompass these complex practices include: ‘code-switching’ (Poplack 1980), ‘hybrid language practices’ (Gutiérrez et al. 1999), code-mixing (Paradis et al. 2000), ‘polylinguaging’ (Jørgensen 2008), ‘metrolingualism’ (Otsuji and Pennycook 2011), ‘code-meshing’ and ‘translingual practice’ (Canagarajah 2012) and ‘multilanguaging’ (Nguyen 2012).

Translanguaging is a term that is now generally attributed to Cen Williams (1994), who described it as a pedagogy for language learning. It was not intended as a theoretical concept, but rather a label to describe a practice between teacher and learner situated in the classroom. For example, translanguaging may occur if the schooled language-of-instruction is different from the learner’s home language. Learners may be able to access understanding by communicating their ideas in their home language with the teacher’s responses in the schooled language-of-instruction; reading may be achieved in one language and writing in another. Wei (2018) explains this as ‘deliberately breaking the artificial and ideological divides between indigenous versus immigrant, majority versus minority, and target versus mother tongue languages’ (p.15). Translanguaging empowers both the learner and the teacher by creating a fluid practice of communication. It encapsulates multiple discursive practices by ignoring boundaries between languages, allowing learners to make more holistic sense of their world in educational contexts (Poza 2017, Wei and Ho 2018).

Baker’s (2006) understanding of translanguaging seems to summarise what translanguaging may actually achieve in an educational context: ‘Firstly, it may promote a deeper and fuller understanding of the subject matter. If the students have understood it in
two languages, they have really understood it’ (p.297). This remark seems to address translinguaging as serving a cognitive purpose. Gort and Sembiante (2015) explore how unofficially translinguaging is used by teachers to support emergent bilingual children (Spanish–English) at a pre-school in the socio-economically, linguistically and culturally diverse community of South Florida. Despite the pre-school’s language approach of linguistic separation – one teacher/one language – Gort and Sembiante observed the pre-school teacher, in partnership with two co-teachers, navigate the tensions of an ideology which drives language separation. These teachers supported Spanish–English emergent bilingual children’s participation in spoken language and literary activities by translinguaging with the children. García (2009a) suggests language separation does not benefit emergent bilinguals, and languages should not be treated as separate entities for learning. García and Lin (2017) advance this argument, by claiming that rather than schools/institutions dictating how learners may communicate, the choice should be returned to the learner. In other words, learning should be ‘child centric’, suggesting emergent bilinguals should be free to use their full linguistic repertoire in meaning-making. As García (2009a) argues, emergent bilinguals may begin to cross linguistic boundaries, moving from their home language to the school’s approved language. García (2009a) observes that, ‘although teachers may carefully plan when and how languages are to be used, children themselves use their entire linguistic repertoires flexibly’ (p.304). García remarks that children will continue to use language surreptitiously, regardless of the classroom guidelines in place. This may, of course, create tension between the competing discourses of the schooled language-of-instruction and the learner’s home language, but without being permitted to use their home language the emergent bilingual may find it difficult to integrate their knowledge acquired from home into school contexts. This may
be evident during assessments, where emergent bilinguals may not be able to express themselves using the school language (Cohen 2009, Sisson and Kroeger 2017).

2.3.5 Pupil-directed translanguaging

However, teacher-led translanguaging as described above is not the only kind of translanguaging. Lewis et al. (2012a) suggest there are two models of translanguaging: ‘the first could be classified as “teacher-directed translanguaging”, a planned and structured activity by the teacher…the second model could be classified as “pupil-directed translanguaging” whereby translanguaging activities are undertaken independently’ (p.665) by the learner. This has already been observed by the sociocultural learning theorists Swain and Lapkin (2002). They observed two students (aged 12) on a French immersion programme who began their schooling in a kindergarten (aged 5) in French and English. These students, while working on several multi-staged tasks, began to work things out together by ‘talking it through’ (p.288). As Swain and Lapkin (2002) explain, these bilinguals use both languages to convey their ideas and process their thinking ‘[through] their dialogue, they engage in making meaning, and debate the meaning made’ (p.285). Subsequently, Swain (2006) refers to this as languaging (p.95), rather than merely language output and suggests ‘languaging serves to mediate cognition’ (p.97).

Lewis et al. (2012b) suggest that translanguaging has its roots in languaging, but for Swain (2006) it is more a cognitive process where learners co-construct their understanding of new ideas and concepts in the languages they know and understand. García et al. (2011) show how Latino emergent bilingual children (aged 3–4) from a New York kindergarten are translanguaging (Spanish–English) together independently away from their teacher;
they name this the ‘third space’ (p.44). García and Wei (2014) summarise pupil-directed translanguaging from the study of García et al. (2011) as practices that:

1. mediate understanding among each other,
2. co-construct meaning of what the other is saying,
3. construct meaning within themselves,
4. include others,
5. exclude others, and
6. demonstrate knowledge.

(García and Wei 2014, p.82)

I will explore each of these translanguaging practices along with additional research because they are highly relevant to my study and part of a meaning-making practice.

**Mediate understanding among each other (point 1)**

Garcia et al. (2011) highlight key examples of pupil-directed translanguaging from their study to suggest that children mediate their understanding together. They describe two girls petting a newly arrived rabbit:

Francisca who is more confident with the bunny than Veronica, advises her: ‘relax, relajate. No hace nada’ (10/17/2007). Some may consider this a simple code-switch. But the example shows Francisca’s ability to linguistically engage in a social practice that violates the programmatic structure of ‘English-only in the English classroom’ to communicate with Veronica.

(García et al. 2011, p.46)
Alamillo et al. (2017) also observed that Spanish–English emergent bilingual children (3–5 years) were able to gauge peer comprehension ability and shift production to meet the listener’s needs: ‘Previously, the entire conversation was in Spanish. When Julio arrived, Antonio spoke to him in English, as did the boy off camera. At times, Julio replied in English, at other times in Spanish, and once in a combination of the two. When asked later how he decided which language to use with his friends, Antonio replied, “I speak to (Julio) in English because he knows English”, confirming that he considered the listener’s needs’ (p.476). In both examples, children gauge how to communicate effectively to mediate understanding.

**Co-construct meaning of what the other is saying (point 2)**

Cekaite et al. (2014) suggest children’s peer talk in bilingual and multilingual settings ‘constitutes a significant locus for children’s learning about language’ (p.14). García et al. (2011) illustrate how children co-construct meaning together through pupil-directed translanguaging. There are several examples given, but this chosen example illustrates an English-speaking boy, Arthur, who is learning Spanish, and a girl, Maritza, whose father is a Spanish-speaking Mexican and mother an English-speaking American. Maritza enables Arthur to count pumpkin seeds in Spanish: ‘this translanguaging event enabled Arthur to try out the Spanish language practices that he had acquired, mainly numbers. But the intervention of Maritza, despite the inaccuracies of her Spanish, enables Arthur to acquire more than numbers, as children co-construct languaging and meaning’ (p.48). They co-construct knowledge, but Maritza is also teaching Arthur by practising with him. Galeano (2011) suggests bilingual children are able to provide scaffolding for each other, as seen with monolingual children (Section 2.2.3). He observes pre-school bilingual (Spanish–
English) children (aged 4) scaffolding other children during sociodramatic play, where the more able child was successful in increasing another young girl’s learning of Spanish.

**Construct meaning within themselves (point 3)**

Garcia et al. (2011) note that emergent bilinguals also construct meanings within themselves. Children demonstrate private speech because ‘the translanguaging practices that are constructed always bring the other language to the forefront, even when that language is not being activated by the instruction’ (p.50) of the teacher. Although this is not unique to young emergent bilinguals, private speech often occurs like a ‘running commentary’ in both languages (Drury 2007, Sawyer 2016). This is akin to Vygotsky’s notion of ‘thinking aloud’ (1934, p.30), because most young children use private speech for self-guidance and self-regulation (Winsler et al. 1997, Al-Namlah et al. 2012).

**Include others (point 4)**

Garcia et al. (2011) suggest children may use translanguaging to *include* others. Their example is a Spanish-speaking boy with limited English (Carlos), a Latina bilingual girl (Silvia), and an English-speaking girl (Kathy), who are all playing with blocks. Carlos is ready to give up because he cannot continue the play in English and Kathy cannot speak Spanish, but Silvia begins translanguaging to include both children (p.51). Other research suggests this is common practice, as most bilingual children at school are natural interpreters and can include other children through cooperative play. Tabors (1998) recounts her observation of two four-year-olds at a water-bath in a pre-school classroom. Naoshi, whose home language is Japanese, is trying to help and include another boy, Byong-sun, whose home language is Korean. Naoshi uses simple phrases in English that Byong-sun will understand. Naoshi helps Byong-sun through his words and supportive
action by connecting tubes to a water bottle at the water-bath. Tabors’ example is typical of children using action with words.

**Exclude others (point 5)**

In addition, García et al. (2011) suggest children translanguage to exclude others. Two Spanish-speaking boys (Francisco and Miguel) have a falling out over a toy horse, but ‘Francisco switches to English to exclude Miguel who speaks very little English’ (p.52) and continues to use English to exclude Miguel. Francisco is using language as a powerful discursive strategy to exclude (Canagarajah 1999, Fairclough 2001). Attempts by children to use spoken language to exert their influence and power are viewed across several peer cultures, across many ages and in many contexts (Kyraitzis and Guo 2001). To exclude others occurs when there is an attempt to control some aspect of a child’s interaction, by deliberately not including them (Fanger et al. 2012). Bilingual pre-school children have the power to exclude through use of the several languages that they speak.

**Demonstrate knowledge (point 6)**

When emergent bilinguals demonstrate their knowledge, García et al. (2011) suggest children also ‘try out all the words they know’ (p.53) in their new language. They observe a young girl practising all the new words she has been studying over the past week with her Spanish-speaking teacher. Drury (2007) observes this with Samia and Maria (Pahari-speaking children learning English in a mainstream English-speaking nursery in London). They are naming all the colours they know in English: ‘Samia and Maria alike have learnt the need to show their understanding of colours, as well as other key vocabulary items such as numbers and shapes through appropriate language use and interaction with adults’ (p.70). Other studies point out the importance of emergent bilinguals using self-repetition
Bennett-Kastor 1994, Oliver 2003). Rydland and Aukrust (2005) study the self-repetition of Turkish children aged 4–5 (learners of Norwegian), and suggest repetition varies in type and complexity. Repetition is linked to the frequency of the utterances of children as they respond to other children. Drury (2007) also observed the practising and rehearsing of English between two sisters Nazma (aged 3) and Yasmin (aged 4), who usually speak Pahari at home. When these sisters are in the bathroom at nursery: ‘Nazma uses the context to practise a song from nursery “wash it up, do this”. She is confident in this context to vocalise and practise her English with her sister’ (pp.73–74). Drury describes this as the inner layer of the child, the one the teacher does not see, but clearly children are learning from these brief opportunities to practise their English away from the adults. These research studies suggest that emergent bilingual children are translanguaging, but research is emerging which looks at other communicative ways bilingual children draw on their resources for meaning-making.

2.3.6 An emerging direction: multimodal translanguaging

Current understandings of translanguaging appear to be dominated by a focus on spoken and written language. However, Wei (2011a) believes ‘translanguaging is both going between different linguistic structures and systems, including different modalities (speaking, writing, signing, listening, reading, remembering) and going beyond them’ (p.1223). He refers to this intersection as the ‘translanguaging space’, which he explains as follows:

The act of translanguaging is transformative in nature; it creates a social space for the multilingual language user by bringing together different dimensions of their personal history, experience and environment, their attitude, belief and ideology, their cognitive and physical capacity into one coordinated and meaningful
performance, and making it into a lived experience. I call this space ‘translanguaging space’, a space for the act of translanguaging as well as a space created through translanguaging.

(Wei 2011a, p.1223)

A later study by Hua et al. (2017) focuses on proxemics along with artefacts and texts, object handling, positioning, body movement and gaze alongside language in creating the translanguaging space. Wei (2018) remarks: ‘language, then, is a multisensory and multimodal semiotic system interconnected with other identifiable but inseparable cognitive systems. Translanguaging for me means transcending the traditional divides between linguistic and non-linguistic cognitive and semiotic systems’ (p.20). Kress (1997, 2010) has long illustrated that all modes have equal status and can be used to engage in learning (Bezemer and Kress 2016), because a social semiotic multimodal perspective questions current traditional communicative structures (Jewitt and Kress 2003, Mavers 2007, Stein 2008, Cope and Kalantzis 2009).

More recently, translanguaging is beginning to be approached as multimodal (García and Wei 2014, Bengochea et al. 2018, Wei 2018, Lin 2019). Lin particularly notes the coordination of hand gestures, facial expressions, sounds and visual images in meaning-making among 14–15-year-old emergent bilinguals in a science lesson about blood circulation in a Hong Kong secondary school, and reflects:

Instead of focusing on individual speakers and listeners speaking to one another using discrete languages or codes (or semiotic systems), it would be more productive to view them as co-ordinated parts of an assemblage of agents and
resources all entrained (i.e. drawn or pulled along) into the fluid, dynamic flow of meaning making.

(Lin 2019, p.8)

Other research studies have looked at how emergent bilingual pre-school children in the early years educational setting use multiple modes for meaning-making. Bengochea et al.’s (2018) two-year ethnographic study of Spanish–English emergent bilinguals (aged 3–4) investigates children’s multimodal choices during sociodramatic play. Their findings suggest one child ‘employed his multi-modal resources differently, including his translanguaging practices…Anthony used multiple modes simultaneously and in complementary ways to nuance his meanings (p.57). In their opinion, translanguaging occurs as part of a transmodal repertoire and they suggest Anthony was in a better position to reinforce his play with his friends through his personalised narratives.

These findings suggest that meanings made by bilingual children are not made through speech alone. In Wei’s (2018) account, he begins to draw together translanguaging and multimodality from his interpretation of Thierry (2016), a leading neuroscientist in the field of bilingualism, to conclude that: ‘language processing cannot be wholly independent of auditory and visual processes, just as cognitive processes such as number processing and colour categorization cannot be wholly independent of language’ (p.20). Multimodality and translanguaging operate in both spoken language and non-verbal forms of communication, understood as meaning-making. Examples in the practices of deaf children show how they fully and effectively communicate without spoken language and rely on visual forms to articulate their meanings (Swanwick 2017, Kusters 2019).
Perhaps a new analytical approach is required rather than, as in the past, isolating spoken language from more visual forms of communication. Instead, multimodality and translanguaging should be drawn together. In other words, the whole practice of the bilingual child should be observed, creating a new analytical approach. The following section reviews the literature of a social semiotic multimodal perspective on meaning-making.

2.4 Moving beyond spoken language: multimodality

In this section I explore how meaning is made multimodally (Section 2.4.1); the mode (Section 2.4.2); materiality, affordance and semiotic resource (Section 2.3.3) and the transformative engagement of meaning (Section 2.4.4).

2.4.1 How meaning is made multimodally

Multimodality may be traced back to early theorists in semiotics, starting with Saussure (1974 [1916]) and Peirce (1965) and their various notions of the linguistic ‘sign’ as an abstract system. Peirce and Saussure were key participants in the developing theory of signs and their relationships to meaning. According to Saussure’s definition, the sign is a binary concept, with both signifier and signified – the two aspects cannot be separated as one cannot exist without the other. On the other hand, in Peirce’s notion of the sign, semiosis is tripartite, consisting of the ‘sign’, its ‘object’ and the ‘interpretant’. Peirce’s view of semiotics suggests the sign is based on both maker and reader of the sign and their interpretation of meaning. He also was consistent in his view of signs as either spoken language or image. Kress (2010) expands the concept of multimodality, but this field can be traced to earlier theorists such as Halliday (1978), with whom Kress studied. Halliday’s
main influence was in establishing the idea that the linguistic sign is culturally shaped. Kress (2010) argues that multimodality is not a theory but ‘maps a domain of inquiry’ (p.54), which is a social construct. Bezemer (2012) suggests, ‘Multimodality is an interdisciplinary approach that understands communication and representation to be more than about language’ (unpaginated). It is an all-encompassing term to express the social and cultural use of multiple modes of expression which may be activated in meaning-making. Kress (2011) notes these as ‘image, writing, layout, music, gesture, speech, moving image, soundtrack’ (p.54), although this is not an exhaustive list.

Multimodality falls into three main theoretical domains, which usually crossover but nevertheless have distinct defining terms. Multimodal Interactional Analysis (MIA) is derived from socio-linguistic and linguistic anthropology, concerned with examining situated language as interactional communication (Norris 2004). Multimodal Discourse Analysis (MDA) is profoundly influenced by Halliday’s Systemic Functional Linguistics (SFL) (Halliday 1994, Halliday and Matthiessen 2004), which remains a central theoretical tenet of MDA (O’Halloran 2011). Multimodality as a social semiotic approach (Kress 2010, Jewitt 2011) draws on a contemporary view of the way meanings are made, moving away from language-based notions to more complex and multiple ways of meaning-making. This study draws principally on a social semiotic multimodal perspective.

There are three assumptions in a social semiotic multimodal approach. The first assumption is that modes are equal, but when drawn together, they form multiple designs – thus contributing to meaning-making. Kress (2010) describes these various combinations of modes as the ‘ensembles of meaning’ (p.159). Modes may be organised in different ways and within different settings. Bezemer et al. (2012) summarise multimodality as: ‘a
theoretical perspective that brings all socially organized resources that people use to make meaning into one descriptive and analytical domain’ (p.1).

The second assumption is that resources are historically shaped, articulated by different communities. According to Bezemer (2012), ‘for something to “be a mode” there needs to be a shared cultural sense within a community of a set of resources and how these can be organized to realize meaning’ (unpaginated).

The third assumption is the emphasis on the sign-maker, that is, the individual who organises meaning. According to Kress (2010), this is central to meaning-making as the ‘motivated-sign’ (p.10). Although sign-making is motivated by the sign-maker, it is specific to various social contexts, as Bezemer (2012) implies: ‘communicational acts are shaped by the norms and rules operating’ (unpaginated).

Another emphasis, suggested by Kress (2010), is that

   In a social-semiotic approach to meaning-making, [meaning] is seen as both social and external and as social and ‘internal’. There is outward social (inter-) action in which meaning is constantly created, in a transformative process of interactions with and response to the prompts of social others and of the culturally shaped environment; and there is constant ‘internal’ action, an (inner) response in constant engagement with the world.

   (Kress 2010, pp.93–94)

It appears that there is a distinction between outer (social/interpersonal) action and inner (cognitive/intrapersonal) action in meaning-making, because meanings are made in ever-
changing contexts, yet both actions are equally important in meaning-making. They are processed by the individuals who make them and interpreted by others (see also Vygotsky 1978, p.57).

2.4.2 Definitions of mode

Hodge and Kress (1988) offer a critique of mainstream semiotics on the grounds that it is based on fixed linguistic structures (and by extension other modes) which ignore the social uses of signs. This leads Kress and van Leeuwen (2006) to extend semiotics beyond verbal language to other sign systems by reconceptualising the transmission of meaning as a holistic semiotic process which does not depend on any single semiotic system. Based on the principles of Halliday (1978), Kress and van Leeuwen (2006) suggest all modes fulfil three major functions:

To use Halliday’s terms, every semiotic fulfils both an ‘ideational’ function, a function of representing ‘the world around and inside us’ and an ‘interpersonal’ function, a function of enacting social interactions as social relations. All message entities – texts – also attempt to present a coherent ‘world of the text’, what Halliday calls the ‘textual’ function – a world in which all the elements of the text cohere internally, and which itself coheres with its relevant environment.

(Kress and van Leeuwen 2006, p.15)

Kress (2010) later defines a mode as a ‘socially and culturally shaped set of resources for meaning-making’ (p.79). A mode brings with it a uniqueness, with specific potentialities, but it is only when combined with other modes (act of multimodality) that meaning-making is achieved. Kress furthermore states: ‘The introduction of mode and multimodality produces a challenge to hitherto settled notions of language’ (p.79, original italics).
2.4.3 Materiality, affordance and semiotic resources

I could have considered underpinning my study within the onto-epistemologies of new materialism as this would emphasise the interrelationships of discourses, artefacts, cultural practices and draw attention to the environment of a society (Toohey 2019, Hackett et al. 2020). As expressed by feminist theory (Colman et al. 2019) ‘a central tenet of new materialist thinking is that ‘matter’ is fundamentally multiple, self-organising, dynamic and inventive, moving between nature and culture, the animated and automated, bodies and environments’ (unpaginated). Although new materialism stresses the ‘multiple’ nature of meaning-making, my concerns here are not only with ‘matter’ but also how emergent bilinguals use modes (in this thesis, those of speech, gesture and gaze in addition to artefacts) for meaning-making. This is because I am drawn to the communicative patterns of emergent bilinguals as they deploy several modes at the same time, which is known as a modal ensemble (Kress 2010). This is a humanistic and holistic perspective of meaning-making, and so I have positioned myself within a multimodal social semiotic theoretical framework, specifically within an educational context (Kress 2010, 2013).

A social semiotic multimodal perspective suggests meanings are generated by the interest and agency of the sign-maker and understood by the sign-reader (see Section 2.4.1 for Peirce’s notion of the sign). Meaning-making requires resources as part of the processes of sign-making. Kress and van Leeuwen (2006) suggest media are the material resources required in the production of semiotic products and events. For example, paint or ink (or anything used to create a mark) may be used to outline an image on media to create meaning. The materiality of such media represents different features for different kinds of sign-making. Visual artefacts are materially quite different from one another; for example, photographs are different from paintings, drawings and collages. Pahl (1999), while
observing nursery children, suggests children’s choices of media make things more real to them:

Barney embellished an egg box and put seeds in the bottom. He said it was a garden. Lydia did something with another box. Lucy took the inside of a toilet roll and began to put shapes on to it. Becky was immersed in sticking layers and layers of material on mountains of glue.

(Pahl 1999, p.42)

Some materials may prompt more of a response than others, as Ormerod and Ivanič (2002) illustrate in their findings on the practices of primary school children aged 8–11: ‘the choice of surface material is always important and the choice of ink, or material, for signs can also be varied’ (p.88). This is because children show agency in the things that they do and choose, when they are enabled to do so.

Kress (2010) defines the choice of modes for meaning-making purposes as ‘modal affordance’ (p.79), because modes offer different potentials for making meaning. Modal affordance originates from the work of Gibson (1979), who defines affordance as the ‘action possibilities’ (p.127). If modes offer different potentials – for example, speech and image may offer different potentials as signifiers – then these meanings also may vary. Kress (2010) suggests that:

Image or speech, are both similar to and different from each other within one society: similar, in that they are shaped in the one society and by its characteristics and the needs and demands of its members, yet different in that the materiality of different modes offers different resources and potentials for social shaping.

(Kress 2010, p.81)
Some modes are semiotically better at conveying meaning than others. Therefore, a social semiotic multimodal perspective on modal affordance is based not only on the differences between modes but also on their cultural significance. These differences strengthen the concept of the motivated-sign, as individuals purposefully select some modes over others due to their potential in meaning-making as part of semiotic work (the process and design of sign-making).

Kress (2010) expresses the potentials and differences between modes of gesture and moving image:

Some modes, *gesture* or *moving image* for instance, combine the logics of time and of space. In *gesture* there is sequence in time through movement of arms and hands, of the head, of facial expression, as well as their presence against the stable spatial frame (the background) of the upper part of the torso. In (older versions of) *moving image* the logic of sequence in time is provided by the succession of frames of images.

(Kress 2010, p.81, original italics)

Kress (2010) calls these differences cultural constraints. Modes may seem apt for purpose, but cultural constraints and the expectations of society control their usage. Therefore, the assumption is that a mode is always ‘a mixture of affordance and constraint’ (van Leeuwen 2009, p.299). Schools present a perfect example of this. As children move through primary school, they are encouraged to move away from drawing pictures towards composing written narratives, because writing is perceived as the preferred mode.
Semiotic resources, on the other hand, appear to configure and shape the mode. According to van Leeuwen (2005), the term ‘cultural semiotic resources’ (p.3) (or simply semiotic resources) replaces the notion of the sign. This raises several fundamental questions as to what constitutes a resource, but van Leeuwen’s definition amplifies the notion of the semiotic resources found in speech, gesture and image:

[S]emiotic resources are the actions and artefacts we use to communicate, whether they are produced physiologically – with our vocal apparatus, with the muscles we use to create facial expressions and gestures, etc. – or by means of technologies – with pen, ink and paper, with computer hardware and software, with fabrics, scissors and sewing machines, etc.

Traditionally they were called ‘signs’.

(Van Leeuwen 2005, p.3)

Bezemer and Kress (2016) suggest the socially and culturally shaped semiotic resources resonate with neo-Vygotskian (1978) cultural-psychological ideas of ‘cultural tools’ (p.11). Vygotsky suggests that ‘the use of tools and signs share some important properties; both involve mediated activity’ (p.127). This corresponds with Norris’s (2011) view of semiotic resources as ‘mediational means and cultural tools’ (p.80). She uses these terms interchangeably to explain her position. Bezemer, Kress, van Leeuwen and Norris agree that the cultural semiotic resources appear to configure and shape the mode.

*Speech/sound*

As indicated by Kress (2011), ‘speech shares certain aspects of lexis, syntax and grammar with writing. Sound, the material of speech, is, however, entirely different from the (graphic) material of writing’ (p.55). Although both are considered part of language,
speech has different affordances to written language. As van Leeuwen (2005) states, the resources of speech come from our vocal apparatus, which produces pitch, tone, timbre, intonation, or rhythm created by moving muscles to alter the shape of the mouth, tongue and vocal cords to produce sound and pitch variation. Arabic, in its many varieties, is configured and sounds rather different from, say, English, French, Chinese or Swahili, with the addition in each case of the individual’s subjectivity in producing these sounds. Different spoken languages will sound dissimilar, and this extends to varieties and dialects. Speech is a mode, but subtle differences (including varieties of the same language) are historically, regionally and socially specific.

**Gaze and gesture**

Speech during interaction usually occurs alongside an individual’s gaze and gesture. Each of these modes (speech, gaze and gesture) possesses different potentials and differing affordances to enable specific semiotic work. According to Jaworski and Thurlow (2010), there are two types of gestures: deictic or pointing gestures, which may indicate people, objects, directions or locations; and representational gestures, which usually occur when accompanied by speech or replacing speech – for example, the index finger pressed to the lips in some cultures may instruct one to be silent. Their interest is in how individuals use their gestures in context and in specific ways. They suggest gesture becomes part of ‘locating self’ and the ‘complex interplay of various semiotic resources’ (p.264), and this suggests that gesture is both culturally and communicatively situated.

Gaze and gesture are essential features of early childhood meaning-making. Deictic gestures are particularly important for purposes of interaction and language development. Infants (from 12 months) begin to communicate by controlling the length of their gaze and fixing on the adult’s eyes when spoken to. Dyadic joint attention between two people is
used by one individual who wishes to make another individual aware of a developing situation (Tomasello 1995, Hobson 2005). In triadic joint attention, an object is usually involved, and the initiating individual locates the point of interest by first fixing their gaze on another’s eyes and face. Once locked in gaze, the initiating individual then draws the interlocutor’s gaze to an object or point of interest (Barton and Tomasello 1991, Baldwin 1995). For young children, dyadic and triadic interactions assist with engaging in social situations and judging relationships during peer interactions at school – an aspect which is also important for learning. (Nurmsoo et al. 2012, Brey and Shutts 2015).

Children use gaze and gesture with embodied action in meaning-making (Craft et al. 2012) to communicate their ideas, often providing speech-accompanying gestures by pointing and naming objects or situations of interest (Oates and Grayson 2004, Hobson 2005) or linking relationships between a person and object; a useful concept when reviewing data from observations of children. Lancaster (2001), through her examination of gaze and gesture, observes the drawing activity of a two-year-old child with her father. Lancaster remarks that a child’s gaze can be organised into three main functions: first, to engage in interpersonal relations; second, to express mood and feelings; and third, analytically. Lancaster finds the child uses gaze to scrutinise visual and spatial arrangements to generate joint meaning with her father. Charman et al. (2000) concur that children as early as 20 months use gaze for social and analytical purposes to gather information from their environment. Although in a quantitative study, Charman 2000 et al. observed children during spontaneous play with artefacts on the floor, switching their gaze between their parents and their artefacts. They were observed to analytically scrutinise their objects through their gaze, which Charman et al. suggest appears to be linked to cognition.
**Written symbols and three-dimensional artefacts**

Children’s use of gesture along with marks and drawing is usually a precursor to writing, or what Vygotsky (1978) describes as ‘graphic speech’ (p.112). He observes a child walking her fingers across marks she has made on a page and calling this running. Research indicates young children may use a graphic surface to write symbols, and as they do so are moving their bodies, revealing intricate multimodal combinations (Adi-japha et al. 1998, Wright 2014). Gibson (1979) suggests it is not the movement of drawing that pleases the child, but rather the symbol made. But that may not necessarily be the case, as Matthews (1999) suggests the sensorimotor aspect of drawing and graphic marking is both evident and gratifying for the child.

Many scholars demonstrate how children’s visual-mode communicates meaning long before they can read or write (Matthews 1996, Kress 1997). Children use symbols which are often of personal significance (Anning 1997, Golomb 2002) and they know the differences between scripts and drawing (Kenner 2004, Lancaster 2007). Almost all children at some stage attempt to write their name before school (Bloodgood 1999, Haney 2002), and this is common practice in literate cultures: English (Clay 1975), Spanish (Ferreiro and Teberosky 1982), Hebrew (Levin et al. 1996), Arabic (Levin et al. 2008), and Chinese (Chan 1998). Children living in biliterate contexts may switch between scripts, for which Mor-Sommerfield (2002) coins the phrase ‘language mosaic’ (p.100). In essence, young children across global locations begin to understand the practice of symbolic meaning through written symbols which have significance for them such as their name.

Vygotsky (1978) notes what while a written symbol indicates meaning, so too do artefacts as the cultural tools for learning (Section 2.2.4). The positioning and layout of artefacts and
images is explored by Kress and van Leeuwen (2006). They suggest the arrangements of visual elements become part of the ‘grammar of visual design’ (p.2) and explain that these arrangements create a visual syntax. Positioning provides traces of ideas which tell a story. According to Kress and van Leeuwen (2006), lines of gaze between people or the position of objects in a photograph or drawing indicate meaning. These are vectors (imaginary lines) showing relationships or associations. As Mavers (2003) concludes, lines and arrows between graphic elements have narratives and conceptual meanings. The directional arrows and spatial arrangements and layout of symbols drawn by children are used in mind maps, which demonstrates the clarity and analytical involvement in children’s thinking. As in writing, lines and arrows ‘punctuate’ images, showing connections between textual elements. The engagement and layout of symbols and artefacts is an essential aspect of learning and has implications for meaning-making.

2.4.4 Transformative engagement

A key concept in the theory of multimodality is how individuals make meaning through transformative engagement. This refers to how meanings may be moved and expressed in a variety of ways:

Arrangements are made by me – as a modal ensemble made for myself and for others – or else someone has made an arrangement as a modal ensemble for me. Arrangements are made as ensembles in a world of movement. I, as maker of meaning move in the world, literally, in different ways, and the world around me is in motion, in constant movement, and more often than not, I move in a world in motion.

(Kress 2010, p.159, original italics)
As Kress (2010) describes, the sign-maker is in constant movement, and meanings are made by individuals to gratify their own understanding of meaning, but also so these meanings can be read by others (see Eco 1984). Learning together is part of that engagement, perhaps becoming part of the socially made world. Bezemer and Kress (2016) elaborate that ‘sign-makers do not “simply” – so to speak – copy, acquire, somehow straightforwardly internalize or absorb signs made by others’ (p.38). Their claim is based on the assumption that the sender-message-receiver model of communication cannot account for the relationship between the sign-maker and their engagement with various modes for meaning-making.

Kress (2010) proposes how relationships are realised by the sign-maker when meanings are moved/reconfigured (using multiple modes for meaning-making). He uses the linguistic term ‘translation’:

Translation is a process in which meaning is moved. It is moved ‘across’, ‘transported’ – from mode to mode, from one modal ensemble to another, from one mode in one culture to that ‘same’ mode in another culture – what has been regarded as translation from one ‘language’ to another.

(Kress 2010, p.124).

Kress (2010) explains there are two kinds of translation: ‘transformation’ (p.129) and ‘transduction’ (p.125). These terms capture the essence of semiotic change, according to Bezemer and Kress (2016), because both kinds of semiotic change frequently occur during the process of meaning-making. They go on to say: ‘inter-modal changes we call transduction and…intra-modal changes we call transformation’ (p.53). I now consider these in more detail.
Transformation

According to Kress (2010), the term transformation (p.124) is a process which involves no change in the modes being used by the sign-maker – just the reordering of the semiotic material ‘from one mode in one culture to that “same” mode in another culture’ (p.124). Kress draws his early ideas on transformation from observations of children who clearly explore this method of meaning-making with objects in their bedroom:

A car made on the bedroom floor by a 6-year-old and her friend. It is made from two wired-mesh drawers, a pillow, a red toolbox, and an assortment of other bits and bobs, passengers included. The toolbox serves as a bonnet, the two flanking drawers are the car doors, the central pillow is the/are the car seats, on which – for a while anyway – the two 6-year-olds were happy to sit. A very short time after I had taken this photo, the car had already been changed beyond its shape.

(Kress 1997, p.31)

Drawing together different resources for children’s play supports children’s learning, as explored by Pahl (1999), who observed children modelling and transforming recycled items into artefacts which carry meaning for the child. The cutting out of the drawn caterpillar from paper (p.40) by one child appears to bring the object to life. This is an important move from the two dimensional to the three dimensional, which demonstrates the process of transformation and reshaping of meaning. By observing these moves, one can gather the thought process of the child. It can be used as a lens for understanding the early literacy practices of young children communicating their ideas. This is the case for all ages, as Bezemer and Kress (2016) state: ‘by implication, when we deal with signs of learning, we absolutely need to consider how learners’ demonstration of learning was or might have been shaped by the modes’ (p.54).
**Transduction**

As quoted above (Section 2.3.6), Lin (2019) observed translanguaging and hand gestures used by students in Hong Kong to better understand blood circulation. Jewitt and Kress (2003) also observe a similar situation with 13-year-olds in a London inner-city school. Here, the teacher explains blood circulation, through talk, through diagrams on the board (modified with arrows to show the direction of blood flow) and through gesturing with his hand to indicate the flow of blood to vital organs. What can be drawn from both examples is the multiple uses of modes and the sequentially unfolding ensemble of modes; speech foregrounded with the image, which is overlaid by gesture. There are several moves as the meanings are transferred through several modes. Bezemer and Kress (2008) state ‘we speak of the move of semiotic material from one mode to another’ (p.176), using the meaning-making practice of transduction. This process aids expression and changes the meaning due to the reorganisation of the entities. Stein (2008) suggests that the process of translation moves along a ‘semiotic chain’ (p.99) and tracking these changes leads to an understanding of how learners make meaning. Stein (2008), in her observation of primary children in Johannesburg, notes that through drama, children began creating narratives and characters that were then moved into two-dimensional drawing and then moved to a written text. These elaborate moves by children suggest the semiotic chain, which leads to meaning-making. Newfield (2009, 2014) develops the analytical concept of the ‘transmodal moment’, used in the examination of transmodal translation, which describes the process of moving meaning through the chains of semiosis. According to Newfield (2014), examining what happens in the transmodal moment enables understanding in shifts in materiality, medium, and genre, as well as meaning, orientation, disposition, subjectivity, identity and affect. Newfield (2014) argues that meanings can be moved into various modes and suggests if there was an area of slippage in Kress’s use of the term
‘transduction’, it is that it does not refer to the distinction between internal semiosis (meanings made cognitively) and external semiosis (meanings made as signs). However, perhaps Siegel (1995) sheds light on this (guided by Peirce and Eco), when she explains the process of a fourth-grade student (aged 9–10) moving across two or more modes to convey his ideas (e.g. from words written on the page to the images of what he has written, and then through his speech and gesture to explain what he means). This illustrates how meanings are made externally in order for others to internally make sense of what is being communicated, so that they may understand the meanings being made. Siegel describes this as ‘transmediation for learning’ (p.456). Siegel argues children use these acts (moving between modes) more easily during play, until they learn how to work out more formal modes used in school, such as writing. Her ideas are pivotal in understanding the benefits of the transmodal moment for teaching and learning rather than a transmission-model of literacy, which she suggests is ‘the “schools” bias toward language’ (p.456). In an educational context, Lin (2019) suggests the term trans-semiotising (the moving between different modes), because the practice mobilises all semiotic resources to co-construct meaning and understanding. Transduction explains how sign-makers transfer between modes to enrich their understanding and others’ understanding. This meaning-making practice may be adopted as a pedagogical tool among teachers but may also be used among learners.

The terms transformation and transduction, as highlighted above, are both useful concepts to recognise. All humans have the ability to use these meaning-making practices and do so in interesting and innovative ways. However, bilinguals have a wider choice of linguistic resources to draw on. They have an advantage over monolinguals in the way they think,
and how they make meaning in their communities, because they can use the practice of multimodal translanguaging.

2.5 Chapter summary

Although there are various perspectives on how meanings are made, this study is concerned with how meanings are made using a framework associated with a social semiotic multimodal perspective which does not give precedence to speech. The overarching research aim of this study is to explore the meaning-making practices of Arabic–English emergent bilingual children in a kindergarten during child-initiated play. Therefore, the first section of this literature review explored early years pedagogy and in particular play. In the following section, I went on to discuss how some international schools shape their language approach and what that means for bilingual pedagogy. Next, I explored the notions of emergent bilinguals and how translanguaging has opened new ways of thinking, culminating in current research regarding translanguaging as a multimodal practice. Finally, I discussed how the transformative engagement of the sign-maker illustrates how meanings are moved along the semiotic chain, highlighting how meanings are made in a variety of ways. Bilinguals have a variety of semiotic resources to draw upon, which I suggest is collectively multimodal translanguaging. I now discuss options for collecting multimodal data and possible methodologies.
CHAPTER 3 Methodology

3.1 Introduction

My overall research aim was to explore the meaning-making practices of emergent bilingual children attending a kindergarten of a large British School Overseas (BSO). I decided to observe their meaning-making practices during child-initiated play independent from adults. This was my overall aim, but I explored their meaning-making practices through these research questions:

- **RQ1** How do these 3–4-year-old emergent bilingual children use spoken English in meaning-making?
- **RQ2** How do these 3–4-year-old emergent bilingual children use their gaze, gesture and engage with their play artefacts in meaning-making?

In Chapter 3, I consider the potential methodological approaches (seeking advice through the literature) before I discuss how I collected my data, in Chapter 4. First, I consider qualitative and quantitative research and methodological approaches within qualitative research (Section 3.2). I discuss a case study approach and provide justification for my use of this methodology (Section 3.3). I begin to explore methods for collecting multimodal data using ethnographic-tools (Section 3.4). I explore the various approaches to multimodal transcription by reviewing multimodal grids, methods of transcription and coding multimodal data (Section 3.5). I then outline ethical considerations when researching young children, drawn from the literature (Section 3.6).
3.2 Consideration of methodological approaches

An approach to research may be based on a qualitative or quantitative paradigm or have elements of both. According to Creswell (2013), it is important to acknowledge the philosophical underpinning of the researcher or what they perceive as the reality of how knowledge is formed. This is the researcher’s epistemological position, which can usually be found in the description of their methodology. The epistemological position of a researcher who draws on conceptual notions of positivism/postpositivism usually uses methods which are experimental or quasi-experimental in nature – perhaps using techniques of randomisation, or blind and controlled trials, with the emphasis on deductive reasoning (Lazaraton 2000, McMillan and Schumacher 2005).

In contrast, the epistemological position of a researcher following a qualitative paradigm implies multiple realities exist based on inductive reasoning (Creswell 2013). Such research tends to be on a smaller scale and in naturalistic settings, using methods of observation which articulate the participant’s perspective. In qualitative studies, methods are usually underpinned by philosophies of interpretivism, which involves the researcher interpreting elements of the study (Aubrey et al. 2005, Hughes 2010). According to Lincoln et al. (2011), these notions are supported by critical theory (shaped by social, political, cultural, ethnic and gender perspectives), social constructivism (local, specific and co-constructed) and participatory theory (subjective–objective reality). Qualitative inquiries focus on how meanings are made and allow for different perspectives to be raised (Berger and Luckmann 2011).

Much of early years research within a qualitative paradigm tends to be underpinned by the academic fields of anthropology, sociology, psychology and philosophy. Dunn (2005)
suggests methodologies of a qualitative nature are preferable in the early years because they are framed using methods that put the welfare of the child first. Experimental designs seem inappropriate for young children. Removal of a child from their naturalistic setting for the purposes of experimental research may cause a child distress, and this may limit the researcher’s understanding of the child’s behaviour. It may also go against the researcher’s ethical practices and principles, and this is clearly an important issue when selecting a research approach. Mukherji and Albon (2010) suggest the most frequently used methodologies within early years tend to be in the qualitative paradigm of ‘action research…ethnography and case study’, usually applying methods of ‘observation…[and] interviewing’ (p.29). However, according to Creswell (2013), there are also methodologies such as narrative research, phenomenology and grounded theory which could equally be considered. My perspective is aligned with my position of how I consider the reality (outlined in Chapter 1). I now justify a case study methodology for this study in line with my position.

### 3.3 Case study methodology

A case study approach to research may be quantitative or qualitative or both in nature. Here I will focus on a qualitative case study approach, as my preference, because it may be used to explore the meaning-making practices of an individual, a group, a community, or an event. The case study approach focuses on a singularity within distinct boundaries; in other words, within set limits guided by the researcher. Creswell (2013) describes case studies as a ‘bounded system’ (p.73). My boundaries are represented by the confines of the kindergarten, the participating children’s meaning-making practices in child-initiated play along with my interpretations of the context.
**Justification of a case study approach**

Understanding the context is critical in multimodal research as it provides the cultural backdrop to how and why meanings are being made. The context is an important feature of qualitative case studies and this is why they are usually conducted in naturalistic settings. According to Stake (1995), ‘certain contexts have been recognized as necessary to understand why the case operates’ (p.123). Vygotsky (1978) suggests there is a need to go beyond the isolated individual when trying to understand human development by exploring individuals in their social context. Kress (2010) also suggests the meaning-making of individuals/communities are never made in isolation from their social context and so a case study approach seems theoretically compatible with a social semiotic multimodal perspective.

Case studies are usually small-scale and non-generalised and use various methods: observation, interviews, use of physical artefacts, analysis of archival records or documents and so on (Yin 2009). Not all methods are equivalent, and careful consideration of methods should be made by the researcher. Stake (1995) suggests the choice of methods should be governed by the ‘choice of what is to be studied’ (p.435). This seems useful to me, as case studies are by their very nature pragmatic because they represent an eclectic style of research (Hammersley et al. 2000). It is the researcher’s responsibility to establish the data collection methods. This flexible approach is a benefit to me as I must be mindful of the ethical implications of researching children when choosing appropriate methods. A case study approach appears to me to be free from prescriptive methods, allowing me to tailor my methods to suit researching young children.
Notions of objectivity, validity and generalisability, which stem fundamentally from the philosophy of positivism (Crotty 1998), are not my objective. Neither is statistical generalisation, as it does not appear to be the main goal of qualitative case studies (Merriam 1988, Stake 1995). Bassey (1999) describes qualitative research studies as being ‘fuzzy’, linking the specific to the general – they are ‘fuzzy generalisations’ (pp.12–14), so if outcomes are not specific, they are therefore not quantifiable. The meanings of young children cannot be quantified and so to me a qualitative case study approach seems preferable. As Denscombe (2014) concludes, a case study approach is used ‘to illuminate the general by looking at the particular’ (p.54) and therefore, these notions seem compatible with my study. Tight (2017) draws the main features of a qualitative case study together in the form of a list, derived from the definitions of several scholars. He suggests there are commonalities across these definitions:

- The study is of a case or several cases.
- The case(s) will be complex and bounded.
- The case study is researched in context.
- The analysis undertaken is holistic.

(Tight 2017, p. 9)

**Types of case studies**

The above list is general to all qualitative case studies, but the type of a case study will impact the outcome. If the main objective of a case study is to uncover the unknown, rather than exploring an established theoretical position, then this will lead to quite a different study. Both approaches are of value, but the studies will differ, according to Hammersley (2012). Therefore, scholars have tried to classify case studies.
Yin (2009) classifies case studies as ‘explanatory, descriptive and exploratory’ (p.21): an explanatory case study is used to test a theory, a descriptive case study to describe a phenomenon, and an exploratory case study to define questions or hypotheses, or to test out a research procedure (as in a pilot study). Stake (1995), on the other hand, divides his case studies into three types: intrinsic, instrumental and collective (p.3). An intrinsic case study involves a single case (an individual, group, organisation, event or other entity) that is to be studied. An instrumental case study is a single case but focuses on the broader phenomenon of the study. The collective case is a phenomenon or theme from across several case studies. Denscombe (2014), however, classifies case studies according to their purpose and outcome (Table 3.1). This classification leads me to believe my case study could be described as descriptive.

Table 3.1 Case-study types

<table>
<thead>
<tr>
<th>Discovery-Led Case Studies</th>
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<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Exploration</td>
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<tr>
<td>Comparison</td>
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<tr>
<td>Explanation</td>
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<table>
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<tr>
<th>Theory-Led Case Studies</th>
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<tbody>
<tr>
<td>Illustration</td>
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<tr>
<td>Experiment</td>
</tr>
</tbody>
</table>

Source: Denscombe (2014, p.57)
Features of qualitative case studies

Yin (2009) suggests researchers should ask ‘how’ and ‘why’ (p.9) when forming their research question, and once these questions are acknowledged, researchers move through a step-by-step process. Merriam’s (1988) approach is underpinned by doing ethnography (see Section 3.4) and argues for ‘thick descriptions’ (Geertz 2003 [1973]). These are detailed accounts of field experiences in which the researcher makes explicit the patterns of cultural and social relationships in context to illustrate the phenomena. Merriam recommends methods of interviewing, observation and collection of documents to provide multiple forms of data used, which she describes as the triangulation of methods to ensure a detailed chain of evidence. Merriam suggests this leads to developing conceptual categories indicated by the data through recurring regularities.

Bassey (1999) suggests a case study approach in education should start with the identification of a problem. Bassey incorporates the concept of generating ‘analytical statements’ (1999, p.70), which are written by the researcher from their interpretation of the data. This is not a prescriptive process following specific procedures, as suggested by Yin (2009) and Merriam (1988), but a bottom-up approach to exploration of the data – an approach which acknowledges the importance of the context.

While Yin (2009), Merriam (1988) and Bassey (1999) have made an important contribution to case study methodology, it is worth noting that Yin’s approach is not derived from educational research. Merriam (1988) is structured and specifically aligned with ethnography, and Bassey’s (1999) analytical statements may be significant to one researcher but not to another. Stake (1995), on the other hand, is specifically attuned to educational contexts, and his approach appears more flexible in style, which I favour. He is
not aligned with any form of structure and suggests the researcher should be alert to methods which may not necessarily fit into a particular style, but which offer the best solution to answer the research question. Referring to the ‘arbitrariness of the methods’ (p.29), Stake believes the approach is unique to each situation, thus his definition of a case study suggests use of eclectic methods, yet it is not without rigour. There is total flexibility, and this became a key issue for me when I decided to be guided by a social semiotic multimodal perspective.

3.4 Collecting multimodal data: using ethnographic-tools

Classrooms are complex settings offering individuals potentially numerous ways of meaning-making, and so it is important to decide which methods are most appropriate to capture this practice. Firstly, I wished to explore children’s meaning-making practices during their child-initiated play, and secondly, the children’s contextual surroundings, which might support my interpretations during multimodal analysis.

I decided to look for methods that would allow me to collect multimodal data, offer flexibility and illustrate a human social activity within a culture. Flewitt suggests: ‘the combination of ethnography with multimodality reveal[s] multiple layers of socially situated meaning-making’ (p.298). I therefore explored Green and Bloome (1997), who describe three ethnographical approaches in educational research:

1. Doing ethnography.
2. Adopting an ethnographic perspective.

(Green and Bloome 1997, p.83)
With its roots in anthropology, ethnography is a transdisciplinary approach which, according to Green and Bloome, ‘has become a resource for a broad range of people including social scientists, teachers, students, and everyday members of society’ (p.181). Hammersley and Atkinson (2007) concur that ethnography is not rigid or set, and researchers tend to explore small social groups by examining their practices.

In Green and Bloome’s list, doing ethnography refers to a full-blown, long-term study, where it may take several years to achieve an understanding of a society or practice. It ‘involves the framing, conceptualizing, conducting, interpreting, writing, and reporting associated with a broad, in-depth, and long-term study of a social or cultural group’ (p.183).

In contrast, adopting an ethnographic perspective uses ‘theories of culture and inquiry’ (p.183) on a specified group/community and their cultural practices. Yet it is Green and Bloome’s ethnographic-tools approach which appears to me to be more flexible and better suited to multimodal data collection. The researcher adopts some of the key principles of ethnography without spending long periods of time in the setting or becoming a member of the subjects’ community, as specified to be an important feature of ethnography (LeCompte and Schensul 2010, Denscombe 2014).

Nonetheless, I am mindful of the underpinning philosophy that ethnography explores. I am aware the stance of an ethnographer should be made explicit to participants. The researcher should be both ethical and reflexive on their position and acknowledge their influence on the research by noting their own beliefs and values, which may add bias to their interpretations. I also like the idea that ethnography is widely used as an approach in early years education (James 2001, Buchbinder et al. 2006), because it prioritises the welfare of the child and this
to me is essential. I therefore chose the approach of using ethnographic-tools on the grounds that it is conducive to qualitative data-gathering within a naturalistic setting, puts the welfare of the child first and may be used within a case study approach. Further, not only is it compatible with a qualitative case study methodology, but also it is not tightly bound to any particular theory and therefore is suited to a social semiotic multimodal perspective.

3.4.1 Observational stance

Early years settings use observation as a practical tool to support teachers’ understanding of children in their care and to inform plans for their future learning. A researcher, on the other hand, uses observation to explore human behaviour or phenomena and this became my main ethnographic tool to collect the meaning-making practices of children during child-initiated play.

Mukherji and Albon (2010), while discussing observation for research, list what could be considered as essential contextual information – in particular, the child’s age, gender, languages spoken, the date and time. They suggest noting the number of adults present during an observation, the artefacts used by the child, and the location of the observation. Common to ethnographic research is human observation, but it is usual to reduce the impact on those being observed, particularly with young children (Rolfe and Emmett 2010, Sylva et al. 2010).

In ethnography, a researcher seeks to understand the participants through being involved in their day-to-day routine, termed ‘participant observation’ and defined as falling within the range of ethnographic-tools (Green and Bloome 1997). However, according to Mukherji
and Albon (2010), there are degrees of participant observation and these are summarised by Angrosino (2007) in Table 3.2.

Table 3. 2 Observational stance

<table>
<thead>
<tr>
<th>Observational scale of participation</th>
<th>Researcher stance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete-participant</td>
<td>Researcher is totally immersed in the community and does not disclose their position.</td>
</tr>
<tr>
<td>Participant-as-observer</td>
<td>Researcher is immersed in the day-to-day life of the participants and the researcher's position is disclosed with consent.</td>
</tr>
<tr>
<td>Observer-as-participant</td>
<td>Researcher interacts with the participants on specific occasions to conduct their research, with consent.</td>
</tr>
<tr>
<td>Complete-observer</td>
<td>Researcher collects observations from a distance with no involvement or disclosure of their presence.</td>
</tr>
</tbody>
</table>

Source: Angrosino (2007, p.6)

There are advantages and disadvantages along this scale of participation, but the main discussion points appear at the outer edges of the scale. At one end, the participants do not know they are being observed, which is considered unethical, but the research is likely to yield detailed descriptions and inside knowledge. At the other end of the scale, reduced participation may provide an objective view, but the very unobtrusiveness of the observer means that participants may still be unaware they are being observed, which is also unethical. Caution is necessary, not only regarding the ethical boundaries but also how the researcher could influence the data. Therefore, I decided to take the stance of observer-as-participant by gaining assent from the child and minimising the risk of becoming involved in the child’s meaning-making. I did not want to collect data where I was co-constructing meanings with the child, because this would not be considered child-initiated play.
3.4.2 Data supporting multimodal analysis: contextual data

Jewitt and Kress (2003) suggest that videoed evidence documented via digital equipment (panning video shots and note-taking of the areas in the classroom) supports observations and multimodal analysis. Flewitt (2011) collected details of the setting she was researching through a video still during her observation of Edward, a four-year-old boy playing at the computer in a nursery. These pictorial details informed her multimodal analysis, but Flewitt would also situate herself within the setting among the participants, listening and observing: ‘the ethnographic approach of getting to know the practices and beliefs from participant perspectives by spending extended periods of time in the setting informed the interpretation of this video still’ (p.301). In other words, drawing upon the contextual information may support the interpretation of the multimodal data. The use of visual (video/photography) methods – to note the setting, particular artefacts, and position of individuals around the room – adds to the contextual information and provides far more detail than handwritten notes.

Talking to children

The meaning-making practices of children during play may not, to the adult, be easily discernible in every instance. Clark and Moss (2011), inspired by the Reggio Emilia approach in northern Italy (Section 2.2.1), developed a framework known as the Mosaic approach for children, designed ‘to include young children’s views’ (p.15). This framework was used in their study evaluating the network of services for children and families. Their approach was based on the principle that children played active roles as researchers; they had agency and ideas of their own. Clark and Moss describe how they used informal methods to ascertain the views of three-year-olds on their outdoor play space, and they called this method child conferencing. They set up an appropriate area to
talk to children: ‘a table was set out in the corridor, a popular place in the nursery, with
doors open into the courtyard’ (p.19). They acknowledge that not all children are interested
in talking, and so for some children, research conversations are best conducted on the
move as they play. Child conferencing can be achieved using outdoor spaces, which are
particularly favourable for boys who are active, but it appears that all spaces are of value
when children are engaged in play, and this approach seems less formal and more
consultative. I therefore used this approach to talk to children about what they were doing
and named this as a child conversation, as the term interview seemed too formal and less
appropriate for children.

**Interviewing adults**

Interviewing is not the principal method of data collection in studies associated with
multimodality. Most data are collected through visual/audio recordings, observing *in situ,*
and analysing each mode in meaning-making. Nevertheless, interviewing is valid to
establish contextual information. Johnson and Christensen (2008) refer to interviewing as a
method of data collection which may contribute to the understanding of participants’ views
and feelings. Interviewing parents about their child may add to the contextual information
on the child being observed. These conversations reveal details about the child’s life, likes
and dislikes, or about aspects of their play. Interviewing teachers, on the other hand,
provided details about the school, such as what children liked to play with and what the
teachers observed children doing.

Structured interviewing, using closed questioning techniques, may not always open the
conversation with participants or lead to new ideas being explored. Such interviewing
techniques are impersonal and more appropriate for large-scale studies and quantified data
that may be considered similar to that of questionnaires (Denscombe 2014). Stake (1995) considers that a researcher should have a plan of the kinds of information of interest, but also advises that interviews are complementary to direct observational data and should not be the main feature of a case study. An appropriate approach appeared to be semi-structured questions, which may be adapted on account of the information a researcher receives, leading to unstructured interviewing. Open-ended questions may lead to new understandings – a valuable insight when gathering information when interviews are not the primary source of data. The focus, as described by Robert-Holmes (2011) should be on the participant: ‘the role of the interviewer is one of facilitator’ (p.149). The stance should be one of listening to the perspectives of the participant.

Usually, researchers on small-scale social research projects transcribe the interview data and send it back to the participant for checking. This validates the interview responses and contributes to building trust with the participant (Denscombe 2014, Smith 2014). I shall now turn to multimodal transcription.

### 3.5 Multimodal transcription

#### 3.5.1 Digital data

Holm (2014) explains that many methodologies now use digital equipment to capture both audio and image. This has opened new ways of recording information and is particularly useful when capturing multimodal data that requires fine-grained analysis of each mode used by the sign-maker. The speed of multimodal communication would be difficult to explore using the naked eye, or pen and paper, if micro-analysis is required. A video camcorder or digital camera, together with a digital audio recorder, is particularly useful in
multimodal analysis. Each mode can be singled out; it can be saved, reviewed repeatedly, and video can be slowed down and stopped. It is useful to educational research because it may capture the ‘traces of the teaching and learning’ (Jewitt and Kress 2003, p.280) by shedding light on all aspects of the sign-maker’s meaning-making practice.

Audio and image

Flewitt (2006) argues if the researcher focuses exclusively on audio recording, they cannot see other modes being used by the sign-maker. In subsequent research, Flewitt (2011) challenges language-biased approaches and suggests collecting data by capturing both visual and audio data is highly beneficial. She compares the transcription of audio data in an ethnographic study with multimodal data derived from video. Flewitt suggests the latter is far more detailed, providing a holistic overview capturing the interaction of children. It is clear from her account that if only audio was used, the sequenced action of pointing and gaze would be lost. Lancaster (2007) concurs that by examining second-by-second images of a video recording, one can understand the representational and communicative activity of a participant in considerable detail.

Although the principal technology of preference for multimodal data collection is video, there are disadvantages. When held by an individual, camcorders do not easily follow sudden movement. In addition, audio data may be lost or reduced if microphones on camcorders are not sensitive in noisy, busy places such as classrooms. Most video analysis is achieved by stills (frame-by-frame review), which repetitive photography may also achieve and serve to highlight an aspect of the action. According to Holm (2014), photography seems to be an alternative to video in methodologies associated with ethnography. It is a method I favour because it seems less intrusive to participants and
significantly more practical to the researcher, as the camera may be moved into different angles as the researcher walks through the setting to observe the participant’s action. That being said, Holm (2014) elaborates the challenge of photography, suggesting at one time photographs were thought to portray a reality. This assumption is contested by Holm, who suggests photographs are constructs of what is perceived as the reality, as photographs are made by the researcher. The important thing is that this is acknowledged and taken into account.

3.5.2 Mapping multimodal data

Flewitt (2011) suggests multimodal transcription ‘is a transduction of data collected in diverse media and presented anew in written format’ (p.302). Meanings are moved to a digital image and audio, which is moved again to paper as a two-dimensional artefact. A multimodal transcript is useful to make representations of what is observed and aids the researcher so that the analysis may begin, but Lancaster (2007) remarks that multimodal transcription is very complex in nature and time-consuming to prepare. While Lancaster agrees transcripts are useful artefacts to elucidate a meaning-making practice, she also warns ‘it might be a step too far to say that such analysis provides a direct window onto the children’s thinking, it does nevertheless provide some very sharp insights into their intentions’ (p.128). Transcription is an interpretation of what is thought to have occurred, mapped out by the researcher in a format that can be referred to or read by others.

Multimodal transcripts are always produced in ways that represent multiple modes as used by the sign-maker. This is in contrast with conversation analysis (CA), an approach which studies social interaction, but in ways which prioritise speech. Norris (2006) questions this notion of prioritising speech by exposing the possible shortfall of this form of analysis.
because it does not illustrate the full communicative value ‘by simply investigating the verbal exchanges’ (p.407). Multimodal interaction analysis (Norris 2004) is a holistic methodological framework that allows the researcher to analyse the data by integrating in one transcript the modes of interest being used by the participants. In her attempt to question verbal-only traditional forms of transcription, Norris (2004, 2006), during her transcription process, lays speech over the top of a still video image, frame-by-frame. I liked this idea but believed it would be difficult to achieve with many children and their overlapped speech. Norris represents speech as wavy lines to indicate how speech is emitted from the individual speaker; this is her interpretation with none of the usual transcription conventions. Norris (2006) highlights through her transcription that a multiparty interaction is coordinated co-constructed practice, where humans juxtapose multiple modes to articulate their meanings ‘instead of viewing social actors as performing one-thing-at-a-time’ (p.402). Motivated by her interests in proxemics, posture, gesture and gaze, Norris’s transcript presents the action as a coordinated effort by the participants as the interaction unfolds (Figure 3.1).
Doorway to assistant’s office: typing and fragments of talk can be heard.

Figure 3.1 Multimodal transcription as a series of interactions

Source: Norris (2006, p.405)
Speech and its features have traditionally been central in transcription, but researchers are learning to adapt, distancing themselves from certain traditional conventions (Goodwin 2001, Heath et al. 2010). Multimodal transcription seems to reflect the interests of the researcher, like any transcription process. Ochs (1979) therefore reminds us that transcription methods are subjective and based on a researcher’s theoretical positioning.

In respect of multimodal methods of transcription, modes of interest to the researcher are mapped onto a multimodal grid, but priority will be given to a key mode which all other modes follow, to aid transcription. Flewitt et al. (2011) call this the ‘anchor mode’ (p.48), because this is the primary mode of interest to the researcher. Lancaster (2007) explores the graphic marks of children under three years old and uses the gaze direction of the participants as the anchor mode (Figure 3.2). During this event, the child (Ruby) begins to draw a dress, and her gaze direction appears to be the main mode for analysis. The gaze direction of the child generates a longer temporal timeframe (the length of time can be seen on the left-hand side of the first column), and the other modes move quickly in succession (Figure 3.2). Lancaster’s modes of interest move horizontally and sequentially across the multimodal grid, but the modes seem to have their separate linear journeys, and the overall orchestration can only be gained from her written explanation.
<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
<th>Gaze</th>
<th>Language</th>
<th>Marking Action</th>
<th>Gesture</th>
</tr>
</thead>
<tbody>
<tr>
<td>0:00</td>
<td>To bottom page</td>
<td></td>
<td>M: pretty yellow dress can't you</td>
<td>Short, yellow horizontal line drawn L to R</td>
<td>R: Deictic indicating mark</td>
</tr>
<tr>
<td>0:02</td>
<td></td>
<td>R: that's a bit of the dress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:04</td>
<td></td>
<td></td>
<td>M: yea goin to draw some more dress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:07</td>
<td></td>
<td>R: that's her [unclear] of her dress and</td>
<td>Short, yellow horizontal line //</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:08</td>
<td></td>
<td></td>
<td>and under first</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:09</td>
<td>head lifted</td>
<td></td>
<td>R: there's her head</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:09</td>
<td></td>
<td>on page</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:10</td>
<td></td>
<td>To top page</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:10</td>
<td></td>
<td>To centre</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:11</td>
<td></td>
<td>To R centre</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:12</td>
<td></td>
<td>To L on pens</td>
<td>M: her head you going to draw her head at the top</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:13</td>
<td></td>
<td>In centre on pen and mark</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:14</td>
<td></td>
<td>On pen moving to top</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:14</td>
<td></td>
<td>On top image</td>
<td>Small clockwise ovoid in top right</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:16</td>
<td></td>
<td></td>
<td>M: with some pretty hair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:18</td>
<td></td>
<td></td>
<td>M: is that her face</td>
<td>Yellow travelling zigzag L to R across top of ov Cad.</td>
<td></td>
</tr>
<tr>
<td>0:21</td>
<td></td>
<td>R: hair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:22</td>
<td></td>
<td></td>
<td>M: that's lovely hair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:23</td>
<td></td>
<td>R: she's got pink she's got</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:25</td>
<td></td>
<td>To bottom R</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:26</td>
<td></td>
<td>To L Centre</td>
<td>R: she's got</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0:27</td>
<td>Head lifted gaze ahead</td>
<td></td>
<td>R: big hair</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M: she has she's got really beautiful hair hasn't she</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3.2 Using gaze as the anchor mode**

Source: Lancaster (2007, p.150)
Flewitt (2011) uses multimodal transcription to scrutinise how and why each mode is used by a child in meaning-making, as seen in Figure 3.3. In her multimodal transcript, four-year-old Edward interacts with other children by instructing them how to use the nursery computer. He uses indexical gestures to generate meaning and guides the other children. Each mode used by Edward is executed with remarkable precision and appears to play a role in meaning-making for the child. Flewitt, through her transcription, reveals how these modes work together, or what Kress (2010) describes as the ‘modal ensemble made for myself or for others’ (p.159); in other words, as the arrangement of modes for meaning-making. Flewitt does not show a still image of the child’s action but decides to write a summary, perhaps due to reasons of publication, as images make documents data-heavy, but more likely for ethical reasons. The speech and sounds of the children are placed in the last column of her transcript. Perhaps Flewitt was keen to highlight the child’s action, noting speech was not always central to the role of meaning-making: ‘when helping a child complete a jigsaw puzzle, speech might be used to discuss the images on individual pieces, but pointing gestures might be more apt for indicating where a piece is located in the puzzle’ (p.295).
<table>
<thead>
<tr>
<th>Line no &amp; Time</th>
<th>Participant</th>
<th>Gaze direction</th>
<th>Action</th>
<th>Language/Sounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>48:18</td>
<td>on-screen</td>
<td>screen</td>
<td>teapot automatically pours tea in cup</td>
<td>Congratulations! Now the tea is ready to drink. (slurping sound effects, um hum) That was a delicious cup of tea!</td>
</tr>
<tr>
<td>48:38</td>
<td>Screen</td>
<td>screen</td>
<td>returns to menu, offering four game options</td>
<td>now yeah ( ) make toast</td>
</tr>
<tr>
<td>48:38</td>
<td>Edward</td>
<td>screen</td>
<td>points towards on-screen icons</td>
<td></td>
</tr>
<tr>
<td>48:44</td>
<td>Chrissie</td>
<td>screen</td>
<td>uses mouse to click on toast icon</td>
<td>Use these things to make some toast.</td>
</tr>
<tr>
<td>48:55</td>
<td>Edward</td>
<td>screen</td>
<td>points to bread icon</td>
<td>first bread</td>
</tr>
<tr>
<td>50:00</td>
<td>Chrissie</td>
<td>screen</td>
<td>holds mouse but does not click</td>
<td>first get some bread ( ) then it toasts out</td>
</tr>
<tr>
<td>50:00</td>
<td>Edward</td>
<td>screen</td>
<td>scratches head</td>
<td>( ) no click on</td>
</tr>
<tr>
<td>50:00</td>
<td>Chrissie</td>
<td>screen</td>
<td>holds mouse but does not click</td>
<td>Use these things to make some toast. What do you do first?</td>
</tr>
<tr>
<td>50:00</td>
<td>Edward</td>
<td>screen</td>
<td>leans forward, points to toaster icon</td>
<td>now ...click on</td>
</tr>
<tr>
<td>50:00</td>
<td>on-screen</td>
<td>screen</td>
<td>leans forward and points to plate &amp; knife icon</td>
<td>Take the toast out of the toaster.</td>
</tr>
<tr>
<td>49:10</td>
<td>Younger boy</td>
<td>screen</td>
<td>wanders in, leans on desk to left of Edward</td>
<td></td>
</tr>
<tr>
<td>49:10</td>
<td>Edward</td>
<td>screen</td>
<td>twiddles hairs</td>
<td>(sound effects as toast moves on screen)</td>
</tr>
<tr>
<td>49:10</td>
<td>Chrissie</td>
<td>screen</td>
<td>clicks on toaster</td>
<td>What will you do now?</td>
</tr>
<tr>
<td>49:10</td>
<td>Screen</td>
<td>on-screen</td>
<td>toast leaps from toaster to the plate</td>
<td></td>
</tr>
<tr>
<td>49:10</td>
<td>Younger boy</td>
<td>on-screen</td>
<td>moves behind Edward and Chrissie</td>
<td></td>
</tr>
<tr>
<td>49:10</td>
<td>voice&amp;print</td>
<td>voice&amp;print</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3.3 Centralising the action

Source: Flewitt (2011, p.304)
Baldry and Thibault (2006), on the other hand, writing from the theoretical perspective of multimodal discourse analysis (MDA) rooted in Hallidayan semiotics, suggest: ‘there are many other resources that can be used to create texts in addition to the spoken and written word’ (pp.1–4). Their multimodal texts comprise Roman script, gesture, music and movement. Their preference is always to place the image first on the left-hand side of their multimodal grid. This, they suggest, shows the significance of the visual-mode from which all other modes follow. Jewitt and Kress (2003) illustrate the multimodal instruction of a teacher in a science classroom. Their multimodal transcripts include reproduced still images from video, drawn illustrations, speech and the annotated action of the teacher all placed in separate text boxes. They too place image first, because they do not want to prioritise speech, arguing that speech is not the main mode used for teaching, and this is a view with which I concur.

As noted, there are many designs, but I adapted a grid similar to Lancaster’s (2007) (as seen in Figure 3.2). I took some examples of this approach and decided to utilise this method in designing my own multimodal grid (Section 4.6.1). While her transcripts represent gaze in the first column, my own ‘anchor mode’ was both the image (photographed action) and speech. In this sense, I was following Baldry and Thibault (2006), who prioritised the visual image in their first column, because my intention is to place the focus on the action of the child.
3.5.3 Steps to multimodal transcription

As each mode is transcribed, this enables the researcher to unpick the action of the sign-maker and to explore how the sign-maker uses several modes – or ‘orchestrating ensembles’ (Kress 2010, p.162) – for meaning-making. These relationships of modes provide vital clues as to how the sign-maker makes meaning. The relationships are defined by the term ‘intersemiotic relationships’ – in other words, how modes relate to each other. O’Halloran (2003) called this ‘intersemiosis’ (p.337), while Cowan (2014) suggests modes are analysed by looking for particular patterns among modes as they are orchestrated in interaction.

Bezemer and Jewitt (2010) go through certain steps with multimodal transcription during the analysis stage. **Step 1** is to begin by collecting and logging data. Once modes of interest have been established by the researcher, the material can be reviewed. **Step 2** is the process of repeatedly viewing and reviewing the digital data. Bezemer and Jewitt explain that to prise open the multimodal data, they watched video recordings with sound and image and then just image with no sound (fast forward, slow motion, etc.). **Step 3** is the selection of video data into critical incidents (though I have named these ‘multimodal events’ see Section 4.6.5) for detailed analysis. This is difficult to achieve due to the sign-maker’s simultaneous use of modes for communication. **Step 4** is transcribing and analysing data onto a multimodal grid and coding.

Transcripts are likely to generate large documents, and therefore to unlock the data these transcripts are cut into more manageable sections. This may have originally been achieved
at the reviewing stage (Step 3). Other researchers may transcribe large volumes anticipating areas which seem of interest – ‘critical incidents’, as suggested by Bezemer and Jewitt. In Step 4, the data requires some form of coding to make sense of it.

3.5.4 Coding multimodal data

As Saldaña (2009) explains, ‘coding…is intended as a “first draft” followed by a “revised draft”’ (p.193). In his view, ‘how you perceive and interpret what is happening in the data depends on what type of filter covers that lens’ (p.7). Bazeley (2013) concurs with this advice, regardless of the area of research, because this is the researcher’s motivation for the interpretation of the data: ‘before you start, remind yourself of the aims and objectives for your project’ (p.142). So, handling the data and coding it manually requires a methodical approach in the researcher’s theoretical understanding and their consistent use of codes throughout.

Charmaz (2012) explains that in grounded theory the process of axial coding is used as a comparative, iterative and interactive method of analysing data. Codes are ‘short labels that we construct as we interact with the data’ (p.5). Grounded theory can be adopted by researchers who hold different theoretical perspectives, because codes are just labels generated by the researcher and based on the data. Grounded theory can therefore help a researcher with multimodal data as they can begin to think about why data is presented in such a pattern, particularly with regard to the combinations of mode (ensembles of meaning) as used by the sign-maker. Researchers may begin by interrogating and questioning the data as it is placed on a multimodal grid.
3.6 Ethical considerations

Safeguarding children is the first and foremost responsibility of the teacher. It represents the largest section in the EYFS Statutory Framework (DfE 2017). It outlines the requirements for children’s protection, suitable people that may work with children, and the suitability of environments and equipment for children. There are also measures for inter-agency collaboration in the UK to ensure that children are safeguarded and that all individuals working with children have clearance from the Disclosure and Barring Service (DBS), where records are checked for any criminal convictions and cautions.

However, the rights of children in other countries are governed by their own laws. Egypt has laws on safeguarding children at school, governed by the Ministry of Education Egypt (MoEE). In addition, the Geneva Convention (Pictet 1952), signed by Egypt, safeguards children under 15 years during times of war. However, it is the United Nations Convention on the Rights of the Child (UNICEF 1989) which acts as the global document that specifies children’s rights and a child’s right to an education.

It is the British Educational Research Association (BERA 2018 [2011 at the time of this research]) which provides educational researchers with ethical guidelines. Founded in 1974, BERA aims to inform educational policy through funding educational research projects. It also provides information on ‘ethical best-practice’ though a series of case studies. The ethical guidelines from 2018 are accessible to all educational researchers online and are regularly updated.
Researchers conducting research as part of a university research community must also obtain permissions through university research institutions as part of a process of ethical approval (see Appendix E for ethical clearance of this study).

3.6.1 Informed consent

BERA (2018) recommends children under 16 years should have written consent from their parents to participate in research studies. Robson and McCartan (2016) add that participants need time to think about all the features of the research and how it will affect them. Should they wish to withdraw, they should be given every opportunity to do so before and during the study.

I made parents and children aware of their right to withdraw at any point during the study without repercussion, in accordance with the BERA guidelines. I spoke to families of their rights and informed them in writing, both in Arabic and English. Although parents in this study did not officially withdraw, one child did not appear to enjoy the observations during Term 2, and so I did not ask him to re-engage in the study and parents appeared content with this decision.

There are also generic issues concerning bilingual contexts where consent is required from those whose first language is not English and/or may not be literate. Sending letters to parents requires prior thought from the researcher who is not originally from that community. With bilingual communities, care should be taken with language choice and issues of translation and choice of translator. Also, who will conduct the research must be
considered – whether a community representative or the researcher who is not part of the community, who will be seen as an outsider (Hellawell 2006, Chawla-Duggan 2007).

Society in Cairo is principally conservative, and therefore most important decisions, as with all patriarchal societies, are taken by men. However, decisions regarding children, education and family life are often taken by women. According to Ibrahim (2010, unpaginated), these different roles in Egypt are deeply ingrained in the minds of generations: ‘most women have been taught that their main place is in the home’. A female teacher/researcher may appear at first glance to be in a good position to research families in Cairo. However, Ryan et al. (2011), while examining how non-Muslim researchers negotiate their position as outsiders, suggest ‘in so doing, we analyse the complexity and multiplicity of identities and positionings and suggest ways in which religion, ethnicity, gender and age may impact on the research process’ (p.49). By addressing these issues, the researcher may take a reflexive stance, critically examining how their views may impinge on the research.

As with most female or male western English-speaking early years professionals, it is therefore important to be reflexive and consider the ethical dilemma of relative status as an outsider which may adjust the balance of power. To counteract the imbalance of power between the participant and the researcher/teacher, Maiter et al. (2008) suggest a researcher/teacher may consider, as an appropriate stance, becoming an active member of the community they are researching.
Language also plays a critical role in how a researcher gains access and consent. Haeri (1996) explains that women in Cairo are not in general an uneducated, stay-at-home group of individuals, and researchers should not make assumptions. For example, Haeri indicates that among the upper class in Egypt, most women speak English. Nevertheless, one must remain mindful of various boundaries (religion, ethnicity, gender and age) when developing trust among communities to gain consent and access to their children for research purposes.

An English-speaking teacher may then represent both an \textit{insider} as part of an international school but also culturally an \textit{outsider} to the community. Awareness of this and the assumptions of one’s own position is an ethical stance typically gained through being culturally aware of the group being researched. However, Minkler (2004) warns: ‘our notions of participation must be flexible enough to consider the culture and social environment of the community members with whom we work and to reflect critically on our own role as outside researchers’ (p.692), The researcher as outsider must consider a reflexive stance necessary to bring together innovative ways to gain access through trust and bring balance to the research.

3.6.2 Anonymity

BERA Ethical Guidelines (2018) stipulate participants should have their identity removed from any data that is publicly viewed. It is commonly understood that good practice is to remove the names of places and of participants in the study. Providing a pseudonym is a good way to ensure the participant and the location are not identifiable. Most often,
children are invited to choose their own pseudonym. MacNaughton et al. (2007) suggest this creates a sense of a child’s own identity and is good ethical practice.

Robson (2011) states that visual material of any kind is ethically problematic because of the recognition of distinctive facial features of young children and their school clothing. He advises children may still be recognised when they reach adulthood, and so this demands particular action on the part of the researcher, to disguise all possible features that would expose the identity of the participant. Even with parental consent, it is ethically advisable to hide the faces of children in photographic imagery by reducing the pixels, ‘blobbing’, ‘blurring’ or ‘fuzzing’ out certain features. There are some losses with this, particularly with multimodal data (e.g. a child’s gaze). However, the loss of some data is preferable to putting the child at risk (Flewitt 2005b). Somekh and Lewin (2005) offer the practical suggestion that once a still image is documented, dotted lines or arrows may be used to indicate certain features such as the gaze and movement of participants. Payler (2007) used pencil drawings to outline a child’s body position and gaze.

All children and parents in this study remained anonymous, and pseudonyms were chosen by the parents and children. Teachers and TAs chose their own pseudonyms. ‘Valley Hill’ is a pseudonym, chosen by me to reflect the essence of the school. As a standard school procedure, parents could decide whether they wanted their child to opt in or out of any photography or video material collected by the school. For my research, parents and Egyptian staff discounted the use of video from the start, but they accepted photography. I wrote to parents in Arabic (first) and translated this into English, requesting consent to
record their child’s speech and take photographs of their child during my research. I reassured parents their child would be anonymised in any photographs by ‘fuzzing out’ or ‘black/blue blobbing’ facial features and removing identifiable information on their child – a common aspect in most visual research. I debriefed parents and children at the end of the research and gave them copies of transcripts and photographs of their child, taking care to remove data on other children (Section 4.5.6).

The research also complied with the legal requirements of the Data Protection Act (1998), which at the time of this study was UK statutory law, as well as following legal frameworks found in Egypt as advised by the school secretary. Parents had full access to the information kept about their child. I kept transcriptions, audio recordings, photographs, and all confidential files on my laptop with password access. I locked my laptop in a wooden box while in Egypt and only I had the key. Giving parents access to their child’s data proved useful, as parents provided additional insights into their child which I may have overlooked (Section 4.5.4).

Since my return to the UK, I have maintained safeguarding of all material with passcodes. I am registered with the Information Commissioner’s Office (ICO), DBS-checked and I am an Ofsted registered childminder. I continue to follow the guidelines stipulated by the Data Protection Act (2018) of the General Data Protection Regulation (GDPR), which suggests individuals must ensure the information they hold is used fairly, lawfully, and transparent. I will keep this data no longer than is necessary.
3.6.3 Data storage and access

Holm (2014) explains methodologies using digital technology can offer advantages to researchers but keeping digital images may be problematic. In the UK, when using images of young children, most institutions must register with the ICO and declare whether they hold sensitive data, particularly photographs of young children. There are arguments that academic researchers may need exemption from some of the guidelines (e.g. length of storage or the retrievability of identifying characteristics of children), and this requires permissions from the governing ethics committee of the academic facility.

BSOs in Egypt do not follow UK law, but consent to take photographs and store these is gained from parents as a matter of school policy and good practice. Nevertheless, in circumstances where the law of a country is undecided on such matters, it is the responsibility of the researcher to adopt an ethical stance and follow the recommendations set by BERA or a similar professional body, as well as the requirements of their institution’s own ethics committee, in this case, the Open University’s Human Research Ethics Committee (HREC).

Children’s activity during play is often photographed and should adhere strictly to the GDPR, and permission from parents must be obtained for assessment practices in the UK. This is no different at Valley Hill and becomes part of assessing children in the early years, which provides teachers with the knowledge to enhance children’s next steps. Most children had been told that teachers take photographs and that it would become part of that child’s recorded learning. Nevertheless, photography and the unusual addition of recording
a child’s speech raise certain ethical implications. Even after parental permission had been granted, I had to be sure children were comfortable with the camera and audio recorder.

3.6.4 Putting the child first

Ethical considerations are the most central caveat in all matters when researching children. The moral duty of the researcher is to develop methods which put children first (Aubrey et al. 2005). Researchers should be particularly mindful when researching very young children because there are several ethical matters to consider. Young children’s ability to participate as legitimate informants is readily acknowledged by Clark and Moss (2011), because children demonstrate a remarkable quality for taking control of their own ideas and must be permitted by adults to use their voice (as identified by UNICEF 1989, Article 12). Clark and Moss (2011) suggest methods of talking to children as an example of putting the child first, where hearing the child’s voice is paramount. The voice and views of children regarding their meaning-making practices at school are therefore essential.

Children may wish to talk to adults about their ideas and activities during play, and this adds to the richness of data. Although a parent may have consented to the research, it is ultimately the child that gives assent (Coady 2010). As Langston et al. (2004) demonstrate, a child may refuse to engage with the researcher or the materials by turning their face away, crying or becoming very quiet (Section 4.5.3). Before children were observed, I always spoke to them to gain assent, telling them the purpose of the photographs and audio recordings. However, the power dynamics between children and adults may not always be felt as equal, from the child’s point of view (Alderson and Morrow 2011). I was mindful of
the power imbalance between adult and child and the implications these relationships may bring. To counterbalance this, I gave the recording equipment to the child being observed during home visits and to other children in the classroom who showed an interest (Section 4.5.4). I have several photographs and transcripts of children playing with the equipment and wanting to take part. I tried to create a safe and fun space for children, so they felt empowered to refuse at any time.

3.6.5 Developing reflexivity

Reflexivity is a research practice developed from anthropology as an ethical and self-critical stance in which the researcher reflects upon all aspects of the research process. The process of contemplating one’s own position in relation to the research is to question the reality of knowledge as one sees it, the choices of a methodology, and decisions as to which methods are ethical and put the welfare of the child first. This involves examining one’s own assumptions and preconceptions, which may affect research decisions (Etherington 2004, Lincoln et al. 2011).

Researchers need to weigh up issues resulting from their chosen methods and their own ethical stance. This idea is reiterated by Chiseri-Strater (1996), who recommends that during the data collection phase, a social researcher employing observation as a method must be aware of their presence. For example, participant observation may affect the participant’s behaviour in some way (Labov 1972). Part of this process is examining your relationship with the participants and viewing these relationships during the observation process. The emerging consensus advises that a reflexive researcher acknowledges those
being studied, provides integrity to the research process and remains contextually situated (Charmaz 2008, Coady 2010).

3.7 Chapter summary

Educational researchers face a choice between quantitative and qualitative paradigms, but the prevailing practice of early years research seems to favour qualitative research designs. There are various qualitative methodologies open to the researcher, but a case study design offered flexibility and supported different theoretical perspectives and various data collection methods. Case study methodology using ethnographic-tools with a multimodal perspective on how individuals make meaning appeared to be a ‘good fit’ with my research, and linked culture and social activity. It seemed to me that a case study approach (Stake 1995) using ethnographic-tools (Green and Bloome 1997) appeared both practical and less intrusive for young children.

I have considered collecting multimodal data and explained my stance and my reasons for the choices I have made. I have illustrated forms of interviewing and talking to children. I have reviewed the ways that multimodal data may be collected using digital equipment and I have explained the process of multimodal transcription, looking at various formats used by other researchers. I have also explained the steps to multimodal transcription how multimodal data may be coded manually.
I have shown that research requires ethical consideration if it is to be legitimate and trustworthy; particularly concerning the practicalities of safeguarding, consent, anonymity and listening to young children. I have also discussed why and how the researcher may take a reflexive stance, so that the research may move forward in an ethical and transparent manner.

Chapter 4 now turns to how I put the theoretical understanding of a qualitative case study methodology, ethnographic-tools as methods, multimodal transcription and ethical considerations into practice.
CHAPTER 4  Case study: data collection and coding

4.1  Introduction

In Chapter 3, I have considered the methodology of this study to explore the meaning-making practices of eight emergent bilingual children attending the kindergarten at Valley Hill during child-initiated play by referring back to the research questions (Section 1.3.1). Chapter 4 begins with a description of the kindergarten at Valley Hill: the classes and teaching staff along with the organisation, timetable, routines and the curriculum topics (Section 4.2). I then discuss aspects of my pilot study and decisions I made in light of the pilot study (Section 4.3). The main study begins with parental involvement, recruitment criteria and selection (Section 4.4). I then indicate the types of data and how I collected them (Section 4.5). The next section follows the processes I undertook towards multimodal analysis and how I mapped my multimodal data onto a multimodal grid to enable multimodal transcription. I highlight conventions for transcribing bilingual speech and the process of transliteration and translation of Arabic. I discuss my criteria for transcribing and classifying a multimodal event and the process I undertook to code a multimodal event, which led to the development of MMTL (multimodal translanguaging) as an analytical framework (Section 4.6). This chapter is summarised before I attend to Chapter 5, the data analysis.

4.2  The kindergarten at Valley Hill

Children enter the Valley Hill kindergarten at the beginning of the academic year (usually by mid-September), aged 3–4 years. They are placed across four kindergarten classes
(Antelopes, Buffalos Camels and Darters – as pseudonyms) with an English-speaking teacher and two bilingual teaching assistants (TAs).

At Valley Hill, children are placed into classes according to their gender, to achieve balance across the four classes. Children are streamed (placed in Antelopes or Buffalos class) according to previous attendance at the Valley Hill pre-school (ages 2–3).

Children at Valley Hill learn in the medium of English following a British-style education informed by selected aspects of the Early Years Foundation Stage (EYFS) Statutory Framework (DfE 2012) and the International Primary Curriculum (IPC), as Valley Hill considered this would ease children’s transition into Key Stage 1 (ages 5–7).

4.2.1 Classes and teaching staff

Teachers are employed because they are English-speaking, have curriculum knowledge and previous teaching experience from the UK or from another international school (Section 1.1). Some English-speaking teachers may not speak Arabic, and so local bilingual TAs are employed to translate and interpret the daily tasks of teaching.

There are a total of eight bilingual TAs across the four classes. TAs’ specific duties are to help children who need extra support to complete tasks, supervise group activities, look after children who are upset and carry out administrative tasks. TAs at this school have limited teaching experience, but they are recruited because they speak English. Their salary is significantly lower than that of English-speaking teachers. This is quite common; women tend to be paid less in Egypt and recruited foreigners with expertise are paid
considerably more. However, TAs’ benefits include paid holidays, bonuses and reduced childcare costs to maintain a continuity of core staff.

Arabic-speaking teachers are part of the teaching staff who come to the classroom each day to teach a 45-minute Arabic lesson where children are permitted to speak Arabic (Modern Standard Arabic) as part of the legal requirement (Section 1.2). Children also receive several Music and PE lessons each week, given by specialist teachers.

**Antelopes**

In the Antelopes class, there are 21 children (9 girls and 12 boys). There are 16 Egyptian nationals and five other nationalities (British, French, Indian, Libyan and Polish). There was no policy of placing children of more varied heritage in one class, but children in this class did have previous experience at the Valley Hill pre-school.

The English-speaking teacher for Antelopes is Miss Nicole. She is also the head of the kindergarten. Miss Nicole is Montessori trained and has taught at Valley Hill for five years. She has lived in Egypt for 20 years and has extensive knowledge of Egyptian culture. Although she is a fluent Arabic speaker, she maintains she will only speak English to children in her class, following the school approach.

The bilingual TAs from Antelopes are Sara and Shaimaa. Sara has a degree in English from Ain Shams University and is new to teaching and learning on the job. Shaimaa has been a TA since the school opened in 2000. She has no formal qualifications but plenty of experience with young children. She leads all the other TAs across the kindergarten.
**Buffalos**

In the Buffalos class, there are 22 children (10 girls and 12 boys). There are 21 Egyptian nationals and one other nationality (Libyan). Most of the children in this class have previous experience at the Valley Hill pre-school.

Miss Melissa is the English-speaking teacher for Buffalos. She is new to the kindergarten. Melissa started as a TA and replaced a teacher during the Arab Spring of 2011. She came to Cairo from Dubai, where she was a nursery schoolteacher at another BSO for five years but does not speak Arabic. Melissa has a daughter who is also a student at Valley Hill.

Dina and Esra are the bilingual TAs from Buffalos. They have only just started their employment with the school. Dina speaks Arabic, German and English and has a degree in Commerce and Industry from Ain Shams University. Esra has one child in KS-1 at Valley Hill and has no formal qualifications.

**Camels**

In the Camels class, there are 22 children (10 girls and 12 boys). There are 18 Egyptian nationals and four other nationalities (Indian, New Zealand and Yemen). The majority of children have never been to a pre-school and this is their first experience of school.

I (Julia) was the English-speaking teacher of Camels (identified as JRC in the transcripts as researcher and referred to as Miss Julia as teacher). I had been at the Valley Hill kindergarten for four years before the research took place. Although as a teacher I only...
spoke English, I spoke Arabic to children during the research, as permitted by the school management.

The bilingual TAs of Camels are Amira and Eman. They have not been with the school long and are learning on the job. Amira came from Ain Shams University in Cairo, where she studied Commerce and Industry, and English, French and Mandarin. Amira is bilingual and biliterate in English and Arabic. She is studying a part-time course in early years education at the American University of Egypt. Eman has a degree in Art from the Faculty of Arts at Cairo University.

**Darters**

In the Darters class, there are 21 children (10 girls and 11 boys). There are 17 Egyptian nationals and four other nationalities (British, Chinese, Libyan and Pakistani). Most children have never been to a pre-school and this is their first experience of school.

Miss Diana is the English-speaking teacher of Darters. She has been teaching at the kindergarten for two years, and previously taught in a UK nursery for 14 years, where she started as a TA and then became a class teacher and manager of a nursery. She specialises in helping children with physical, special, and behavioural needs.

Khadiga and Nesma are the bilingual TAs of Darters. They have only just begun working at the school. Khadiga has a child in the school. Nesma has a degree in Music from Helwan University and plans to teach music.
4.2.2 Classroom organisation and routines

The kindergarten classrooms are stationed along a wide corridor on the ground floor of an annex to the main school building. Each classroom is 48 square metres. At the front of each classroom is a wall-mounted interactive whiteboard (attached to a desktop computer). In front of the interactive whiteboard is a carpet for children to sit on to watch items on the board or take part in circle time (where young children gather in a circle to participate in a guided discussion or another adult-led activity). There is always a book corner, role-play area and investigation table in each classroom. There is a desk for the teacher’s use and centralised tables with chairs where children sit to eat their lunch. The classrooms encompass both indoor and outdoor learning spaces, providing children with continuous provision (artefacts, levelled tasks, various resources for children to play with). The continuous provision in this setting is provided for ‘free-play’ (child-initiated play) designated slots in the timetable. In ‘free-play’ periods, children are free to choose their own artefacts and activities.

Timetable

The structured timetable is necessary as spaces and resources are often shared with the older children in the school (Appendix C). The timetable is also used to accommodate Arabic, Music and PE lessons taught by specialist teachers who also teach in other Key Stages. Play often stops to accommodate these specialist lessons and I observed some teachers use the morning ‘free-play’ slot to catch up on children’s outstanding artwork. Most of the ‘free-play’ is conveniently placed in the morning (before registration) or after lunch as garden time.
Indoor spaces

The activities found in the classroom are linked to the learning statements found in Developmental Matters (Moylett and Stewart 2012), the areas of learning (AoL) in the EYFS Statutory Framework (at the time of study DfE 2012), along with Letters and Sounds, Phase 1 and 2, which are teacher-led phonic activities (DfES 2007), and resources linked to the IPC (2012). The activities that teachers plan for children may include items for role-play, talk-tables (items placed on a table to encourage children to talk and play) and show-and-tell activities. The home corner area contains items found in the UK, representing themes such as a shop, train station, garage, farmyard or jungle. Large rugs have cushions, beanbags and mats for playing with construction materials such as building blocks, Duplex, wooden blocks, beads and sewing cards. Each classroom has a ‘messy-play’ area for recycled modelling with paint, glue, boxes and paper, and there are areas for water and sand play with a variety of vessels for children to play with (Figure 4.1). A large percentage of the school’s budget is spent importing activities and objects from the UK.

Figure 4.1 Indoor spaces
Outdoor spaces

The outdoor garden for the kindergarten, known as the ‘Back Area’, is a narrow, tarmac-covered strip of land attached to the back of all the four kindergarten classrooms (Figure 4.2). Children have access to this during ‘free-play’ play through a backdoor from their classroom. The continuous provision for children is regularly changed depending on the term topic (Section 4.2.3). Generally, there are different coloured marker pens for a large outdoor wall-mounted whiteboard, water-bath (with different sizes of vessels and tubes), a chalkboard on the wall (with a box of chunky chalk), magnetic mirrors on the walls, and a sandpit. There are also tricycles and scooters at the far end of this area. Hoops and skipping ropes are attached to the walls, and children can use a slide, a climbing frame and a plastic tunnel shaped like a caterpillar.

There are several painting easels with paint and paper, and small plastic workbenches with colouring sheets and a large pack of crayons and coloured pencils. On some of these tables are plastic figurines and construction blocks. Behind a coloured picket fence, is an artificial turf area where children can run around. Kindergarten children may also climb on equipment and dig and plant seeds in raised flower beds. The temperature can reach 40 degrees centigrade, so children usually use this area in the morning only. This area is run according to a timetable, as it is shared with another year group, the reception children, and so this area is not freely accessible to children.
4.2.3 Curriculum topics

There are several educational topics in each term, as outlined in the curriculum documents (Appendix D). These topics are drawn from the IPC (2012) and specifically attributed to the early years and linked to the EYFS Statutory Framework (DfE 2012). Parents receive a weekly letter outlining what their child will learn during the week. Children’s drawings and photographs relating to their weekly activities are stuck in what is known as a mark-making book, thus illustrating aspects of the child’s learning journey.

**Term 1 All about me:** Children talk about their family and express emotions, using their senses. They learn to play with other children and understand the boundaries of school. Also, the topic of ‘Transportation’ occurs at the end of the term. Children plan trips, identify how they get to school and learn about different modes of transport. They discuss road safety, the role of the emergency services, and how to keep themselves safe from harm.
Term 2 Animals and Insects: Children sing songs and use music, art, drama, and dance associated with jungle animals. They also talk about different kinds of bears and read many stories about bears. Children classify groups of animals and learn about their natural environment. Children also learn about various garden insects and spiders through the topic ‘Mini-Beasts’.

Term 3 Celebrations: Children learn about celebrations and festivals around the world. They are encouraged to create different celebratory art and music. Children also put on a concert for their parents: ‘Peter and the Wolf’.

4.3 Pilot study

I approached the senior management team of Valley Hill for consent. I also organised ethical clearance, as most universities require this as a condition for conducting research. Upon further clarification from the OU Human Research Ethics Committee (see Appendix E), I submitted the pilot study report (2011–2012) to the OU on 27 February 2012. The original aim of the pilot study was to explore children’s talk around their drawings and texts. The child participants in the pilot study were two girls, one boy whose home language was Arabic, and one boy whose home language was English. These children were all from my class ‘Camels’ and were aged 3–4 at the beginning of the study. The main research questions for the pilot study were:

- How do the texts of Egyptian pre-school children (made during ‘free-play’) inform us about their sign-making?
- How are children’s texts connected to an imported literacy practice from England?
During the pilot study, I wanted to develop appropriate data collection methods and sharpen my research aims for the main study. My research questions constantly changed and were refined. Yin (2009) highlights the value of pilot studies, suggesting they allow the researcher time to refine their data collection methods and reflect on that data. Although this is true, I also found the pilot study allowed time to reflect upon my position as teacher/researcher, and to adjust my stance and reflexive position. It was also a period to review the literature and explore the theory of social semiotics and multimodality as a distinct position on meaning-making.

My principal challenge came during my observations as a teacher/researcher. I began by documenting observations using a pre-printed grid and pen. I found children’s play moved fast and I could not notate all the areas of potential interest. I wanted to use a camcorder to record the children’s speech, and video aspects of their play, but I discounted this equipment for ethical reasons: I learnt parents did not want their children videoed and TAs were also not comfortable being videoed. I tried to solve this issue by placing an audio recorder in the play area of the children’s classroom and using a static tripod with a camera to photograph children. However, the audio recorder produced poor sound quality (I could not differentiate between the children’s voices), and I had not accounted for the children’s movement between indoor and outdoor play. As a result of my reflections on the pilot study, I used photography with a digital handheld camera to capture the child’s play, along with a lightweight audio recorder attached to the child.

During the research process, the roles of researcher and teacher are inevitably constrained and require a different stance. As a teacher my natural inclination was to become involved,
but during the pilot study I realised this would be problematic. There are theoretical and practical issues attached to the stance of a teacher and researcher, and the two positions are quite different. You cannot be involved directly as a researcher if you wish to remain an observer-as-participant (Section 3.4.1). The data I wanted to collect was the child’s meaning-making practice rather than the adult and child’s co-constructed meaning-making. I tried to remove myself from the role of teacher, but this was challenging, as young children will still see you as a teacher/helper.

The pilot study also enabled me to focus on the type of child participants I required for the main study. At Valley Hill, although most children speak Arabic at home, the school is also popular with English-speaking families and some children are of mixed heritage. During the pilot stage, I observed a non-Arabic-speaking child who was an English-speaking British/Palestinian-Arab who had just moved from a nursery in the UK to Egypt. My observations revealed the child spoke English during play and found it difficult to make friends with other Arabic-speaking children. I noticed this child spent a good deal of time around English-speaking adults and was silent among Egyptian children. This was not the data I wanted to explore. Although interesting, it would have led to quite a different study. I had to reflect on the child participants and note their home language during the recruitment stage for the main study. I decided both parents should be Egyptian and Arabic-speaking at home.

As stated earlier, I spent a considerable time reconsidering the focus of the research questions based on my observations and reading of the literature. I moved from the focus of literacy and began thinking about bilingual children during child-initiated play using a
range of modes for meaning-making. I observed children translanguaging but also meaning-making through their gesture, gaze and engagement with their artefacts. This opened up the study to further explore my understanding of meaning-making. I therefore changed the research questions to reflect this and started to align myself with a social semiotic multimodal perspective on meaning-making. It was also about the same time when I decided to transcribe multimodal data. I spent a considerable amount of time developing multimodal grids and transcription methods associated with multimodal data and once I felt confident I began the main study.

4.4 Main study

Based on the informative process of the pilot study and ethical clearance (Section 4.3), the main study took place between September 2012 and June 2013.

4.4.1 Parental involvement

To inform parents (as part of my approval from the school), I gave a PowerPoint presentation in the school hall. Teachers, the senior management team, school governors and all parents with children in the kindergarten were invited. I wanted the study to be transparent to everyone and this gave me a platform. During the presentation I suggested what I intended to study. I left some flexibility as I was in the initial stages of planning the main research, but I explained in detail what participating children might experience and I invited all parents to raise questions.
I addressed at this presentation why only some children would be selected for the study based upon my criteria. I explained no child would be disadvantaged if they were not selected, as there would be no change to the usual kindergarten day. I also made it clear that all participants had the right to withdraw at any time during the study. I confirmed I would keep in close contact with parents of the child participants, with several face-to-face interviews and regular communication via email and telephone.

The recruitment process began at the end of the presentation. Parents of children who expressed an initial interest in taking part in the study were given an ‘initial interest form’ simply expressing interest and nothing more (Appendix F). This gave parents time to go away from the presentation, think about the study and if they wished to continue, reply using the ‘initial interest form’.

Parents who were willing to take part in the study returned the ‘initial interest form’. Upon receipt of these forms, I could see which parents wished to join the study. I then continued the recruitment process against my criteria.

4.4.2 Participant criteria and selection

I explained during the PowerPoint presentation that I had eight child participant places which would be selected based upon my following criteria:

- Egyptian parentage and Arabic-speaking at home.
- Children aged 3–4 years.
- Consultation with their English-speaking teacher.
- One boy and one girl from each class making a total of eight children.
I could have selected children at random (placed names in a hat), reducing possible bias. However, this method would not have had the teachers’ consent and I may not have achieved the gender balance I required or an equal split of children across the four kindergarten classes. Teachers had the final say, on condition that the selected boy and girl from their class were making good progress at school, leading to an amicable agreement with both the teacher and parent.

Colleagues selected children from my class, minimising the possibility of me selecting children I knew well. I was available to speak to parents whose child was not selected, and this seemed to satisfy parents. After a significant amount of time reflecting on the children selected, the study began.

Upon selection of the eight children, parents were sent a ‘consent letter’ (Appendix G). Upon return of the consent forms, I then interviewed the parents (usually mothers as often fathers were working) in their home. I wanted to give parents time to ask me questions, talk to them face-to-face about the boundaries of the research, and provide them details of my plans and new information on any changes to the study and how I would make my observations at school. I also wanted to give them time to withdraw if they wished to do so (Section 3.6.1). Parents and children chose their pseudonym, keeping the initial letter of the child’s first name: Osama, Alyaa, Michael, Gabrielle, Mostafa, Nadeen, Yousef and Laila.

Although eight children were initially recruited to take part in this study, some of the data sets for these children were incomplete, and one child withdrew relatively early during the
study because they did not wish to continue with the observations. My criteria were further adapted to include those children who had previous pre-school experience and those that had not. The final child participants selected for detailed analysis in Chapter 5 were Alyaa, Michael, Mostafa and Nadeen, from the classes Antelopes, Buffalos and Camels. I maintained the gender balance (two boys and two girls), with two children (Alyaa and Michael) who had previous experience of pre-school at Valley Hill and two children who did not (Mostafa and Nadeen). Table 4.1 provides details for child participants.
Table 4.1 Details of the child participants

<table>
<thead>
<tr>
<th>Children &amp; their age at the start of the study</th>
<th>Alyaa (girl) 3 years 6 months</th>
<th>Michael (boy) 3 years 10 months</th>
<th>Mostafa (boy) 3 years 11 months</th>
<th>Nadeen (girl) 3 years 7 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten class</td>
<td>Antelopes</td>
<td>Buffalos</td>
<td>Camels</td>
<td>Camels</td>
</tr>
<tr>
<td>Pre-school experience</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Parents</td>
<td>Mother: translator with English degree&lt;br&gt;Father: lecturer in engineering</td>
<td>Mother: hospital doctor with medical degree&lt;br&gt;Father: telecoms engineer</td>
<td>Mother: housewife with secondary education&lt;br&gt;Father: electrician</td>
<td>Mother: Interior designer with an Art degree&lt;br&gt;Father: Restaurateur with a Business degree</td>
</tr>
<tr>
<td>Siblings</td>
<td>None</td>
<td>None</td>
<td>Baby brother 8 months</td>
<td>Younger sister 1 year 7 months</td>
</tr>
<tr>
<td>English-speaking teacher</td>
<td>Nicole, Montessori trained</td>
<td>Melissa, QTS</td>
<td>Julia (researcher/teacher), M.Ed, PG Dip</td>
<td></td>
</tr>
<tr>
<td>Teaching assistants</td>
<td>Sara and Shaimaa</td>
<td>Dina and Esra</td>
<td>Amira and Eman</td>
<td></td>
</tr>
</tbody>
</table>
4.5 Data types and collection

There were two types of data I wished to explore: (i) data on the participating children and their meaning-making practices during child-initiated play (Section 3.4.1), and (ii) data supporting multimodal analysis, drawn from the contextual information of participating children’s meaning-making (Section 3.4.2). The methods and equipment used are summarised in Table 4.2. The following sections will discuss these methods in more detail.

Table 4.2 Methods, collecting device and data collected

<table>
<thead>
<tr>
<th>Multimodal data</th>
<th>Methods</th>
<th>Collecting device</th>
<th>Data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct observation</td>
<td>Digital audio recorder (AR1)</td>
<td>Child’s speech</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Digital camera</td>
<td>Child’s gesture</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Child’s gaze</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Child’s layout of artefacts</td>
</tr>
<tr>
<td>Data supporting multimodal analysis</td>
<td>Audio field notes</td>
<td>Digital audio recorder (AR2)</td>
<td>Researcher perspectives &amp; comments</td>
</tr>
<tr>
<td>Contextual data</td>
<td>Child conversations</td>
<td>Digital audio recorder (AR2)</td>
<td>Child’s reflections</td>
</tr>
<tr>
<td></td>
<td>Interviews with adults</td>
<td>Digital audio recorder (AR2)</td>
<td>Parent perspectives</td>
</tr>
<tr>
<td></td>
<td>Curriculum documents</td>
<td>Valley Hill server</td>
<td>Long-term plan</td>
</tr>
<tr>
<td></td>
<td>Images</td>
<td>Digital camera</td>
<td>Photographs of the visual context</td>
</tr>
</tbody>
</table>
4.5.1 Direct observation

To understand a child’s meaning-making practice from a social semiotic multimodal perspective, I decide to collect the child’s speech, gesture, gaze and images of their action regarding their engagement (layout/position) with their play artefacts using the principal method of direct observation. My observations were restricted to the timetabled timeslot known as ‘free-play’, usually in the morning or in the afternoon during garden time and organised through pre-arrangement with the English-speaking teacher. Most teachers preferred the mornings for observation as they did not have direct contact time and there were no timetabled Music, Arabic or PE lessons. I collected observational data for participating children during these arranged slots using an audio recorder (AR1) and a digital camera.

Children knew me as an English-speaking teacher, and I wished to distance myself, developing my own position as researcher. I chose an observer-as-participant stance (Section 3.4.1). This stance allows the researcher some space to withdraw and create distance. Children would have been aware of my presence initially during an observation, but this position changed once I withdrew slightly. I was mindful of the observer’s paradox, whereby child participants’ behaviour changes when they are watched (see Labov 1972), but the stance I took reduced this possibility, and children began to relax and play. There is also another valid reason for conducting an observation in this way, as the more involved I became as a researcher, the higher the possibility that the data would be influenced by this. Teachers often co-construct meanings with children to develop a child’s understanding (Section 2.2.3) but these were not the meanings I wished to collect. I required insight into the child’s independent meaning-making practices.
Before observations began in September, I introduced myself to all the children in the kindergarten, giving a PowerPoint presentation about my study, which led to discussion, so that every child felt included in the research. This provided some explanation of my presence in the children’s classroom. All children play with each other, and although my observations were designed to observe children selected for this study, other children in the class by default would also become part of the observation. All parents had been made aware of my study from the start, but parents of non-participating children were approached to give their consent to the material presented in this thesis.

Observations were organised over three phases: autumn term (T1), spring term (T2) and summer term (T3). Each research phase consisted of approximately 11 to 13 weeks, making a total of 35 weeks (school holidays excluded). However, some observation sessions were cancelled and reorganised, or an observation was repeated due to a fire alarm going off. Some children refused to be observed, resulting in absent data. If a child refused on an alternative day, I respected the child’s wishes and did not try again for that term.

Observations lasted a maximum of 30 minutes, including time to allow the child to feel comfortable with the arrangements of being observed. Most children wanted to take part in an observation and granted me permission. I began the observation period by using puppets. There were ‘yes’ and ‘no’ puppets (cow and cat) to which children would give me assent by pointing at a puppet or telling me in Arabic or English (Section 3.6.4). I tried to be sensitive to the child’s body language, or any silence or lack of eye contact, to understand if a child did not wish to participate. I felt it was important to pay attention to these vital cues and gain the child’s trust by respecting their wishes. I would help the child
with something they were doing before I arrived, such as finishing a puzzle. It often interested children that I spoke Arabic, as teachers normally do not, but I had already explained my position to the children during the recruitment stage. A summary of the direct observation schedule of participating children in this thesis is found in Table 4.3 (a full account of all eight children is in Appendix H).

Table 4.3 Direct observation schedule of participating children

<table>
<thead>
<tr>
<th>Participating children</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alyaa</td>
<td>14.10.12</td>
<td>03.02.13</td>
<td>22.04.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26.02.13</td>
<td></td>
</tr>
<tr>
<td>Michael</td>
<td>21.10.12</td>
<td>20.02.13</td>
<td>23.04.13</td>
</tr>
<tr>
<td>Nadeen</td>
<td>28.11.12</td>
<td>10.02.13</td>
<td>13.05.13</td>
</tr>
<tr>
<td>Mostafa</td>
<td>04.11.12</td>
<td>13.02.13</td>
<td>14.05.13</td>
</tr>
</tbody>
</table>

Collecting speech

Once I felt the child was comfortable, I would ask them if I could attach the audio recorder (AR1). I used a small, lightweight digital audio recorder, which I placed inside a child-friendly backpack (which I had previously placed in the home corner as a play artefact). I then placed the backpack on the child’s back, clipping the microphone onto their clothing. This whole process took about 5–10 minutes before I could record the observation with a recording time of no more than 30 minutes. This was a practical method, as the audio recorder remained with the child, even if they ran about and went outside. The child’s
speech in English or Arabic was then recorded along with the child’s interactions, verballisations and prolonged silences.

**Collecting gaze, gesture and children’s engagement with play artefacts**

Each child was audio-recorded during an observation to collect their speech, but an audio recorder cannot account for the visual data. Children’s play occurred in rapid succession and I found the digital camera worked well to record the details of the child’s use of other modes. I could take many photographic shots of the child’s activity from different angles without intruding upon their play, and I could distance myself where necessary by using the zoom lens.

The camera was good at capturing a child’s gesture or marks in sand, playdough or on paper. I could photograph drawings or writing, along with the child’s choice of coloured pencils, chalks or paints, and note in what order they chose them. The camera captured how the child opened the pages of an exercise book or which hand the child used to write with. However, because I was behind the camera, I could gauge whether the camera seemed detrimental to the child’s play and I could put the camera down if I felt the child became uneasy. I was also mindful of my interpretation of events by taking both wide-angled and close-up photographic shots (Section 3.5.1).

**4.5.2 Audio field notes**

Part of case study methodology is to capture the context to make sense of what has been observed (Stake 1995). As Kress (2010) notes, meanings are not made in isolation from their context. To support the multimodal data gathered from the direct observations of
participating children, I also spoke into a second audio recorder (AR2) attached to my body as I observed the participating children play.

The first audio recorder of the child (AR1) and my audio recorder to make audio field notes (AR2) were synchronised before the observation began. My audio field notes began with a verbal description before the observation; I noted the child’s name and age, the date, names of other children in the specific play, teaching staff present, recording times, the topics covered in the teacher’s planning, and the main activities in the classroom during the time of the observation. I noted the total number of children present in the classroom and I also noted the weather and if the child played outside.

The audio recorder (AR2) was really useful capturing the context of the environment, but also my verbal commentary captured aspects of the child’s gaze direction which may not have been evident in the photograph I took. Also, I could verbally note the layout of children’s artefacts and the order in which they played with them. Something I did not anticipate was the background talk from the English-speaking teacher and how children reacted to this (see Excerpt E, line 61 as an example).

4.5.3 Child conversations

Near the end of the observation, I would approach the participating child to ask them what they were doing, as children quickly forget. I have called this a child conversation because this is quite different from an interview with an adult. I was mindful of these casual conversations by trying to balance the power between us through my careful questioning (Section 3.6.4).
I asked the participating child why they had chosen certain artefacts, colours, positions of artefacts and so on, to guide my interpretation of their meaning-making practice. The other children playing in the area would have been aware of my questioning, but they were not excluded. Children had known of my study, but I was nevertheless careful of possible jealousy or friction between them.

In most educational settings, children are questioned by teachers as part of their assessments, so there was nothing unusual in a teacher talking to children about their play. As a researcher, I spoke Arabic to children following an observation (Section 1.1). I was grateful I could speak Arabic as the children’s reflections about their play were not always in English.

4.5.4 Interviews with adults

Interviews provide contextual data and complement the direct observation of the participating child. As Stake (1995) suggests, the principal method of a case study approach is observation, but by asking what another person may think is the ‘surrogate observer’ (p.114). Interviewing adults supports the multimodal analysis and acts as a confirmation of or supplement to my interpretation (Section 3.4.2). Interviews with adults were audio-recorded (AR2) and then transcribed.

Home visits

My aim with the home visits was to interview the parents of participating children – to establish a relationship, obtain information about their children and discuss the parent’s initial thoughts on the research process – and also to give the participating children my
equipment to play with. I demonstrated the recording equipment on the home visit and children played with it (Appendix I). Mothers were usually interviewed because fathers were often working, but I was always open to meeting them. Mothers asked me questions and I had a list of semi-structured questions on themes I wanted to discuss (Appendix J). The interviews were informal, and I did my best to listen to the views and perspectives of the families (Section 3.4.2).

The second contact with parents was an informal check during the termly home visit to establish they still wished to proceed with the research. I shared the transcripts I had made of their child at school (I did so each term) in accordance with BERA (2018 [2011 at the time of this research]) (Section 3.6.2). I always thanked parents with a letter each term (Appendix K) and at the end of the study I conducted a final debrief interview with parents.

**Interviewing colleagues**

Interviewing my colleagues was based on a similar format to interviewing parents. I prepared interviews with semi-structured questions based on themes I wanted to ask (Appendix L), but there were many informal conversations throughout the year. Each interview was always followed up with a thank-you letter (Appendix M) and a transcript of the interview.

I also interviewed one TA, Amira. The other TAs did not want to be interviewed, and I did not press them as to their reasons. I wanted to ask questions relevant to the research, but also identify what activities and resources they placed in each of their classrooms, giving
me a better insight into how each TA worked and a clear understanding of the participating child’s experience in their classroom.

I remained discreet about the interview data and I collected it without comment. I anonymised any data which I thought potentially harmful (Section 3.6.2) – particularly any informal comments made during interviews, such as on the political climate, direct comments about children or comments about Valley Hill. Through collaborating and consulting with parents and teachers, I was able to revisit the data with them, which provided me with a new perspective, and this enabled me to reflect on my study.

4.5.5 Curriculum documents

All kindergarten teachers plan lessons together to maintain consistency of teaching between the four classes. Teachers create long-term plans (Appendix D), medium-term plans and weekly plans from topics, producing weekly themes (Section 4.2.3). The outcomes from planning generate ideas for teaching in the classroom, providing both adult-led and child-initiated activities for children to engage in and learn from. I examined lesson planning because it gave me an overview and insight into what children might expect to experience over the coming academic year and insight into their possible meaning-making.

Before any direct observations took place, I read these documents, making notes of the classroom topics, learning intentions and the classroom continuous provision. The teacher’s vocabulary section in the planning was also cross-checked against teacher’s talk during lessons. During circle time, teachers explained key vocabulary to children, and I named this as ‘classroom English’ (Section 1.3). For example, for the topic ‘All about Me’,
teachers used phrases linked to ‘parts of the body’, ‘family’, ‘what we look like’ and our ‘senses’. As part of building the collection of data, I would regularly note both activity and teacher’s talk in their classroom and cross-check this against the planning documents.

4.5.6 Images of the visual context

I photographed all the visual, sensory stimulation and the children’s display work on boards and washing lines (pegged artwork on string across the classroom). I took photographs of the kinds of artefacts found in children’s play areas before observations began. All these images were used to complement what I had learnt from the direct observations of the participating children. I now turn to the mapping of the data onto a multimodal grid and the development of the analytical framework.

4.6 Multimodal Analysis: the MMTL analytical framework

Wei (2011) began to introduce notions of multimodality to translanguaging through his notion of the ‘translanguaging space’ (Wei 2011, p.1223) and this has been further advanced to include proxemics, artefacts, gesture and gaze (Hau et al. 2017, Wei 2018). These authors have contributed to the understanding of bilingual practices for communication in bilingual contexts as multimodal (Section 2.3.6).

I have aligned myself with a social semiotic multimodal perspective within educational contexts. This perspective acknowledges both the social/interpersonal and cognitive/intrapersonal aspects of meaning-making (Section 2.4.1). I suggest children’s meaning-making practice is through a combination of modes of which the speech-mode is
one. Kress (2010) does not specifically refer to languages per se, but rather refers to spoken language as a speech-mode. He refers to the semiotic resources of speech which may be deployed to denote certain features in spoken language and the movement of semiotic material within the speech-mode, which constitutes a transformation. So to me the original use of pupil-directed translanguage (García 2009a; see Section 2.3.5) involves staying in the same speech-mode but shifting the semiotic resources used in Arabic and English.

As with most sign-makers, meaning-making occurs through a combination of modes, and all modes have equal status. Although I have an interest in the speech-mode, I also attend to the multimodal combinations of gesture, gaze and the engagement (layout/position) of children’s artefacts for meaning-making. I am particularly interested in the notions of ‘transformation’ and ‘transduction’ (Section 2.4.4) as terms to explain the way meanings are made by the sign-maker to achieve their communicative objective.

The sign-maker’s motivation is what interests me because it tells me how meaning is made through their choices. My transcription process, coding and the initial stage of multimodal analysis reflect this. I develop the idea of MMTL as an analytical framework which may be used for scrutinising the way emergent bilinguals deploy multiple modes for meaning-making.
4.6.1 Mapping data on a multimodal grid

**Gaze, gesture and layout/positioning of artefacts as used by the child**

Usual forms of transcription for transcribing speech (as mentioned earlier in Section 3.5) cannot attend to the dynamic ensembles of meaning by the sign-maker. A researcher must make steps to first design their own multimodal grid as part of the process of multimodal transcription. Other researchers may populate a multimodal grid slightly differently than I have, depending on the data they have collected. I discuss this process as mapping the multimodal data onto a multimodal grid, and this is an important process which guides the researcher towards multimodal analysis. I began my transcription directly onto an unpopulated multimodal grid. Referring to Table 4.4, I placed the image (photograph of the child’s action as the anchor mode – Section 3.5) into column two, and this was matched to the speech of the child (from AR1) in column five. So, from the image (photographed action), I could see how the child gestured and how they used their gaze (either on their artefact or on their interlocutor). I could also see the layout and positioning of the child’s artefacts. However, sometimes there was no image to place in a cell, or images had to double up in a cell because there was no speech from the child, so there may be a disjuncture between the image and speech, especially as I used photography rather than video data. Flewitt et al. (2011) also raise such issues: ‘as soon as multiple modes are included, the notion of speech turns becomes problematic as other modes contribute to meaning’ (p.45). When realising these problems, I tried to handle each issue as it occurred and matched the image (by using the jpeg number of each photograph) with the speech of the child (using the counters on the audio recorders) as best I could.
The temporal sequence of my research is governed by the child’s speech, which is matched with the image (photograph). This gives the researcher an understanding of how the sign-maker organises modes in meaning-making. For example, through multimodal transcription, a researcher can capture (by transcription) how the sign-maker uses each mode for meaning-making – gesture, gaze and speech. The underlying design of a multimodal transcript draws all the modes together in one place, so the data may be scrutinised for analysis.
Table 4. Data on multimodal grid

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Speaker turn and analytical code</td>
<td>Image</td>
<td>Time in mins &amp; secs.</td>
<td>Speaker</td>
<td>Speech /sound</td>
<td>Gaze direction</td>
<td>Gesture/ posture/ movement</td>
<td>Artefact/ layout</td>
<td>Comments</td>
</tr>
<tr>
<td>Speech exchange line.</td>
<td>Photograph of the child’s action.</td>
<td>Counter time from audio AR1 and AR2.</td>
<td>Name of child.</td>
<td>Speech and sounds from AR1.</td>
<td>Gaze of child resulting from photograph and audio field notes from AR1.</td>
<td>Gesture of child resulting from photograph and audio field notes from AR2.</td>
<td>Layout of artefacts by child resulting from photographs and audio field notes from AR2.</td>
<td>Audio field notes, photographs and notes on child conversation captured on AR2. My comments on curriculum planning &amp; aspects of adult interviews.</td>
</tr>
</tbody>
</table>
**Mapping speech**

Before I embarked on producing an audio transcript (placed onto the multimodal grid), I listened to all the audio recordings (both AR1 and AR2) to determine the acoustic quality and familiarise myself with the audio data. During this time, I noted any potentially interesting features present in the data. I transcribed all the audio recordings of the child’s speech in sequential order as they occurred, directly into column five of my multimodal grid.

I was keen to transcribe every utterance of the child’s spoken language, what they said and how they said it, because my aim was to interpret the meanings of their speech along with other modes. In this setting, children spoke Arabic and English within the same utterance, and I paid close attention to such utterances. There were 30 hours of audio recordings, which took approximately 170 hours to transcribe. Transcriptions represented many pages of typed text in both Arabic and English. In Sections 4.6.2 and 4.6.3, I explore how I transcribed Arabic, with all the speech conventions.

**Mapping contextual data**

Before each observation, I synchronised all the audio equipment, which made it possible to match all the data from AR1 with AR2. I did not transcribe from AR2 (my audio field notes) verbatim, transcribing only those elements that were relevant to my transcripts from AR1 and the photographic images. Audio notes were placed in column nine of my multimodal grid. These notes became part of my contextual data (in the form of comments). Selection was made according to what seemed relevant to direct observation (aspects of the child’s gaze, gesture, choice of artefacts – positioning/layout). This proved
invaluable during the next analysis stage, when all the data was present on the multimodal grid (Table 4.5).

4.6.2 Conventions for transcribing speech

While transcribing speech from the audio recordings, I encountered some problems with some losses: the temporal and sequential relationships of speech – pitch, intonation and tone. Written conventions try to replace these losses using symbols. I developed a reflective practice, as suggested by Ochs (1979), noting that the transcription of children’s bilingual talk requires flexibility because they have not yet gained the communicative skills of adults. Ochs was examining early childhood language development and drew on notions of children’s communicative competence to drive her transcription decisions. This encouraged Ochs to give emphasis to non-verbal communication and ways of highlighting turn-taking which did not assume that each turn followed the last in sequence. Hepburn and Bolden’s (2013) advice on written conventions for speech has also influenced the development of my own transcription conventions. Typically, the transcript of the first words of a young child for an academic audience will be quite different from a transcript produced for legal purposes. So, the question I asked myself was, what was the transcription for? In my case, it was to explore the multimodal meaning-making practices of children from a framework associated with a social semiotic multimodal perspective. Non-verbal meanings are not simply add-ons to speech but are intrinsic to the whole meaning-making practice. My transcripts needed to reflect this.

Overlapping speech: Also known as simultaneous talk, this occurs between children during play. Although most of the flows of conversations on my audio recordings were
coherent, several children used this practice during fast-paced talk or when many children played together, say at the sandpit. I use curved staple brackets to mark simultaneous talk between children. I marked the onset by the first left bracket and the end of the overlap with the right bracket, as in the example below (regular type Arabic, and bold English as uttered by the child, which may not always make sense to an adult).

Nadeen: It will come now

I want that…I want that…but I want it  {But I want it

Ahmed: I want to walk} within it

**Gaps and pauses:** I used ellipsis points to indicate silences between utterances. Listening to the recordings allowed me to understand the tempo and pace of talk. Although some approaches to transcription may show absolute measures and timings to a tenth of a second, I was not so precise, because my aim was to record the meaning-making practices of children, of which speech is one aspect.

**intonation and volume:** Raised intonation is indicated by a question mark and falling intonation by a full-stop enclosed by parentheses (.). Uppercase letters denote shouting (e.g. LOOK), with whispering enclosed by asterisks (*yes*), as in the example below.

Youssef Oh that’s good tell me…[inaudible]

Sara Finish…I find it (.)

Basim In the bag?
As with most verbal interactions, there were moments when I could not decipher what I heard, even after going back over the section of the recording. I use angular brackets to indicate the inaudible speech followed by the word ‘[inaudible]’.

**Aspiration, onomatopoeia, singing and laughing**: I notate these sounds associated with a letter, I may repeat the sound according to its duration oooooo or ahahaha. Some children during play used onomatopoeia (such as boom or whoosh) and this I also transcribe. Laughing, singing and crying are noted in parentheses, such vocalisations may have significance for meaning, as in the example below.

Youssef      *Yes*
Sara        It’s PICTURES of Youssef

Youssef      I’ll make it too (singing)

Ahmed       Shall I colour the **crocodile** with this one? Are we going to colour the **crocodile**? Which one is the **green** colours…remind me?

Youssef      **Spicy**

Ahmed       **Spicy**? Yes everything **spicy** oooooooo **BLOOD**…**Blood ketchup** yes you think **green**…why?
4.6.3 Transliteration and translation

According to Hepburn and Bolden (2013), the transcriber needs to decide how to represent the languages to be transcribed orthographically. They recommend providing a ‘three-line transcription’ (p.69). The first line represents the original talk in the conventional orthography, the second line is the transliteration, and the third line an idiomatic English translation which attempts to capture the local, interactional meaning of the original. This they claim allows the English speaker who is reading the transcript some comprehension.

There is another problem, as Schegloff et al. (2002) warn that translation needs to be sensitive not only to the detail of language being studied but also to the effect of translation, as meanings may be lost.

Following this advice, my first line of transcription represents the original talk (conventional orthography of the vernacular Egyptian-Arabic or global English variety), the second line is a transliteration of Arabic (using my own representation of the English sound structure), and the third line is an idiomatic English translation that attempts to capture the local, interactional meaning of the original utterance (as in the key in Table 4.5).

When translanguaging occurred, I used non-standard orthography to transcribe English as spoken and not Standard English as written. I transcribed spoken Egyptian-Arabic – a vernacular of Arabic which is not the same as Modern Standard Arabic (MSA). There are many vernaculars of Arabic found in North Africa and the Middle East, and although the child participants speak Egyptian-Arabic, not all the children in the class originated from Egypt. Also, I reminded myself children are still learning Arabic (and being taught MSA in
Arabic lessons). Interpreting children’s early utterances is fraught with conjecture. I took an early decision to transcribe each utterance, whether in English, Egyptian-Arabic or MSA, as they spoke it. This is what Jaffe (2000) describes as transcribing for individuals with a vernacular that may not be standard, ‘whose speech does not have its own orthography’ (p.500).

There are challenges with the three-line transcription because Arabic and English have different scripts and directionality – English normally written left to right and Arabic right to left. For transcription, Arabic and English cannot be typed on the same line in a word-processed document (unless Arabic letters are typed backwards). I had to type Arabic on a separate line to English. Each time the languages switched, I changed the keyboard script and moved the cursor to the left-hand side or to the right-hand side and typed on a different line depending on the script. This made the whole transcription process time-consuming. It also proved difficult to decode the transcript while reading it, on account of the change in directionality of the scripts. I continued using the chosen method because I felt it best represented the original data. If I have to refer back to the transcript I can, knowing the exact point when a translinguaging event occurred.

So that readers of English could read the transcript, I transliterated to the Roman alphabet and English sound system. Transliteration aims for the whole utterance to sit on one line in a word-processed document. According to Ritter (2005), ‘there is no standard system of transliterating Arabic’ (p.198), so I used the United Nations standard, which was put together during a conference in Beirut in 1972 (United Group of Experts on Geographical Names 2007). Some Arabic syllables/morphemes can be more difficult to define or do not
exist in the phonemic system of Standard English. Most Arabic speakers use the symbol ‘3’ to represent the ﴿ ﴺ phoneme (iyan) (equivalent to the French and the German ‘r’). There is also grammatical ordering to consider, which I did not adjust (as I did not want to change the children’s meaning). The final part involved translating the speech of the child, bearing in mind the difficulty of a literal translation (the issue of untranslatability being common to all languages – for some words in Arabic there is no translation into English) and hence the potential loss of meaning. Table 4.5 summarises the transcription process, and Figure 4.3 gives an example of a transcription.

Table 4. 5 Principles for the speech-mode

<table>
<thead>
<tr>
<th>Arabic – 1st line</th>
<th>Transcribed Arabic (as spoken by the child) with occasionally English in the same utterance. Due to the directionality of Arabic and the Roman alphabetic script, Arabic and English are represented on different lines. To differentiate between the three-line transcription, this line is placed on the right-hand side of speech cell.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romanised alphabet transliteration of Arabic – 2nd line</td>
<td>Arabic is transcribed in Romanised alphabetic script. Arabic sounds which are not present in the English phonemic system are replaced with a number. Most Arabic speakers will recognise this convention.</td>
</tr>
<tr>
<td>Translation of Arabic– 3rd line</td>
<td>The translation is always found in square brackets [translation].</td>
</tr>
<tr>
<td>Language choice</td>
<td>The far-left column is the analytical code used to indicate language choice. Colour purple indicates use of both English and Arabic. The code yellow indicates English use only.</td>
</tr>
<tr>
<td>English</td>
<td>All spoken <strong>English is in bold.</strong></td>
</tr>
</tbody>
</table>
Transcribing interview data

I used AR2 to record the parent and teacher interviews. My interest in this data was the contextual information it provided. I did not intend using these transcripts in the main body of my thesis, and so I did not use all the conventions for indicating simultaneous talk or the silences between utterances. However, I transcribed the utterance as it occurred in either Arabic or English and then translated the Arabic to English. A section of a typical parent interview can be seen in Figure 4.4. This has a three-line translation, with English in bold according to the conventions I have adopted.

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/ posture/ movement</th>
<th>Artefact/ layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>93</td>
<td><img src="image.png" alt="Image" /></td>
<td>21:01</td>
<td>Youssef</td>
<td>a3 pink</td>
<td>Gaze on drawing.</td>
<td>Right hand holding pink pen.</td>
<td>Drawing outline of car Top left of white board.</td>
<td>Probably private speech referring to his pink car.</td>
</tr>
</tbody>
</table>

Figure 4.3 Example of transliteration and translation in transcript
### Figure 4.4 Extract from an interview with a parent

#### 4.6.5 The definition of a multimodal event

The criteria for demarcating a multimodal event begin at the point when the child’s speech shifts from Arabic to English and vice versa (translanguaging), along with the child’s gaze, gesture and engagement with their artefacts.

I demarcated these events in the first instance using colour codes alongside the speaker turn and analytical code column of the multimodal transcript (refer back to Table 4.4, column 1). I used purple when children uttered English and Arabic and yellow when only English was spoken. These are cut from a very long multimodal transcript to reflect the
boundaries of a multimodal event. Each event is then coded, presenting a ‘snapshot’ of the observation. I created a simple matrix by listing these coded multimodal events from across all the original eight case studies (Appendix N). Significant events relevant to my analysis are presented as ‘Excerpts’ in Chapter 5. During the coding of these multimodal events, common themes began to emerge across the case study, and these are found in Chapter 6.

4.6.6 Coding a multimodal event and development of MMTL

Coding, as described by Bazeley (2013), ‘is a tool for querying data’ (p.25). There are various methods to follow, including computerised tools for coding, but I found manual coding, similar to grounded theory, beneficial to me. This is because aspects of grounded theory determine what happens (processes) in context, and by writing comments (thick descriptions) the actions of child participants are exposed, leading to potentially interesting aspects within the data (Section 3.5.4). Coding is a useful labelling system based on the researcher’s interpretation of how knowledge is formed, and this is often underpinned by the researcher’s epistemological and theoretical position.

I understand meaning-making from a social semiotic multimodal perspective – the premise is that the sign-maker draws on modes to form ensembles of meaning which are subject to potentials and constraints. Meaning-making occurs in situ as it is a social practice through the engagement with others (Section 2.4.1).

During ‘free-play’ in the kindergarten of Valley Hill, I observed the participating children engaging in meaning-making by themselves and with other children. I collected this data
and coded it, building up a picture (through collecting data from audio field notes, interviewing, child conversations, curriculum documents and images of the classroom) of what I interpreted as the children’s context and coding it to support the process of multimodal analysis. The process of analysis begins as modes are placed on the grid which then becomes a multimodal transcript. The comments column on the multimodal grid consists of my interpretations and interesting facets found in the data. My codes are divided into 1st and 2nd cycle of codes found in the coding column of the multimodal event.

The first cycle of coding (Appendix S) was my first attempt to code. As found in Figure 4.5 (see below), I coded in the first column using purple to indicate both English–Arabic spoken by the child (translanguaging). I provided a location code because this identifies the multimodal event within the larger multimodal transcript, e.g. ‘T3 Michael School Line 4’ to indicate when the observation took place (T3 = summer term), the child participant (Michael) and the setting. Next, the code shows where and with whom the interaction took place, namely ‘whiteboard’ and with a ‘friend’ and what they were doing, ‘drawing’. I coded all the modes within each excerpt individually (gaze, gesture, layout of artefacts), but in the early stages of coding I had a problem with coding speech. This was because I tried to separate the speech-mode from other modes – a mistake on my part when trying to understand the entire meaning-making practice. I began to code speech using an early inventory of Hallidayan Language Functions (Halliday 1975), and I did this with an ‘in vivo’ coding, as suggested by Saldaña (2009). I wanted to summarise the child’s utterance as a language function (using the child’s voice), but this produced too many codes and did not embrace a holistic meaning-making practice. At about the same time I discovered the notion of pupil translanguaging (Section 2.3.5), but the theoretical understanding of
translanguaging at the time did not attend to the multiple use of modes for meaning-making. I abandoned this method of coding modes separately and tried to develop a holistic approach in the second cycle of coding.

The participating young bilingual child always seemed to deploy several modes (bearing in mind the potentials and constraints of modes) for meaning-making. My second cycle of coding (Figure 4.5), while retaining some aspects of the first cycle of coding, was my attempt to summarise the sign-maker ‘orchestrating ensembles’ (Kress 2010, p.162).

<table>
<thead>
<tr>
<th>Speaker/turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>2:41</td>
<td>Michael</td>
<td>See Mustafa I’ve made a circle...do you know how to make one like me?</td>
<td>One at Mustafa’s board. Body facing board. Head moving to friend. Michael draws circle.</td>
<td>Drawn circle close to Michael’s body.</td>
<td>According to Michael’s teacher Michael likes to be the leader. Speech circle &gt; draws circle Shapes displayed in the classroom. Teacher’s planning shapes.</td>
<td>1st cycle codes 2 Michael, School, Line 4. Whiteboard, friend, drawing. 2nd cycle codes TRANSLANGUAGING TRANSDUCTION MODELLING</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.5 Multimodal event coded to the MMTL analytical framework

I took Charmaz’s (2006, 2012) advice and began to write short labels for what I interpreted the data was telling me and this guided me to draw up several new codes. For example, I noted Michael, while speaking Arabic to other children, uttered the word ‘circle’, which is typically classroom English, and then ‘drew’ a ‘circle’ on the wall-mounted interactive whiteboard (Figure 4.6 above). He was translanguaging, staying in the speech-mode (selecting semiotic resources of Arabic and English). However, speech does not occur in isolation from other modes as he is simultaneously drawing and gazing at his friend.
It occurred to me that translanguaging was actually being used simultaneous with other modes for meaning-making and so I considered this a possible analytical framework. I named this as MMTL (multimodal translanguaging), to include not only translanguaging (verbal, vocalisations, singing and onomatopoeia) but also the modes of gaze, gesture and the layout/positioning of artefacts.

I began looking for features within the translanguaging itself where multiple modes were being engaged with by the participating child. I started to develop a number of codes (Table 4.6) as each observation and multimodal event represented slightly different ways for meaning-making. As noticed in Figure 4.5, Michael shifts his speech ‘circle’ to drawing a circle, so I added ‘transduction’ to my codes to express the transfer of semiotic material to another mode (Section 2.4.4). Michael appears to be modelling/scaffolding for other children and so modelling and scaffolding became codes. The act of coding in qualitative research is an inductive and iterative process. I kept a consistent and evolving written list with photographed images, adding examples and explanations of the codes I used.

MMTL is an analytical framework used to unlock meaning-making, but one must remember these are examples of a certain community, at a certain time, in a certain context. The examples in this case study may reveal several meaning-making acts as an embodiment to communicate meaning in certain communicative situations. Meanings may be adjusted in accordance with the context. There is no ‘blueprint’, realities may change and each case for meaning-making is different, but the more multimodal events I coded, the more I began to get a sense of reoccurring themes emerging from the data.
### Table 4. 6 Some second cycle codes with explanation

<table>
<thead>
<tr>
<th>Multimodal event</th>
<th>Some second cycle codes</th>
<th>Explanation of the codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child-initiated</strong></td>
<td>Transduction. Modelling for each other. Scaffolding. Teacher-like. Gaze on artefacts &amp; friend. Pointing. Translanguaging.</td>
<td>A shift from one mode to another (speech to drawing) or reshaping a mode (perhaps to reconfigure the shapes of playdough in the visual-mode) usually used for an explanation and gaining a better understanding with others so they can read/understand the situation. Used with speech, gaze and gesture/movement to a visual-mode (layout, drawing, print, marks and artefacts).</td>
</tr>
<tr>
<td></td>
<td>Repeating. Practising. Private speech. Withdraws. Translanguaging.</td>
<td>Tends to occur with speech and through gesture and action (dependent on the situation), allowing a child to independently work things out. Usually, children appear to be alone and withdraw from the play.</td>
</tr>
<tr>
<td></td>
<td>Transformation. Moving artefacts. Play with others. Friendship. Singing/vocalisations. Singing/onomatopoeia. Translanguaging.</td>
<td>Tends to occur with gaze and indexical gesture (pointing /moving body) for directing the play together in harmony. Children are being playful together. There are lots of vocalisations with movement.</td>
</tr>
<tr>
<td></td>
<td>Excluding. Dominating. Moving artefacts. Gazing at each other. Fighting/pushing. Translanguaging.</td>
<td>Using language of the English-speaking teacher to get service or goods. This tends to occur with gaze and gesture towards each other.</td>
</tr>
<tr>
<td></td>
<td>Friendship. Gazing at each other. Translanguaging. Transformation.</td>
<td>Aligning with English to indicate to others they belong. This occurs with gaze and gesture. Sometimes use of artefacts in play.</td>
</tr>
<tr>
<td><strong>Adult-led</strong></td>
<td>Teacher present, with most speech in classroom English. Some use of Arabic but most teachers will not understand this.</td>
<td></td>
</tr>
</tbody>
</table>
4.7 Chapter summary

In this chapter, I have described Valley Hill kindergarten, and its classrooms, teachers, timetable and curriculum topics studied. I discussed the pilot stage, which enabled me to reflect on the data collection methods for the main study. I discussed the recruitment process, including parental involvement and child participant selection criteria. Drawing upon a case study methodology, I illustrated the principal methods for data collection through ethnographic-tools and highlighted these types of data and how the contextual data supported multimodal analysis. I went on to discuss how I transferred multimodal data onto a multimodal grid and the preliminary steps I took towards multimodal analysis. I then explained how I handled the transliteration and translation of Arabic and finally, the coding process and how to code multimodal data. I then explain MMTL as an analytical framework and how I developed this idea.

Chapter 5 begins with a detailed analysis of the cultural context and multimodal analysis of four from the original eight participating children’s meaning-making practices during child-initiated play.
CHAPTER 5  Case study: data analysis

5.1 Introduction

The intention of this research was to explore the meaning-making practices of eight participating emergent bilingual children at the Valley Hill kindergarten during their child-initiated play (timetabled as ‘free-play’ Section 4.2.2) as proposed by the research aims of this study (Section 1.3.1). In Chapter 5 I begin by presenting an interpretative analysis of the cultural context of Valley Hill in 2011–2013, derived from the observational events of the eight participating children that struck me as potentially significant. I also include Vignettes from interviews with adults and I use these Vignettes to demonstrate the cultural context and the children’s experience in the kindergarten (Section 5.2).

Chapter 5 continues (Sections 5.3–5.6) with portraits of just four from the original eight participating children, namely Alyaa, Michael, Mostafa and Nadeen, selected according to a broad set of criteria (Section 4.4.2) because this enabled me to develop a richer detailed multimodal analysis (Section 4.6.5) of their meaning-making practices. Each portrait of the four participating children outlines the child’s interests, family history and basic contextual information. I also include selected multimodal events, extracted from the much larger multimodal transcript, which I have named as Excerpts. I identify these Excerpts by phrases used by the child (e.g. Happy face) and in parentheses I identify the school term (T1, T2, T3), along with a date when the observation took place over an academic year. Each Excerpt begins with a short paragraph relating to contextual information derived from my observations of the classes (Antelopes, Buffalos and Camels – Section 4.2.1) or a photograph presenting the visual context of each class (e.g. Figure 5.1). There follows a short description of the Excerpt and I give a brief interpretation of the child’s meaning-making practice based
on the MMTL analytical framework (Section 4.6.6). English is shown as bold type and Arabic as regular type (transcript conventions in Section 4.6.2). In my role as a researcher, I am identified as JRC (Section 4.2.1).

5.2 The cultural context of Valley Hill kindergarten, 2011–2013

At the time of my data collection, the kindergarten appeared to be selective in terms of which parts of the EYFS Statutory Framework it chose to implement – for example, by not providing opportunities for children to be assessed in their home language (DfE 2012, p.6). This was because the school’s approach was ‘English-only’ in the classroom, other than a timetabled Arabic (Modern Standard Arabic) lesson each day. Spoken English in the classroom was monitored by the senior management team, English-speaking teachers and the bilingual teaching assistants (TAs).

I interviewed most teachers in the kindergarten (Section 4.5.4). Miss Melissa, the English-speaking teacher of Buffalos, adheres to the school’s ‘English-only’ approach. Nonetheless, she acknowledges that the children are Egyptian and speak Arabic. She suggests this is because speaking Arabic is easier for the children, but she does not consider this may help children with meaning-making as they learn during play. Miss Melissa reminds children to speak English, encouraging them with a reward of a sticker.
Miss Melissa  I think if children are left to their own devices…they will speak whatever is easier for them…and at this stage of the year we keep reminding children English English English…if I hear a child say something in English I will give them a sticker…

Vignette 5. 1 Interview data: Miss Melissa

Bilingual TAs, however, are permitted to speak Arabic to the children for the purposes of regulating daily classroom activities and routines. The children do not seem to recognise when they can speak Arabic and to whom. The TA from the Buffalo class reminds Gabrielle not to speak Arabic when carrying out a schooled task.

TA  Write another one like this….Annie Apple….Annie Apple….Annie Apple

Michael  And then like this?

TA  Wow again….write this

Gabrielle و آنا و آنا اعملها كدة
Wa ana wa ana amal ha keda

[And I and I make it like this]

TA  Don’t speak Arabic

Vignette 5. 2 Observational data: Teaching assistant speaking to Gabrielle

How children negotiate the school’s ‘English-only’ approach in the classroom is complex and certainly difficult for young emergent bilinguals to follow as teachers do not always adhere to the ‘English-only’ approach. In a timetabled ‘free-play’ session, Nadeen is free to choose whatever she wants to do. Nevertheless, when Nadeen asks the TA in Arabic if she can colour, the conversation moves to Arabic.
Vignette 5. 3 Observational data: Nadeen speaking to teaching assistant

Formalities of when and with whom children can speak Arabic may appear contradictory and extremely challenging for any young child on their journey to bilingualism. Children occasionally forget or simply lack the vocabulary to explain themselves. The division between home language, school language, classroom language and playground language is widespread worldwide. Even in immersion situations, it seems ‘unnatural’ for language spoken between Nadeen and the TA to be contextually bound (according to location or activity). Children are therefore often reduced to communicating sub-optimally with each other during classroom activities, which may be one reason why they draw on a broader repertoire of modes to communicate.
Opportunities for meaning-making when these emergent bilingual children are only permitted to speak English are often lost, as seen in the conversation below between Laila and her English-speaking teacher Miss Diana. It also illustrates the difficulties of teaching the curriculum content to young emergent bilinguals in a single language. Conversations between an English-speaking teacher and child tend to be short, with the teacher doing most of the talking. In these situations, children appear monosyllabic and less articulate. Although they may appear to be listening and trying to decipher what the teacher has asked of them, they may not fully comprehend what is being said to them.

Laila in Term 1 is drawing a fish on an A4 portable whiteboard with a marker pen at the table. She tries to explain to Miss Diana what she has drawn, but Miss Diana cannot decipher every utterance because she does not speak Arabic. Laila raises her voice and repeats ‘fins’ in English, as if questioning the word, but Miss Diana has not quite understood her. Miss Diana does not acknowledge Laila’s prolonged gaze on her face. Since there is no explanation, and Laila does not continue the conversation, Miss Diana moves on, telling Laila ‘very good’.

<table>
<thead>
<tr>
<th>Laila</th>
<th>Miss Diana</th>
</tr>
</thead>
<tbody>
<tr>
<td>ana 3amalt fish</td>
<td>A fish</td>
</tr>
<tr>
<td>A big one</td>
<td>That is a really big one… what else has a fish got?</td>
</tr>
<tr>
<td>Eye</td>
<td>Eye kedda</td>
</tr>
<tr>
<td>[I made a fish]</td>
<td>[Eye like this]</td>
</tr>
<tr>
<td>[I made a fish]</td>
<td>What else is he going to have? A tail? And some fins?</td>
</tr>
</tbody>
</table>

146
Vignette 5. 4 Observational data: Miss Diana and Laila

In an early observation as a researcher, I made the mistake of asking one of the children, Mary, to speak to Mostafa in Arabic, but she refused as this went against her parent’s wishes.

JRC Can you ask him to say it in Arabic?
Mary I don’t want to…my father and mother said I only speak English
JRC Could you help me? Could you ask Mostafa what he is drawing in Arabic?

Vignette 5. 5 Child conversation: JRC and Mary

This exchange took place early in the year, and children were still gaining confidence to speak to me in Arabic as a researcher and not as an English-speaking teacher. I thought I had clarified this with the children at the start of the research. Mary had not wanted to speak Arabic with Mostafa, so I needed to adjust my stance. In hindsight, I think it was insensitive of me to ask her to speak Arabic.

Parents believe learning English will be a gateway to international job opportunities for their children and enhance their prospects. Laila’s mother, during my interview with her, suggested that her child would learn ‘British cultural norms’ by learning English.

Laila’s Mother I like the British language and I like to practice my English. I want my children to speak English…and if they speak English well they will find
work… I also think the school will help my children with their attitude and their manners…most native English speakers at the school will speak English well…so I need the British school to help me.

JRC So you want to educate your children using the English language?
Laila’s Mother In the way of the world and life.

Vignette 5.6 Interview data: Laila’s mother

Parents believe that sending their child to Valley Hill could change the way their child perceives their world. According to the parents, everything in Valley Hill signified ‘Britishness’ – from making Christmas decorations to celebrating the Queen’s Diamond Jubilee, reading ‘Goldilocks and the Three Bears’ and counting dots on a ladybird – and parents seemed to embrace this cultural underpinning.

In Vignette 5.7, Alyaa’s mother comments during her interview on ideals she admires and how Alyaa notices everything about being ‘British’, including the British flag, a London bus and Queen Elizabeth. One could argue that parents in this setting are extending children’s meaning-making practices by providing them with the physical and linguistic spaces of another culture created by an English-speaking school.

Alyaa’s Mother Most of the…she likes the British flag. When she sees the British flag on a bus or on a t-shirt or pyjamas she says the British flag…when I was her age I didn’t know that…I just knew the Egyptian flag

JRC That’s interesting…children are very observant

Alyaa’s Mother Also…so last year with the Queen Jubilee… we went on the internet and watched the celebration and I printed out a Queen Elizabeth drawing to colour…so now she knows about Queen Elizabeth and she knows about the telephone box that her Daddy brought from London…a sharpener like
a telephone box…and she knows the London bus because he bought another one for her

JRC Funny you should say that we built a London bus at school

Vignette 5. 7 Interview data: Alyaa’s Mother

Free-play

I observed children quickly packing up during the period designated for ‘free-play’, as it was a necessary to keep to the timetable (Section 4.2.2). This may have encouraged teachers to use more structured forms of play – whiteboards, colouring and name writing (Section 4.2.2). What initially was timetabled as ‘free-play’ – a space for children to choose their own playmates and play artefacts recognised as child-initiated play – quickly developed into forms of adult-led play.

In Vignette 5.8, Alyaa and her friends are about to engage in ‘free-play’ before registration. They have chosen a whiteboard and marker pen to draw at the table, but the play quickly becomes adult-led when Miss Nicole sits at their table and opens a mark-making book (Section 4.2.3), commenting that it is ‘upside down’. Children have not yet understood the directionality of English, and one child has drawn in the back of their book. Miss Nicole then shifts her attention to Alyaa and comments on her drawing. Alyaa responds in English: ‘This is my happy face’. The interaction now becomes directed by Miss Nicole as she suggests they should write the date and Alyaa volunteers to write her name. While this is happening, the other children’s silence on the table is evident, although they appear to be listening to Miss Nicole, with the occasional glance. When Miss Nicole moves away from the table, I notice children shift their speech back to Arabic, which I suggest indexes the demarcation between adult-led and what potentially could be child-
initiated play. It also reveals how Alyaa, and the other children were not free to make their own meanings in the presence of their English-speaking teacher.
<table>
<thead>
<tr>
<th>Speaker</th>
<th>Time in mins &amp; secs.</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>04.50</td>
<td>Whose is this? Whose is this mark making book? Or is this you...oh its upside down (giggle)...you've done it upside down...never mind never mind...Who is this?</td>
<td>Alyaa gazes at the whiteboard.</td>
<td>Alyaa’s right hand drawing and body facing the whiteboard and table.</td>
<td>Circle central to body and drawn anticlockwise.</td>
<td>Children have not yet established the reading/marking direction of English. Children chose pens.</td>
</tr>
<tr>
<td>Alyaa</td>
<td>04.56</td>
<td>This is my happy face</td>
<td>Alyaa gazes at the whiteboard.</td>
<td></td>
<td></td>
<td>Faces depicting emotions are on wall. Lots of discussion with teacher this week about faces and expressions.</td>
</tr>
<tr>
<td>Teacher</td>
<td>04.57</td>
<td>This is a happy face?...ok let me write that down for you...shall we put the date?</td>
<td>Alyaa gazes at the whiteboard.</td>
<td>Alyaa rubbing out work with board rubber.</td>
<td></td>
<td>On whiteboard teacher annotates what Alyaa has said and adds the date. Often teachers photocopy the A4 board or photograph it to keep a record of the child’s work.</td>
</tr>
</tbody>
</table>

Vignette 5. 8 Observational data: Alyaa and Miss Nicole
Vignette 5.8 ctd.

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in min &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td></td>
<td>07.24</td>
<td>Alyaa</td>
<td>Shall I write my name?</td>
<td>Alyaa gazes at the whiteboard.</td>
<td>Alyaa’s pen moves in an anticlockwise direction.</td>
<td>Alyaa is starting to write the first letter of her name.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>08.21</td>
<td>Teacher</td>
<td>You want to write your name...ok ok write your name</td>
<td>Alyaa is smiling at the whiteboard and then looking up away from whiteboard.</td>
<td>Alyaa’s head raised, chin towards ceiling. Facing whiteboard with both hands holding down board. Eraser in left hand.</td>
<td>Alyaa starts writing second letter of her name. Centre to her body.</td>
<td>Alyaa still has the marker pen in her right hand and her left hand on the eraser. She appears to be thinking. Second written letter of her name.</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>09.07</td>
<td>Alyaa</td>
<td>So... اذا اعمل ايه؟ انت تعرف؟</td>
<td>Alyaa’s gaze going to the ceiling.</td>
<td>Alyaa’s chin and head up. Her fist is under her chin. She starts a circle.</td>
<td>The circle is to the centre.</td>
<td>Teacher walks away. Alyaa asks a question but it seems to herself. Her gaze is not on her friends. Children start to talk in Arabic.</td>
</tr>
</tbody>
</table>

[So...what I do? You know]
English-speaking teachers often intervened during what was timetabled as ‘free-play’, perhaps feeling a need to enforce the ‘English-only’ approach. Also, perhaps teachers felt the need to be engaged in ‘teaching’, as the senior management expected this of them, and often ‘dropped in’ for informal observation.

In Vignette 5.9, I was invited into Nadeen’s play, because naturally in her view I was the teacher, but at that particular moment I was wearing my researcher’s hat. This position of being both teacher and researcher did prove challenging to me and I did not always get my positioning right. I possibly asked Nadeen an unnecessary question at that time which may have restricted her potential for meaning-making. This was not the position I wished to portray. I had deliberately chosen the observer-as-participant stance (Section 4.4.1).

It is here I consider that teachers should also be mindful of unnecessary involvement in children’s child-initiated play, and although children clearly benefit from adult-led play, one must also consider that children also benefit from uninterrupted and independent play. In child-initiated play, children are free to enjoy the variety of ways for meaning-making. They are learning how to create ensembles of meaning by deploying modes and resources for meaning-making.

In this event, it occurred to me that the timetable in this kindergarten, and some teachers’ unnecessary involvement, seemed to restrict child-initiated play, often curtailing a child’s project and not giving the child sufficient time to play and investigate.
<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>12:50</td>
<td>Nadeen</td>
<td>Give me anyone one thing I want those flowers...I'm making the cake cakes...cupcakes</td>
<td>Nadeen is looking at the sand toys.</td>
<td>Nadeen is sitting next to her friend and slightly turned away.</td>
<td>Nadeen uses the sand moulds in front of her body.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>14:39</td>
<td>JRC</td>
<td>What are you going to do with it now Nadeen?</td>
<td>Nadeen is looking at JRC.</td>
<td>Nadeen is standing and gesturing at the sand mould.</td>
<td>Nadeen is holding the sand mould.</td>
<td>I don’t know why I spoke to her at this point. Perhaps it was because Nadeen felt I was watching her.</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>14:40</td>
<td>Nadeen</td>
<td>I am putting it in the form</td>
<td>Nadeen is gazing at the sand.</td>
<td>Nadeen’s arms are outstretched pointing. Her body is slightly bent over the sand.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>14:42</td>
<td>JRC</td>
<td>You are going to put it in there?</td>
<td>Nadeen is looking at the watering can.</td>
<td>Nadeen’s body is over the sand moulds.</td>
<td>Nadeen is using the sand mould in front of her.</td>
<td>Session was over. I wanted to discover what Nadeen was doing.</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>14:44</td>
<td>Nadeen</td>
<td>In the form</td>
<td>Nadeen is looking at the watering can.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Vignette 5. 9 Observational data: Nadeen and JRC**
I have introduced some of the cultural context and set the scene; I am now going to explore
the meaning-making practices of Alyaa, Michael, Mostafa and Nadeen as per the aims of
my research (Section 1.3.1). The following sections frame my analysis by presenting
portraits of these selected children, and excerpts of multimodal events from my observations
made during the child’s ‘free-play’. I pay close attention to these children’s meaning-making
practices, relating them to the analytical framework of MMTL.

5.3 Alyaa

Alyaa attends the Antelopes class with Miss Nicole (Section 4.2.1). Miss Nicole informs
me Alyaa speaks more English than most children in her class, and she seems confident.
Alyaa attended the pre-school at Valley Hill, and this may account for why she appears
more self-assured. She also speaks English at home with her mother, who has a degree in
English, which has helped her to interact with her English-speaking teacher early in the
academic year. Miss Nicole mentions how Alyaa is helpful to other children in the class.
According to Miss Nicole, Alyaa’s mother is attentive to Alyaa and does a great deal of
home study with her daughter.

Alyaa’s mother was a pre-school teacher in an Egyptian state school but has since given up
teaching to care for her daughter. She prefers to work from home as a translator
(Arabic/English). Alyaa’s father is a lecturer in engineering at the British University of
Egypt (BUE) and travels a great deal. Alyaa has no siblings but always has friends visiting
her at home. She also has a large extended family. Her mother stated that her daughter
likes to draw and will often comment on things in her environment. Alyaa uses an A4
portable whiteboard and marker pen, paper and pencils at home in her play area. I saw many of her drawings during my home visit (Section 4.5.4). Her mother suggested her daughter likes to watch English-speaking TV, particularly western cartoons, and she plays with items her father has brought back from London (see Vignette 5.7). I noticed Alyaa’s mother followed the related topics we had covered at school, and she confirmed to me that she follows what is happening at school through the weekly ‘parent letter’, sent by the class teachers (Section 4.2.3).

5.3.1 Happy face (Excerpt A)

(*Alyaa T1, 14/10/12*)

This observation took place at the start of the new academic year (Week 5). Most children have never been to school, left their mother’s side or experienced a language other than their own. According to Miss Nicole, some children are very tearful in the morning when leaving their family carer to enter the classroom in the morning, and also after their nap in the afternoon. Miss Nicole remarked that this first term seems exhausting and stressful for children and teachers because children enter an unfamiliar environment with a language they cannot understand. Miss Nicole manages the curriculum planning, which she said was designed to settle children into school and offer independent activities, providing a bridge between the children’s home experiences and school. For the first half of Term 1, children learn about emotions, families, healthy eating and starting school.

On the classroom wall, next to the days of the week, are photographs of children expressing a range of facial emotions, such as happy, sad, angry and crying. Painted self-portraits are hanging on string across the corridor. I note Miss Nicole naming and
discussing body parts and human features for a display board. On the other display board are images which seem to suggest that all children were given shapes in a specified colour for facial features and a yellow card circle for their happy face, leaving no opportunity to choose their own shape or colour (Figure 5.1). There is a collage of several outlined painted figures with body parts labelled on a display board and several painted mobile family trees of children’s families, in various sizes pegged on a line across the corridor. In the toy-area are puzzles relating to body parts and healthy eating. The previous day, Miss Nicole had asked children to draw themselves by looking in mirrors and naming their facial features in English, with the TA Miss Shaimaa, and these portraits were placed in their mark-making book (Section 4.2.3).

![Figure 5. 1 Happy face display](image)

This observation begins early in the morning before breakfast, when children are arriving in the classroom. This period is designated for ‘free-play’, before the register is taken by the English-speaking teacher. Children have been talking about emotions, particularly a
‘happy face’. Excerpt A begins as Alyaa moves to the rectangular table at the back of the classroom and picks up an A4 portable whiteboard, a green marker pen and an eraser from the shelf. She sits where there are already two girls (Salam and Sara) and one boy (Bassem) at the table.

The children in Excerpt A appear to be friends, with all smiles and greetings in Arabic being shared, but then they become silent. I notice these children seem to be looking around and watching other children play. They seem less relaxed than usual, and I wonder if this is because of my presence, so I withdraw to the back of the class. On the recorder, I hear Alyaa translanguaging: ‘**I shall draw…happy face I want green**’. This remark does not appear to be directed at anybody at the table. Bassem is on the opposite side of the table, away from Alyaa, and I also hear him on the recording using some English words: ‘I have it in **America**…I tell you what…I want **red**’. I observe his gaze, which remains on his A4 portable whiteboard. He is smiling to himself. Both appear to be using private speech as they are practising alone while translanguaging as they mark on the whiteboard, with the occasional glance towards other children.

Alyaa appears to be drawing a ‘happy face’, and I can see a circle with two dots representing a face. The children’s naming of items or situations associated with school in English is not uncommon. Children seem to name colours in English, along with numbers, as Alyaa remarks: ‘I will do **number four**’. Alyaa knows most of her colours and numbers in English, and probably learnt them while attending pre-school. Many children already know their colours and numbers in English, according to Miss Nicole.
Salma tries to give Alyaa a yellow pencil, but Alyaa shakes her head, appearing to refuse. These are whiteboards, and a pencil will not make a mark, and perhaps Alyaa realises this. Alyaa has adopted the role of the sign-maker, and these signs are motivated by her, but she is also constrained by these resources and their affordances (Section 2.4.3). Salma gets up from her chair, walks away and joins another group of girls in the home corner. No words are spoken between the two girls, but I can see from Salma’s facial gesture that she feels a little disgruntled by the rejection.

When Alyaa and I reflect together about her drawing during our conversation (Section 4.5.3), she confirms it is a self-portrait. It is perhaps important to Alyaa because it was drawn centrally on the A4 portable whiteboard (Section 2.4.3). Alyaa is translanguaging while practising privately, but she is also marking (drawing) while using her gaze and glancing fleetingly at others, thus creating ensembles of meaning. Children play with artefacts, placing them in different positions while selecting other modes (speech, gaze, and gesture) when engaged in the process of meaning-making. By using the analytical lens of MMTL I can see that these combinations of actions with speech are an embodiment of meaning-making (see Norris 2004).
<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 1                                |       | 00.06               | Alyaa   | ٍٍِّٗ انا عائزة  green  
I shall draw happy face  
an\"ayza green  
[I shall draw...happy face  
I want green] | Alyaa’s gaze is towards her whiteboard. | Alyaa is sitting in front of her board.  
Right hand with marker pen, poised to start writing. | Green marker pen.  
Shape left of board. | Alyaa is sitting down in front of a whiteboard with her friends.  
She has three friends around her on the same table (Bassem, Salma, Michael).  
Alyaa uses self-talk/private speech. |
| 2                                |       | 00.20               | Bassem  | ٍٍِّٗ انا عائزة  red  
Wa andie America... bolik eh... an\"ayza red  
[I have it in America... I tell you  
what...I want red] | Alyaa’s gaze is towards her whiteboard. | Drawing marks and lines. | Circle and lines to the left-hand side. | Alyaa makes a mark and then rubs it out  
and keeps making the marks and rubbing them out.  
Bassem uses self-talk/private speech. |
| 3                                |       | 00.39               | Alyaa   | ٍٍِّٗ انا عمل\n  
number four  
Ana ha3mel number four  
[I will do number four] | Alyaa’s gaze to her board and then Salma. | Alyaa is shaking her head in Salma’s direction. | Green marker pen. | Alyaa looks up and starts marking again.  
Salma tries to give Alyaa a yellow pencil, but she indicates ‘no’ by shaking her head. |
5.3.2 Dora the Explorer and Dragonfly (Excerpts B and C)

(Alyaa, T2, 03/02/13)

The observation took place in Week 19, when Miss Nicole suggests Alyaa has reached her expected levels in most of the Early Learning Goals (ELGs).

According to Miss Nicole, the children seem settled at school and understand some aspects of written and spoken English. The children have been busy drawing and painting several insects for their classroom display boards through the topic ‘mini-beasts’ (Section 4.2.3). Many of the resources and educational artefacts found in the classroom support this topic but are based on a British rather than Egyptian context (Figure 5.2).

Other references to insects were found in the book corner (The Very Hungry Caterpillar pop-up book) and noted in the audio field notes. The teacher-talk heard on the audio recordings also exposed children to many different insects found in British gardens. There were insect puzzles, colourful plastic figurine insects, colouring worksheets of insects, and a role-play area.

![Figure 5.2 Plastic insects and investigation table](image-url)
I see some children sitting on the carpet, watching a programme about insects on the wall-mounted interactive whiteboard. The previous day, they had been on an insect hunt using a magnifying glass. They collected leaves, snail shells and some insects, which they kept in jars. It is just before breakfast and children are engaged in ‘free-play’, free to choose an activity. Miss Nicole has organised an investigation table as part of the continuous provision of the classroom (Section 4.2.2). The table has a tray with snail shells, which children have been referring to as insects. There are several magnifying glasses with a photocopy of a pre-drawn magnifying glass outline for children to draw on with coloured pencils from a pot.

In Excerpt B, Osama is hovering around the investigation table and is joined by Alyaa. They remove items from the investigation table and sit together at another table. They begin to draw using a shared pencil. I hear Alyaa teasing Osama on the audio recording, and I can see this through her body position and gesture. I note Alyaa’s upright position, her chin moving up and down as if mocking Osama. Her tone on the recording is raised, as if questioning him. Osama describes the object on the tray (snail shells) as ‘douda’. A ‘douda’ in Arabic is a caterpillar, and this is not a caterpillar. Alyaa replies: ‘Dora?’ (from ‘Dora the Explorer’, a TV cartoon), changing his words into English. It is quite common that children use popular culture in this way (see Marsh 1999), but Alyaa’s utterance also suggests an element of wordplay because ‘Dora’ sounds like ‘douda’ in Arabic.
**Excerpt B Dora the Explorer (Alyaa, T2, 03/02/13)**

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
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<th>Gaze direction</th>
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<th>Artefact/layout</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>📸</td>
<td>0.44</td>
<td>Osama</td>
<td>Bolk douda folk douda [I am telling you a caterpillar a caterpillar]</td>
<td>Osama’s gaze is on the paper and Alyaa is staring at Osama’s drawing.</td>
<td>Alyaa’s chin is slightly down. She is standing upright. Osama’s right hand not quite a tripod grip on pencil.</td>
<td>Magnifying glass to Osama’s right and colouring pencils to left.</td>
<td>Teacher sits beside the children, her attention focused on sticking pictures in the children’s books. The children appear to forget she is there.</td>
</tr>
<tr>
<td>5</td>
<td>📸</td>
<td>0.46</td>
<td>Alyaa</td>
<td>Dora?</td>
<td>Osama’s gaze on Alyaa and Alyaa holds his gaze with her gaze.</td>
<td>Osama shifts his body, facing Alyaa.</td>
<td>Alyaa moves the snail shell from the tray to the paper.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>📸</td>
<td>0.47</td>
<td>Osama</td>
<td>Douda [Caterpillar]</td>
<td>Osama gazes at the shell and Alyaa uses her gaze to draw Osama’s gaze to the shell.</td>
<td>Alyaa points at shell with her index finger and moves her head slightly to indicate the shell.</td>
<td>Alyaa places shell top right-hand corner of the paper.</td>
<td>Alyaa points to the snail shell, as a teacher would point to words in a book, to help a child to read. Osama gazes at where Alyaa is pointing.</td>
</tr>
<tr>
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<tr>
<td>7</td>
<td>0.48</td>
<td>Alyaa</td>
<td></td>
<td>مس حايزين toy مس حايزين animal او insects كدا باس [We don’t need a toy we need an animal or insect like this look]</td>
<td>Alyaa gazes at the shell.</td>
<td>Osama starts to draw. Alyaa’s chin is pointing to the shell. Through her chin and pointed finger Alyaa is indicating the shell.</td>
<td>Osama draws a circle slightly to the left of the photocopied pre-drawn circle on the page.</td>
<td>Alyaa’s whole body and gaze arc instructing Osama, quite teacher-like. She uses classroom English like the teacher in the “insect hunt”.</td>
</tr>
<tr>
<td>8</td>
<td>1.09</td>
<td>Osama</td>
<td>Douda</td>
<td>Douda [Caterpillar]</td>
<td>Alyaa looks away to the other children.</td>
<td>Osama is moving his pencil and drawing. His hand is on the paper. Alyaa’s whole body shifts, turning away.</td>
<td></td>
<td>Osama calls it a caterpillar, but Alyaa thinks he is saying Dora. She is teasing him. This kind of watching and shifting body to look at other children occurs often.</td>
</tr>
<tr>
<td>9</td>
<td>1.10</td>
<td>Alyaa</td>
<td>Dora?</td>
<td></td>
<td>Osama stares at the page.</td>
<td>Alyaa takes pencil off Osama and her hand steadies the page.</td>
<td>Pencils moved by Alyaa closer to Osama.</td>
<td>Teacher turns her body towards them and moves away. Perhaps this is Alyaa’s cue to become the teacher.</td>
</tr>
<tr>
<td>10</td>
<td>1.12</td>
<td>Osama</td>
<td>Douda</td>
<td></td>
<td>Alyaa looks at. Alyaa gives Osama a mocking stare.</td>
<td>Alyaa’s hands retracted and chin down. Alyaa shifts away.</td>
<td></td>
<td>Osama has not understood the vocabulary Alyaa uses. Alyaa shifting body to look at other children.</td>
</tr>
<tr>
<td>Speaker</td>
<td>Image</td>
<td>Time in mins &amp; secs</td>
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<td>Speech / sound</td>
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</table>
| 11      |       | 1.13                | Alyaa   | Dora mish animal  
[Osama continues to look at Alyaa. Alyaa has both hands in her lap. Osama’s right-hand index finger pointing in the air towards the shell.] |              |              |              |                      |
| 12      |       | 1.20                | Osama   | وقال دودا دودا  
[Baol douda douda  
[I am telling you caterpillar] |              |              |              |                      |
|         |       |                     |         | Dora mish insects... ersan zay dee ana dee gbtaha 3shan tbo 3alcha  
[Dora mish insects... I’ll bring this to you to have a look at it] |              |              |              |                      |
| 13      |       | 1.23                | Alyaa   | Dora mish insects... ersan zay deh a la de gbtaha 3eshan tbo 3alcha  
[Dora mish insects... draw like this I’ll bring this to you to have a look at it] |              |              |              |                      |
|         |       |                     |         | Dora is not insects... draw like this I’ll bring this to you to have a look at it] |              |              |              |                      |
Alyaa is translanguaging but also shifting her body towards Osama and pointing in the direction of the snail shell: ‘we don’t need a toy we need an animal or insect like this look’. Osama gazes at the shell and draws a circle without referring to the shell at all in his speech. He looks at Alyaa and she leans back with her hands in her lap as if waiting for his reply. Osama is trying to learn new words in English, and Alyaa has played a very important role in Osama’s learning and her own by indicating how Osama should use the word ‘insect’.

After a brief interlude, I observe Alyaa beginning to change her approach (Excerpt C, ‘Dragonfly’). She has tried to explain to Osama by translanguaging, but this form of communication is proving difficult, and Osama does not understand what he should draw. Alyaa resorts to using her body by gesturing and pointing, moving artefacts, and twisting towards Osama, as a way of explaining what he should do. Alyaa instructs Osama by pointing to an area on the A4 paper, as if playing the teacher. Osama touches and moves the magnifying glass as if thinking about what Alyaa has shown through her gesticulation. His gaze follows Alyaa’s indexical gesture (pointing), and he too starts to point to the area of interest on the A4 page. Alyaa is modelling for Osama using English and Arabic, using her body to point to the snail shells, shifting these artefacts around in Osama’s immediate space, and using her gaze to draw Osama to the artefact. Alyaa utters the words associated with curriculum vocabulary and topics used in classroom English. Throughout this observation, she has used the words ‘snail’, ‘insect’, ‘toy’, ‘animal’, ‘dragonfly’, ‘circle’, ‘magnifying glass’, ‘line’ and ‘colour’ – words previously used by the English-speaking teacher.
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>4.55</td>
<td>Alyaa</td>
<td>ولا تعمل</td>
<td>T3mel ant wala t3mel dragonfly</td>
<td>Alyaa gazes at the colouring pencil pot.</td>
<td>Osmania takes a pencil. Alyaa points with finger to outlined magnifying glass on worksheet.</td>
<td>Pot to left, magnifying glass to right of Osmania.</td>
<td>There is no dragonfly in the tray. This is from Alyaa’s imagination.</td>
</tr>
<tr>
<td>28</td>
<td>5.11</td>
<td>Osmania</td>
<td>خلاص عملت</td>
<td>Khalas Jamalt</td>
<td>Alyaa looks at Osmania and then the paper.</td>
<td>Alyaa points at the paper. Osmania’s hand touches the magnifying glass.</td>
<td>Osmania moves the magnifying glass.</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>5.14</td>
<td>Alyaa</td>
<td>استني هريك حاجة</td>
<td>Estara hawarilak haga</td>
<td>Both gaze at the paper.</td>
<td>Osmania is pointing at the paper. Alyaa is drawing the dragonfly.</td>
<td>Alyaa shifts the paper.</td>
<td>Alyaa draws a circle.</td>
</tr>
<tr>
<td>30</td>
<td>5.23</td>
<td>Osmania</td>
<td>Dragonfly?</td>
<td></td>
<td>Osmania looks at the magnifying glass.</td>
<td>Alyaa points to where the dragonfly should go. Follows circle with her finger.</td>
<td>Osmania repeats ‘Dragonfly?’ as if it is a question. He seems to be seeking confirmation or questioning Alyaa as to what is in front of him.</td>
<td></td>
</tr>
</tbody>
</table>
Alyaa displays some interesting moves to gain Osama’s understanding by moving semiotic material between different modes other than speech to explain to Osama what she means by the word ‘insect’. With her speech and her positioning of the shell, she moves the whole meaning to a drawing of the insect on A4 paper – a practice referred as transduction (Section 2.4.4). I also note Alyaa using her gesture – pointing to the shell and using her gaze – as used in ‘joint attention’ by adults when teaching young children to read, thus Alyaa is using multiple modes to encourage learning.

5.3.3 Naughty chair (Excerpt D)

(Alyaa, T2, 26/02/13)

Alyaa appears to be following Amira, who has a British mother and speaks English at home. It is Week 22 and the children have just finished taking turns to wash the class teddy bear. They have been sitting on the carpet, listening to a song sung by Miss Nicole, ‘Teddy Bear, Teddy Bear’. Soon after, Alyaa and Amira wander around the classroom, free to choose from the play artefacts, and Alyaa begins talking to herself. She has momentarily withdrawn from Amira and begins translanguaging privately in a playful manner: ‘yes I am underneath… naughty chair… thinking chair’.

Alyaa begins to touch the playdough on a table with the rolling-pin and cutters. She continues: ‘give me the duck… look at that… this from that ummm this you need to touch it… look hello hello look hello… I don’t want to play’. Her use of ‘touch’ in this instance may have been influenced by the song ‘Teddy Bear, Teddy Bear’, which includes lines such as ‘Teddy bear, teddy bear touch the ground’ and ‘Teddy bear, teddy bear touch your toes’. The children are touching and moving the artefacts on the table, such as the
‘duck cutter’ and ‘playdough’ (Figure 5.3) found in Alyaa’s speech (Excerpt D). I notice Alyaa and Amira are listening to the other children and Miss Nicole. I understand this from their gestures, the angle of their heads and their fleeting glances towards their teacher. They both seem playful, humming and singing as they play with the playdough and cutters.

Figure 5.3 Playdough cutters
**Excerpt D Naughty chair (Alyaa, T2, 26/02/13)**

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
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<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
</table>
| 5                               |       | 04.15                | Alyaa   | **naughty chair thinking chair**
                                      |        |                      |          | (laughing)     | Both girls are looking for things to. | Moving around the classroom. | | Alyaa is nowhere close to the ‘thinking chair’. She is being playful, using her imagination and probably trying to be a little bit mischievous. Alyaa is talking to herself. This is private speech. Children are searching and staring at other children. |
|                                 |       |                      |         | **play dough**
                                      |        |                      |          | elab hagga tanniaya…taalli | Watching other children. | | |
|                                 |       |                      |         | Aah Ana tahat…
                                      |        |                      |          | **naughty chair thinking chair**
                                      |        |                      |          | hattesa khina mishizaelab
                                      |        |                      |          | (laughing) | Gaze at objects to play with. | | | |
|                                 |       |                      |         | **playdough**
                                      |        |                      |          | elab hagga tanniaya…taalli | | | |
|                                 |       |                      |         | [Yes I am underneath…
                                      |        |                      |          | **naughty chair thinking chair**
                                      |        |                      |          | give me the knife not like that
                                      |        |                      |          | play (laughing) **playdough**
                                      |        |                      |          | play with something else…come here] | | | |
| 6                               | 04.59 |                      | Amira   | **You can try this and me try this…Miss look…Miss…Miss…Teddy bear**
<pre><code>                                  |       |                      |         | | Alyaa and Amira gaze at the cutters. | Near playdough cutters. | | They both start to engage with animal-shaped cutters: duck, heart, dog, people, teddy bear. |
</code></pre>
<p>|                                 |       |                      |         | | Both girls’ bodies are close. They are holding hands. | | | |</p>
<table>
<thead>
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<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>05.13</td>
<td>Alyaa</td>
<td></td>
<td>Ummm ... (Laughing)... Mمك تتعد هذا... أيه ده... طيب اديني ال duck... look at that... this from that ummm this you need to touch it... look hello hello look hello... مش عاوزة اللعب. Ummm Odiehina (Laughing)... mumkkin to3d hinna... eh da... tybe ideny deh edeny el duck... look at that... this from that ummm this you need to touch it... look hello hello look hello... mish ausa al3aba [Ummm Sit here (Laughing)... can you sit here... what’s this? ... fine give me the duck... look at that ummm this you need to touch it... look hello hello look hello... I don’t want to play]</td>
<td>Both gazing at each other. Alyaa is gazing at the other children across the room.</td>
<td>Both near the table. They are beginning to settle on a table. Alyaa’s hands are touching and playing with the cubes.</td>
<td>Alyaa’s cubes are in front and the box of cubes are near Amira.</td>
<td>They both seem playful. Teacher arrives and leaves. Children begin looking at the playdough and duck cutters on the table. ‘Touch it’ – in English. I expect this is to do with the nursery rhyme. This appears to be private speech Alyaa decides she does not want to play with the playdough and picks up the cubes next to her.</td>
</tr>
</tbody>
</table>
Alyaa (although playing with Amira) is practising alone and, while doing so, begins translanguaging and changes her voice by singing – a form of transformation. These children appear to be in a world of their own, just singing, watching and listening while touching and moving artefacts, encapsulating a meaning-making practice that appears to me in this instance as both a cognitive and an intrapersonal aspect of meaning-making (Section 2.4.1).

5.4 Michael

Michael had already spent a year in pre-school at Valley Hill. According to Miss Melissa, Michael’s spoken English is limited. He appears to understand her but does not speak to her, although his mother informed me that her son occasionally uses English words he would have learnt at school. He has also learnt the Arabic letters, but his mother comments he writes more letters in English than Arabic. Miss Melissa suggests Michael is a popular boy at school and has many friends. She says that most children cannot speak English and Michael is no exception, although he is a confident boy. The teachers have selected him to take the leading role in the kindergarten concert because of his confidence.

According to his mother, Michael has no siblings but plays with children of his own age from a local Coptic Orthodox church and wants to make friends with Muslim boys at school. His mother works full-time as a hospital radiologist, and his father works full-time as a telecoms engineer. Both parents were born of Egyptian parents, but Michael’s father has Greek nationality through his great-great-grandfather (mother’s side). The Greek language is used at home for liturgical purposes. Both parents speak English well, but
Arabic is spoken at home. The family lives in a small apartment close to the school, and Michael travels to school using the school microbus (a small passenger vehicle sometimes referred to as a minibus). Michael’s parents have sent him to Valley Hill because it is local to the family home, and they hope Michael will learn to speak English.

Michael’s mother states he loves to paint using his fingers and to colour with pencils. When I visited Michael in his home, I saw many of his drawings and paintings. He was particularly keen on the 3D animations, ‘The Lion King’ and ‘Dora the Explorer’. He was fond of the film ‘Spiderman’ in Arabic and English and had a Spiderman pencil case. There were plaster-of-Paris figurines that Michael had painted, along with colouring books, puzzles and artefacts. According to his mother, he is fond of using his iPad and likes to play games on it, using the drawing application to write his father’s name in English.

5.4.1 Shoes, Boy places, Number five and Number six (Excerpts E, F, G and H)

(Michael, T1, 21/10/12)

Michael’s observation took place in Week 7. This week the kindergarten begins a new topic – ‘Transportation’ (Section 4.2.3). The theme is about travelling on foot and ‘walking to school’. Teachers have also planned a trip for the class teddy bear and there is a story about this bear walking to school.

The word ‘shoe’ in English has been used from the previous topic ‘All about me’ and there was a great deal of teacher-talk about getting dressed for school, according to Miss Melissa. The topic ‘Transportation’ has also led to several discussions with the English-
speaking teacher about children ‘walking to school’. The pictures and paintings around the classroom, depicting children’s body parts and children walking to school, may have also influenced Michael’s play.

Michael sits next to the bilingual TA, who is showing children how to write their name, then he moves over to the construction area (Figure 5.4). On the wall are images of boys and girls (from a template given to the children by the English-speaking teacher to colour in). Michael is always looking up at the wall and at the other children playing in the classroom. On the carpet are boxes of wooden building blocks, Lego, Stickle Bricks (a plastic construction toy), magnets, colourful connecting tubes and sewing cards. The sewing cards are in the shape of animals or things from home. Michael sits on the carpet next to a girl called Lameah, who is playing with the sewing cards.

![The construction area and image of boys and girls](image)

**Figure 5. 4 The construction area and image of boys and girls**

In Excerpt E, Michael begins his play using the multi-coloured connecting tubes on the carpet, away from his teacher’s gaze. I can hear lots of clatter on the recording and I can see Michael sorting the construction tubes by colour and selecting different lengths of
tubes. He does not greet Lameah, and he appears to be translanguaging as he talks to himself. He inserts the word shoes – ‘I will make **shoes**’ – and ties a shoelace onto a construction tube. Michael constantly repeats the word ‘shoe’ as he gazes at it and moves the artefact around in front of him. He is practising alone using private speech because he is not directing his speech at Lameah. Lameah also inserts the word ‘**shoes**’ in English, as if copying Michael, but her tone sounds condescending. Lameah shifts her body away from Michael, with her back turned.

During our conversation, Michael does not tell me why he talks about ‘shoes’ or why he is using the construction tubes in this manner. Throwing a shoe at someone in Egypt is an insult, as the bottom of one’s shoe is considered unclean, although I do not believe this was Michael’s intention. However, I can see that both the repetition of the word shoe and playing with the shoelace is important to him.
**Excerpt E Shoes (Michael, T1, 21/10/12)**

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td></td>
<td>06.50</td>
<td>Lameah</td>
<td>بص ليه: Boss ch</td>
<td>Lameah is looking in sewing-card box.</td>
<td>Lameah is kneeling.</td>
<td></td>
<td>Michael is back to playing in the construction area, but he is always looking around, watching what other children are doing.</td>
</tr>
<tr>
<td>58</td>
<td></td>
<td>06.54</td>
<td>Michael</td>
<td>أنا حمل shoes</td>
<td>Michael gazes at the tubes.</td>
<td>Michael is cross-legged.</td>
<td>Michael's construction tubes are centre right.</td>
<td>Michael picks up the construction tube. Michael is looking up at other children. Michael is talking to himself.</td>
</tr>
<tr>
<td>59</td>
<td></td>
<td>06.57</td>
<td>Lameah</td>
<td>لا ماد الشو shoes</td>
<td>Lameah gazes at sewing and threading. Michael is looking at the connecting tubes.</td>
<td>Michael plays with connecting tubes. His body is close to Lameah.</td>
<td>Cards are close to Lameah's body.</td>
<td>Seems like Lameah is telling Michael what to do with his shoes. She doesn't turn around. Children have been learning about transportation and walking.</td>
</tr>
</tbody>
</table>

*Note: Shoes in Arabic are written as 'shoe' in English.*
<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td></td>
<td>07.06</td>
<td>Michael</td>
<td>Oh yes…ssss. shoes shoes shoes shoes shoes… shoes…shoesss shoesss ce ahhhhhh</td>
<td>Michael Gazes at the tubes.</td>
<td>Michael moves closer to Lameah.</td>
<td>Michael’s tubes are central to his body.</td>
<td>Michael is still on the carpet, constructing with the tubes. He takes a string from the sewing box to tie it onto the tube. He puts it down and has decided to sew. He moves towards Lameah who is sewing using the pre-cut sewing card.</td>
</tr>
<tr>
<td>61</td>
<td></td>
<td>07.43</td>
<td>Lameah</td>
<td>لا لا لا لا أنا جاهي مع مامي لا لا لا لا ماها look</td>
<td>Both children’s gaze on sewing cards.</td>
<td>Michael moves near Lameah. Children cross-legged.</td>
<td>Both children’s objects central to their body.</td>
<td>Michael is about to switch play in Lameah’s direction. Michael appears to be using private speech. All children in classroom become silent as teacher questions another child in the classroom, which tells me children are constantly listening to the teacher.</td>
</tr>
</tbody>
</table>

La la la la an a gai m3a muntie la la la Ha ha la a Look ah ya bunitie a3at aleha

[No no no no I’m coming with my mummy no no no no ha ha ha Look oh my tummy you sat on it]
Later, Michael begins to play with sewing cards (Excerpt F). I watch him sew the shoelace through a card. He stands up and sits down, looking at Lameah and at other children (an action he regularly performs). Michael speaks to himself as he sews: ‘Stop you…come with me…take it…with stick…I will play cards’. The words ‘stick’ and ‘cards’ are illustrations of vocabulary associated with school. At some point, these words would have been taught by the English-speaking teacher or TA, according to Miss Melissa.

Michael and Lameah are now both sewing with cards, translanguaging and moving their bodies, and adjusting their gaze to their artefacts. Michael kisses the card and utters the word ‘mama’, which sounds English to me. Also, the constant shifting of Michael’s body tells me he does not enjoy sharing this space with Lameah. He starts to use his body and gaze as a barrier, and then a fight begins, seemingly over artefacts. Michael tells Lameah, she is in the ‘boy’ place.

All young children explore gender and their identities and their place in the world. They may have cultural, social or stereotypical views confirmed by their teachers or parents. Perhaps Michael considers this a boy place, but what is important to this interpretation is the evidence derived from the MMTL analytical framework as the lens to reveal the multimodal combinations for meaning-making. Michael not only consolidates his meanings through translanguaging but moves his artefacts out of Lameah’s reach, at the same time using a piercing gaze. This non-friendly action is confirmed through his gesture as he physically uses his body to remove Lameah from the carpet. These features indicate he is socially engaged in meaning-making to dominate both the artefacts and the play space.
<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td></td>
<td>09.53</td>
<td>Michael</td>
<td>سب يا... تعالى معايا انا... خيط... ...[inaudible]... على Stick... انا هلعب cards</td>
<td>Michael is looking at the card.</td>
<td>Michael’s hands moving the thread.</td>
<td>Michael has a sewing card central to his body.</td>
<td>Michael changes from tubes to sewing. Lameah doesn’t seem very happy about this and moves away. Her back is in front of him. Michael is using words associated with school English.</td>
</tr>
<tr>
<td>63</td>
<td></td>
<td>10.54</td>
<td>Lameah</td>
<td>(Ba ba ba ba ba)</td>
<td>Michael’s gaze on the cards.</td>
<td>Michael’s hands are on the cards.</td>
<td>Michaels card central to his body.</td>
<td>Michael switching cards.</td>
</tr>
</tbody>
</table>
### Excerpt F etc.

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td></td>
<td>11.23</td>
<td>Michael</td>
<td>Ana fi bayt wahdy...ah ah ah... meen izo mama bas ana la ato...(sucking) ...hoodie teddy bear mama (kiss)...ana mashy...tistana makana beta3 boy mesh bia girl [I’m home alone...ah ah ahhhh from mummy only take it mummy (sucking)...take teddy bear mama (kiss)...I am going...you’re staying in the boy place not girl]</td>
<td>Michael gazes at Lameah and then at his card.</td>
<td>Michael picks up red sewing teddy bear card.</td>
<td>Michael stands up and sits down.</td>
<td>Michael’s card is central to body.</td>
</tr>
</tbody>
</table>
Michael decides to move away from the construction area to engage in an activity left on a classroom table by Miss Melissa – cutting and sticking (with coloured card, scissors, glue and white A4 paper). As Michael sits alone, his teacher brushes past him, selects his mark-making book (Section 4.2.3) and turns to a clean page. Then she puts the book down and walks away – no words are spoken, and she does not indicate what he should do. Michael pauses for a moment, looks at the other children, and begins to cut and stick. Gabrielle then joins Michael. They are both friends from church and regularly see each other out of school. They briefly talk to each other in Arabic, and both cut and stick. Michael changes his mind, turns the page of his mark-making book and selects coloured pencils found on the table. He begins to draw two figures and the letter ‘m’ (the initial of his name in Roman script) written in the direction of Arabic (he tells me these drawings are of his family).

In Excerpt G, Michael and Gabrielle are drawing upon their common knowledge about their families. Michael begins by randomly saying numbers in English, and he stops at number five and fixes his gaze on his book. His gesture tells me he is listening to Gabrielle, as his head is slightly tilted towards her – he is not able to count. Gabrielle begins to use gesture by raising five fingers on her right hand, first in front of her body and then out to the side, with all five fingers outstretched, and she is translanguaging and gesturing: ‘So what does it mean there are five?’ At which point, Michael gives a quick glance at her fingers and then back at his book. This to me is evidence of transduction, as Gabrielle shifts gesture (a visual-mode) to speech for meaning-making to help Michael understand and this explains the cognitive feature of transduction as meaning-making.
Excerpt G Number five (Michael, T1, 21/10/12)

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td></td>
<td>27.09</td>
<td>Michael</td>
<td>Five</td>
<td>Michael’s gaze is on his book.</td>
<td>Michael is in front of his book. Gabrielle’s right hand is raised to show 5 fingers in front of her body.</td>
<td>Michael stares at his drawing with a green coloured pencil.</td>
<td>Gabrielle raises 5 fingers and speaks.</td>
</tr>
<tr>
<td>111</td>
<td></td>
<td>27.13</td>
<td>Gabrielle</td>
<td>Bini ah ma five</td>
<td>Yanni eh fi five [So what does it mean there are five?]</td>
<td>Gabrielle’s gaze is on the book, then he turns his gaze to Gabrielle’s fingers.</td>
<td>Gabrielle’s fingers are stretched out and slightly to the right of her body. Gabrielle’s head slightly turned to Gabrielle.</td>
<td>Michael continues to draw.</td>
</tr>
<tr>
<td>112</td>
<td></td>
<td>27.15</td>
<td>Michael</td>
<td>Four keeda</td>
<td>Four kedda [Four like that]</td>
<td>Michael’s gaze is back on his book.</td>
<td>Gabrielle’s hands raised with 5 fingers, moved again in front of her body. Michael turns to Gabrielle and then back to his book.</td>
<td>Michael’s left hand slightly raised above his book, revealing his fingers.</td>
</tr>
</tbody>
</table>
As time passes in Excerpt H, Michael appears engrossed by Gabrielle as she begins to talk about her older sister being six years old, and again she raises her hands to now show six fingers. This triggers Michael to say numbers randomly in English and he remarks: ‘six…and I have **four**…I’ll grow up to be **five** I have **four** and then I’ll be **five** older than you and my Daddy’. Gabrielle corrects him and reorders these numbers by repeating back his utterance with corrections. She is guiding Michael, who continues playfully translanguaging: ‘and I have **four**…but I have [inaudible] they play with fire’. While speaking, he is drawing and gesturing at his picture, which becomes more elaborate, showing three figurines side-by-side with one figurine shorter (this is of his family, I learn during our conversation). The mention of fire appears playful and imaginative as he elaborates his story and changes the features of his drawing.

Gabrielle continues to count and with the raising of her fingers seems to galvanise Michael, who turns her utterance into a counting game. Gabrielle also wants to be sure Michael has understood her. The raising of six fingers shifts the speech into a more visual and accessible mode using the practice of transduction. At the same time, Michael continues to draw changing the features of his drawing on the page as he constructs his family, a form of transformation. Michael and Gabrielle’s combination of speech, gesture, gaze and their use of artefacts (in this case drawing) is a demonstration of an all-inclusive use for meaning-making while collaboratively playing together. However, Gabrielle (like Alyaa in Excerpt C) may also be playing the teacher, so meaning-making here serves both as a social and cognitive practice.
**Excerpt H Number six (Michael, T1, 21/10/12)**

<table>
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<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1.png" alt="Image" /></td>
<td>31.58</td>
<td>Michael</td>
<td>Six...wa ana andi four...hakbar wa habaa five ana andi four wa baadin habaa five akbar minoko...ana wa babaya</td>
<td>Michael's gaze is on his book.</td>
<td>Michael reaches his right hand to the left-hand side of the page.</td>
<td>Michael draws lines/circles.</td>
<td>The trigger for Michael is Gabrielle when she refers to the age of her sister. She puts up 6 fingers. Michael instinctively knows they are talking about numbers. Michael begins to count in English and playfully mentions being older than everyone including his Daddy.</td>
</tr>
<tr>
<td>Speaker turn and analytical code</td>
<td>Image</td>
<td>Time in mins &amp; secs</td>
<td>Speaker</td>
<td>Speech/sound</td>
<td>Gaze direction</td>
<td>Gesture/posture/movement</td>
<td>Artefact/layout</td>
<td>Comments</td>
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</tr>
<tr>
<td>135</td>
<td>32.15</td>
<td>Gabrielle</td>
<td></td>
<td>عرف عدده [inaudible] و بعدين [three و بعدين [four و بعدين [five و بعدين [six و بعدين [seven</td>
<td>Michael looks at the pencils.</td>
<td>Michael reaches over towards the coloured pencils.</td>
<td>Michael moves the pencils in front of his body.</td>
<td>Gabrielle corrects Michael to count in ascending order.</td>
</tr>
<tr>
<td>Speaker turn and analytical code</td>
<td>Image</td>
<td>Time in mins &amp; secs.</td>
<td>Speaker</td>
<td>Speech /sound</td>
<td>Gaze direction</td>
<td>Gesture/posture /movement</td>
<td>Artefact/layout</td>
<td>Comments</td>
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<td>----------</td>
</tr>
<tr>
<td>136</td>
<td>32.23</td>
<td>Michael</td>
<td>four</td>
<td>Wa ana andi four has aandow [inaudible] bi y3bo fi nnar [And I have four but I have [inaudible] they play with fire]</td>
<td>Michael’s gaze is on his book.</td>
<td>Michael’s right hand is drawing.</td>
<td>Drawing a circle on the left-hand side of page in the colour blue.</td>
<td>They are sharing their pencils. Michael is talking about, and he appears to be drawing, his family.</td>
</tr>
<tr>
<td>137</td>
<td>32.24</td>
<td>Gabrielle</td>
<td>three</td>
<td>Wa ana sanateen...b3din three b3din four b3deen five b3din seven ...wa aowal wahed [I’m two years ... then three then four then five then seven ...and the first one]</td>
<td>Michael’s gaze is on his book.</td>
<td>Michael raises his right hand, with his pencil in it.</td>
<td>Drawing a circle on the left-hand side of page in the colour blue.</td>
<td>Gabrielle starts to count in English but misses the number six.</td>
</tr>
</tbody>
</table>
5.4.2 Concert and triangle (Excerpt I and J)

(Michael, T2, 20/02/13)

It is Week 21 and the topic this week is bears. I can see pictures on the classroom wall depicting various animals and a wall frieze with numbers in order. In previous weeks, children have been learning about different sizes and shapes. Children have also been making sunglasses out of different shapes, which are hanging in the corridor (Figure 5.5). Miss Melissa recalls how children are developing their independence by this point in the academic year and are speaking some English.

Figure 5.5 Sunglasses of different shapes and Peter and the Wolf concert display

The children are busy with their concert, ‘Peter and The Wolf’. They have carried out a dress rehearsal and a photographer has taken pictures of the children on stage. These photographs are now among children’s drawings on a display board (Figure 5.5). Various children of the Buffalo class were observed commenting about their concert while pointing to their photograph on this display board. Children have been preparing props for the stage and learning their lines. All the kindergarten children are due to put on this concert for their parents in the afternoon.
Michael is moving around the classroom before registration and showing off the backpack with all the audio equipment inside. His friends talk about the backpack as if it were part of his costume for the concert. Michael and his friends Hana, Celine and Rodayna move to the wall-mounted interactive whiteboard with marker pens and begin to write numbers (three, four and six). Michael suggests: ‘all of us will write three four…and then I’ll write four’. They appear to me to be using multiple modes by trans languaging, saying the numbers ‘three and four’ and then moving to writing them, thus demonstrating transduction for meaning-making. Michael appears to me to be slightly more confident at doing this, informing the other children what to do.

In Excerpt I, their conversation has no relation to the marks and the numbers they write. I hear them on the audio recording trans languaging by discussing the forthcoming school concert they are about to perform, and I see them moving and gesturing. They seem happy playing together as they have been planning this concert for some time and parents have been gathering their costumes. Rodayna gestures and inserts ‘scarf’ in English, and Michael gestures and uses his gaze to tell his friends about his ‘brown t-shirt’. These are all costume items, and the children insert words from the topic of the concert, which keeps the conversation focused on the concert.

Michael appears engaged in writing, his gaze fixed on the whiteboard, but he is also intently listening, head tilted, and contributing to the conversation. In Excerpt I, I notice that these children are using multiple modes for meaning-making. Michael is speaking to his friends, but he is also writing. All the children at the whiteboard are smiling, gesturing and appear to be working together harmoniously. They are not being competitive about
their immediate space on the whiteboard, switching positions and quite happy to share.

There is a great deal of gaze between children and at their marks. Michael wipes off Rodayna’s marks, but she does not complain. The motivation for this kind of play seems to me to be not only playing together but also co-constructing their knowledge as they play together by considering their concert clothes and simultaneously practising writing numbers on the whiteboard.
### Excerpt 1 The concert (Michael, T1, 20/02/13)

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>![Image](126x175 to 820x468)</td>
<td>11:08</td>
<td>Celine</td>
<td>El Miss alet ban’d el <strong>breakfast</strong> fe hafla? W haneel’a hena sah?</td>
<td>Michael is gazing at Rodayna’s line on the whiteboard.</td>
<td>Michael is rubbing out Rodayna’s line.</td>
<td>Michael writes the number 4 central to his body.</td>
<td>The children are marking and writing numbers but the topic shifts dramatically to their party after the concert.</td>
</tr>
<tr>
<td>41</td>
<td>![Image](126x175 to 820x468)</td>
<td>11:19</td>
<td>Rodayna</td>
<td>Mama qaallati... Mama magabelesheh leena <strong>scarf</strong></td>
<td>Michael slightly peers over at Rodayna’s marks.</td>
<td>Michael leans back, head slightly tilted to Rodayna.</td>
<td>Michael writes the number 3.</td>
<td>Talking about their concert.</td>
</tr>
</tbody>
</table>
Excerpt I ctd.

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech / sound</th>
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<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>11.27</td>
<td>Michael</td>
<td></td>
<td>مسمى مجبيلتش t-shirt ت بتاع بيتاز لونه brown</td>
<td>Michael gazes at the numbers written.</td>
<td>Michael is facing the whiteboard.</td>
<td>Michael writes 3. Then 3 again, then 4.</td>
<td>They are referring to their costumes for the concert of Peter and the Wolf. The teacher requires a brown t-shirt but the colour ‘brown’ is said at the end of the sentence, as it would be in Arabic.</td>
</tr>
<tr>
<td>43</td>
<td>11.38</td>
<td>Rodayna</td>
<td></td>
<td>طلب مامتي لسة مجبيلتش scarf وهاتني scarf بئاثها</td>
<td>Michael’s gaze on the number two.</td>
<td>Michael writing on the whiteboard.</td>
<td>Children writing various numbers – 10, 2, 6, 3 and 2.</td>
<td>Referring to their costumes for the concert of Peter and the Wolf.</td>
</tr>
</tbody>
</table>
In the same observation, children stop talking about their concert and Michael becomes more instructive, explaining the various features of shapes (see Figure 5.5). Hana appears to be learning from Michael while playing on the whiteboard. In Excerpt J, both children at first appear to be practising by translanguaging about numbers and then writing them on the whiteboard (Roman numerals 10, 2, 6 and 3, with a marker pen), using the meaning-making practice of transduction.

Michael begins by commenting in English on the features of his drawn shape: ‘Square very nice’. Hana tilts her head and listens to what Michael is saying and then watches how Michael draws the shape. Hana asks Michael: ‘Is the rectangle like this?’ and Michael comments: ‘No that’s a triangle’. He begins to speak and gesture, modelling for Hana, who repeats back in English the name of the shape, her voice raised: ‘Triangle…is that a rectangle?’ Michael nods and continues by asking Hana a teacher-like question in Arabic: ‘What is the name of this?’ He draws the shape and motions with his marker pen. Hana responds in English: ‘triangle’, Hana becomes playful and remarks she will place a duck inside the triangle.

It seems to me that Michael is becoming more confident in speaking English and becoming the teacher through modelling a triangle. Michael illustrates this by translanguaging his meaning. He then moves his meaning to the more visual-mode of drawing, thus deploying transduction by moving speech to image. I observe Michael uses his gaze to draw Hana’s gaze towards the triangle he has drawn, using his gesture with his marker pen to explain, while uttering triangle in English. Perhaps Michael is meaning-making by playing at being the teacher.
Excerpt J Triangle (Michael, T1, 20/02/13)

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>16:22</td>
<td>Michael</td>
<td>Square</td>
<td>Square is on the whiteboard.</td>
<td>Michael stands back a little.</td>
<td>Michael draws a square.</td>
<td>They begin to talk about shapes and draw.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7\text{w} ave</td>
<td>[Square very nice]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hana</td>
<td>16:42</td>
<td>Michael</td>
<td>Howa el rectangle</td>
<td>Michael’s gaze is on board.</td>
<td>Michael with eraser using it as a pointer.</td>
<td>Square is in front of Michael and Hana.</td>
<td>Bottom left is Hana’s red shape and numbers. Roda nova appears to be gazing at Michael’s shape.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>kda?</td>
<td>[Is the rectangle like this?]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7\text{r} fix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael</td>
<td>16:44</td>
<td>Michael</td>
<td>triangle</td>
<td>Michael’s gaze on Hana.</td>
<td>Michael stands back.</td>
<td>Hana draws a red triangle. Numbers in red pen to the right of Hana.</td>
<td>Michael is marking but when Hana asks him what shape she has drawn he comments in English, as if guiding her as to what she has drawn.</td>
<td></td>
</tr>
</tbody>
</table>
### Excerpt J ctd.

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/Layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td></td>
<td>16:50</td>
<td>Hana</td>
<td><strong>Triangle</strong> كَتَنَّهُ دَهَّ <strong>rectangle</strong>؟&lt;br&gt;<strong>Triangle</strong>...kda da <strong>rectangle</strong>?&lt;br&gt;[<strong>Triangle</strong>...is that a <strong>rectangle</strong>?]</td>
<td>Hana looks at Michael’s shape.</td>
<td>Michael nods and motions with his pen in hand.</td>
<td>Michael draws a shape to left of Hana’s triangle. He motions his agreement with his head.</td>
<td></td>
</tr>
<tr>
<td>89</td>
<td></td>
<td>16:59</td>
<td>Michael</td>
<td><strong>دا اسمه اي؟</strong>&lt;br&gt;Da esmo eh&lt;br&gt;[What is the name of this?]</td>
<td>All gaze at board.</td>
<td>All drawing shapes. Michael motions with his pen pointing.</td>
<td>All shapes are in front of body space.</td>
<td>All children now drawing shapes.</td>
</tr>
<tr>
<td>90</td>
<td></td>
<td>17:13</td>
<td>Hana</td>
<td><strong>نا همل</strong> <strong>triangle</strong> كبير وحمل جواه بطة&lt;br&gt;Awa hamel <strong>triangle</strong> keber w hamel gowah batta&lt;br&gt;[I’ll make a big <strong>triangle</strong> and I’ll make a duck inside it]</td>
<td>Michael’s gaze on board.</td>
<td>Michael stands back.</td>
<td>Michael writing numbers near a long line – 3 followed by 2.</td>
<td>Michael switches play back to numbers.</td>
</tr>
</tbody>
</table>
5.4.3 I have Doritos (Excerpt K)

(Michael, T3, 23/04/13)

This is the last term in the academic year (Week 23). In the Buffalo class, children have been learning about bears. More children are noticeably speaking English during play in preference to speaking Arabic. Children this term seem happy and more settled at school. All children bring in lunchboxes because they cannot eat in the canteen with the older children. Children cannot share their lunchbox with other children due to possible allergies, but they appear to compare each other’s lunchboxes a great deal and today Michael has Doritos in his lunchbox.

Before breakfast, Michael is playing on the classroom’s wall-mounted interactive whiteboard with Osama. Michael appears from the audio recording to be talking to himself. The marker pen is in his right hand and he is writing numbers one and two without looking at Osama. In Excerpt K, I notice Michael’s posture changes, and he becomes upright, facing Osama rather than the whiteboard, with his head lifted. It appears he is ready to say something to Osama. He keeps his body near Osama, using his gaze to align himself with Osama, who is also marking on the whiteboard. Michael then utters: ‘I have…I get Doritos’. Although ‘Doritos’ is a product name, I would argue it is recognisably ‘foreign’, albeit non-language-specific. The pronunciation, however, is most definitely English-like and not Arabic or Spanish.

Michael’s gaze is prolonged on Osama’s face, as if watching for his reaction. Michael appears to be showing off, and his body begins to swing while making this remark. When Michael has Osama’s attention, he shifts his gaze back to the whiteboard. Osama faces
Michael briefly, with his head tilted to one side, so that his gaze is fleeting. Michael does not turn around to face Osama’s gaze after he has made his statement. Osama returns the comment: ‘I have Doritos at home’, as if to show friendship or trying to be competitive and not outdone. These brief social exchanges are evidence of meaning-making – where artefacts and gesture are used alongside speech and marking. This exchange seems to cement Michael’s relationship with Osama where both boys seem to be competitive which each other in a bid to become friends and remain with each other through the period of ‘free-play’.
**Excerpt K Doritos (Michael, T3, 23/04/13)**

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>13:43</td>
<td>Michael</td>
<td>Ana 3ndy...ma3ayia Doritos [I have...I get Doritos]</td>
<td>Michael’s gaze is on the written numbers. Osama is looking towards Michael.</td>
<td>Michael rubs out his marks and he is facing the whiteboard. Osama’s head is slightly turned towards Michael and he is marking.</td>
<td>Michael writes 1, 2, 3, 4, 5, central to his body.</td>
<td>Doritos are really hard to buy in Egypt. The word is said with an English pronunciation.</td>
</tr>
<tr>
<td>22</td>
<td>13:47</td>
<td>Osama</td>
<td>Ana 3ndy Doritos falfinit [I have Doritos at home]</td>
<td>Both boys fix their gaze on the whiteboard.</td>
<td>Both boys are marking.</td>
<td>Michael writes 1, 2, 3, 4, 5, 6 – slightly above his eyelines.</td>
<td>Osama responds as if competing with him.</td>
</tr>
</tbody>
</table>
Mostafa seems driven to learn English, and I suspect this is due to his friendship with Andrew, a boy from New Zealand who speaks English at home with his mother (Arabic at the weekend with his Egyptian father). Mostafa is in my class and appears to be a quiet, shy boy. Unable to speak much English, he is often silent in class. At home, Mostafa’s mother regards him as a confident boy who enjoys following English nursery rhymes, but he does not appear so confident at school. Mostafa went to an Arabic-speaking nursery before he started Valley Hill. None of the children who have joined my class attended Valley Hill pre-school. For most children, this will be their first experience of kindergarten.

According to Mostafa’s mother, her son likes to draw and colour in the living room. Mostafa has drawn many items associated with his family (Mummy, Daddy, and his baby brother) and he likes to draw cars. His mother talks about his coloured drawings and comments that he often sings while drawing. Mostafa’s mother is keen he starts writing early (his name, for example) and so she has bought him various exercise books. I saw legible letters and numbers in both Arabic and English in these exercise books. Mostafa also has a laptop on which he listens to CDs and stories in English and Arabic; his favourite game and film is ‘Spiderman’.

Mostafa’s family has an apartment close to the school, and he walks to school accompanied by his mother and his eight-month-old baby brother. His mother is not working, although she was an accountant before her marriage. Mostafa’s father is an electrician at the same company that owns the school. The family has a bursary for
Mostafa’s education at Valley Hill, but neither parent speaks English – a usual prerequisite of the school’s admissions policy. Most of my conversations with Mostafa’s mother were in Arabic, although she has taken up an English course at the British Council.

5.5.1 Marker pen and mashie (Excerpts L and M)

*(Mostafa, T1, 04/11/12)*

It is Week 8 and during previous weeks the kindergarten followed the topic ‘All about me’. The vocabulary used reflects family structures, health associated with visiting the doctor or dentist, certain body parts, and talking about emotions (happy/sad). In the second half of this term, we have been following the topic ‘Transportation’ and its associated themes.

This week is about ‘transportation by road’. Children have been building a large, red double-decker bus out of a cardboard box. We took this to the Assembly to show the children in reception and KS-1. We sang our usual happy tune, known as ‘Congratulations’. In class, we have been discussing taking a bus trip and have done some role-play. We have read stories about road safety and the popular children’s song, ‘The Wheels on the Bus’. There have been lots of activities in the classroom using recycled materials, and children have been practising letter-writing and marking on the wall-mounted outdoor whiteboard (Figure 5.6).
Figure 5.6 Marking on the wall-mounted outdoor whiteboard and recycled bus

Andrew, Mostafa and three girls – Kenzi, Mary and Hana – are engaged in child-initiated play, talking about getting on a bus. They independently congregate around the outdoor whiteboard. Mary and Hana are kneeling at the far end (left-hand side) of the whiteboard, marking. They seem happy and active. Kenzi is to the far left of the whiteboard. She is still and silent, observing the other children play. I can hear Mostafa making lots of vocalisations, but I also observe him running around, moving back and forth to the whiteboard, moving his body in and out among his friends. He makes marks on the whiteboard with his friend Andrew.

In Excerpt L, Andrew and Mostafa are playing together. Mostafa sings while he is marking using dots, lines and circles. Andrew and Mostafa are directing each other where to mark. Mostafa appears to be drawing a face, eyes, nose and legs. He shifts his gaze, looking towards the girls’ marks. Mostafa often stops, looks at other children playing outside, and then continues to vocalise sounds, drawing and erases some parts, then starting again. Mostafa pushes over to Kenzi and Mary’s side of the whiteboard with his body and marks over the girls’ dots, appearing to dominate the girls’ space and play. However, there
is no verbal protest from the girls. Mostafa does not speak to them directly, but he makes vocalisations towards them, marks over their marks on the whiteboard and uses his gaze and gesture to exclude them, thus using multiple modes to communicate his intended meaning. The girls also gesture and stare at Mostafa, also trying to use their body to maintain their side of the whiteboard, and they succeed.

Many vocalisations come from both boys as they weave in and out of other children in front of the whiteboard, frequently gesturing and gazing at each other. Andrew elongates words in English: ‘no, we have, bad and been’. Mostafa elongates his words in English: ‘Nooooo colournoooooo’ (no colour – his pen dried up) and again says words that sound like English: ‘Ma mak peg’ (my marker pen). Mostafa also repeats what Andrew has said in English with a raised intonation, ‘play?’ Perhaps Mostafa uses this space during the timetabled ‘free-play’ to practise English, as he slightly withdraws from the play, gazing at the whiteboard. Mostafa remarks: ‘Congrats you did it’ to Andrew. I suspect Mostafa is using a key phrase learnt from our Assembly song, ‘Congratulations, you did it’. He often uses the word ‘look’ with gesture, or touches Andrew’s shoulder or points with his marker pen. Andrew replies: ‘Go on…keep going keep going they’ll love it’, and Mostafa uses translanguaging ‘and I know it’ as he gestures and gazes at the whiteboard.
### Excerpt L Marking pen (Mostafa, T1, 04/11/12)

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td></td>
<td>03.48</td>
<td>Andrew</td>
<td>I don’t know \wecceceehhh\ weccecehhihkkheela \big baa\ Nooooo nooooo nooooo bceee naaa play</td>
<td>Mostafa’s gaze is on the whiteboard.</td>
<td>Andrew’s right hand facing Mostafa.</td>
<td>Mostafa makes squiggly lines. Right of whiteboard next to Andrew.</td>
<td>They appear to be working together, drawing and marking.</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>04.13</td>
<td>Mostafa</td>
<td>Play? \Ma mak peg ashh See see pam ... Nooooo colour\00000\00000 Ah aasae</td>
<td>Mostafa looks at his pen.</td>
<td>Mostafa close to Andrew as if to confer on something. Pen still in his hand.</td>
<td>Mostafa’s squiggly line is right of whiteboard next to Andrew.</td>
<td>Play? He makes it sound like a question, repeating it back as if learning a new piece of language. He can’t quite say marking pen, but he knows what it is clearly. The pen has dried up – no colour.</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>4.36</td>
<td>Andrew</td>
<td>Hear Julia Heceeeceee (.)</td>
<td>Mostafa’s gaze is on whiteboard.</td>
<td>Mostafa’s facing the whiteboard and gets a new marker pen.</td>
<td>Mostafa marks as if colouring something in the middle of the whiteboard.</td>
<td>I count five children at the whiteboard. Mostafa gets a new marker pen.</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>04.38</td>
<td>Kozi</td>
<td>Heceeeceee</td>
<td>Mostafa’s gaze is on the whiteboard.</td>
<td>Andrew and Mostafa change sides. Mostafa poised to make a mark. Mostafa’s right arm held up.</td>
<td>Mostafa’s making mark on top-right of the whiteboard.</td>
<td>Lots of tapping and banging sounds.</td>
</tr>
</tbody>
</table>
Excerpt L ctd.

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td></td>
<td>04.46</td>
<td>Mostafa</td>
<td>Congrats you did it</td>
<td>Mostafa’s gaze is on the whiteboard.</td>
<td>Mostafa facing the girls slightly.</td>
<td></td>
<td>The song resembles our Assembly school song.</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>04.49</td>
<td>Kenzi</td>
<td>Kwack kwack kwaana</td>
<td>Mostafa’s gaze is on the whiteboard.</td>
<td>Mostafa moves over to girls who are drawing and starts to mark over girls’ dots.</td>
<td>Mostafa far right, marking dots.</td>
<td>Mostafa moves right across to the girls’ area.</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>04.55</td>
<td>Mostafa</td>
<td>LOOK</td>
<td>Mostafa looking at Andrew’s marks.</td>
<td>Mostafa facing Andrew.</td>
<td>Mostafa’s right hand is holding his pen. He is just standing.</td>
<td>Andrew fits in between girls and Mostafa, separating them. Girls carry on.</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>05.02</td>
<td>Andrew</td>
<td>Go on..keep going keep going. They’ll love it</td>
<td>Mostafa’s gaze on me.</td>
<td>Andrew moves off briefly and Mostafa turns around.</td>
<td></td>
<td>I think they are referring to me when they say ‘They’. Perhaps putting on a show for me – Mostafa looks at me. I must be aware of this – ‘Observer’s Paradox’.</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>05.04</td>
<td>Mostafa</td>
<td>ئاكانا انكموت</td>
<td>Mostafa’s gaze on the whiteboard.</td>
<td>Mostafa faces the whiteboard and marking.</td>
<td>Mostafa draws a circle and he goes over it again anticlockwise. He is drawing a face. I am surprised how much English Mostafa knows, because I never really hear him speak English at school. Yet here during play he is speaking English to Andrew and responds to him.</td>
<td></td>
</tr>
</tbody>
</table>
Within the same observation (Excerpt M), Andrew begins his utterance in English and incorporates a local Arabic term: ‘Mostafa I’m making mashie’ (a popular Egyptian dish of stuffed vegetables with rice). Andrew uses dots and marks with a blue marker pen to represent mashie, thus translating the utterance from speech to the visual-mode of drawing, using the meaning-making practice of transduction. Mostafa and Andrew are now interacting together through their gaze and gesture. Mostafa, who rarely speaks English in the classroom, begins singing by repeating Andrew’s utterance: ‘I’m making mashie’. Mostafa appears not only to be repeating Andrew’s speech by singing. He is using his voice but modifying the semiotic material to include pitch and rhythm as a form of transformation. Mostafa also uses transduction, moving from speech to the visual-mode by marking directly over Andrew’s dots representing mashie (after the observation, Mostafa tells me he is making mashie). Repetition of words regularly occurs here (as seen with Michael’s repetition of ‘shoe’ in Excerpt E), but here Mostafa’s repetitive speech is combined with marking and singing. There is no dispute between the children, and they seem quite content, meaning-making together as friends.

Again, I notice Mostafa momentarily withdraws as he repeats English. He often stops, with his marker pen resting on the marks he has made (line 48 – on the leg of the figure he has been drawing). He may be contemplating what he has said and sung, and the marks he has made. It is important to remember that I made this recording early during the first term, when Mostafa was still in the early stages of learning to speak English. During most adult-led carpet discussions, Mostafa usually appears quiet, but not so during this instance of ‘free-play’.
### Excerpt M I’m making mashie (Mostafa, T1, 04/11/12)

<table>
<thead>
<tr>
<th>Speaker Turas and Analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>47</td>
<td>09.00</td>
<td>Andrew</td>
<td>Mostafa I’m making (singing) ماني</td>
<td>Andrew’s gaze on whiteboard and Mostafa. Mostafa in return looks at Andrew’s marking.</td>
<td>Both boys are marking dots, marks and lines. These are clustered together.</td>
<td>The dots and lines appear to be mashie, a popular local dish of vegetables stuffed with rice, tomatoes and herbs.</td>
<td>Andrew is singing, almost chanting. No direct translation for mashie available and so only two levels of transcription required for speech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mostafa I’m making mashie ماني</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>09.14</td>
<td>Mostafa</td>
<td>I’m making ماني</td>
<td>Mostafa gazes at Andrew’s marks then at his own marks and his previously drawn blue figure.</td>
<td>Surrounded by dots and marks, Mostafa’s blue pen is on his drawn figure. He stops. His head slightly back. Pen held on the leg of the figure.</td>
<td>Mostafa makes dots, marks and lines which surround the figure.</td>
<td>The figure was already drawn previously by Mostafa. A child’s representation of a figure or animal is denoted as a tadpole figure (see Cox, 1992; Golombok, 2002). He momentarily removes himself from the play.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mostafa I’m making mashie ماني</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I’m making ماني</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.5.2 Birthday cake and golden fish (Excerpts N and O)

(Mostafa, T3, 14/05/13)

It is the final term of the academic year (Week 31) and the topic is ‘Celebrations’. In previous weeks, the themes have been weddings, birthdays and the class teddy bear going on a picnic. In Islamic cultures, personal birthdays are not generally celebrated, so this is culturally a sensitive topic. However, parents at this school did celebrate their child’s birthday and brought in a birthday cake for all children to share. Images of birthday cakes made from recycled boxes are on display in the classroom and in the corridor (Figure 5.7). The whole school has just celebrated International Day and children have been learning about the different customs, clothes and food of several countries. In the kindergarten, children learnt about China. In Darters, a boy’s mother, who was Chinese, came to talk to the kindergarten. She taught children a song and handed each child a sequined goldfish. This gift delighted most of the children.

Figure 5. 7 Papier-mâché birthday cakes on display
Mostafa acquires more English each day and seems more comfortable speaking English to the other children. He is outside in the ‘Back Area’ (Section 4.2.2), playing with Andrew, Nadeen, Kenzi and Sami. They are trying to make a birthday cake with large sponge blocks on the floor and on top is a cylinder foam block, perhaps representing a candle. I am sure this play is related to our theme of celebrations and birthdays. The children sing a great deal as they play.

In Excerpt N, I can hear Mostafa telling children: ‘No here here here here here here…Look we will build something better’, using gesture and translanguaging to instruct his friends how to build the cake. Mostafa repeats ‘here’ several times as if amplifying his instruction. In his next utterance, Mostafa begins in English and finishes in Arabic: ‘NO no do it from here…no I took it’. The word order is English first, and it is directive, but he is also working with the other children towards a common goal through his gesture and gaze. Mostafa seems more expressive as he moves his body, pointing, raising his hands and moving the blocks into position. By using the MMTL analytical framework as a lens, I can observe the other children seem to understand this multimodal method of communication. This is a significant change from the shy Mostafa at the beginning of the year. Nadeen asks Mostafa in Arabic: ‘where shall I put this, Mostafa?’ Mostafa responds in English ‘Put it here’ – clearly an instruction, but also his tone here indicates he is collaborating with the other children. The use of multiple modes is used to powerful effect, allowing Mostafa to be part of the play with others. This is a useful excerpt showing change over time and the role of English in helping Mostafa achieve social inclusion.
Excerpt N Birthday cake (Mostafa, T3, 14/05/13)

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Time in mins &amp; secs</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>02:14</td>
<td>Mostafa</td>
<td>NO لا اسم من هنا لا هنا أنا آدهتنا</td>
<td>Mostafa is gazing at the blocks inside the wooden box.</td>
<td>Children lining up the foam blocks.</td>
<td>Mostafa seems to be using English to direct the play.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NO la emel men hena la hena...la ana akhataha [NO no do it from here... no I took it]</td>
<td>Mostafa is kneeling over the blocks towards the box.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>02:46</td>
<td>Nadeen</td>
<td>أهت مي نا مصطفى</td>
<td>Mostafa’s gaze is on the stray block.</td>
<td>Children lining up the foam blocks.</td>
<td>Children ask him in Arabic, but he responds in English.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ahot de fen ya Mostafa [Where shall I put this Mostafa?]</td>
<td>Mostafa is standing up and he is picking up the stray block.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>02:47</td>
<td>Mostafa</td>
<td>أرسل في هذا</td>
<td>Mostafa is gazing at the block.</td>
<td>Children lining up the foam blocks.</td>
<td>Responds in English in an authoritative tone to direct the play.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aolak hetti fen? Hetti hena Put it here [Shall I tell where to put it? Put it here]</td>
<td>Mostafa is on the floor, placing the block and directing children with his hand.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>02:51</td>
<td>Nadeen</td>
<td>ماشي</td>
<td>Mostafa is gazing inside the box.</td>
<td>Children lining up the foam blocks.</td>
<td>Children agree to follow Mostafa’s instructions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mashy [Ok]</td>
<td>Removing more foam blocks from the box.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Within the same observation, in Excerpt O, Sami is checking where to put the blocks by asking Mostafa in Arabic. Mostafa repeats the phrase: ‘**PUT it here**’ to Sami, but his tone has changed, and he gestures as he shouts the instruction. Previously he was collaborative but now he responds to Sami’s Arabic using English as an order. I wonder if Mostafa is taking this opportunity to dominate the play by using a multimodal combination of the tone of his voice, English and gesture. Mostafa seems to use English and gesture to exclude Sami from playing, his arm is outstretched, jabbing his ‘golden fish’ (a small plastic dinosaur) in the air and roaring at Sami, telling him in English: ‘**I’m not play with you**’.

Mostafa has changed his mind; they are no longer building a birthday cake. As with most child-initiated play, the identity of the imagined artefact continually changes according to the narratives of the child. The complexity of Mostafa’s utterance is evident – he is beginning to draw on the resources of English ‘goldfish’, (though he calls it ‘golden fish’) by recalling the sequined fish from International Day. Mostafa has a dinosaur in his hand. He is moving it through the air, and I initially think it is an imaginary car, but it is his ‘golden fish’ (which I understand from our conversation after this observation). The children separate the ‘birthday cake’ blocks and reposition them to make a den for the ‘golden fish’, showing Mostafa’s ability to use transformation to facilitate a repositioning of the blocks and through his voice by changing his tone. He bounces his ‘golden fish’ up and down on the blocks to allow the fish to swim through.
## Excerpt O Golden fish (Mostafa, T3, 14/05/13)

<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech /sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td>11:23</td>
<td>Sami</td>
<td>لا مش دي</td>
<td>Mostafa is gazing at the blocks and toy cars.</td>
<td>Mostafa’s hand is outstretched and pointing.</td>
<td>Children put the blocks in a pile.</td>
<td>Mostafa is using English to control the play. Children are rearranging the blocks.</td>
</tr>
<tr>
<td>65</td>
<td>11:25</td>
<td>Mostafa</td>
<td>PUT it here</td>
<td>Mostafa’s gaze is on the dinosaur.</td>
<td>Mostafa’s hand is on the dinosaur.</td>
<td>Mostafa is moving the dinosaur in air.</td>
<td>Mostafa shouts. Appears aggressive.</td>
</tr>
<tr>
<td>66</td>
<td>11:36</td>
<td>Sami</td>
<td>This is the start?</td>
<td>Mostafa is crawling over the blocks.</td>
<td>Mostafa is beginning to put the blocks in a circle.</td>
<td>Mostafa is unfriendly towards Sami.</td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>11:41</td>
<td>Mostafa</td>
<td>This is a hole here......Ahaaa aaaamm shiny golden fish...I’m not play with you</td>
<td>Mostafa’s gaze is on the foam blocks.</td>
<td>Mostafa is pointing with the dinosaur to the hole in the foam blocks.</td>
<td>Mostafa places the dinosaur at the point where the hole will be.</td>
<td>Mostafa is excluding Sami. The dinosaur is the golden fish. He means goldfish.</td>
</tr>
</tbody>
</table>
5.6 Nadeen

At home, Nadeen’s parents speak to her and her sister in Arabic, although her mother sings nursery rhymes in English. According to her mother, Nadeen will often talk to herself in Arabic and English at home. As her teacher, I have noticed Nadeen can understand more English than she can speak. At school, she is fun-loving and outgoing, significantly confident with other children. She is also active outdoors and likes the recycling and drawing areas of the classroom. I found Nadeen adds the letters in her name to whatever she draws. I have seen her do this with paint, pencil and chalk. Nadeen’s mother also observes writing on Nadeen’s drawings in both Arabic and English. Nadeen’s mother informs me her daughter likes to draw figures, one of which she repeatedly draws with increasing detail, which she believes is a self-portrait. Nadeen has a special place in her bedroom to draw, although she is free to draw anywhere at home. Her mother has observed her family drawings, with mummy big and sister small, the differences in size exaggerated.

This is Nadeen’s first year at Valley Hill, although her mother told me that Nadeen had briefly attended a pre-school in London. Nadeen’s family returned to Egypt from London just after the Arab Spring in 2011, and they rent an apartment close to Valley Hill. Nadeen’s mother and father are both Egyptian. Nadeen’s father currently works in Saudi Arabia, travelling worldwide, opening restaurants. Nadeen’s mother is an interior designer, although she is currently at home with Nadeen’s younger sister, who has not started school. According to Nadeen’s mother, both girls like to watch television in English; they are fond of Mickey Mouse, Barney and the Smurfs.
5.6.1 Look (Excerpt P)

(Nadeen T1, 28/11/12)

It is Week 11 and children are coming to the end of their first term, ending with the topic ‘Transportation’. This week, children have been learning about travelling by air and we talked about going on a holiday and getting on an aeroplane. Children watched an aeroplane take off, on the wall-mounted interactive whiteboard, and imagined they were travelling to a far-off destination. We made postcards (posted in our model post-box), and kites and hot air balloons, which we hung on string across the corridors and classrooms, known as our ‘washing line’. Inside the classroom, there are various resources suited to the topic: toy car parks, airports and train sets. Outdoors are cars and trucks in the sandpit, water-baths with plastic aeroplanes, and tricycles and scooters with model traffic lights at the end of the tarmac.

Nadeen decides to go outside. It is a fine day and not too hot, as this observation takes place early in the morning. There are now eight children playing outside. Excerpt P shows a brief interaction between Kenzi and Nadeen. Nadeen has chunky chalk in her hand, and she immediately starts to mark on the tarmac, opposite the doorsteps to the classroom. She starts to ask me to look at her drawing. She is quite persistent, as if seeking my approval, so I respond. Nadeen has shown me the same drawing many times using various media with no explanation of what it is, and it looks similar in all its details – a smiley face, with hair in what appear to be hair-bunches (Figure 5.8).
Figure 5. 8 Nadeen’s written name and chalk drawing

Nadeen seems to be watching another child draw and I can hear one child on the recording talking about a big fish near the water-bath area. Nadeen moves on with her chalk drawing, and it appears to me she is drawing shapes: a rectangle, then a line, and a triangle. On reflection, as Nadeen’s marks progress, I can see she is writing some of the letters of her name and she confirms this during our conversation. She continues to write these letters in capitals. I can see from the photograph (Figure 5.8) that there is a dot in one letter – quite possibly the Arabic letter ن (pronounced ‘noon’), equivalent to the Roman letter N. I also suspect this to be the first letter of her name because the letters have been written in the clockwise directionality of Arabic with the addition of some Roman script, and so what possibly appears is ‘ن N A’ and underneath ‘N A ن’. This is an example of emergent bilinguals drawing on their developing knowledge in mark-making – what has previously been described as a switch between scripts (Section 2.4.3).

Nadeen begins drawing another figure and looks at me as I speak to another child playing. Nadeen is trying to rub out her drawing with her feet. Nadeen is quietly translanguaging by talking to herself: ‘You made that fast [inaudible] I make umm hair can you Miss?’ She is speaking, marking as she gestures, as if practising alone for meaning-making, but Kenzi is
getting closer to Nadeen’s drawing, and Nadeen finishes off her utterance in English as a
protest: ‘No…no…look at me no…no…I am playing’. The word ‘look’ in English is often
used by children and I have seen it elsewhere (Mostafa and Laila). I suspect it originates
from the teachers who say ‘look’ with an indexical gesture (pointed finger) as they request
a child to focus on a task. Nadeen uses a multimodal combination: the word ‘look’ with her
finger pointing at Kenzi and her gaze directed at Kenzi as a form of rebuke, to stop Kenzi’s
advances into her drawing space. She is dominating both the space and the artefact of
chunky chalk. Kenzi’s utterance is returned in Arabic: ‘Can I have one?’. Chunky chalk, a
possession cherished by the children, is in short supply at this school, as teachers find it
difficult to obtain this in Egypt and usually buy it from the UK. In this short excerpt,
MMTL as an analytical framework exposes the many modes working together in meaning-
making.
<table>
<thead>
<tr>
<th>Speaker turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td></td>
<td>04.27</td>
<td>Nadeen</td>
<td>انت عامدل د بسرعة [inaudible] I make umm hair ممكن Miss? لا لا look at me لا لا لعبة</td>
<td>Nadeen’s gaze is on the tarmac.</td>
<td>Nadeen is writing her name.</td>
<td>Nadeen writes the letters of her name using letters in Arabic/English. The direction is English/Arabic.</td>
<td>Nadeen has just finished writing her name. Nadeen uses private speech when she first comments ‘I make hair’ in English. Kenzi wants to play. Nadeen Says ‘no’ and tries to call me. Nadeen is warning Kenzi not to play in her space ‘look at me’ imitating a teacher to gain her attention. Nadeen uses her hand to block Kenzi.</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>05.25</td>
<td>Kenzi</td>
<td>ممكن واحد أو لا أنا علّي الغير و.. لا أنا علّي حلوى تانيه... توريذا</td>
<td>Nadeen’s piecing gaze is on Kenzi’s face.</td>
<td>Nadeen is drawing.</td>
<td>Nadeen is drawing herself. Kenzi wants to play and the conversation shifts to Egyptian-Arabic.</td>
<td></td>
</tr>
</tbody>
</table>

Excerpt P Look (Nadeen, T1, 28/11/12)
5.6.2 My Miss (Excerpt Q)

(Nadeen T2, 10/02/13)

It is Week 20 and the general topic this term is ‘animals and insects’, but this week children have been learning about bears – in particular, stories associated with ‘Goldilocks and the Three Bears’. Children have been talking about their feelings during morning discussion time on the carpet with their teacher. They have also made porridge with honey. Children also talked about size in relation to the story of ‘Goldilocks’ (big, medium and small bear). All children were encouraged to write letters and sign their name.

Nadeen appears keen to draw and she asks the bilingual TA if she can do so. It is 07.55 a.m., and possibly she feels unsure what to do because the other children have not yet arrived at school. Children filter through to the classroom from the corridor, placing their lunchbox and water on the shelf and leaving their mothers. I hear lots of Arabic greetings. Nadeen asks the TA if she can draw and goes to get paper and coloured pencils. She sits alone at a table.

Figure 5. 9 My Miss on A4 paper
In Excerpt Q, Nadeen tilts her head from side to side, moving her body as she draws while speaking to herself in Arabic. She selects different coloured pencils, trying them and putting them down, stopping and staring at the page as she draws two figures, on opposite sides of the page, with smiley faces. She suggests these are of her Miss (teachers are often referred to as ‘Miss’ in Egypt). Although it is early in the morning with few children in the classroom, Yassin brushes past Nadeen and comments in English: ‘red colour’. I am not sure if Yassin has directed this comment at Nadeen, but it certainly seems to be the trigger for Nadeen’s commentary. Privately practising while marking as she gazes on the page of A4, she begins to talk to herself by translanguaging to denote colour and the shape of her drawing: ‘I’m making I am drawing on the red I have green…I do round and inside’. This is typical of private speech, as children often provide a running commentary on their actions.

Nadeen uses a combination of modes, putting her words into action by drawing them. For young children this is not unusual, and here I would add that Nadeen’s representation of her Miss (teacher) is created through drawing her image. During a conversation, Nadeen informs me in intricate detail that she is: ‘doing eyelashes’, as she draws them, and points to her eyes. For Nadeen, the two-dimensional drawing is not enough, and to express her meaning of Miss, the image is thus represented by moving across multiple modes: speech, marking, gesture and gaze.
<table>
<thead>
<tr>
<th>Speaker</th>
<th>Image</th>
<th>Time in mins &amp; secs</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nadeen</td>
<td>5:20</td>
<td>Nadeen</td>
<td>[I’m making Miss]</td>
<td>Nadeen’s gaze is on the pencil.</td>
<td>Nadeen draws to the right of her page – a blue circle.</td>
<td>Nadeen seems to be talking to herself – ‘private speech’.</td>
<td></td>
</tr>
<tr>
<td>Yassin</td>
<td>7:21</td>
<td>Red colour</td>
<td>Nadeen’s gaze is on the circle.</td>
<td>Nadeen’s head is low, tilted and close to the page. She is drawing.</td>
<td></td>
<td>Nadeen switches from Arabic to English – perhaps on account of Yasin’s passing comment.</td>
<td></td>
</tr>
<tr>
<td>Nadeen</td>
<td>7:35</td>
<td>I’m making ana bersamala red and green anal round wa gowa</td>
<td>Nadeen glances slightly at the boy but then back to the page.</td>
<td>Nadeen’s right hand is on the red pencil. She continues to draw with her left hand (full-hand grip) with green.</td>
<td>There are now two circles representing face and eye.</td>
<td>Nadeen starts to sing. I don’t know the tune but it does seem familiar to her. Both pencils are in Nadeen’s hand. She is concentrating and appears happy.</td>
<td></td>
</tr>
</tbody>
</table>
5.6.3 My Watering can (Excerpt R)

(Nadeen T3, 13/05/13)

It is Week 31 and five weeks from the end of the school year. Teachers are exhausted and children appear ready to move on to the next phase of their education. More children are speaking English, and it appears to be their language of choice. I also hear a great deal of ‘classroom English’ combined with Arabic, particularly when children explain to each other colours, shapes, numbers, artefacts and topics we have been learning at school.

It is extremely hot and dry today, even in early May, and before midday the temperature is over 40 degrees centigrade. The air-conditioning unit is fanning out cold air in the classroom. The children do not seem to notice the heat when they go outside, and they wear hats and sun cream. Teachers are considering a paddling pool for children to splash about in as a treat. Water is very popular with young children and they enjoy playing with different vessels, filling them up and emptying them in the water-bath which is provided.

Figure 5. 10 Watering can
Nadeen decides to play in the ‘Back Area’ during the morning session of ‘free-play’ (Section 4.2.2). She goes to the tap to fill up a red watering can (Figure 5.10), which is initially objected to by the TA because Nadeen wishes to add water to the sandpit. The TA concedes when Nadeen tells her in English that the English-speaking teacher said she could. Nadeen manipulatively uses English to get what she wants, and she continues to employ this practice, even with her friends.

In Excerpt R, there are at least five children around the sandpit and various others playing at the water-bath and on the tricycles. At the sandpit, there are moulds of different shapes that children fill with sand, there are sand tools used to mark in the sand, and I can hear children talking about baking cakes in an oven. Nadeen begins to move around with the watering can and it appears she is making marks in the sand using the water.

There is only one watering can and it is very popular with the children, who all want to play with it. Aisha momentarily takes it from Nadeen, who responds abruptly in Arabic: ‘No leave it…it’s mine…return my stuff’. Nadeen physically excludes Aisha from the watering can using her body. I notice there is a great deal of head-nodding and gazing going on between the two girls. There appears to be a relationship between their gaze on the artefact (watering can) and between themselves as they negotiate for this prized possession. Aisha leaves the watering can, but in protest, with a sad face and an elongated gaze at Nadeen.

However, in the end, Nadeen attempts to include Aisha in her play by speaking to her softly in English, probably on account of my gaze towards her indicating fair play. Nadeen
momentarily gives up the watering can, but not for long. Aisha soon leaves the watering can to Nadeen. There is a considerable amount of body shifting and gaze between the two girls. Instead, Aisha picks up the sandpit moulds using damp sand and with her gesture appears to give Nadeen licence to use the watering can. I am trying to keep my distance from the children playing at the sandpit and begin to back away. Nadeen is busy watering the sand, but she knows the rules of fair play and I think she realises this as she glances up at me and smiles. I am usually the ‘referee’ ensuring children share and play fairly. In my presence, Nadeen begins to concede, and she shifts her speech to English in an appeal for my support, but I do not give it and I move away because I believe my presence is influencing her.

As a concession to Aisha, Nadeen tries to include her by suggesting in English: ‘You make the flowers’, said softly with kindness, and momentarily she lets Aisha hold the watering can. The conversation moves from Arabic to English, but all the while Nadeen is using her imagination, and these marks in the sand are her flowers (from our conversation I understand they were her imaginary flowers). Aisha, staring at the sand and realising there are no flowers to be seen, asks in English: ‘Where the flowers?’, but to Nadeen, the marks in the sand are the flowers. The ensemble of meaning here is the combination of multiple modes working together – the speech, marks in the sand along with gesture and gaze. I also see myself as the catalyst, for I think it is worth mentioning Nadeen’s gaze was on the camera. English-speaking teachers in close proximity may motivate the children to speak English.
### Excerpt R Watering can (Nadeen, T3, 13/05/13)

<table>
<thead>
<tr>
<th>Speaker, turn and analytical code</th>
<th>Image</th>
<th>Time in mins &amp; secs.</th>
<th>Speaker</th>
<th>Speech/sound</th>
<th>Gaze direction</th>
<th>Gesture/posture/movement</th>
<th>Artefact/layout</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td><img src="image1.png" alt="Image" /></td>
<td>08:46</td>
<td>Nadeen</td>
<td>لا مسيب... دني تعني أنا... رجاعيه ديه الحاجه تفكى la'a sabiha... deh bata' ty ana... raga3iha deh hagty ... [No leave it... it’s mine... return my stuff]</td>
<td>Nadeen’s gaze is on the water coming out of the watering can.</td>
<td>Nadeen has both hands on the watering can.</td>
<td>Nadeen is making patterns on the sand with the water that sprinkles from the watering can.</td>
<td>I am trying to keep my distance, standing at the end of this stretch of tarmac, known as the ‘Back Area’, where children have free-flow play from the classrooms.</td>
</tr>
<tr>
<td>37</td>
<td><img src="image2.png" alt="Image" /></td>
<td>08:53</td>
<td>Aisha</td>
<td>بجيها bagabba Am trying it</td>
<td>Nadeen is looking at Aisha. Aisha is looking at the watering can.</td>
<td>Nadeen moves to pick up a plastic mould from the sandpit. Aisha holds the watering can.</td>
<td>Watering can moves to Aisha.</td>
<td>Nadeen takes back the watering can from Aisha.</td>
</tr>
<tr>
<td>38</td>
<td><img src="image3.png" alt="Image" /></td>
<td>09:03</td>
<td>Nadeen</td>
<td>You make the flowers</td>
<td>Nadeen looking at Aisha then at the camera.</td>
<td>Nadeen lifts the watering can and turns her head to Aisha and to me.</td>
<td>The watering can is close to Nadeen’s body</td>
<td>Conversation moves to English because Nadeen does not want to give up the watering can. Nadeen briefly looks at me when she does this, probably to get my approval.</td>
</tr>
<tr>
<td>39</td>
<td><img src="image4.png" alt="Image" /></td>
<td>09:20</td>
<td>Aisha</td>
<td>Where the flowers?</td>
<td>Nadeen is looking at Aisha. Aisha is looking at the sand.</td>
<td>Aisha moves to the sandpit. Nadeen moves to facing Aisha.</td>
<td>Nadeen is making patterns on the sand with the water that sprinkles from the watering can.</td>
<td>She instructs Aisha to make the flowers. Many children are moving around in the sandpit, making a claim on their patch of sand. Aisha picks up moulds.</td>
</tr>
</tbody>
</table>
5.7 Chapter summary

In this chapter I have provided additional contextual data from interviews and observations derived from the original eight participating children as Vignettes. Out of the eight children I studied, I have focused on four of the participating children for detailed multimodal analysis: Alyaa, Michael, Mostafa and Nadeen. Using the analytical framework of MMTL as a lens, I suggest these emergent bilingual children are noticeably translanguaging, but they also deploy a combination of modes which reveals a far more diverse semiotic communicative repertoire for meaning-making among bilinguals. Wei (2018) would argue this is the ‘translanguaging space’, where along with Arabic and English being spoken, the space is multimodal in nature, enabling communication. However, from a semiotic multimodal perspective, I establish a link to illustrate the different ways emergent bilingual children combine modes, transfer semiotic material (transduction) and while staying in the same mode, reconfigure the mode (transformation) to achieve their outcomes or objectives for meaning-making.

In some instances, children were clearly focused on the social/interpersonal aspects of meaning-making, whereas in other instances the meaning-making clearly was for cognitive/intrapersonal effect (Section 2.4.1), yet both concepts are inextricably linked to learning. I found that children wanted to be friends and, in these instances, children were sociable with each other (Excerpts I, K, L) by using translanguaging and a combination of modes which had relevance to their artefacts. They used their gaze and gesture in their interactions with other children, often sharing their play artefacts to show friendship. Nonetheless, there were times when some children were far from friendly. They were
sometimes physical, using their body or gesture and their gaze specifically to dominate their space and retain the artefacts in their possession during play (Excerpts F, L, O, P, R). Children often helped other children access activities during play (Excerpts B, C, G, H, J) and became ‘teacher-like’. Children seemed confident in translanguaging with their gesture and gaze – in ways that would communicate their ideas to other children. Also, the children would often use their gaze and gesture to draw another child’s attention to a particular artefact, position it and move it to consolidate their meaning. Interestingly, these children would move their ideas to more accessible modes by a process of transduction, which was usually from speech to an image (drawing, marks, gesture etc), so that the receiving child could understand and read these new concepts.

I also noticed how children developed their imaginative narratives as they played and sang together, positioning their artefacts to elaborate their play (Excerpts I, H, L, M, N, O). I found children translanguaging by moving quickly between Arabic and English to convey their ideas. Their speech was supported through their gazing at their playmate and returning their gaze to their artefacts. But even while children played together, some children were observed slightly withdrawing from other children to practise what they heard. They were translanguaging through the notion of private speech quietly to themselves by repeating, or what seemed to me to be practising English. They were also observed doing this while playing alone but often touched or gazed at artefacts and positioned them as they practised alone (Excerpts A, D, E, M, P, Q).

In Chapter 6, I discuss in more detail how meaning-making is achieved through the MMTL analytical framework and how this is mapped onto the themes that I found in this study.
CHAPTER 6  Case study: findings

6.1  Introduction

Originally, I observed eight emergent bilingual children over three terms (T1/T2/T3) because I wanted to understand their meaning-making practices during child-initiated play (timetabled as ‘free-play’). I asked the following research questions:

- **RQ1**  How do these 3–4-year-old emergent bilingual children use spoken English in meaning-making?
- **RQ2**  How do these 3–4-year-old emergent bilingual children use their gaze, gesture, and engage with their play artefacts in meaning-making?

I decided to capture multimodal data relating to the emergent bilingual child’s speech, gaze, gesture and their engagement (layout/positioning) with their play artefacts in child-initiated play.

In Chapter 4, I discussed how I collected, prepared and coded the data for multimodal analysis and what constitutes the analytical framework – multimodal translanguaging (MMTL).

In Chapter 5 I selected four participating children, Alyaa, Michael, Mostafa and Nadeen, against a broad set of criteria (Section 4.4.2) for detailed multimodal analysis. I provided examples of my multimodal analysis through Excerpts extracted from the much larger multimodal transcripts, highlighting data of interest (Section 4.6.5). I also included some contextual data (as Vignettes originating from some of the eight original participating
children) because these data represented aspects of the cultural context and the children’s experience in the setting which may have influenced their meaning-making practice.

Chapter 6 begins by exploring my findings as themes, according to my criteria (Section 6.2), and this is then followed by my observations of the cultural context of the kindergarten at Valley Hill (Section 6.3). I then provide a headline summary of all my findings (Section 6.4), followed by a chapter summary (Section 6.5).

6.2 Themes

My overall research aim was to explore the meaning-making practices of emergent bilingual children and specifically question how these emergent bilinguals create meaning. I express these findings as themes, drawn from the analytical framework of MMTL, which pays attention to the ensembles of meaning as orchestrated by the child in meaning-making (Section 4.6.6). Each theme is characterised by the desire and motivation of the child when using their semiotic communicative repertoire during child-initiated play.

Guided by the MMTL analytical framework, I began to see these themes emerge as to how meaning is made:

- Bidding to make friends
- Trying to dominate others
- Playing the teacher
- Playing together
- Practising alone
To guide me, I developed criteria as outlined in the following section.

6.2.1 Criteria for themes

Through my transcription process and the coding of the data in the initial stages of multimodal analysis, I developed the concept of multimodal translinguaging (MMTL) as an analytical framework. The MMTL criteria I developed are mapped against the excerpts and the themes in Table 6.1.

Table 6.1 Mapping MMTL against the themes

<table>
<thead>
<tr>
<th>Themes in the data</th>
<th>MMTL criteria</th>
<th>Excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘bidding to make friends’</td>
<td>Translingual practices used to form friendships presented in social situations. This usually involves prolonged gaze and gesture towards each other rather than towards their artefacts. However, artefacts may be used for social leverage and used during interaction to make friends.</td>
<td>I, K, L, M</td>
</tr>
<tr>
<td>‘trying to dominate others’</td>
<td>Children create a powerful position to dominate others in social situations using translingual practices and using the pitch of their voice (transformation). Typically, the child’s gaze is on their peer. A dispute ensues, usually over artefacts or their play space. Children may use their bodies/gesture to prevent other children gaining access to play.</td>
<td>F, L, O, P, R</td>
</tr>
<tr>
<td>‘playing the teacher’</td>
<td>Children work together using translingual practices to explain a situation or topic to another child or other children. Gaze and gesture (usually pointing) are on their artefacts and intermittently on each other (joint attention). The teaching child explains to the other child, who has not understood, by moving between modes (transduction) to gain clarity. Both children appear to benefit from these interactions, but the child learning appears to learn something new.</td>
<td>B, C, G, H, J</td>
</tr>
<tr>
<td>‘playing together’</td>
<td>Many children play together deploying translingual practices. Children appear harmonious and with the purpose of reaching a common goal. There seems to be a joint narrative using their voice for singing vocalisations or onomatopoeia. Children may use translingual practices by staying in the same mode (transformation). Children may re-arrange their artefacts to accommodate their story (transduction).</td>
<td>I, H, L, M, N, O</td>
</tr>
<tr>
<td>‘practising alone’</td>
<td>Children may already be playing alone or with others but slightly withdraw from the play. Children begin translingual practices by quietly repeating English and may be touching or gazing at artefacts using transformation and transduction.</td>
<td>A, D, E, M, P, Q</td>
</tr>
</tbody>
</table>
I shall now explore these themes referring back to the analysis in Chapter 5 and the literature of Chapter 2.

6.2.2 Bidding to make friends

In most cases, children wanted to form friendships and used a diverse range of practices to become part of their social group. While children engaged in child-initiated play during their ‘free-play’ session, I observed they engaged in translingual practices by embedding English. These findings are consistent with García et al.’s (2011) study of pupil-directed translanguaging (Section 2.3.5). I also found children not only created a storyline through translanguaging, but drew on multiple modes for meaning-making which featured transduction and transformation, as illustrated through the analytical framework of MMTL.

Making friends is extremely important for social interaction at school and all children will be looking for ways to communicate their desire for friendship. I have called this ‘bidding to make friends’. In Excerpt K (T3, ‘I have Doritos’, Section 5.3.3) I have already established this form of meaning-making is for social purposes. This is seen as Michael tries to impress Osama by mentioning that he has Doritos in his lunchbox. What is interesting is how Michael uses modes to achieve this desire of making friends. This kind of meaning-making offers social leverage. Michael tries to engage in friendship, but he requires a high-level of semiotic skill to negotiate his intentions towards Osama, because spoken language alone does not suffice. Michael uses his open body position, the movement of his head, his prolonged gaze towards Osama, and the word Doritos to draw Osama’s attention. This multimodal combination seems to work well as Osama responds,
indicating he also has Doritos. They become friends and play with each other throughout the ‘free-play’ session in the morning.

In another example, in Excerpts L and M (T1, ‘Marker Pen and Mashie’, Section 5.4.1), Andrew and Mostafa also want to become friends. This represents another social interaction, only this time it is Andrew who illustrates their friendship with an underlying narrative of making mashie (the Egyptian dish) while drawing an image of mashie on the wall-mounted whiteboard, in other words an act of transduction from a spoken to a visual-mode. Using narratives in such ways to express ensembles of meaning is not uncommon; that is, not being reliant on speech but drawing on multiple modes. Stein (2008) illustrates narratives being captured through visual-modes via the process of transduction which moves along a semiotic chain (Section 2.4.4). Mostafa and Andrew, however, use the visual-mode of marking (drawing mashie) and by shifting to speech to gesture and then to gaze. Mostafa shows Andrew that he is following the narrative of their game by repeating key phrases used by Andrew. This not only allows Mostafa to practise speaking English but also allows him to form a friendship with Andrew. Mostafa uses alternative means for friendship other than English in his use of gesture and gaze. In addition, Mostafa makes many vocalisations with his gesture, to keep the play going between them. Andrew shows kindness and uses short utterances like ‘look’ and uses the catchphrase of the Assembly song ‘Congratulations’ so that Mostafa can follow the play. Alamillo et al. (2017) observed Spanish–English emergent bilingual children (aged 3–5), who were able to gauge peer comprehension ability and shift production to meet the listener’s needs. I think Andrew uses short phrases that he believes Mostafa may already know. Mostafa also searches for the words in English that he knows and with his gesture and gaze bids for Andrew’s
friendship. Between them, using this combination of modes, they seem to communicate their desire for friendship well.

6.2.3 Trying to dominate others

Garcia et al. (2011) documented that emergent bilingual children in their study used translingual practices to exclude other children. I have found in my study that emergent bilingual children who wish to exclude did so by inserting English (using words like ‘no’, ‘I’, ‘put’). By applying a social semiotic multimodal lens, I considered how children became physical towards each other. They used high levels of gesture and were frequently close to one another (Section 3.5.2. See Norris 2004). Wohlwend (2011) adds that children in close proximity to one another, regardless of their task/play, enabled pre-school children to share artefacts, gaze and talk, gesture to each other and to create a bounded social space. Wohlwend suggests it is a strategy that also limits the access to others and in particular ‘boys-only play’ (p.27).

Excerpt F (T1, ‘boy places’, Section 5.3.1) is an example of such ‘boys-only play’. Michael wants to control the play space on the carpet. He changes his play artefacts frequently, which Lameah (sitting next to Michael) does not like, as indicated by her speech, facial expression, and her manner of turning away. Michael gazes at Lameah’s face and he is physical, leaning over her. Through translanguaging he suggests: ‘I am going…you’re staying in the boy place not girl’. Although Vygotsky (2004) illustrates that a child’s use of artefacts inspires their imagination through social symbolic activity, artefacts may also create tension and cause children to fight. Children will choose whatever semiotic communicative means are available to prevent access to their artefacts (Carruthers
and Worthington 2005, Wohlwend 2008). This was also evident in Excerpt L (T1, ‘Marker pen’, Section 5.4.1), where Mostafa took control of the space on the outside wall-mounted whiteboard, using his body aggressively to push the two girls away, and marking over their drawing. Rather than speech, Mostafa used vocalisations. These are two examples of boys physically attempting to dominate their space and their artefacts by removing girls. This situation may arise from cultural subtleties but more likely from a desire to possess the space and resources.

Children ‘trying to dominate others’ is also seen among girls. Nadeen, in Excerpt P (T1, ‘Look’, Section 5.5.1), uses translingual practices along with her indexical gesture (pointed finger) to prevent Kenzi from getting close to her chalk drawing. I have already discussed Nadeen using her voice to transform her meaning only this time I illustrate in Excerpt R (T3, ‘Watering can’, Section 5.5.3), how she becomes physically bolder by using her body to block Aisha. In Term 3, I believe children were becoming more assertive in both speech and in body action. Mostafa in Excerpt O (T3 ‘Golden fish’, Section 5.4.2) is ‘trying to dominate others’ by transforming his voice, but he is also physical, using his arm and hand. I feel here he is specifically choosing English over Arabic, and he tells Sami: ‘I’m not play with you’. I observed boys dominating girls many times, and girls dominating girls, but rarely did I see girls dominating boys in this setting, although it is possible. Flewitt (2011) observed a girl using her body against Edward in an attempt to gain control of the computer (Section 3.5.1). The emergent bilingual children in the kindergarten certainly spoke more English as they progressed through the year, but MMTL as an analytical framework was used to explore ways in which children deliberately asserted their control over their play artefacts and space.
6.2.4 Playing the teacher

Vygotsky (1978) suggests the co-construction of knowledge is through social engagement with others. In the literature, cognitive aspects of a child’s learning are often illustrated through speech (Mercer and Littleton 2007) and appear through children’s peer talk in bilingual and multilingual settings (Cekaite et al. 2014). According to Garcia et al. (2011), emergent bilingual children use translingual practices to ‘co-construct knowledge’ (p.47) and to ‘show knowledge’ (p.53). Emergent bilingual children may also begin translanguaging for translation, although I did not see direct verbal translation in my data. It may well be the ‘English-only’ approach prohibits children from translating from English into Arabic. Conversely translation from Arabic into English might seem more didactic on account of the linguistic context. However, from my repeated observations I would suggest a shift into a non-verbal mode is a more natural step to take, and so when children were constructing and showing knowledge they used transduction. Meanings are moved along a semiotic chain (Stein 2008), from one mode to another for meaning-making. This has been found in older learners as part of their meaning-practice to create shared understanding (Siegel 1995, Lin 2019). Bengochea et al. (2018) observed pre-school emergent bilingual children using this method of meaning-making, which they suggest is part of a transmodal repertoire during child-initiated, sociodramatic play (Section 2.3.6), but here in this context it is used for learning.

I have referred to this as ‘playing the teacher’, for in this context I observed children using the process of transduction to guide other children and keep them involved in the play. Alyaa models ‘insect’ for Osama in Excerpts B and C (T2, ‘Dora the Explorer’ and ‘Dragonfly’, Section 5.2.2) through transduction. She is ‘playing the teacher’ by guiding
Osama. Alyaa begins by translanguaging to explain the concept of ‘insect’, but Osama does not understand this version. Alyaa illustrates ‘insect’ by touching the snail shell, the pointing to the A4 paper to outline ‘insect’, moving then from speech to gesture and then moving again to drawing as the chain of semiosis. The children gaze at each other and through joint attention they gaze back at the paper, as if confirming the new information between them. A finding also made by Bengochea et al (2018) when describing Anthony’s transmodal choices: ‘The patterns of transmodal communication that were emblematic of Anthony’s play with peers included a shift between joint attention with peers and direct attention to objects that he was manipulating’ (p.58). Here I illustrate there are several semiotic moves through a semiotic chain, all guiding Osama towards the English word ‘insect’.

Meaning-making while ‘playing the teacher’ is also evident in Excerpt G (T1, ‘Number five’, Section 5.3.1) and in Excerpt H (T1, Number six’, Section 5.3.1) within the same observation. Another example of transduction is when Gabrielle moves from translanguaging (calling out the numbers in English) to the mode of gesture (by raising five fingers on her right hand) to translate the number ‘five’, and this is repeated for the number ‘six’. Similarly, in Excerpt J (T2, ‘Triangle’, Section 5.3.2), Michael uses translanguaging to explain ‘triangle’ to Hana. He uses transduction by gesturing (using his pen as a pointer) to illustrate ‘triangle’ and then moves the meaning to a drawn image of triangle on the wall-mounted whiteboard. He deliberately moves through a semiotic chain because Hana can ‘read’ these translations of triangle far better than speech. Once Hana has understood these meanings of triangle through the image, she goes on to draw a triangle herself. It
seems these 3–4-year-old children prefer the visual-mode when trying to outline their ideas during play.

Meaning-making while ‘playing the teacher’, often employs the practice of transduction, and it seems to me to appear regularly within the data. Within the semiotic activity of meaning-making, children begin to explore the relationship between sign forms and their referents to convey meaning. By doing so, children are extending their knowledge, moving back and forth between modes to form various semiotic chains for meaning-making.

6.2.5 Playing together

In sociodramatic play, children use spoken language and artefacts to develop their imaginary worlds and create roles based on real-life situations (Smilansky 1968). This was observed by Mukherjee (2016) in a reception class as children spoke about and used artefacts when taking on different roles (Section 2.2.4). Play is also bound by ‘rules’, which children create (Vygotsky 1967. See Section 2.2.2) and this keeps play fun and engaging, revealing both the social and the cognitive nature of play. Here, I illustrate the meaning-making practice of transformation and transduction in the service of ‘playing together’.

As seen in Excerpt H (T1, ‘Number six’, Section 5.3.1), Gabrielle is no longer guiding Michael to say and repeat numbers in English. Their partnership has become collaborative as they role-play together forming a narrative about their family. Michael is constantly in motion as he gestures, reconfiguring and transforming his drawings as he speaks by creating a two-dimensional artefact using paper. Pahl (1999), on the other hand, observed
transformation among monolingual pre-school children who used recycled materials as three-dimensional artefacts to create meaning.

Kress (1997) observes children’s deployment of transformation of artefacts being moved around on the floor to reconfigure meaning (Section 2.4.4), as do I in Excerpt N (T3, ‘Birthday cake’, Section 5.4.2). Mostafa, Andrew, Nadeen, Kenzi and Sami work together imaginatively with large sponge blocks. The block arrangements keep changing shape. This practice of moving blocks is quick and constantly evolving, as do their narratives. The children first make a birthday cake and then, with further rearrangement of the blocks, create a den for their ‘golden fish’.

The use of translingual practices as a narrative has been observed by Alamillo et al. (2017) through Spanish–English speaking young emergent bilingual children. I also observe this in Excerpt I (T2, ‘The concert’, Section 5.3.2), Michael, Hana, Celine and Rodayna are building a narrative together through translingual practices but they are also developing their friendship and knowledge about their forthcoming concert by moving back and forth between marking and drawing on the wall-mounted whiteboard. They also use an ensemble of gestures, move together, sing together and use speech to construct different stories by shifting their meaning to various modes expressing transduction. Michael in the above example of Excerpt H (T1, ‘Number six’, Section 5.3.1) also illustrates the practice of transduction by moving the semiotic material of his speech to his drawing. While ‘playing together’, transformation and transduction appear to me to switch quickly and seamlessly as the children create their narratives by playing together.
6.2.6 Practising alone

García et al. (2011) illustrate translanguaging as a meaning-making practice used by emergent bilinguals to ‘mediate understanding within themselves’ (p.33). García et al. note that children appear to repeat words and phrases because this facilitates their understanding of the new language they are learning. They refer to children translanguaging alone to generate their own meanings. I also observed young emergent bilingual children ‘thinking aloud’, (Vygotsky 1986, p.30) and this is a cognitive/intrapersonal practice, usually referred to as ‘private speech’ (Section 2.3.5). I found emergent bilingual children are meaning-making by ‘practising alone’, sometimes with repetition of English. Importantly, however, their speech was often accompanied by gesture, gaze and engagement with their play artefacts. The movement between these modes appeared critical to their meaning-making and to their understanding.

In Excerpt A (T1, ‘Happy face’, Section 5.2.1), Alyaa is practising by privately uttering ‘I shall draw... happy face I want green’, her gaze fixed on her portable A4 whiteboard, and she raises her chin. I construe from her expression that she is thinking, and she utters: ‘I will do number four’, and then she begins marking. Another example of Alyaa is in Excerpt D (T2, ‘Naughty chair’, Section 5.2.3), where she has been listening to songs sung by Miss Nicole. Alyaa withdraws her gaze from her friend Amira and begins translanguaging alone but starts singing making use of pitch/volume/rhythm – a transformation using her voice. Alyaa is ‘practising alone’ as she handles the playdough. Miss Diana from the Darters class remarked that children respond to what is going on in class by repeating privately the English being used. Similarly, in Excerpt Q (T2, ‘My Miss’, Section 5.5.2), Nadeen is using speech by ‘practising alone’, talking about what she
will draw, then drawing it on an A4 portable whiteboard – a transduction because Nadeen shifts the speech-mode to a visual-mode.

The children in this study were often observed meaning-making by repeating English. In Excerpt E (T1, ‘Shoes’, Section 5.3.1), Michael’s gesture and gaze are mainly on his play artefacts (tube, card and shoelace). As he utters the word ‘shoe’ in English, he is actively lacing up his artefacts (cards and tubes) and perhaps these artefacts are ‘shoe-like’ to him. Michael repeats the word ‘shoes’ and engages with the construction tubes after his English-speaking teacher talks about ‘walking to school’. While threading and tying the shoelace, he utters ‘shoes’ repeatedly, as he is gazing at the artefact.

In Excerpt L (T1, ‘Marker pen’, Section 5.4.1), Mostafa is clearly practising and repeating utterances which sound English, like ‘Ma mak peg’ (my marker pen). In Excerpt M (T1, ‘Mashie’, Section 5.4.1), Mostafa repeats ‘I’m making mashie’ several times. He appears thoughtful, slightly withdrawn, and his gaze remains fixed on the whiteboard as he marks. Lancaster (2001) categorises this kind of gaze as analytical, and perhaps Mostafa is thinking about this brief interaction between what he has drawn and his speech in English, which represents cognition. Many children practice and repeat language, but here ‘practising alone’ appears to be a combination of speech, gaze, movement and engagement with artefacts, using a combination of transduction and transformation for meaning-making.

As explored by Kress (2010) meaning-making is motivated by the child and can be seen both as social/interpersonal and cognitive/intrapersonal (Section 2.4.1). There have been
many discussions of this in the literature as occurring through the speech-mode (Section 2.4). However, I cannot agree individuals do this alone through speech. The themes I have described here reveal the intricate detail of how meaning-making uses multiple modes in a myriad of ways to generate meaning, often through transformation and transduction. Bilinguals have an advantage because they have the additional semiotic resource in speech – their second language.

6.3 Observation of the cultural context

In order to understand these children’s meaning-making practices I noted their cultural context. I achieved this through observation and interviewing parents and teachers. Vignettes 5.1 and 5.2 highlight the ‘English-only’ approach and how it was implemented. Children were instructed to speak English, regardless of their home language (usually Arabic) and parents were encouraged by this approach and often appreciated these cultural underpinnings, as found in Vignettes 5.6 and 5.7.

BSOs are part of the global network of international schools (Section 2.3) and their teaching is based on a pedagogy and a philosophy of an imported curriculum. Valley Hill uses English as the medium of instruction, but I found prioritising one language over the other may have created lost opportunities for children’s meaning-making. English-speaking teachers did not recognise the meaning-making practices of these emergent bilingual children, as seen in Vignette 5.4. Children could not challenge teachers when they did not understand them and could not express themselves using English. Consequently, they would remain silent or become monosyllabic (Vignettes 5.4 and 5.8).
As expressed by Murphy (2003), international schools were a place for young children ‘where you don’t understand a word anyone says’ (p.29). Murphy perhaps explains the lack of verbal participation, but she suggests this was not due to lack of interest, but simply because the child could not speak English. Emergent bilingual children nevertheless appropriate the change of their environment and begin to understand through their own involvement (Rogoff 1990, Drury 2007). Furthermore, there did appear to be an element of confusion among TAs concerning what language they could speak and when with children, as seen in Vignette 5.3.

It seemed to me that so-called ‘free-play’ was often structured, which may have limited opportunities for meaning-making. Teachers (including myself) often became overly involved in what should have been child-initiated-play, as seen in Vignette 5.8. There were only brief moments of child-initiated play in the morning and afternoon, and so children were not free to make their own meanings. Payler (2007) commented on the visible pedagogy of the reception class she was observing (Section 2.2.1), and I think the Valley Hill kindergarten may have operated in a similar fashion. In addition, some artefacts may have had no cultural resemblance to their home-life (Figures 5.2 and 5.4) and this may have changed the way children made their meanings. Activities were also adult-led, where art artefacts were generated by adults and not by children (Figure 5.1). Nonetheless, children were imaginative and used translingual practices for themselves or with friends, deploying a combination of modes for meaning-making in child-initiated play.
6.4 MMTL: overview of meaning-making in play

The findings from my research suggest that in the context of child-initiated play, these children seemed unconstrained by the ‘English-only’ approach followed by the school, creating their own language choices by translanguaging. However, they did this subversively, away from the watchful eye of their teacher. Translingual practices have already been observed by García et al. (2011) among young emergent bilingual children when independent of their teacher and where the context was highly relevant to certain spoken-language choices. This was illustrated in my data when children were translanguaging – in Excerpt I, for example, concerning their forthcoming concert (T2, ‘Peter and the Wolf’, Section 5.4.2). Children here illustrate translingual practices, but they also gestured, used their gaze among their friends and positioned their artefacts for meaning-making, as seen in Excerpt N (T3, ‘Birthday cake’, Section 5.5.2), using the foam blocks outside in the ‘Back Area’.

Meaning-making appears to me to be multimodal, socially constructed among their friends and intrinsically motivated by the child. It is normal practice in qualitative research to reflect on the practices of children, gained principally from observation, and then to base a theoretical assertion on these reflections. Vygotsky (1978, p.57) and Kress (2010, pp.93–94) suggest meaning-making may appear among children to be both a social/interpersonal and cognitive/intrapersonal interaction (Section 2.4.1). I would agree with this, as supported through my own observation, but I would also argue that meaning-making is based upon the available semiotic resources at hand. These emergent bilingual children, in addition to their artefacts, have the semiotic resources of both spoken Arabic and English. For example, Michael tries to be friends with Osama in Excerpt K (T3, ‘Doritos’, Section 5.4.3). Here he
uses translingual practices along with his body and gaze to attract Osama’s attention. This represents a social practice. Bengochea et al. (2018) suggest that by construing translanguaging as part of an emergent bilingual child’s transmodal repertoire, researchers may then begin to understand how emergent bilingual children draw on multiple modes for meaning-making to mediate social interactions in play. While this is partly true, children’s meaning-making practices are more than just facilitating social interaction. Children also engage in meaning-making for learning and understanding as a cognitive/intrapersonal practice – either on their own or with other children. In Excerpt C (T2 ‘Dragonfly’ Section 5.3.2), Alyaa uses meaning-making to explain to Osama what an ‘insect’ is by using multiple modes – through translanguaging, gesture by touching the artefact on the tray and drawing – both children benefit from this practice. Drury (2007) describes this as invisible learning which is never witnessed by a teacher, but she argues nevertheless children are learning.

This study is concerned with exactly how meaning is being made – not only in the speech-mode but also in combination with other modes. How do these emergent bilinguals create meaning? From my observations, I noticed when children are engaged in child-initiated play they are motivated to do things in certain ways for meaning-making. They select modes, move between them and manipulate them in ways to suit their own purpose. This often occurred through the transformation and transduction of modes, as a form of ‘translation’ (Kress 2010, pp.124–129).

An example of transformation can be found in Excerpt R (T3, ‘Watering can’, Section 5.6.3), where Nadeen (through her translingual practice) manipulates the speech-mode. Nadeen starts abruptly in Arabic, wanting her watering can back from Aisha, then
concedes in a soft voice in English, handing the watering can, albeit briefly, to Aisha. This practice occurs again with Mostafa in Excerpt O (T3, ‘Golden fish’, Section 5.5.2), He uses translingual practices, manipulating his voice to sound loud to prevent Sami from entering into the play. This is an extremely subtle but very effective use of transformation using the speech-mode. Interestingly, these observations took place in T3 when children were slightly older and near the end of their kindergarten academic year. Could it be true that as we get older, we become more apt at manipulating the mode to suit our needs? Kress (2010) in his discussion of the motivated-sign lays claim to this (Section 2.4.1). Similarly, bilinguals stay in the speech-mode but move ‘across cultures in the same mode’ (p.129), and this is a transformation. This to me explains pupil-directed translanguaging – staying in the speech-mode but manipulating the semiotic resources of speech to switch between Arabic and English.

On the basis of my observations, the most effective meaning-making practice emergent bilinguals have at their disposal appears to be transduction (also known as the transmodal moment; see Newfield 2009). This is similar to the way a teacher uses multiple modes to explain a new concept to learners, as seen in the science classroom in Section 2.4.4 (Kress and Jewitt 2003, Lin 2019). With an emergent bilingual child, transduction may occur when they are trying to explain their meaning to their friends (who in turn must ‘read’ their meanings). Here, they may move their meaning to a more accessible mode – perhaps from speech to image. Excerpt J (T2, ‘Triangle’, Section 5.4.2) illustrates Michael deploying translingual practices to explain ‘triangle’ to Hana in the speech-mode. However, to clarify his meanings to Hana and for her to read his meaning, he performs a transduction, shifting from the speech-mode to drawing the triangle on the wall-mounted interactive whiteboard.
6.5 Chapter summary

As an in-depth case study of a kindergarten within a BSO in Cairo, Egypt, my aim was to observe the meaning-making practices of young emergent bilinguals in child-initiated play.

In this thesis, the detailed multimodal analysis focused on four of the eight participating children: Alyaa, Michael, Mostafa and Nadeen. Children are meaning-making for both social/interpersonal interactions and for cognitive/intrapersonal purposes, but from my observations, children did this through multiple modes, thus highlighting Kress’s (2010) belief that the sign-maker creates ‘ensembles of meaning’ for meaning-making.

Children were particularly creative through the semiotic chain and deployed transduction, where the semiotic information was moved from one mode to another. Transformation was also used, whereby children would remain in the same mode but reorder the semiotic material. These actions were deliberate and part of the child’s motivation for meaning-making, so that they could make their meaning and so others could read their meanings.

All emerging themes have been developed from the data analysis in Chapter 5, using the analytical framework of MMTL. During social interactions, children use meaning-making in ‘bidding to make friends’. To control aspects of play, be it space or artefacts, I called this ‘trying to dominate others’. The cognitive aspect of meaning-making seems beneficial for children’s learning, using the semiotic process of moving from one mode to another as in transduction and this I called ‘playing the teacher’. However, where relationships seemed equal, children were also found ‘playing together’ to construct their meanings using a combination of singing, vocalisations, onomatopoeia and practices of transduction and transformation, suggesting this play was highly imaginative. However, children also
played by ‘practising alone’—perhaps to confirm meanings privately to themselves—and children did this through practising English by repeating it.

The cultural context was partly represented by the ‘English-only’ approach of the school and its structured approach towards child-initiated play (timetabled as ‘free-play’). There were limited artefacts representative of children’s home-life and many art activities and display boards around the kindergarten were adult-led. Yet regardless of these constraints, children used translingual practices and artefacts in creative ways while simultaneously arranging modes for meaning-making. Chapter 7 now concludes aspects of the research process, summarises the findings and draws on my reflections and implications for policy and practice. I also anticipate future research in this field.
CHAPTER 7  Conclusions

7.1  Introduction

This concluding chapter summarises the research process (Section 7.2), and my key findings (Section 7.3). I give an account of my reflections: the approach, methodology, analysis, limitations and my self-reflection (Section 7.4). I also consider school policy and practice generally in British schools overseas (BSOs) (Section 7.5). Finally, I outline possible future research (Section 7.6) and make my concluding remarks (Section 7.7).

7.2  MMTL: the research process

The central purpose of this case study was to explore the meaning-making practices of emergent bilingual children in an English-medium kindergarten in Cairo. This was because I was curious, based on my informal observations, to find out more about how emergent bilingual children would engage in meaning-making away from the English-speaking teacher during child-initiated play.

I explored the meaning-making practices of eight participating children as they took part in child-initiated play at the kindergarten, and I asked:

- **RQ1**  How do these 3–4-year-old emergent bilingual children use spoken English in meaning-making?

- **RQ2**  How do these 3–4-year-old emergent bilingual children use their gaze, gesture and engage with their play artefacts in meaning-making?
At the beginning of Chapter 5 I presented the contextual information derived from the eight original participating children. I did this by selecting Vignettes (Section 5.2) to demonstrate the cultural context and the children’s experience in the kindergarten. In Chapter 5 (Sections 5.3–5.6) I continued with just four from the original eight participating children, namely Alyaa, Michael, Mostafa and Nadeen, selected according to a broad set of criteria (Section 4.4.2). This selection enabled me to provide a more detailed multimodal analysis of these children’s meaning-making practices.

Vygotsky (1967, 1978, 2004) is concerned with how children learn through their interactions with others, principally through speech and artefacts they play with. García et al. (2011) illustrate the translingual practices of young emergent bilinguals and how they communicate. Although these theorists have been of value to my research, it is Kress (2010) and others (Pahl 1999, Lancaster 2001, Flewitt 2005a, Jewitt 2008) who have driven my interest towards a social semiotic multimodal perspective of meaning-making. I wanted to develop a deeper understanding of the meaning-making practice in an educational context and to illustrate how meanings were being made among emergent bilingual children using multiple modes. I noted the ‘ensembles of meaning’ (Kress 2010) made principally through the child’s speech, gaze and gesture and I also became aware that the child’s engagement (layout/positioning) of play artefacts appeared important to the child for generating meaning, encapsulating a holistic view of meaning-making.

As I explored the possibilities of transcribing multimodal data, through my own interpretation I developed a multimodal grid. I followed ideas generated by Flewitt (2006, 2011), Lancaster (2007) and Baldry and Thibault (2006), centralising the action of the
child on the multimodal grid. I coded each multimodal event to help me unlock the data, basing this on the child’s translingual practice and multimodal engagement. I took the advice of Saldaña (2009) and Charmaz (2012), writing short labels to code the data and noting any emerging themes (Guest et al. 2012) The development of the MMTL analytical framework (Section 4.6.6) therefore provided me with a lens on the child’s practice (ensembles of meaning) and a tool for analysis.

7.3 **Key findings**

Young emergent bilinguals in this setting face two main challenges: first, they are learning to speak English, and second, they are learning from a culturally-specific curriculum. During the first few months of school, newly arrived children were suffering from stress, according to their teachers. This was a very challenging environment for them. Most children found learning in this setting extremely demanding, requiring high levels of concentration. Children had to adapt and had to have a strong sense of survival to manage the transition from their home-life, where they spoke Arabic, to school-life where they spoke English.

7.3.1 **The overall understanding of meaning-making**

One of the key findings of this study was that children were meaning-making in various ways which were not anticipated by the Valley Hill kindergarten. Away from the scrutiny of their English-speaking teacher, children during their ‘free-play’ appeared to be translanguaging. Children were empowered during ‘free-play’ and seemed no longer obligated to follow the strict school approach of ‘English-only’, providing the teacher was
some distance from their play. Children drew from an integrated semiotic communicative repertoire, using not only speech but also their gaze, gesture and engagement with artefacts. They used and positioned their artefacts in many ways during their play, which constituted their overall meaning-making practice – examples in this study include marks on the whiteboard and foam block arrangements on the floor. This evidence suggests children are meaning-making using multiple modes.

From my observations over three terms, putting into practice the MMTL analytical framework, I found that there were several layers of meaning-making. Meaning-making was achieved through social interaction and for learning. As I began to scrutinise the practice more thoroughly, I noted the term ‘translation’ as used by Kress (2010), and the subordinate forms – known as transformation and transduction of modes (p.124–127) – that create a semiotic chain (Stein 2008) were most useful to me. This illustrates then how children used their full semiotic communicative repertoire for meaning-making.

7.3.2 Generating themes

Various themes emerged from the use of the MMTL analytical framework. The theme ‘bidding to make friends’ (Excerpts I, K, L, M) occurred during social interactions when children identified they wanted to belong in a relationship with other members of their class. To do this, they required high levels of semiotic skill and communicative modes, particularly their gaze and gesture, which were combined with speech. On the other hand, in another social interaction, children ‘trying to dominate others’ (Excerpts F, L, O, P, R) deployed the mode of speech and gesture (in a proxemic sense) by using their body to
block other children’s access to their space and their artefacts. In other words, they were more physical to each other, and it often turned into a fight.

For cognitive purposes, children used multiple modes to communicate their meanings to others and for themselves. It seemed to me that confident children appeared to guide or help other children not only through translingual practices but also by drawing upon artefacts or marking to explain their meanings. They were in effect shifting between modes as in transduction, so that their meanings could be better understood by others. I labelled this ‘playing the teacher’ (Excerpts B, C, G, H, J). Interestingly, children who used this form of meaning-making had previously attended Valley Hill pre-school. Perhaps these children were more confident of their surroundings, had been exposed to English for longer and were more familiar with classroom routines of a British school.

Children would often play together and jointly construct their meanings using a variety of modes for meaning-making, and this I called ‘playing together’ (Excerpts I, H, L, M, N, O). Here, the positioning of artefacts was particularly important, and usually these artefacts stood for something else (symbolic play) and were part of sociodramatic play. Children created roles and narratives between themselves, and this may have offered greater opportunities for meaning-making. The use of indexical gestures (pointing a finger) and movement generated an understanding between children – of where to draw or where to put artefacts. They governed their play through their spoken rules – Mostafa became good at this by Term 3 and was directing the play of other children. I observed all children enjoyed this ‘playing together’ and they often sang or used vocalisations and onomatopoeia as an instance of voice transformation.
Children could also be heard privately repeating or practising words or key phrases of classroom English. They were translanguaging alone, while using gesture, drawing or engaging with artefacts, as if recalling these new words learnt from their English-speaking teacher. Children would often slightly withdraw in this process, even if playing with other children, as if wishing to take time to recall what they knew. I could see this was a very important aspect of their learning, which I called ‘practising alone’ (Excerpts A, D, E, M, P, Q). It was particularly evident with Mostafa and Nadeen – perhaps because they had not attended the pre-school and were still at the early stage of learning to speak English. Nonetheless, as children acquired more English, all children reduced the frequency of inserting English into Arabic utterances. By Term 3, for all children (but Alyaa and Michael in particular), English became the principal language used during child-initiated play.

7.4 Reflections on the research process

The original plan was to collect data only on children’s graphical marks and their speech. However, observations during the pilot study altered my perception. I noticed children moved artefacts around and near their bodies, painted and built structures using blocks, or moulded shapes with playdough. Children used their gesture along with speech and through transformation of their voice there was singing, vocalisations and onomatopoeia. I felt I could not isolate these features of their play and so this guided me towards a social semiotic multimodal perspective of meaning-making, which seemed more appropriate for an early years educational setting. A social semiotic multimodal perspective seeks to understand the communicative practices of individuals and communities through their
purposeful use of multiple modes. This gave me a more holistic overview of a child’s meaning-making practice during play.

7.4.1 Methodology

My interest was to observe and collect data from children during their ‘free-play’, independent from their English-speaking teacher which I note as child-initiated play. This was not always easy to achieve, as I observed that teachers often became involved during the timetable period of ‘free-play’. Children had a tendency to follow the teacher’s instructions, often removing their own agency from the play. This seems to be how play evolved at this school, but this then changes the dynamics of the play. If an adult joins the child in play, then the meaning-making practices of children may change from independent meanings as in child-initiated play to meanings jointly constructed and becomes adult-led. These were not the meanings I wished to document for this study. The good thing about realising this early in the research was that I became mindful of it. Although I continued to audio-record and observe an adult’s involvement during my observations, I did not use this data in my study unless I was trying to illustrate these subtleties.

Another feature of the study was collecting multimodal data and the choice of methods I used to collect it. Although photography allowed me to take images of the child’s action during play (noting their gaze, gesture and use of artefacts), the temporal issue of synchronising speech with the visual data was problematic for me at first. I resolved this by synchronising the digital equipment by pressing buttons at the same time (Section 4.6.1). I would suggest for a fine-grained analysis a digital video recorder has obvious advantages.
Unfortunately, the use of video recording was not feasible at Valley Hill, otherwise this would have been my preferred method.

7.4.2 Analysis
Collecting multimodal data and scrutinising the relationships between each mode is very labour-intensive work. This kind of research generates a great deal of data, which is often challenging to record, organise and analyse. If I did this again, I would be more selective and establish clear criteria for what aspects of the observation and data I would transcribe for my study. As a novice, I did not quite clearly understand how valuable clear criteria would be in focusing the essence of my research questions. I see that now but at the beginning of the study I spent a great deal of unnecessary time transcribing unrelated data that I would not use. If I had been an experienced researcher, I probably would have realised this earlier. Also, I realised that the research questions I had originally formulated for my pilot study did not reflect the integrated nature of meaning-making. This led me to refine my research questions. In the main study, the detailed process of coding the data really made me understand how the sign-maker draws upon multiple modes for their meaning-making (Section 4.6.6).

7.4.3 Limitations
The aim of this case study was to observe eight children to give a broad representation across four of the kindergarten classes. In the end I selected just four participating children, Alyaa, Michael, Mostafa and Nadeen, and used the contextual information from the original eight participants to support the multimodal analysis. Reducing the number of
participants in this thesis enabled me to carry out a richer and more detailed account of the meaning-making-practices found in this setting. Although such processes of participant selection are common to case study research, I was also mindful to forestall possible bias and I took measures to prevent this by creating criteria (Section 4.4.2). Although in all research I realise no matter what processes are put in place to reduce bias, it can never be fully removed.

There is always a difficulty between acting as both researcher and teacher in educational contexts. In the initial stages of the research, this difficulty was evident in my own involvement in the children’s play and my initial request to some children to speak Arabic when they had been instructed to speak only English. I also recognise as a novice researcher the time wasted in the process of transcribing all of the data unnecessarily.

A case study does not provide generalisations because it is a methodology that favours a specific context. This study was specific to the kindergarten of Valley Hill, Cairo. Still, I recognise this might be seen as a limitation to the study.

Not all of the teaching staff were interviewed. The bilingual TAs (local Egyptian staff) were reluctant to be interviewed (Section 4.2.1). It would have been beneficial to have gathered their perspectives on the meaning-making of children in their care.

7.4.4 Self-reflection
During my personal reflections, I could see how my own identity, linked to being British, has its advantages and disadvantages. I recognise that my interpretive lens is of an outsider
trying to gain access to a community different from my own. Although marrying an Egyptian and having three children in Egypt gave me some understanding, learning the subtle complexities of another culture takes time, particularly when notating the meaning-making practices of individuals which may be different from your own. I learnt early to document everything, even if at the time it did not seem relevant, as I often found that it became relevant much further into the research process. I found that to remain open to all new practices and to be non-judgmental was the best approach. This was not always easy to do because at the time I was working as an English-speaking teacher at the school. One tries to fit in and follow the rules of the establishment, but as time went on, my observations and thoughts led me to a new way of thinking. I also had a growing awareness of the lack of culturally diverse artefacts for children to play with and this unsettled me upon realising artefacts and resources have such an important role for children’s meaning-making. In the end, I felt very uncomfortable about an ‘English-only’ approach to teaching and learning in the classroom, which appeared to prevent children from using their full communicative repertoire. In the long term, this could curtail the child’s ability to create social opportunities in the wider community and might actually prevent the child from accessing further education in Egypt.

7.5 Implications for policy and practice

I discuss here policy and practice both at a local level and from a global perspective of international schools, of which BSOs are part.
7.5.1 Policy

Many of the children entering Valley Hill kindergarten were already quite traumatised by having to leave their mother, to be then thrown into an environment that they did not culturally recognise, and where they had to speak English. Valley Hill timetables out specific times of the day for either Arabic or English, with different teachers. So English is used for the majority of the school day. Although many parents in this setting embraced this separation of languages, I would argue pedagogically the school would benefit from recognising the multilingual intake of children and repositioning itself as an advocate of multilingualism to embrace translanguage as a classroom practice. There are implications; obviously teachers will be required to speak both English and Arabic, but embracing such hybrid practices creates a child-centric approach.

BSOs worldwide would benefit from promoting equality of all languages for learning. Rather than conforming to a strict culturally-specific imported curriculum, schools should be able to adapt the curriculum to reflect a local context without prejudice during a school inspection. If underlying educational policy and pedagogy was child-centred (close to the ethos of current British institutions), then this would benefit children and would encourage tolerance and respect for all cultures. This is supported by the literature (García 2009a) and the Early Years Foundation Stage (EYFS) Statutory Framework, which acknowledges the child’s home language.

7.5.2 Practice

In terms of the pedagogic approach in the early years, there appeared to be conflict between what was understood by the senior management team running a large BSO and
the leading teachers of the kindergarten. Senior management at the time favoured a top-down approach to learning. Parents welcomed this structured approach in order to encourage their children to speak English (Vignettes 5.6 and 5.7). Teachers understand the importance of play in learning, but senior management at Valley Hill had a very structured approach towards play. Teachers felt obliged to follow the timetable and this may have led to considerably more adult-led play. Periods that were designated for ‘free-play’ quickly turned to adult-led activity; teachers became overly involved because they had to enforce the ‘English-only’ approach and follow the timetable. Teachers were quite dismissive, suggesting children could not speak English (including myself). Though surprisingly, while children were in ‘free-play’ they spoke a great deal of English. While remembering that all play in early years educational settings is structured to some extent, the findings from this research indicate that there really should not be timetables with strict boundaries for play. Early years professionals could be encouraged to allow children time to lead their own play, putting the focus on the child’s needs and not on the formal requirements of the school.

Beyond Valley Hill, international teachers may wish to consider providing a variety of artefacts by becoming mindful of the restrictions they may place on children if they do not (this was fairly evident from Figure 5.1 – Happy face). I would also advocate generally that all modes should be acknowledged in meaning-making as a more appropriate model for young emergent bilingual children, rather than the traditional conceptions of learning which seem to be represented as academic (writing and reading).
In terms of my own practice, I am now more mindful of how meanings are made, listening and watching for clues of certain learning styles of meaning-making which may appeal young children. I think the practice of transduction is a useful concept for early years professionals. Although teaching professionals may instinctively use transduction in meaning-making, it could be more formally recognised as part of pedagogy. I am myself mindful of the way children learn through transduction using a variety of modes and this has been useful to my teaching practice.

7.6 Future research

Literature drawn upon for this study suggests research framed from a multimodal perspective has been conducted monolingually and most of the work on translanguaging has been limited to the spoken mode. Avenues for future research could include a further exploration of a range of modes in meaning-making used by multilinguals, across different parts of the world. I have been very specific in my study by engaging with the modes of speech, gaze, gesture and the layout of artefacts children use during child-initiated play. Yet another area of interest would be the use of display images and graphical symbols in the bilingual classroom, and the impact these have on children’s learning. This appears to be a developing area of research (Seals 2021).

In terms of directions for my own future research, I would like to explore transduction in multilingual contexts, because this is an area which I believe reveals how we communicate effectively for learning – exploring the shift between modes for better understanding. Research is developing in this area: I note Lin’s (2019) concept of trans-semiotising in
emergent bilingual students (aged 14–15) and Bengochea et al.’s (2018) exploration of preschool emergent bilinguals’ multimodal choices in sociodramatic play. It would be beneficial to see more research in this area and to consider how these practices mediate learning and understanding in various contexts.

7.7 Final thoughts

Until recently, non-verbal communication and verbal communication have been seen as two separate traditions. Even the paralinguistic features of speech (such as gestures, facial expressions, tone and pitch of voice) are recognised as complementary, but somehow secondary, to speech. A social semiotic multimodal perspective suggests a shift away from the idea that the verbal should take precedence. Kress (2010) argues, ‘we cannot afford to let older “language-based” thinking constrain how we see mode, in semiotic theory’ (p.92). This departure from the traditional ‘verbal’ and ‘non-verbal’ communication divide represents a new direction.

The title of this thesis is the ‘Meaning-making practices of emergent Arabic–English bilingual kindergarten children in Cairo’. My overall research aim of this study was to explore the meaning-making practices of the emergent bilingual children attending the Valley Hill kindergarten during their ‘free-play’. As an in-depth case study, I explored the meaning-making practices of children learning to speak English. I used an analytical framework – multimodal translanguaging (MMTL) (Section 4.6.6) – as a lens to explore the meaning-making practice of bilingual children, and this became a tool for analysis.
I believe I have found out a great deal within the bounds of my research questions (Section 1.3.1) and limitations of research (Section 7.4.3). The detailed process of coding the data enabled the iterative process of refining the research questions and this led to my formulation of the MMTL analytical framework. This study perhaps offers a fresh contextual perspective as I show how children engaged in multiple modes for meaning-making as the ensemble of meaning, both socially and cognitively. I understand meaning-making presents various multimodal combinations and speech does not take priority in meaning-making. I observed the benefits children gained from child-initiated play (independent from their teacher) enabling them to create and design their own meanings. In particular, I recognised the importance of bilingual children establishing their full semiotic communicative repertoire for meaning-making, and the injustice of artificially separating modes in a pedagogical setting.
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Appendices

Appendix A: Education in Egypt and the rise of BSOs

The Ministry of Education in Egypt (MoEE) operates a centralised school system employing the Egyptian National Curriculum (ENC), but it is buckling under the strain of a large population and urbanisation. The current pedagogical approach is based on traditional practices that rely on memorisation and assessment rather than critical engagement.

The official bodies which manage state education in Egypt include the Ministry of Education Egypt (MoEE), the Ministry of Insurance and Social Affairs Egypt (MISA) and the Ministry of Health Egypt (MoHE). Modern Standard Arabic (MSA) is the official language of instruction in all state schools, for all subjects, although spoken instruction is often delivered in Egyptian colloquial Arabic.

In 2007, the Professional Academy for Teachers (PAT) was established to organise the national planning, coordination, monitoring, and evaluation of professional development for teachers and educational leaders. The body became responsible for validating teacher certificates and accrediting training programmes (NCERD 2014). Currently, early years teacher training is not coordinated through this body, although MoHE suggests early years teachers must have a bachelor’s degree (NCERD 2014).

Early childhood education in Egypt is not compulsory or state funded, although government nurseries do exist which are fee-paying. However, most nurseries are funded by the private sector or via charities. The stage of early years education is commonly
known as kindergarten. Children aged 3–6 in Egyptian state schools usually attend this stage for two years – kindergarten one (KG1) and kindergarten two (KG2) – although many nurseries are beginning to offer places to much younger children. Private settings operate as either small independent units or become part of a large school which offers both primary and secondary education. According to UNESCO (2007), only 15.57 percent of children in Egypt were enrolled in early childhood education in 2006–2007. This figure is rising and consequently an independent body known as the National Council for Childhood and Motherhood Egypt (NCCME) now coordinates early childhood care and education.

For most children, compulsory education consists of primary (age 5–11) and preparatory stage (age 12–14), a total of nine years. Teaching continues to secondary (age 15–17), although this is not compulsory, and many children leave education at age 14. Core Egyptian state subjects are Arabic, Religious Education, Mathematics and Science, along with Egyptian Social Studies. English is sometimes taught as a foreign language, commencing from age 10–11 onwards and other taught languages may include French, German, Spanish or Italian.

In response to the Egyptian economy, particularly in tourist areas, the MoEE has initiated experimental language schools. These are state language schools which include a state English-language programme, known as the Advanced English Curriculum. Although state-run, families pay a fee, but much less than in private language schools. Class sizes tend to be large, ranging from 45 to 75 students, and operate a morning and afternoon shift system. Teaching is based upon traditional methods with students usually tested monthly,
mid-yearly and end of year with examinations set by the MoEE. At the end of secondary, students sit a national exam known as the Thanawiya Amar, which is divided into two streams: science and humanities. Universities require a minimum score of 97 percent for the scientific examination and 95 percent for humanities (Ahmed Abdel Aziz 2015).

Many children receive private tutoring after school, to increase their grades in the Egyptian system rather than to broaden the child’s educational experience, at an estimated gross cost to Egyptian parents of $2.2bn a year (Daragahi 2013). In response to this extra financial burden there has been a steady increase in private schools that are known locally as semi-international schools because they follow the Egyptian state curriculum in the medium of English. They employ foreign teachers and Egyptian nationals who are proficient English speakers.

In addition to these schools are international schools, known locally as fully international schools. These schools implement a curriculum which originates from a country such as France, Germany, Italy, the UK or the United States. These schools usually employ teachers from the country from where the curriculum originates. Parents see this as a distinct advantage, particularly if parents are not native to Egypt (Hayden 2006). However, all schools are obliged to apply the state curriculum of core academic subjects only, excluding mathematics and sciences.

Part of the network of international schools are British School Overseas (BSOs). They have a history of educating non-Egyptian nationals, but a number of local children are beginning to attend these schools. In 2009, Egypt, with a total 163 international schools,
was one of the top ten countries in the world in terms of the growth of international schools (Merriman 2020) and consequently BSOs in Egypt have benefited from this trend (Dearden 2014).

Once a BSO is accredited,\(^1\) parents are willing to pay the considerable fees. BSOs in Cairo teach all subjects in English, in other words with English as the medium of instruction (EMI) often using an adapted form of the National Curriculum England (NCE), and learners are taught by English-speaking teachers. However Egyptian law requires all Egyptian nationals to receive tuition from Arabic-speaking nationals in MSA, religious studies (Islam or Orthodox/Coptic Christianity) and social science (equates to personal, social, health and economic education—PSHE in England) to sit the Thanaweya Amma (ثانوية عامة) (The General Secondary examination), as it serves as the entrance level for Egyptian public universities.

Although students graduate from BSOs with International General Certificates of Secondary Education (IGCSEs) and Advanced Levels (A-levels), they may not meet the expected level of the Thanaweya Amma to enrol at some Egyptian public universities, so there is a mismatch between their knowledge and qualifications. Students whose families can manage the financial outlay tend to apply to English-language university degree

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\(^1\) The Department for Education in England (DfE) set up a voluntary scheme for the inspection of BSOs (DfE 2014). BSOs are inspected by organisations approved by the DfE and monitored by Ofsted (a non-ministerial department of the UK government responsible for inspecting a range of educational institutions, including state-maintained and some independent schools). To become accredited, a BSO is subject to the same inspection criteria as independent schools in England (AoBSO 2020, COBIS 2017). Reports made by the approved inspection teams are available on the DfE’s website.
courses overseas or attend the British University in Egypt (BUE) or the American University in Cairo (AUC). This outcome seems to curtail the Egyptian student’s opportunities rather than increasing them.

Still, the assumption by most parents who send their children to BSOs in Cairo is that their child will become bilingual and biliterate in both languages (Arabic and English), but children in these schools will rarely become biliterate, and this is a feature of most international schools with a monolingual language approach, according to Haeri (1996, 1997).

The general consensus among educators is that state Egyptian education in the post-Mubarak era is going to be challenging due to poor resourcing, large class sizes, poorly trained teachers with low wages and a centralised curriculum which focuses on rote learning and memorisation (Loveluck 2012). A full detailed historical account of education in Egypt can be found in Cochran (2013).
Appendix B: English-only approach at Valley Hill

From: *** ******* [mailto: school@cairo.com]
Sent: 20 March 2013 09:31
To: ‘*** ****’, ‘**** *****’
Subject: Arabic performances and not using Arabic language in class

It has come to my attention that the use of Arabic around school has increased in recent weeks. Obviously we have great respect for the Arabic language and regard it as equally valid when compared to English but we must also remember that we are a British School and school aim number 1 states that we aim to ‘Provide the highest standard of education, in the English language to students of any nationality who are likely to benefit from it’.

Therefore may I remind you all that we actively discourage the use of Arabic in school except in Arabic lessons and we do not promote Arabic songs, poems, or writings; again except in the context of Arabic lessons.

I would not expect to see performances of Arabic material at assemblies or in front of a class except perhaps music without lyrics, dances and so on.

Naturally I would also not expect to see an aggressive anti Arabic approach as that would also be inappropriate and I know I can rely on your good judgment to do the right thing.

If in doubt, say no thanks or ask a senior colleague.

Thanks for your cooperation,

Principal

Valley Hill,
New Cairo,
Egypt
## Appendix C: Timetable

<table>
<thead>
<tr>
<th>Time</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>07.30–08.05</strong></td>
<td>Arrival Free-Play</td>
<td>Arrival Free-Play</td>
<td>Arrival Free-Play</td>
<td>Arrival Free-Play</td>
<td>Arrival Free-Play</td>
</tr>
<tr>
<td><strong>08.05–08.10</strong></td>
<td>Registration TA Break</td>
<td>Registration TA Break</td>
<td>Registration TA Break</td>
<td>Registration TA Break</td>
<td>Registration TA Break</td>
</tr>
<tr>
<td><strong>08.10–08.45</strong></td>
<td>Bikes Free-Play</td>
<td>Garden Time Free-Play</td>
<td>Bikes Free-Play</td>
<td>Bikes Free-Play</td>
<td>Free-Play</td>
</tr>
<tr>
<td><strong>08.45–09.10</strong></td>
<td>Breakfast TA Break</td>
<td>Breakfast TA Break</td>
<td>Breakfast TA Break</td>
<td>Breakfast TA Break</td>
<td>Breakfast TA Break</td>
</tr>
<tr>
<td><strong>09.10–09.50</strong></td>
<td>Focus Activity</td>
<td>Focus Activity</td>
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<td>Focus Activity</td>
<td>Focus Activity</td>
</tr>
<tr>
<td><strong>09.50–10.30</strong></td>
<td>Arabic TA Break</td>
<td>Arabic TA Break</td>
<td>Arabic TA Break</td>
<td>Arabic TA Break</td>
<td>Arabic TA Break</td>
</tr>
<tr>
<td><strong>10.30–11.10</strong></td>
<td>Free-Play</td>
<td>Free-Play</td>
<td>Free-Play</td>
<td>Library Story Time</td>
<td>Assembly</td>
</tr>
<tr>
<td><strong>11.10–11.50</strong></td>
<td>Lunch TA Break</td>
<td>Lunch TA Break</td>
<td>Lunch TA Break</td>
<td>Lunch TA Break</td>
<td>Lunch TA Break</td>
</tr>
<tr>
<td><strong>11.50–12.20</strong></td>
<td>Garden Time PE</td>
<td>Garden Time TA Break</td>
<td>Garden Time TA Break</td>
<td>Sleep Time</td>
<td>Sleep Time</td>
</tr>
<tr>
<td><strong>12.20–13.00</strong></td>
<td>Sleep Time TA Break</td>
<td>Sleep Time TA Break</td>
<td>Sleep Time TA Break</td>
<td>TA Break</td>
<td>Music</td>
</tr>
<tr>
<td><strong>13.00–13.40</strong></td>
<td>Free-Play</td>
<td>Sleep Time</td>
<td>PE</td>
<td>Garden Time</td>
<td>Sleep Time</td>
</tr>
<tr>
<td><strong>13.55–14.45</strong></td>
<td>Story/Rhyme/Song Time Stickers</td>
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## Appendix D: Curriculum document: long-term planning

<table>
<thead>
<tr>
<th>Week</th>
<th>Theme</th>
<th>PSED</th>
<th>Communication and Language</th>
<th>Physical Development</th>
<th>Literacy</th>
<th>Mathematics</th>
<th>Understanding of the World</th>
<th>Expressive Arts and Design</th>
<th>Phonics</th>
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<tbody>
<tr>
<td>1</td>
<td>Starting school</td>
<td>Class and school rules.</td>
<td>Getting to know each other. Pass teddy and ask children their name.</td>
<td>Hygiene and toileting protocol.</td>
<td>Stories about starting school.</td>
<td>Assessment of number skills. Introducing number 1.</td>
<td>Tour of the Foundation Unit. Getting familiar with walking in a straight line.</td>
<td>Rhyme 'What's Your Name?'</td>
<td>Intro.</td>
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<td>3</td>
<td>My body</td>
<td>Keeping healthy.</td>
<td>Songs about body.</td>
<td>Moving in different ways.</td>
<td>Listen to 'Funny Bones'.</td>
<td>Number 3.</td>
<td>Create a skeleton.</td>
<td>Hand and footprints.</td>
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<td>My senses</td>
<td>My favourite food.</td>
<td>Sound walks around the garden.</td>
<td>Trays of paint and sand.</td>
<td>Story about senses.</td>
<td>Number 4.</td>
<td>Playdough emotions.</td>
<td>Song 'If You're Happy and You Know It'.</td>
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<td>5</td>
<td>Healthy lifestyle</td>
<td>What we like to eat.</td>
<td>Talk about family life.</td>
<td>Cutting fruits for a fruit salad.</td>
<td>Listening to stories about healthy living.</td>
<td>Number 5.</td>
<td>Tasting fruits.</td>
<td>Make up dances to music.</td>
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<td>My family</td>
<td>Similarities and differences between families.</td>
<td>Talk about features of our families.</td>
<td>Play 'Keeper of the Keys'.</td>
<td>Story about my family.</td>
<td>Number 6.</td>
<td>Family tree.</td>
<td>Make family tree mobile.</td>
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<td>Transportation on foot</td>
<td>Plan a trip for a teddy.</td>
<td>Talk journeys (walking) to school.</td>
<td>Play 'follow my leader'.</td>
<td>Story about walking to school.</td>
<td>Number 7.</td>
<td>Take a tour around the school.</td>
<td>Children to help build a travel role-play area.</td>
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<td>By road</td>
<td>Trip on a bus.</td>
<td>Talk about road safety.</td>
<td>Play 'traffic lights'.</td>
<td>Look at books.</td>
<td>Number 8.</td>
<td>Paint with toy vehicles.</td>
<td>Group project – bus.</td>
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<td>By rail</td>
<td>Talk about transportation by rail.</td>
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<td>Draw parallel lines, chug along like a train.</td>
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<td>Look at trains on the classroom interactive whiteboard.</td>
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<td>By water</td>
<td>Talk about going on a boat trip.</td>
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<td>Sing 'Row, Row Your Boat'.</td>
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<td>Listen to 'Mr. Grumpy's Outing'.</td>
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<td>Introduce concepts of 'float' and 'sink'.</td>
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<td>Make a sailing boat with paper.</td>
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<td>By air</td>
<td>Imagine being on a magic carpet.</td>
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<td>Listen to 'Aladdin and His Flying Carpet'.</td>
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<td>By spaceship</td>
<td>Think about space travel.</td>
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<td>Discuss the video 'Astronauts Eat in Space'.</td>
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<td>Play space aliens.</td>
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<td>Look at books about space.</td>
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<td>Build spaceships.</td>
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<td>Christmas sleigh</td>
<td>Children socialising and preparing for Christmas.</td>
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<td>Sing Christmas songs.</td>
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<td>Pets</td>
<td>Discuss the importance of being quiet and gentle around pets.</td>
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<td>Who has a pet at home?</td>
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<td>Moving like a pet.</td>
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<td>Listen to 'Some Dogs Do'.</td>
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<td>Create your own pet.</td>
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<td>Farm animals</td>
<td>Play with farm animals.</td>
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<td>Discuss farmers and their role.</td>
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<td>Play 'Farm Animals Go Home'.</td>
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<td>Read 'Farmer Duck and Little Red Hen'.</td>
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<td>Play 'Collect the Eggs'.</td>
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<td>Interactive whiteboard – draw animals.</td>
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<td>Make farm animal puppets.</td>
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<td>Wild animals</td>
<td>Introduce grassland and jungle animals.</td>
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<td>Song 'Walking in the Jungle'.</td>
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<td>Make jungle animals with playdough.</td>
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<td>Read 'Over in the Grasslands'.</td>
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<td>Look at colours and patterns of animals on the interactive whiteboard.</td>
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<td>Use paint to make animal patterns.</td>
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<td>Creepy-crawly – mini-beasts</td>
<td>Watch garden bugs on the interactive whiteboard.</td>
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<td>Discuss 'The Green Frog Story'.</td>
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<td>Write your name.</td>
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<td>Read 'Greedy Spider' and 'The Hungry Caterpillar'.</td>
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<td>Investigate life cycles and changes of caterpillars.</td>
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<td>Flutter &amp; buzz</td>
<td>Ask children to tidy up after garden play.</td>
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<td>Make honeybee sandwiches.</td>
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<td>Bees hop to flowers – game.</td>
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<td>Read poem about insects.</td>
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<td>Go on a bug hunt and count.</td>
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<td>Play 'Buzzy, Buzzy Bee Ring'.</td>
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<td>Investigate bears</td>
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<td>Counting bears.</td>
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<td>Differences between real bears and teddies.</td>
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<td>Pretend you are a bear.</td>
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<td>Goldilocks and the Three Bears</td>
<td>Talk about your feelings ‘hugging like bears’.</td>
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<td>Discuss ingredients of porridge.</td>
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<td>Which hand do you use to stir the porridge?</td>
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<td>Story of 'Goldilocks'.</td>
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<td>Big bear – small bear shapes and sizes.</td>
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<td>Tasting porridge.</td>
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<td>Sing 'Goldilocks'.</td>
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<td>Bear masks</td>
<td>Make a mask.</td>
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<td>Talk about a bear’s features.</td>
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<td>Story 'Can't You Sleep Little Bear'.</td>
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<td>Looking at differences in bear types.</td>
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<td>Bear masks.</td>
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<td>Bear hunt</td>
<td>Ask children to tidy up after free-play. Talk about 'Going on a Bear Hunt'. Free-play outside. Story 'We're Going on a Bear Hunt'. Counting bears and estimating amounts. Differences between real bears and teddies. Role-play area. Letter formation.</td>
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<td>Revision week</td>
<td>Which story did you like the most? Talk about features of bears. Free-play. Read 'Bears Don’t Swim'. Revision. Differences between real bears and teddies. Role-play area. Letter formation.</td>
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<td>Celebrations - Birthdays</td>
<td>Discuss birthdays. How do we feel when it is our birthday? How do we make somebody’s birthday special? Read a story about a birthday party. Make a set of skittles that look like candles. The children roll the ball to knock them down. Make a birthday wheel for the class or revise the birthday charts in the classroom. Write labels in the different sections. Learn the number song 'Ten little Candles on a Birthday Cake'. Use photos and drawings to make a timeline of special events and/or experiences in the children’s lives. Use the recycling box to design and make a birthday cake. Letter formation.</td>
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<td>Celebrating a teddy bear picnic</td>
<td>Dressing the teddy bear. Talk about what we will wear. Play in the ‘Back Area’. Read the story of 'The Gruffalo'. Encourage children to count beyond ten. Make a class display of the 'Teddy Bears’ Picnic'. Make simple party hats incorporating bear ears. Make simple party hats incorporating bear ears. Letter formation.</td>
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<td>Celebrations in different countries</td>
<td>Use the interactive whiteboard to show a clip about clothes. Talk about clothes. Talk about International Day. Read 'The Emperor's New Clothes'. Sequencing familiar events. Talk about the familiar world. Draw traditional clothes for different countries. Letter formation.</td>
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<td>Celebrations in different countries</td>
<td>Use the interactive whiteboard to show a clip about clothes. Talk about clothes. Talk about International Day. Read 'The Emperor's New Clothes'. Sequencing familiar events. Talk about the familiar world. Role-play area. Revision.</td>
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<tr>
<td>Types of homes</td>
<td>Introduction. Interactive whiteboard to show different kinds of homes. Draw your own home. Read a story about homes. Use shapes to make houses. Talk about different houses you have seen on the interactive whiteboard. Role-play area. Revision.</td>
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Appendix E: Ethical clearance

From  Dr Duncan Banks  
Chair, The Open University Human Research Ethics Committee
Email  d.banks@open.ac.uk
Extension  59198

To  Julia Capell Hassan, CREET Language and Literacy, FELS
Subject  "A Study of Egyptian Pre-school Children in Cairo, their Mark-Making: Meaning, Choice and Practice in an English Immersion Nursery."
Ref  HREC/2011/#1094/1
Submitted Date  11 November 2011

This memorandum is to confirm that the research protocol for the above-named research project, as submitted for ethics review, is approved by the Open University Human Research Ethics Committee. Before you start your research you will need to address the comment(s) from the review panel;

1. To what extent does attention paid to individuals by a teacher from the same school single these children out and or makes other children feel that they are being disadvantaged? There is no explanation of how children will be selected for the study. HREC will need to see this, as well as how people will be approached to participate. To get round the issue of why some children are not picked, you could give a leaflet out to all parents in relevant classes at the school.

2. On the subject of consent there is nothing about recording children in here, nor that the recordings will be destroyed if people opt out of the research. You will need to add the information about recording on the consent form and give your contact details. Ideally there needs to be more information about how children’s consent and right to withdraw will be ensured. How will you make sure they understand this and feel confident to express their views? Similarly, children should give permission for their work to be used – not just parents.

3. There needs to be more detail about the staff interviews. There could be an issue of staff feeling pressured to participate if you are a colleague, or a question about confidentiality.

4. On the subject of data protection, the data are not anonymous, and you need to address storage/destruction of raw data and not just electronic files. If the data are securely stored and adequately anonymised and participants understand this and why it is necessary, and agree then there should not be a problem.

5. The new BERA guidelines indicate that you should have a UK CRB check or make clear whether there are any requirements for similar clearance in Egypt, and to show you have it.

6. Debriefing is good practice, but will it make parents/children feel that their child is being assessed (and do they understand that is what’s happening) or is it simply a summary of what the research has found? If the latter case, would a paper summary to keep be better than a meeting?
Appendix E ctd.

This memorandum is to confirm that the research protocol for the above-named research project, as submitted for ethics review, is approved by the Open University Human Research Ethics Committee. Before you start your research, you will need to address the comment(s) from the review panel.

Here are the comments and clarification.

1. To what extent does attention paid to individuals by a teacher from the same school single these children out and or makes other children feel that they are being disadvantaged?

   There is no explanation of how children will be selected for the study. HREC will need to see this, as well as how people will be approached to participate. To get round the issue of why some children are not picked, you could give a leaflet out to all parents in relevant classes at the school.

   Clarification

   There is no intention to separate, segregate or pay special attention to the children who are the focus of my study. All children in the setting create ‘texts’ as part of their play and are spoken to about their ‘work’ by teachers and teaching assistants during the day. Examples of children’s texts are collected as part of normal practice to inform planning for children’s learning. However, the children taking part in the study will be audio recorded whilst they are talking to a teacher and some of their work [texts] will be photographed or photocopied for analysis. Therefore, parents’ consent is necessary and will be sought in writing. All children experience the same curriculum and have access to the same resources, during a normal school day. No additional activities or resources will be provided for the children taking part in the study. Care will be taken to ensure, as far as possible, that the audio recordings are as unobtrusive as possible, and the purpose of the recordings will be explained to all children.

   Children will be identified using the criteria of age and gender in order to demonstrate transparency. I have chosen to focus on children between 3.5 to 4.5 years at the start of the study (or as near as possible to this age). I will focus on one girl and one boy in each class to achieve a gender balance. The final selection of children will depend on consent from the children and parents. I will approach parents of children who meet the criteria above informally at first to explain my study and seek their permission for their child to participate. I will ask them to explain the research to their child. If the child and parents are happy to participate, I will seek formal consent in writing. Other parents may wish to know why their child was not selected. To explain this, I will provide a leaflet for all parents explaining the research and will also talk to parents at parents evening. I will also make myself available to speak to parents and colleagues about my study and the selection process of children. I will speak to colleagues informally about my research and seek their participation. If they agree I will seek formal consent in writing. If they do not agree I will respect their wishes and make alternative arrangements.

2. On the subject of consent there is nothing about recording children in here, nor that the recordings will be destroyed if people opt out of the research. You will need to add the information about recording on the consent form and give your contact details.
Ideally there needs to be more information about how children’s consent and right to withdraw will be ensured. How will you make sure they understand this and feel confident to express their views? Similarly, children should give permission for their work to be used – not just parents.

Clarification:
Continue to the consent form.
Children will be asked for their consent during each step of the study and they will have the right to withdraw at any time. So, I can be sure they understand this and feel confident to express their view I can speak to them in English and Arabic. I can include the teddy system, regarding their choice of teddy. The cow teddy means ‘no’ today and the cat teddy mean ‘yes’ today. I hope that this will ensure children do not feel in any way threatened by an adult presence and have to say yes when they really want to say no. All children should be able to clearly give their assent for their work to be used.

3. There needs to be more detail about the staff interviews. There could be an issue of staff feeling pressured to participate if you are a colleague, or a question about confidentiality.

Clarification:
No colleague should feel pressure to be interviewed if they do not which to take part. I am a teacher, and I am not in a managerial position, so I would hope my colleagues would not feel any pressure to take part in the study or be interviewed if they do not wish so. After speaking to a colleague informally about their participation and gaining a positive response I will formally write to them and provide them with my email address. If they do not wish to speak to me directly regarding their participation, they can email me or tell my supervisor in confidence. If after my initial informal approach, it is clear they do not wish to be involved I will respect their wishes and not pursue the matter further. I will seek written consent from all adults. I will ensure that they know that all data is confidential, held securely and that their names will not be used in the thesis. Any raw or electronic data stored will be coded with pseudonyms. The team I work with already know about the possibility of this study and have been truly supportive.

4. On the subject of data protection, the data are not anonymous, and you need to address storage/destruction of raw data and not just electronic files. If the data are securely stored and adequately anonymised and participants understand this and why it is necessary, and agree then there should not be a problem.

Clarification:
The data, both raw and electronic, will be coded and I will use pseudonyms for all participants. Children’s names can be blocked out if a child decides to write their name on their work. However, as part of this investigation I am looking for solitary letters in Arabic and in English within the graphical marks that a child makes. These marks are often associated with the child’s name; however, these can be cleverly coded using pseudonyms. Raw data will be kept in a secure and lockable filing cabinet/box in my home. The school has a mechanical shredder; this is kept in the deputy heads office and I will use this to destroy raw data once I have finished the analysis.
5. The new BERA guidelines indicate that you should have a UK CRB check or make clear whether there are any requirements for similar clearance in Egypt, and to show you have it.

Clarification:
I do feel a CRB check is important and understand fully the need for this and as a requirement for teachers working in the UK. However, none of the schools I have worked for within Egypt have ever required a CRB check. Egypt currently does not require this for a working visa for foreign nationals or for indigenous teachers. I have been in contact with the school lawyer who could write to you to confirm this is the current position in Egypt should you wish. I have also suggested to the school lawyer that I could register as an Egyptian, which would give me an opportunity to privately complete a police check. I have known teachers who leave Egypt go about this process to try and get a police check.

6. Debriefing is good practice, but will it make parents/children feel that their child is being assessed (and do they understand that is what’s happening) or is it simply a summary of what the research has found? If the latter case, would a paper summary to keep be better than a meeting?

Clarification:
I will give parents a choice if they would like to meet with me. I will also provide parents with a summary of the study so they could read it at their leisure.

Appendix E ctd.

Dear Julia,

Thank you for excellent response to the list of questions raised by our reviewers. You have obviously put a lot of effort into this document and we appreciate this. As for point 5 regarding the CRB clearance this should be an option for you as no such system exists in Egypt. So as your research is not delayed in any way could I suggest that you plan your studies, update the forms as and where necessary with the knowledge that you now have the full approval of the university’s ethics review process. If you need any further advice please do not hesitate to get back to me.

I know the Egyptian education system very well and frequently visit Egypt. I am currently working in Alexandria.

Best wishes,

Dr Duncan Banks
Chair, HREC

From: Julia Capell <juliaharm@netscape.co.uk>
Reply-To: Julia Capell <juliaharm@yahoo.co.uk>
Date: Fri, 9 Dec 2011 19:06:12 +0000
To: Duncan Banks <d.banks@open.ac.uk>, "research-rec-review@open.ac.uk" <research-rec-review@open.ac.uk>
Subject: Re: HREC/2011/01094/1

Dear Sir/Madam,

Please find the amendments and clarifications to your questions attached.

Regards

Julia Capell
Appendix F: Initial interest form

Parent’s Name__________________________________________

Child’s Name_________________Date of Birth______________

Year Group and Class Teacher’s name _____________________

Date__________________________________________________

Julia Capell: Researcher/ Teacher Email *****************Tel: **********
Appendix G: Consent letter

From the British school to the family of ____________________________

Date

We hereby declare that we participate in the program and this is in accordance with the school's requirements. We ask that you agree to the following:

Program Information:

This program is an extension of the educational system in the United Kingdom, and it is conducted in Arabic, which is the main language of instruction. This program is designed for students aged 12 to 16 years old who have a minimum of one year of Arabic language study.

What are the benefits of the program?

The program aims to provide students with a comprehensive understanding of the Arabic language and culture, as well as to develop their skills in listening, speaking, reading, and writing.

What are the requirements for participation in the program?

Students must have a minimum of one year of Arabic language study and be able to understand and write Arabic.

What are the costs of participation in the program?

The program costs $150 per student per semester.

What are the benefits of the program?

The program aims to provide students with a comprehensive understanding of the Arabic language and culture, as well as to develop their skills in listening, speaking, reading, and writing.

What are the requirements for participation in the program?

Students must have a minimum of one year of Arabic language study and be able to understand and write Arabic.

What are the costs of participation in the program?

The program costs $150 per student per semester.

By signing this form, we agree to the terms and conditions of the program and to the payment of the tuition fees.

______________________________

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______________________________

Chairman of the Board

Principal

Teacher

Family Representative

Student Representative

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Appendix G ctd.

Dear Parent,

I would like to invite your child to take part in some research, and I hope that your child will be able to take part.

What is the study about?
This study is part of a British Educational Doctorate based in the UK related to young children who are new to learning English. I am investigating children’s meanings, like the drawings and marks children make during play.

If you agree to allow your child to take part, what will they be asked to do?
I would like to photocopy some of the drawings they make at school. I would be very keen to talk to you face-to-face and discuss your ideas about your child’s meanings and drawings at a mutually convenient time and will contact you later about this.
In addition: -
  • I would like to photograph/audio-record and observe your child during play. This is routine at school so your child will not consider this unusual.
  • I would be grateful to have one drawing from home that your child has drawn alone.

What’s in it for your child?
This project will not disrupt your child’s education. Teachers often talk to children about their drawings as part of a normal school day; this is the case for all children in the class. Children often get enormous pleasure from discussing their drawings with adults.

What if your child would like to drop out of the study?
If at any time you wish to remove your child from the project, or your child does not wish to take part at any stage, we will honour your wishes. The project is entirely voluntary and is not linked in any way to your child’s assessment. All data on your child will be removed following your withdrawal.

What will happen to the data that is collected?
Your child’s work and name known to the project will remain confidential and anonymous. If any part of your child’s work is used as an example in the final thesis, your permission will be first sought. We have a responsibility to always behave ethically.

What do I need to do now?
If you do not wish to participate, you need do nothing more. If you do wish to participate, please read the attached consent form, and sign it within a week. Then attach the form to the school communication book.

Kindest Regards

Julia Capell
Researcher/teacher

I have read and understood the nature of my child’s involvement in this project, and I give my child permission to take part.

Parent’s name________________________________________________
Child’s name_________________________________________________
Date_________________________________________________________
Appendix H: Observation & interview schedule

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<th>Child</th>
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<th>Mother interview</th>
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<td>09.03.13</td>
<td>09.03.13</td>
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<td>22.02.13 26.04.13</td>
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## Appendix H ctd.

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<th>Dates</th>
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<th>Dates</th>
<th>Dates</th>
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<td>28.11.12 10.02.13 13.05.13</td>
<td>06.12.12 16.02.13 03.05.13</td>
<td>06.12.12 16.02.13</td>
<td>03.05.13 My class My class My class</td>
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<tr>
<td>Mostafa</td>
<td>04.11.12 13.02.13 14.05.13</td>
<td>15.11.12 15.02.13 08.06.13</td>
<td>15.11.12 15.02.13</td>
<td>08.06.13</td>
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<tr>
<td>Laila</td>
<td>18.11.12 05.02.13 29.04.13</td>
<td>24.11.12 08.02.13 02.06.13</td>
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<td>Youssef</td>
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<td>24.11.12 11.02.13</td>
<td>08.06.13</td>
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</tr>
</tbody>
</table>
Appendix I: Playing with the equipment

Date: 24/11/19 Start: 10.12am. Total recording time: 21m 39s.
Participants: Laila and brother

Children were highly interested in the digital audio recording equipment and digital camera. Most children in the classroom at some point played with the equipment. This lightweight audio digital recorder, attached to a microphone, was clipped to the child’s lapel and stored inside a backpack, which the child would wear as I observed them.

The following observation is an example of how Laila started playing with the digital equipment on my home visit, before both audio recorders (mine and hers) were synchronised to start at the same time.

After I had sat down, Laila gave me a big hug and kiss, then she went straight to my bag, got out the equipment and started to attach the microphone to herself. She also attached my microphone. We talked about synchronising the audio equipment and she watched carefully which buttons I pressed. She wanted to know all about the camera, and she took a picture of me with my audio equipment on.
<table>
<thead>
<tr>
<th>Time</th>
<th>ID</th>
<th>Speaker</th>
<th>Action/Comment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.51</td>
<td>24</td>
<td>Laila</td>
<td>What’s this here?</td>
<td>Looking through my bag.</td>
</tr>
<tr>
<td>01.53</td>
<td>25</td>
<td>JRC</td>
<td>This is my bag…and this is my camera</td>
<td></td>
</tr>
<tr>
<td>02.00</td>
<td>26</td>
<td>Laila</td>
<td>I want look</td>
<td>Holds one of my audio recorders.</td>
</tr>
<tr>
<td>02.01</td>
<td>27</td>
<td>JRC</td>
<td>You want to look…ok how do you think you switch it on?</td>
<td></td>
</tr>
<tr>
<td>02.08</td>
<td>28</td>
<td>Laila</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02.10</td>
<td>29</td>
<td>JRC</td>
<td>No no you switch it on like that on the top…you worked it out didn’t you.</td>
<td>You worked it out didn’t you.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Right come on then show me what you’re going to do.</td>
<td></td>
</tr>
<tr>
<td>02.34</td>
<td>30</td>
<td>Laila</td>
<td>Where’s the camera?</td>
<td></td>
</tr>
<tr>
<td>02.35</td>
<td>31</td>
<td>JRC</td>
<td>Where’s the camera? It’s here</td>
<td></td>
</tr>
<tr>
<td>02.37</td>
<td>32</td>
<td>Laila</td>
<td>Yeah</td>
<td>Clicking sound of camera.</td>
</tr>
<tr>
<td>02.42</td>
<td>33</td>
<td>JRC</td>
<td>Can you take a picture?</td>
<td></td>
</tr>
<tr>
<td>02.42</td>
<td>34</td>
<td>Laila</td>
<td>Yeah</td>
<td>Holds camera.</td>
</tr>
<tr>
<td>02.46</td>
<td>35</td>
<td>JRC</td>
<td>Go on then…did you do it?</td>
<td></td>
</tr>
<tr>
<td>02.50</td>
<td>36</td>
<td>Laila</td>
<td>Yeah</td>
<td></td>
</tr>
<tr>
<td>02.53</td>
<td>37</td>
<td>JRC</td>
<td>Show me. You have to hit it there. Yep. Got it managed it…ah you pressed the</td>
<td>Presses camera button.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>wrong button. You have to press the middle one…let’s have a look</td>
<td></td>
</tr>
<tr>
<td>03.33</td>
<td>38</td>
<td>Laila</td>
<td>Yeah</td>
<td>Takes my picture and runs to the table.</td>
</tr>
</tbody>
</table>
Appendix J: Interview questions with parents

<table>
<thead>
<tr>
<th>Code</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>What do you have in the home to encourage your child to draw or make something? Can you show me?</td>
</tr>
<tr>
<td></td>
<td>What types of artwork does your child like to do? Do they prefer paint or coloured pencil or clay of perhaps something else? Why do they like this?</td>
</tr>
<tr>
<td></td>
<td>Does your child use technology to draw? Which and what?</td>
</tr>
<tr>
<td></td>
<td>Does your child stop and start when they draw? Can you tell me what they do?</td>
</tr>
<tr>
<td></td>
<td>Does your child start to draw or paint something and then change their mind and start drawing something else?</td>
</tr>
<tr>
<td>English</td>
<td>Do you see anything in your child’s drawings that may not come from Egypt? What are these features, and do they talk about them?</td>
</tr>
<tr>
<td></td>
<td>Do they like to draw with the TV on or perhaps have people around them? Do you notice that they may talk about something in their drawing that seems interesting?</td>
</tr>
<tr>
<td></td>
<td>Why did you choose a British school to educate your children?</td>
</tr>
<tr>
<td>Mode choice</td>
<td>What kind of features does your child like to draw or perhaps does your child likes to make something at home? Can you tell me about it? Can you see what it is or is it just a scribble to you?</td>
</tr>
<tr>
<td></td>
<td>Does your child like to write their name? How do you know it is their name? Where do they write their name?</td>
</tr>
<tr>
<td></td>
<td>What do you notice about their drawings and their choices of what they draw? Can you tell me? Do you have examples?</td>
</tr>
<tr>
<td></td>
<td>Does your child have paper or a whiteboard they can use without asking you? What do you notice when they draw without you? Are you present with your child when they draw?</td>
</tr>
<tr>
<td></td>
<td>Do you see any alphabetic script in their drawings? Does it look like print, such as English or Arabic? Does your child repeatedly draw the same image?</td>
</tr>
<tr>
<td></td>
<td>Does your child hum or talk when they draw? Is it in Arabic or English? Or is it something you can’t understand?</td>
</tr>
</tbody>
</table>
Appendix K: Parent debrief letter

Dear Parents of Alyaa,

Firstly, thank you so much. I really enjoyed observing Alyaa. I have gained a lot of valuable information for my research. I particularly enjoyed the home visit and meeting you personally.

I would like to share with you the information that I have collected so far. I have enclosed the transcripts of your child while they were playing at school and at home and I have also enclosed our interview transcript. If you would like the photographs I took, please provide me your USB memory stick and I will copy them for you.

I am lucky to have your daughter taking part in this study. I will be in contact with you again during the second term for our next meeting.

Have a lovely holiday.

Kindest regards,

Julia Capell
### Appendix L: English-speaking teacher interviews

<table>
<thead>
<tr>
<th>Codes</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>What kinds of drawings have children been producing over this term?</td>
</tr>
<tr>
<td></td>
<td>Have you noticed anything particular with their play/drawings?</td>
</tr>
<tr>
<td></td>
<td>Which family members do you think have a big influence on the way a child draws/plays and why?</td>
</tr>
<tr>
<td></td>
<td>What are children playing with?</td>
</tr>
<tr>
<td></td>
<td>Some children are more dominant than others and some children seem to lead. Can you explain this and what are your thoughts?</td>
</tr>
<tr>
<td>English</td>
<td>Why do you think parents send their child to a British school?</td>
</tr>
<tr>
<td></td>
<td>Have you noticed if these drawings relate to school? Can you tell me about this and give me some more examples?</td>
</tr>
<tr>
<td></td>
<td>What have you been teaching recently?</td>
</tr>
<tr>
<td></td>
<td>Have any of these drawings or play been influenced by home? Or do all the influences of a child’s play/drawings come from school?</td>
</tr>
<tr>
<td></td>
<td>Children are using which language during play?</td>
</tr>
<tr>
<td></td>
<td>Can you see features, written script or pictorial images? Tell me about these?</td>
</tr>
<tr>
<td>Mode choice</td>
<td>During my observations children stop and start, look around and play with many objects. Have you noticed this?</td>
</tr>
<tr>
<td></td>
<td>What other practices are exposed when children engage in play/drawing? Can you comment on this?</td>
</tr>
<tr>
<td></td>
<td>Children call something a car and then it becomes a fish. Why do you think children do this?</td>
</tr>
</tbody>
</table>
Appendix M: Teacher debrief letter

Dear Ms Diana,

Firstly, thank you so much. I really enjoyed being in your class and observing the children. I have gained a significant amount of valuable information for my research.

I would like to share this information with you. I have enclosed all the transcripts conducted at school. Youssef’s home transcript is still to be typed, although you do have the photographs that I have produced. These transcript copies I will need back, but you can write on the transcripts as I have, as it may help you think and develop your questions for me.

I wonder if, before we all run off for Christmas, I can sit down with you and talk to you about my findings on Tuesday during breakfast time. Please let me know if this is ok. We can go upstairs in the meeting room. I really look forward to hearing your thoughts.

Kindest regards

Julia Capell
## Appendix N: Multimodal events

<table>
<thead>
<tr>
<th>KG Class</th>
<th>Children</th>
<th>Observation Date</th>
<th>Transcript Name</th>
<th>Excerpt</th>
<th>Summary Code/label</th>
</tr>
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<tbody>
<tr>
<td>Antelope</td>
<td>Alyaa</td>
<td>Observation Term 1 14/10/12</td>
<td>Happy face.</td>
<td>A-T1/1 Lines 13-18</td>
<td>Teacher present – all classroom English. Adult-led.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A-T1/2 Line 18</td>
<td>Translanguaging and transduction through drawing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Observation Term 2 03/02/13</td>
<td>Dora the Explorer.</td>
<td>A-T2/3 Lines 4-13</td>
<td>Teasing by translanguaging, moving artefacts and drawing. Practising alone – private speech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A-T2/4 Lines 16-20</td>
<td>Teacher present – all classroom English. Adult-led.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A-T2/5 Lines 27-50</td>
<td>Translanguaging, transduction by moving artefacts with drawing. Playing the teacher.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A-T2/7 Lines 57-59</td>
<td>Translanguaging and transformation through remaking artefacts and moving them. Playing together.</td>
</tr>
<tr>
<td></td>
<td>Osama</td>
<td>Observation Term 1 15/10/12</td>
<td>Copying the letter of my name.</td>
<td>O-T1/9 Lines 22-30</td>
<td>Translanguaging playing with greetings by repeating and drawing. Practising alone – private speech.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Observation Term 2 03/02/13</td>
<td>I will colour all the circle.</td>
<td>O-T2/10 Lines 52-62</td>
<td>Translanguaging by naming insects in English and pointing. Practising alone – private speech.</td>
</tr>
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</table>
Appendix N etd.

<table>
<thead>
<tr>
<th>Name</th>
<th>Observation Term</th>
<th>Activity</th>
<th>Lines</th>
<th>Translanguaging</th>
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<tbody>
<tr>
<td>Michael</td>
<td>Observation Term 1</td>
<td>Shoes</td>
<td>M-T1/11</td>
<td>Translanguaging by repeating.</td>
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<tr>
<td></td>
<td>21/10/12</td>
<td></td>
<td>Lines 57-61</td>
<td>Practising alone – private speech.</td>
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<tr>
<td></td>
<td></td>
<td>Boy place</td>
<td>M-T1/11</td>
<td>Translanguaging but using his body to</td>
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<td></td>
<td></td>
<td></td>
<td>Lines 64-66</td>
<td>control the artefacts.</td>
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<td></td>
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<td>Numbers</td>
<td>M-T1/12</td>
<td>Bossy play.</td>
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<td></td>
<td></td>
<td></td>
<td>Lines 136-137</td>
<td></td>
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<td>Observation Term 2</td>
<td>Concert</td>
<td>M-T2/13</td>
<td>Translanguaging and drawing.</td>
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<td>20/02/13</td>
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<td>Lines 42-43</td>
<td>Wanting to belong. Playing together.</td>
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<tr>
<td></td>
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<td>Speech to writing</td>
<td>M-T2/14</td>
<td>Translanguaging and transduction</td>
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<td>Lines 110-112</td>
<td>playing writing.</td>
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<td>Triangle</td>
<td>M-T2/115</td>
<td>Translanguaging and transduction</td>
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<td></td>
<td>Lines 85-90</td>
<td>through drawing shapes.</td>
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<td>Observation Term 3</td>
<td>Doritos</td>
<td>M-T3/16</td>
<td>Playing the teacher.</td>
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<td>23/04/13</td>
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<td>Lines 21-22</td>
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<tr>
<td>Gabrielle</td>
<td>Observation Term 1</td>
<td>My teacher</td>
<td>G-T1/17</td>
<td>Translanguaging and transduction by</td>
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<tr>
<td></td>
<td>22/10/12</td>
<td></td>
<td>Lines 2-10</td>
<td>copying each other while drawing.</td>
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<tr>
<td></td>
<td></td>
<td>Counting the legs of a spider</td>
<td>G-T2/18</td>
<td>Wanting to belong.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lines 49-59</td>
<td>English with pointing.</td>
</tr>
<tr>
<td></td>
<td>Observation Term 2</td>
<td>Me, girl</td>
<td>G-T3/19</td>
<td>Adult-led.</td>
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<td>27/02/13</td>
<td></td>
<td>Lines11-18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Observation Term 3</td>
<td></td>
<td></td>
<td>Translanguaging transduction through</td>
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<td></td>
<td>24/04/13</td>
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<td></td>
<td>drawing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Wanting to belong.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Playing together.</td>
</tr>
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### Appendix N ctd.

<table>
<thead>
<tr>
<th>Name</th>
<th>Observation Term</th>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Observation Term 1 04/11/12</td>
<td>Making mashie</td>
<td>Mo-T1/21 Lines 47-48</td>
</tr>
<tr>
<td></td>
<td>Observation Term 2 13/02/13</td>
<td>An aeroplane, this car</td>
<td>Mo-T2/22 Lines 6-24</td>
</tr>
<tr>
<td></td>
<td>Observation Term 3 14/05/13</td>
<td>Birthday cake</td>
<td>Mo-T3/23 Lines 4-12</td>
</tr>
<tr>
<td></td>
<td>Golden fish</td>
<td>Mo-T3/23 Lines 64-67</td>
<td>Translanguaging and transformation by moving and remaking artefacts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bossy play.</td>
</tr>
<tr>
<td>Nadeen</td>
<td>Observation Term 1 28/11/12</td>
<td>Look at me</td>
<td>N-T1/24 Lines 12-19</td>
</tr>
<tr>
<td></td>
<td>Observation Term 2 10/02/13</td>
<td>Miss</td>
<td>N-T2/25 Lines 10-20</td>
</tr>
<tr>
<td></td>
<td>Observation Term 3 13/05/13</td>
<td>Watering can</td>
<td>N-T3/26 Lines 38-47</td>
</tr>
<tr>
<td>Laila</td>
<td>Observation Term 1 18/11/12</td>
<td>‘H’, car and fish</td>
<td>L-T1/27 Lines 1-31</td>
</tr>
<tr>
<td></td>
<td>Observation Term 2 05/02/13</td>
<td>Blue bear</td>
<td>L-T2/28 Lines 7-11</td>
</tr>
</tbody>
</table>
### Appendix N ctd.

<table>
<thead>
<tr>
<th>No.</th>
<th>Observation Term</th>
<th>Activity</th>
<th>Date</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>YO-3</td>
<td>Observation Term 3</td>
<td>Drawing on computer</td>
<td>29/04/13</td>
<td>No speech, gestural drawing and colour. Practising alone -private speech.</td>
</tr>
<tr>
<td>YO-1</td>
<td>Observation Term 1</td>
<td>My Daddy is going to work</td>
<td>12/11/12</td>
<td>Translanguaging and drawing. Practising alone -private speech.</td>
</tr>
<tr>
<td>YO-2</td>
<td>Observation Term 2</td>
<td>John Ceena</td>
<td>04/02/13</td>
<td>Translanguaging, repeating and moving artefacts. Practising alone -private speech.</td>
</tr>
<tr>
<td>YO-3</td>
<td>Observation Term 3</td>
<td>-</td>
<td>19/06/13</td>
<td>-</td>
</tr>
</tbody>
</table>

**Key**
- A = Alyaa (the first letter of the child’s name).
- T = Term (1,2,3).
- No. = numbered multimodal event.
Appendix O: First cycle of coding

LOCATION CODE: T2 LAILA HOME LINE 3 OR T1 ALYAA SCHOOL LINE 20
SUB-CODE: LOUNGE / DINING ROOM / CHILD'S BEDROOM / OUTDOOR AREA / CARPET / SANDPIT / TABLETOP


SUB-CODE: IN VIVO

GIRL / BOY / CHILDREN / TEACHER / TEACHING ASSISTANT / RESEARCHER / MOTHER / FATHER / BROTHER / SISTER / SELF-TALK


GESTURE CODE: BODY TURNS (MOTHER, FATHER, TEACHER FRIEND ETC.) / FACING (MOTHER, FATHER, TEACHER FRIEND ETC.) / BODY TWISTED / HEAD MOVING / HAND MOVING (MARKER, PEN, BOARD, CHALK ETC.) / HAND TOUCHING (MARKER, PEN, BOARD, CHALK ETC.) / HAND USING (MARKER, PEN, BOARD, CHALK ETC.) / ARM TOUCHING/ FINGER POINTING / BODY BENT OVER / HAND UNDER CHIN / BODY FACING TOY/ HANDLING

LAYOUT CODE: DRAWING/PAINTING/ MARKING/ WRITING/ CONSTRUCTING/ MODELLING/ STICKING / CUTTING/ SEWING/CENTER/LEFT/RIGHT