# A Sheffield Hallam University thesis

# Exploring the multimodal communication and agency of children in an autism classroom.

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# ABSTRACT

## 'Exploring the multimodal communication and agency of children in an autism classroom'.

This study explores the communication and agency of five children between 6-8 years old attending a special school in England. The children have all received a diagnosis of Autism Spectrum Disorder and demonstrate limited or no verbal speech. The study analyses how the children communicate with staff and peers in the classroom, how the diverse communicative contexts arising from the school day shape their communicative behaviours, and the nature of the relationship between their communication opportunities and the agency they exercise in the classroom.

The study draws on a wide range of data including classroom video recordings, fieldnotes, the author's reflexive research journal, interviews with classroom staff and with the children's parents and the collection of photographs and documents. It adopts a hybridized methodological framework drawing upon ethnography of communication, Conversation Analysis and Multimodal Interaction Analysis. This framework is used to enable fine-grained analysis of communication and to subsequently locate such microanalysis within a broader ethnographic context.

The children in this study communicate using a range of strategies including the use of Picture Exchange Communication System (PECS®) and Makaton® signing, embodied communication and Intensive Interaction. Some individual variation between children is noted in terms of their preferred modes, speech topics, functions and interactional partners. Communication mediated by Makaton and PECS is often associated with requesting objects or help from adults as well as social convention such as *please* and *thank-you*, and appears to be outstripped in range and complexity by the children's embodied multimodal communication. Some forms of communication are found to be highly associated with certain classroom communicative contexts. Whilst all the children show at least some orientation towards peer interaction, the nature of a specialist setting with high staff to student ratios, small classes, an absence of non-disabled peers and AAC provision which orients towards object requesting together tend to mitigate against interactions with other children.

Implications arising from the study include the need to think critically about facilitating peer interaction in specialist settings, to reflect on how and why some vocabulary and speech functions are provided with PECS and Makaton to the exclusion of others, and to consider the very complex relationships between classroom activities, vocabulary, mode, speech function and interactional partners. It is suggested that the concept of childhood 'agency' might support practitioners and policy makers in reflecting on how communication support for disabled children might enhance their lives both present and future.

# ACKNOWLEDGEMENTS

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# MULTIMODAL TRANSCRIPTION LIST

# GLOSSARY OF ACRONYMS & TERMINOLOGY (SPECIAL NEEDS EDUCATION)

| Acronym | Term | Description |
|---|---|---|
| AAC | Augmentative & Alternative Communication | AAC is an umbrella term for a range of symbolic communication systems which may be used to *augment* verbal speech where it is insufficient to meet the person's needs, or to provide an *alternative* to verbal speech when minimal or absent.  PECS, Makaton and SGDs all fall within the umbrella term AAC. |
| ASD | Autism Spectrum Disorder; autism | ASD is defined by diagnostic criteria ICD-10 (WHO, 2016) as *'A type of pervasive developmental disorder that is defined by: (a) the presence of abnormal or impaired development that is manifest before the age of three years, and (b) the characteristic type of abnormal functioning in all the three areas of psychopathology: reciprocal social interaction, communication, and restricted, stereotyped, repetitive behaviour'*. (F84.0).<br><br>In this study the term 'autism' is preferred because 'ASD' is suggestive of an entirely within-child deficit account of autism which is not consistent with the critical realist perspective on disability explained in Chapter 2.  However, an exception is made where I draw upon clinical literature or reports which have themselves referenced ASD in order to reflect the author's intended meaning.<br><br>Person-first language is used on the basis of personal preference ('child with autism' rather than 'autistic child') since there is a lack of consensus within the UK autism community about which term is preferred (Kenny et al., 2016). |
| --- | Communication Passports | A document which describes the idiosyncratic communicative behaviours of a minimally verbal person for the benefit of new caregivers or professionals who do not have a shared history with the person (Goldbart & Caton, 2010) |
| EHCP | Education, Health & Care Plan | A document provided for by the Children & Families Act 2014 which gives integrated documentation of the child's required provision from education, health and social care providers. |

| Acronym | Term | Description |
|---------|------|-------------|
| GDD | Global Developmental Delay | In clinical literature, a child is considered to have 'mild' GDD if their functional age is less than 33% below chronological age, moderate if 34%-66% below, and severe if more than 66% below (McDonald et al., 2006). Two of the five children in this study were identified as having GDD (in addition to ASD) as specified in their statements/EHCPs. |
| IBP | Individual Behaviour Plan | A document which plans for behaviours which are deemed challenging and how to respond to them, drawn up by the child's school. |
| IEP | Individual Education Plan | A document drawn up by the child's school detailing current educational targets for a child, which in turn draw upon the longer-term goals contained in their statement/EHCP. |
| II | Intensive Interaction | An approach to developing the communication of children with communication difficulties by using playful, child-led, non-verbal exchanges inspired by parent-infant interactions (Nind & Hewett, 1994). |
|  | Makaton ® | A simplified form of manual signing created for people with learning disabilities (Walker, 1980). It draws upon the individual signs British Sign Language (BSL) but does not follow the grammar of BSL. Instead, it follows the word order of spoken English, and users may choose to sign only one or two key words to make meaning rather than complete sentences. There are over 7,000 signs available in Makaton. |
| --- | Minimally verbal | This study follows Kasari et al. (2013) in using this term to describe a person with no more than 20-30 spoken words. It is preferred to 'non-verbal' or 'pre-verbal' which could suggest permanence (in the first case) or absolutely no speech (in both cases), which would not be true of all participants in this study. |
| PECS ® | Picture Exchange Communication System | A form of AAC developed by Bondy & Frost (1994) which involves learners handing over laminated symbol cards in exchange for a desired item. There is a PECS teaching manual with a six-stage PECS Protocol, where exchanges become more complex and eventually progress onto the exchange of multiple cards arranged in a sentence on a Velcro strip as well as the expansion to the commenting speech function in addition to requesting. |

| Acronym | Term | Description |
|---|---|---|
| SALT | Speech & Language Therapist | An allied health professional working for the National Health Service (UK) or in private practice to support people with communication difficulties. They may visit children at school or at home and write reports, with recommendations subsequently being incorporated into educational documents such as IEPs or EHCPs. |
| SEN | Special Educational Needs | Defined by s.20 of the Children & Families Act 2014 as having 'a learning difficulty or disability which calls for special education provision to be made for him or her'. The Special Educational Needs & Disability Code of Practice (DfE, 2014) further specifies four areas of SEN (communication & interaction; cognition & learning; social, emotional & mental health; sensory & physical needs). |
| SENCO | Special Educational Needs Co-Ordinator | A teacher with designated responsibility for SEN provision within a school. This role is required by The Special Educational Needs & Disability Code of Practice (DfE, 2014). |
| SGD | Speech generating device | A device which allows the user to create a voice output message by selecting symbols (manually or by eye gaze) on the device. |
| --- | Total Communication | Total Communication involves 'being aware and valuing all the different ways a person may use to communicate' (RCSLT, 2013, p.8). A 'Total Communication Environment' may provide any combination of communication supports including Makaton, PECS, photographs, SGDs, objects in the environment, music, and the use of embodied modes such as touch and facial expression. |
| --- | Widgit © symbols | A bank of over 18,000 simple colour symbols which can be purchased in the form of CD-based software or an online subscription account. The software will automatically symbolise words as staff type, so they can quickly create (for example) PECS cards, visual timetables and learning materials. Widgit was used in the school in this study. |

# CHAPTER 1: INTRODUCTION

## 1.0 Introduction

> *I just hope ... [Albert] will be able more freely to express what he wants, because sometimes it is still a struggle where you are second guessing constantly what it is, just for him, yes. Just to be able to show me, so I know what he wants.* **(Albert's Mother, Interview).**
>
> *I hope [Dominic] comes on where he is able to say sentences. I would be over the moon at that. Be like winning the Lotto wouldn't it to know that you, your child can communicate and put his view across and if there is anything wrong he can come out with it. Or there is a lot more people trained in autism. That would be nice. Police would be more aware of the situation and government but that is I think going too far isn't it ...* **(Dominic's Mother, Interview).**
>
> *I really would like for [Thomas] to just develop some kind of language whether it is spoken, whether it is sign language whether it is picture language whatever, but something that I can have a conversation with him. And actually find out what is in his mind. At the moment I don't know.* **(Thomas' Father, Interview).**
>
> *Definitely [my hope for Anna's future] is communication verbal communication because that will be very helpful, in the future for her so, this is my big wish for because I can't stop to think what will do with her when missing me.* **(Anna's Mother, Interview).**

Topics such as 'communication' and 'agency' can have deep emotional significance for the parents of minimally verbal children with disabilities including autism which go well beyond theoretical discussions of these terms in academic literature. These quotations, taken from my interviews with the parents of my five child participants, point to some of their concerns about their child's communication. As Dominic's mother wonders, should we be working to maximise the verbal communication skills of our children, or should we be demanding more responsive communication enabling environments? Thomas' father ponders the range of options available: should we encourage children to develop verbal language or forms of Augmentative & Alternative Communication (AAC) such as sign language or pictorial symbols? Albert's mother refers to the role of the communication partner in attempting to

infer meaning from ambiguous behaviours, and whether this is a desirable feature of the child's long-term communicative repertoire.  Finally, Anna's mother locates these questions in the context of a concern shared by many parents of disabled children (Case, 2000): what happens in the future when our children may not be with responsive and familiar caregivers who are willing and able to undertake the complex interactional work of inferring meaning from idiosyncratic behaviours?  These questions were already familiar to me long before this study began as a parent to two minimally verbal children myself, and they set the scene for the emergence of the current study, which addresses how children with minimal speech communicate and the relationship between their communicative repertoires and their 'agency' in the classroom.

In this introductory chapter I begin with an exploration of my own positionality as researcher (Section 1.1).  I then provide contextualising detail on the current legislative framework for 'special needs education' in England (Section 1.2).  In Section 1.3, I consider the role of the National Curriculum in England for children in specialist settings in order to locate observed classroom practice within the parameters of what is expected of practitioners in special schools.  In Section 1.4 I focus specifically on approaches to the teaching of communication skills in the education of minimally verbal children with autism.  In Section 1.5 I set out the aim of this thesis and my three research questions, and in Section 1.6 I explain the structure of the thesis which follows.

**1.1 Researcher Positionality**

As indicated above, my interest in this topic is deeply influenced by family experience: I am a parent of two children with autism who have limited verbal speech and who use Augmentative & Alternative Communication (AAC) as well as embodied modes such as gesture, eye gaze and non-verbal vocalisations as part of their communicative repertoires.  This parenting experience has fundamentally shaped my approach to the study in several ways.  Firstly, it pointed towards the use of qualitative ethnographic methods since I wanted to provide rich description of *how* children make meaning in busy, complex everyday environments. Secondly,

watching my children communicate through multiple modes including Picture Exchange Communication System (PECS), speech-generating devices, embodied modes and strategic use of artefacts in the environment led to my interest in the field of multimodality, or the systematic study of how modes are orchestrated together to make meaning. The concepts of 'mode' and 'multimodality' and their significance to this study are further explored in Section 2.1.2.

My experiences as a parent have also shaped my ontological understandings of the nature of 'disability' and 'autism', and it has in many ways been a deeply personal and sometimes challenging journey to engage with various competing perspectives on disability. I can readily get enthusiastic about the political impetus behind the social model of disability which calls for the problematisation of disabling environments rather than individual impairment (Oliver, 1996), and I can also see value in the Foucauldian-informed positions of scholars associated with Critical Disability Studies who foreground the role of discourse in othering, injuring, oppressing and excluding disabled people (Goodley, 2011). However, I am also reluctant to locate my study squarely within either framework: when I reflect on my observations of my children's life experiences thus far, I find myself agreeing with Shakespeare (2013) that the complexity of disability is not captured by a focus on social barriers or discourse alone. My blended reflections on my own children and the five participants in my study eventually led me to a critical realist understanding of autism (Shakespeare, 2013) which insists upon the need to analyse disability as a complex and multi-levelled phenomenon with physical, economic, environmental, social and discursive dimensions which interact in complex ways but cannot be reduced to each other (explored further in Section 2.2.4).

Finally, as a researcher I was also influenced by my background in education. I was a classroom teacher for nine years as well as a Governor in another maintained special school, and I have undertaken an MA in Special Needs Education as well as professional training in Makaton, PECS and Intensive Interaction. These experiences led me to reflect critically on how frequently AAC usage in school settings appeared to be a vehicle for the student to produce tangible evidence of curricular

'attainment', yet not to enable that same student to talk about their most deeply held interests, needs, frustrations, opinions and goals. It was from here that I was drawn to the concept of 'agency' which has arisen to relatively recent prominence in social sciences research and which I have defined for the purposes of this study in Chapter 2 as *having the possibility of acting in a way which can shape and influence events, relationships and one's world.* I began to think about the interplay between communication and agency particularly in the context of disabled children, and to question whether agency might constitute a helpful guiding principle in critically evaluating the usefulness of the various communication approaches often co-existing in special needs classrooms. These considerations are deeply interwoven into this thesis and most particularly the final two chapters where I discuss the implications of my data in the light of these questions. Before this, however, it is useful to locate the study in the context of special needs legislation, policy and practice in England where the research was conducted.

**1.2 Special Needs Education in England**

In this section I present an overview of current legislative provision for children identified as having 'special educational needs' in England and how this has translated into policy and practice. Here, my focus is on the present day as it is beyond the remit of this thesis to provide historical analysis of the evolution of English legislative and policy positions on special educational needs, a topic which is already explored in the work of Runswick-Cole & Hodge (2009) as well as Borsay (2011).

The current legislative framework for special educational needs provision can be found in the Children and Families Act 2014 (hereafter, 'the Act') with its associated revision of the previous Special Educational Needs & Disability Code of Practice (DfE, 2014). Section 20 of the Act defines 'special educational needs' (SEN) as having 'a learning difficulty or disability which calls for special education provision to be made for him or her', a definition which has been critiqued by Runswick-Cole & Hodge (2009) for its continued adherence to the within-child deficit model of disability. The Code of Practice subdivides SEN into four broad categories: communication &

interaction; cognition & learning; social, emotional & mental health; sensory & physical needs. Children in this category of 'communication & interaction' are described as follows:

> *Children and young people with speech, language and communication needs (SLCN) have difficulty in communicating with others. This may be because they have difficulty saying what they want to, understanding what is being said to them or they do not understand or use social rules of communication … Children and young people with ASD, including Asperger's Syndrome and Autism, are likely to have particular difficulties with social interaction. They may also experience difficulties with language, communication and imagination, which can impact on how they relate to others.* (DfE, 2014, p.97).

The Code of Practice goes on to recommend that where the child continues to make little or no progress despite evidence-based SEN support from school staff, a specialist such as a Speech and Language Therapist (SALT) should be consulted by the school:

> *The SENCO and class teacher, together with the specialists, and involving the pupil's parents, should consider a range of evidence-based and effective teaching approaches, appropriate equipment, strategies and interventions in order to support the child's progress.* (DfE, 2014, p.103).

The QCA document *Planning, Teaching and Assessing the Curriculum for Pupils with Learning Difficulties: General Guidance* (QCA, 2009) states that education for children with SEN may incorporate a range of therapies such as Occupational Therapy, Speech & Language Therapy and Physiotherapy, and that the delivery of therapy objectives (which are typically set and reviewed by visiting health professionals) may form an important part of their education.

The Act also provides for the conversion of the previous 'Statements of Special Educational Need' to 'Education, Health & Care Plans' (EHCPs) which will provide integrated documentation of the child's required provision from education, health and social care providers.  Section 33 provides that children with EHCPs should be educated in mainstream settings, with the only exceptions to this rule being if this goes against the wishes of the young person or the child's parent, or would impact on

the efficient education of others and there are no reasonable steps that could be taken to overcome this.

As of January 2017 14.4% of children in England are identified as having 'special educational needs' although only 2.8% have a Statement of Special Educational Needs/ EHCP (DfE, 2017). Of those children who do have a Statement/EHCP, for 26.9% the primary identified reason is a diagnosis of Autism Spectrum Disorder.  As of 2017 43.8% of children with Statements/EHCPs in England were being educated in maintained special schools such as the school where data was gathered for this thesis, a figure which has steadily increased since the 2010 figure of 38.2% (DfE, 2017).

There is currently a wide range of specialist provision in England: special schools may be maintained (funded by a Local Authority), academies, independent schools or free schools.  They may have a relatively generic offer of provision covering a wide range of needs, they may choose to specialise in one of the four areas of 'special educational need' recognised by the 2014 Code of Practice or they may specialise even further within these categories, for example autism-specific schools.  Across all of these settings, there is the question of whether and how teachers of children with autism should enable them to access the National Curriculum (2013) in whole or in part or should draw on alternative teaching frameworks which target perceived deficits, a question which is considered in the following section.

### 1.3 The National Curriculum in England: Application in Special Schools

The National Curriculum in England Key Stages 1 and 2 Framework Document (DfE, 2013) is in principle applicable to all students including those in specialist settings. The Framework Document states:

> *A wide range of pupils have special educational needs, many of whom also have disabilities. Lessons should be planned to ensure that there are no barriers to every pupil achieving. In many cases, such planning will mean that these pupils will be able to study the full national curriculum.* (Paragraph 4.3).

The QCA document *Planning, Teaching and Assessing the Curriculum for Pupils with Learning Difficulties: General Guidance* (QCA, 2009) suggests that special schools take responsibility for determining their own curriculum which 'carefully matches local and individual circumstances … the aims and values in the National Curriculum provide *a starting point* for discussion' (p.5, my emphasis).  Practitioners are reminded that discrete curriculum subjects may be merged in a more topic-based approach to classroom teaching, and that special schools may choose to emphasise core skills such as communication in their timetable, whilst 'treating other material with a lighter touch' (p.15).

Special schools may also replace the National Curriculum framework in whole or in part with another framework which they deem more suitable for their learners.  The Code of Practice (DfE, 2014) notes that a child's Education and Health Care Plan (EHCP) should specify 'any appropriate exclusions from the application of the National Curriculum … and the provision which it is proposed to substitute for any such exclusions in order to maintain a balanced and broadly based curriculum' (p.166).   One alternative model is Lacey's (2011) framework of a *pre-formal, semi-formal* and *formal curriculum.*  Here, *pre-formal* refers to students working on the very earliest levels of learning to interact with others, develop environmental control skills and understand cause-and-effect; *semi-formal* refers to students who may learn best through play, topic-based approaches and functional activities; and *formal* refers to students who are able to access the National Curriculum although possibly in an adapted delivery format.   In this model, the *pre-formal* and *semi-formal* stages are associated with a more developmental perspective to learning with a focus on developing communication and cognition rather than teaching discrete National Curriculum subjects.  As communication is a key focus of this study, the following section considers in detail a range of approaches which are used in special education when communication teaching is foregrounded as a teaching priority.

## 1.4 Communication-focused approaches in autism education

The above review of special needs education legislation and policy might be argued to point to a medicalised view of individual deficit *(*Hodge & Runswick-Cole, 2009).

This appears to position special education as a hybrid space between education and clinical therapies, where both children and classroom practitioners work under the surveillance of multiple health professionals with the goal of remediating the difficulties which have been associated with the child's diagnosis.  In this section, I consider what this looks like in practice by reviewing a range of approaches frequently adopted by special schools in the UK to address children's communication development (Battye, 2017; Sheehy & Duffy, 2009). First, I examine in more detail four specific approaches: Makaton signing, the Picture Exchange Communication System (PECS), the Total Communication Environment, and Intensive Interaction. These four approaches were all used within 'Purple Class', the class featured in this study where all five students had a diagnosis of Autism Spectrum Disorder and had minimal speech.  I additionally introduce two further approaches - communication passports and speech-generating devices (SGDs) - which although not used in Purple Class become relevant in later stages of the thesis when discussing communication possibilities more broadly.

### 1.4.1    Makaton® Signing

Makaton is a communication system developed in the 1970s for people with learning disabilities which brings together speech and manual signing (Walker, 1980).  The signs for individual words and concepts are drawn from British Sign Language (BSL), although unlike BSL Makaton does not have its own grammar since signs are simply enacted in the order of spoken English.  Educators who are modelling the use of Makaton are encouraged to speak as they sign, although Makaton users may sign and not speak.  Users can use signs on many levels of complexity: some might sign only the key word *'drink'*, whilst others might sign *'drink please'* and yet others might sign the sentence *'I want a drink please'.*  Over 7,000 words and concepts have equivalent manual signs in Makaton.

In UK special schools, Makaton is now 'one of most pervasive and influential pedagogical approaches for children with severe learning difficulties' (Sheehy & Duffy, 2009, p.91), a status which is indicated by the ongoing commissioning of the children's Makaton television programme *Something Special* on the CBeebies

channel.  It is a communication approach which is supported by the UK Royal College of Speech & Language Therapists (RCSLT, 2011).  Schools can buy in support from the Makaton Charity whose website offers an array of training courses, books, DVDs, printable resources and iPad Apps to support Makaton usage (Makaton Charity, 2018).

### 1.4.2    Picture Exchange Communication System (PECS®)

The Picture Exchange Communication System (Bondy & Frost, 1994) was originally developed to teach children with autism to communicate by giving symbol cards to an interactional partner in exchange for a desired item, although it is now used with children with a wider range of disabilities.  Like Makaton, it is a form of Augmentative & Alternative Communication (AAC).  PECS is underpinned by a detailed training manual (Frost & Bondy, 2002) laying out the six-stage PECS Training Protocol, which in the early stages involves learning to hand over a single card to represent a visibly present desired item, possibly with a high degree of adult prompting.  Later stages of the Protocol increase in complexity and involve the spontaneous requesting of a desired item not visible in the environment without adult prompting, the arrangement of multiple cards on a Velcro 'sentence strip', the independent carrying of one's own PECS folder with a customised symbol set, and expanding beyond the requesting speech function to commenting.  Vicker (2010) argues that what is actually practised in some classrooms might more accurately be loosely described as generic 'picture exchange' where children often share generic classroom resources designed only for requesting, which is not necessarily consistent with the PECS Training Protocol.

*Figure 1:    A PECS folder.*



Like Makaton, PECS is recognised as a communication approach by the Royal College of Speech & Language Therapists (RCSLT, 2009).  It is a well-known 'brand' in the market of communication interventions in special schools, with a website offering online and onsite training and consultancy, training manuals, DVDs and educational supplies needed to produce the symbol cards (Pyramid Educational Consultants, 2018).

## 1.4.3   Total Communication

The Royal College of Speech & Language Therapists (RCSLT) describes Total Communication as 'being aware and valuing all the different ways a person may use to communicate' (RCSLT, 2013, p.8).  This might be described as a commitment to drawing eclectically upon a range of communication resources including well-known 'packages' such as Makaton and PECS as well as any other strategies which support communication such as music therapy, Intensive Interaction, the use of photographs and the use of tactile, olfactory or object-based cues.  Jones (2000) traces the origins of the approach to the Somerset Total Communication Project of the mid 1980s, at a time when Somerset was the first English county to close all long-stay hospitals for people with learning disabilities and move responsibility for their community care to

social services.  This, she argues, resulted in an 'urgent need to find alternative and effective ways for individuals to understand and express themselves in their new environment(s), and for all those they were to have contact with to have access to the necessary training and resources to make it work' (p.20).  The Project therefore prioritised free and easily accessible training across the county for all staff and promoted shared ownership of the project by encouraging staff to produce their own symbols and resources for the people they supported.  The emphasis was to draw upon an eclectic range of communication tools 'wherever they were available and appropriate for individuals' (Jones, 2000, p.21) rather than close adherence to the training protocols of any one particular strategy.

From the above, it might be argued that Total Communication is more of a philosophy of eclecticism rather than a tightly circumscribed and trademarked 'brand' in the same way that one might describe Makaton, PECS or Intensive Interaction.  Nevertheless, Jones (2000) identifies a point in the 1990s where word spread nationally about the Somerset Project and there was demand for an exportable 'package' (p.24). In response, a resource base was set up in 1997 to disseminate information about Total Communication nationally.  Today, this has become the web page of Inclusive Communication – Somerset Total Communication (IC STC, 2018) where there are free downloadable resources, a subscription-based signs and symbols database, and a range of training modules and events.  However, because of the eclecticism of the approach it is not straightforward to identify precisely what 'Total Communication Environment' is: whilst it might suggest a willingness to provide more than one form of communication support, it is possible for one 'Total Communication Environment' to look significantly different to another in terms of the combinations and relative privileging of different communication approaches.

### 1.4.4   Intensive Interaction

Intensive Interaction (Nind & Hewett, 2001) is an approach modelled on observations of early infant-caregiver interaction which uses skilful observation, repetition of and elaboration on the student's actions to create a student-led, relaxed, playful

interaction.  The aim is to foster 'conversation' which does not require the child to have verbal speech but can be based around the child's vocalisations, gestures, or facial expressions.  The function of such exchanges is purely phatic or social: much like a parent playing a game of peek-a-boo with an infant, the aim is experiencing social closeness, bonding and recognition of one's personhood rather than acquiring the skills to express a particular request for a desired item. Hewett (2011a) argues that in both special schools and adult services for disabled people, communication frequently takes the form of 'task oriented, goal directed [exchanges] intended to achieve an instrumental outcome and with the member of staff leading, directing and following a pre-determined agenda' (p.15).  There is often relatively less space, he argues, for 'just the simple, basic, lovely human reward of another person conversing or interacting with you just for the sake of being with you' (p.14), and this relative lack of social interaction can be compounded by the problem that students/residents may also struggle to interact socially with each other without significant scaffolding and support.

This emphasis on the pleasure of social interaction does not mean that Intensive Interaction is indifferent to intervention outcomes, but rather that they are viewed as 'emergent outcomes' (Hewett, 2011b, p.140). This, according to Hewett (2011b), echoes provision in the Early Years Foundation Stage (EYFS), where outcomes are expected to arise naturally from the provision of skilfully constructed and scaffolded activities rather than constituting 'the driving force of every activity as in a linear, objective-orientated model' (p.140).  Emergent outcomes of Intensive Interaction are argued to be the 'Fundamentals of Communication' (Nind & Hewett, 1994) which typically developing infants have already begun to acquire before the onset of speech but which may require further rehearsal and practice for children with developmental disabilities.  These include: developing one's concentration and attention span; developing enjoyment of being with another person; learning the mechanisms of turn-taking; sharing personal space; learning to regulate and control arousal level; learning to understand and use non-verbal communication such as eye contact, facial expression and touch; and the use of vocalisation which can become increasingly precise and purposeful with repeated rehearsal and elaboration (Nind &

Hewett, 1994).  Additionally, Intensive Interaction aims to encourage the emergence of more intentional communication through the 'imputing of intentionality' (Hewett & Nind, 2013, p.3) to actions of the learner which may not have had communicative intent in order to foster the understanding of contingency and the shift towards more purposeful action.

Like Makaton and PECS, Intensive Interaction might now be described as a well-known 'brand' in the field of SEN communication interventions, with the Intensive Interaction Institute offering conferences, training courses, consultancy, books, DVDs, training packs as well as their own YouTube channel (Intensive Interaction Institute, 2018).

### 1.4.5   Communication Passports

Communication passports are documents which describe the idiosyncratic communicative behaviours of a minimally verbal person for the benefit of new caregivers or professionals who do not have a shared history with the person.  This might include description of particular facial expressions, vocalisations, and gestures and what they usually signify, using people who know the person well as informants. Goldbart & Caton (2010) argue that communication passports are not an intervention directed at the person but rather at their environment in encouraging practitioners to become more responsive to the potential significance of the behaviours they witness.  They also note that in their study 30% of practitioners reported using communication passports, although they tended to be used more in the case of adults with learning disabilities than children.  The authors call for formal published evaluation of the usefulness of communication passports as there is currently a lack of academic literature examining the practice.  However, a range of resources are available online to support the production of communication passports including free downloadable passport templates (CALL Scotland, 2018) and books (Miller & Aitken, 2003), suggesting that the practice is still very much in use.

### 1.4.6   Speech-Generating Devices (SGDs)

Speech-Generating Devices (SGDs) are electronic devices which involve some form of input from the user, typically manual operation or eye gaze used to select symbols, and which subsequently produce a spoken output of the message produced.  There is a diverse range of SGDs available, including devices which have been created specifically to function as communication aids but also general-use tablet computers such as iPads which can be used as SGDs with the installation of an AAC App.  They also vary widely in the complexity of their content, with some devices using visual symbols which can range in number from a small handful to several thousand grouped in topic folders, or alternatively keyboards for users who can type.

**Figure 2:  A Speech-Generating Device.**
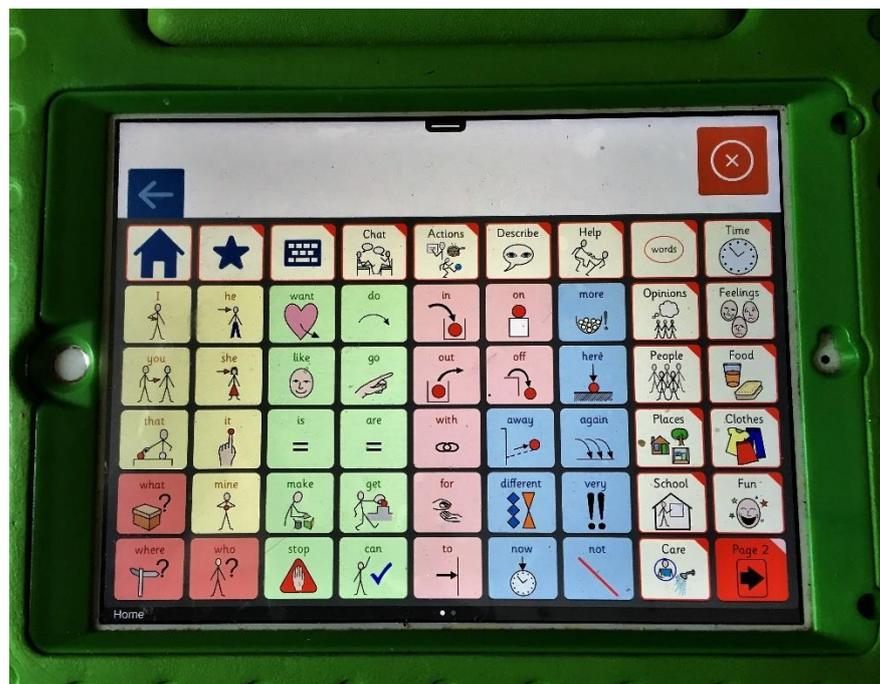


Literature exploring how to teach children to use an SGD frequently reference the concept of 'aided language stimulation' (Goossens, 1989; Harris & Reichle, 2004). This term refers to the everyday modelling of device usage by the interactional partner, perhaps by pressing the symbols for one or two key words from a sentence they are speaking to the child in a naturally occurring context.  As Light (1997) argues, this approach has multiple advantages: it has more input/output symmetry than expecting a child to use PECS while adults continue to use natural speech; it

promotes the idea that device usage is socially acceptable for everyone; and it is possible for a skilful practitioner to extend the child's existing repertoire of symbols by modelling the potential uses of new ones.  This last point, as Light (1997) observes, has clear parallels with Vygotsky's (1978) sociocultural theory of learning and particularly the idea of a learner working alongside a More Knowledgeable Other within their Zone of Proximal Development.  Since SGDs can easily provide repertoires of hundreds if not thousands of words which go well beyond the child's existing repertoire, there are easy opportunities for scaffolding the use of new and unfamiliar words and concepts which might not be possible with a modest selection of PECS symbol cards.  Bedrosian (1997) also develops the theoretical links between Aided Language Stimulation and Vygotskian thought, suggesting as an example that SGD users could be enabled to use their devices in the context of sharing a storybook through the modelling of the relevant vocabulary on their devices to predict and comment on the story and to ask questions about it.  Jonsson et al. (2011) argue that from a Vygotskian perspective the provision of extensive vocabulary in AAC provision which goes well beyond the child's existing demonstrable repertoire is essential, since in the words of Vygotsky (1978), 'the only 'good learning' is that which is in advance of development' (p. 89).

As I have outlined in Sections 1.4.1-1.4.6, a range of teaching approaches aiming to address the communication needs of minimally verbal children have been developed typically as packages which are 'bought in' by the school in the form of training and resources.  These include alternatives to speech which fall under the umbrella term Augmentative & Alternative Communication (AAC) – that is, PECS, Makaton signing or speech-generating devices – as well as approaches such as Intensive Interaction which address the social, interpersonal dimension of communication.  My motivation in conducting this study was to explore how children in a special needs classroom communicated with staff and peers, quite possibly drawing on some or all of these approaches if used within the school as well as other, more idiosyncratic strategies.  This led me to reflect on the formulation of my thesis aims and research questions.

## 1.5  Thesis Aims and Research Questions

My aim in conducting this study was to explore the communication practices of minimally verbal children with autism in the classroom, using ethnographic methods including video-recording to observe how they communicated with staff and peers in the context of everyday classroom activities, and to provide rich description of these observations.  This was in order to provide a basis for undertaking detailed multimodal analysis and a subsequent springboard for drawing out implications for classroom practitioners and special needs policy. The research title initially chosen was 'Environmental Effects on the Multimodal Communicative Capabilities of Preverbal Children with Autism' and I identified five areas I wished to focus on during the process of data generation:

1)    How does each participant make meaning?

2)    How are instances of AAC usage by each participant embedded within an orchestrated multimodal performance?

3)    How do participants achieve meaning-making multimodally without using AAC?

4)    Are there any patterns discernible in the choice to include or not include AAC in meaning-making?

5)    Which other factors (e.g. classroom layout, staff, peers, timetable, resources, etc.)  influence participants' use of AAC?

These research priorities were useful in guiding my initial fieldwork and data generation, but were to later evolve as I critically reflected on new insights emerging from data scrutiny.  My repeated re-watching of classroom video data led me to be drawn to moments where the children appeared to exert power or influence over peers or staff, for example by deciding what form an interaction should take or actively resisting staff attempts to guide an activity in a particular direction.  This led me to refine my research focus as I explored literature on childhood agency which might speak to this emergent theme.  The data seemed to suggest that different communicative methods and competences made varying contributions to the agency

a student could subsequently exercise in the classroom and this became a focus for further analysis.

As a result of this evolution in my thinking, the title of this current study is 'Communication and Agency in the Autism Classroom' and the thesis is framed around the following three research questions:

1. How do minimally verbal children with autism communicate with staff and peers in the classroom?
2. How does the classroom environment (both in terms of materiality and activities) shape the communicative behaviours of the children?
3. What is the nature of the relationship between children's communication and the degree of agency they exercise in the classroom?

**1.6 Structure of Thesis**

In this introductory chapter I have contextualised the study by setting out my positionality as the researcher as well as the background of special educational needs provision in England, with a specific focus on communication interventions for children with autism. I have also set out the research questions which underpin the study.  In Chapter 2, I locate the study in the context of existing research in the three fields of communication, autism and childhood agency.  In Chapter 3, I explain the methodological decisions which were made in the course of this study and justify my decision to use a hybrid framework which draws upon ethnography of communication, multimodal Conversation Analysis and Multimodal Interaction Analysis. Chapter 4 then discusses the methods that were used in this study to generate data as well as my approach to transcription and data analysis. Chapter 5 provides rich description of the individual multimodal repertoires of each child across home and school, as well as considering how the expression of these repertoires may have been shaped by the staff, physical environment and everyday routines of the classroom in which the research was conducted.  Chapters 6 to 8 present and analyse data from the study in relation to three observed everyday classroom activities: snack time, Intensive Interaction and outdoor play time.  In Chapter 9, I reflect on what my

data might suggest about the communication and agency of the children in the study. Finally, in Chapter 10 I consider the wider implications of the study for classroom practitioners, school leaders and policy makers, as well as reflecting on the study's contribution to knowledge, its limitations, and suggested directions for future research.

**CHAPTER 2: LITERATURE REVIEW**

**2.0 Introduction**

In the previous chapter I situated this study in the professional and familial contexts from which it arose as well as the context of special needs education provision in England. The purpose of this chapter is to locate my research within existing work in the fields of communication, autism and childhood agency.

The literature review is organised around three main bodies of literature. In Section 2.1, I review the literature which has shaped the conceptualisation of 'communication' in this thesis. In Section 2.2, I explore competing models of disability and their implications for our ontological understandings of autism. Finally, in Section 2.3 I explore the literature around conceptualisations of childhood 'agency'.

**2.1     Communication**

As explained in Chapter 1, the communication of minimally verbal children in the classroom is a central focus of this study, and the teaching of communication skills to minimally verbal children has received attention both in policy (Section 1.2) and in the development of remedial approaches (Section 1.4). However, despite being in common usage in both academic and everyday discourse, the term 'communication' is not easy to define (Andersen, 1991, cited in Littlejohn & Foss, 2010). In this section I explore some of the key debates around the definition of 'communication' which have relevance to the current study.

In Section 2.1.1 I review existing ethnographic studies which contextualise everyday AAC usage. In Section 2.1.2 I discuss whether communication should be conceptualised as multimodal or a primarily verbal phenomenon. In Section 2.1.3 I consider whether communication constitutes conscious and intentional turn-taking between 'sender' and 'receiver' or conversely a constant and fluid exchange of information at varying levels of consciousness. Section 2.1.4 reviews literature

considering whether communication is an autonomous, cognitive skill or distributed across a network of relationships, environments and artefacts. In Section 2.1.5 I consider how best to conceptualise the relationship between communication and setting, whilst In Section 2.1.6 I consider the concept of categorising communication into 'speech functions' and the usefulness of doing so in this study.  Section 2.1.7 considers whether communication, principally language, is merely a vehicle for inner thought processes or is actually constitutive of those processes by enabling thought to occur.  Finally in Section 2.1.8 I set out how 'communication' is understood in the context of this study.

### 2.1.1 Ethnographic Studies of AAC Usage

A number of studies locate AAC interactions within broader observations of the context, whether school classroom or adult residential care.  For instance, drawing upon ethnographic classroom observations, Mellman et al. (2010) note that students who have their own allocated speech-generating device can nevertheless be communicatively disabled by the device being left physically out of reach, limited staff training, staff beliefs that the child preferred to play alone, missed opportunities to programme into the device useful vocabulary relating to school life, and the devaluing of social interaction with peers.  Similarly, Naraian (2010) observes wide disparities in attitudes towards an SGD: the child used it intermittently, his parents were resigned to this, his speech therapist was passionate about its usage, and his teachers demonstrated 'bare tolerance of it interspersed by sporadic studious utilisation' (p.255).  Naraian (2010) further concludes based on ethnographic observation of the child's communication outside of school that 'within the classroom, interactive sequences were fewer in number, limited by the structures of classroom schedules and rules of classroom community behaviour' (p.256).

Other ethnographic studies have widened the lens to look at the AAC user's other multimodal communicative strategies.  For example, Russell & Valentino (2013) use ethnographic observations of a five year old AAC user to document how he taps staff on the arm to get attention, uses sustained eye contact to show engagement, and actively engages with props during a song.  On the basis of these observations, the

authors argue for 'presuming competence' by scaffolding nonverbal forms of interaction as meaningful and interactive.

In an extensive case study of her own son which also looks more widely at multimodal communication, Dreyfus (2006) uses ethnographic methods to describe his communication around the family home.  She argues that her son demonstrates what she terms a 'multimodal idiolect' (p.282) which includes two forms of AAC - signing and symbol cards - alongside object manipulation, repositioning of adults, gesture, gaze, non-verbal vocalisations, strategic silences and behaviours deemed challenging.  Whereas Dreyfus uses the term 'idiolect' to underline the unique nature of 'individual combinations of multimodes' (2011, p.55), the term 'communicative repertoire' is used in this study.

AAC usage has also been considered from an ethnographic perspective in adult residential facilities for people with learning disabilities. Brewster (2007) explores the relationship between AAC usage and the power differential between residents and staff. She notes the exclusion of residents from many conversations due to their rapidity or complexity, the policing of resident vocabulary use of expletives which are available to non-disabled people, and an overemphasis on facilitating mainly the 'requesting' speech function for residents which consolidates their position as needy and dependent.  The author concludes that the relationship between AAC provision and power is complex: on the one hand, being enabled to refer to abstract or concrete phenomena beyond the immediate environment could empower a user to initiate a wider range of conversational topics, and on the other hand the inevitable time delay in producing an AAC-mediated utterance can further exclude residents from the rapid interactional turn-taking expected by staff.  Brewster additionally notes circularity in the argument of staff that residents could manage to communicate perfectly well without AAC in their natural environment, since this environment 'is carefully controlled by staff and makes few demands on the communication skills of the residents' (p.214).  This suggests that there are complex dynamics at play between communication and power for learning disabled people

and their carers, and AAC may serve to redistribute interactional power more equitably or alternatively to reinforce existing power differentials.

The above studies provide a useful starting point in terms of understanding how people who have minimal speech communicate in everyday situations. They suggest that people use a mixture of available AAC and idiosyncratic, embodied modes; that AAC in busy everyday environments is not always implemented in a way which might be considered optimal by Speech & Language Therapists; and that AAC provision does not automatically rebalance power differentials between the AAC user and provider. The research aims of this study are to build further upon such knowledge by examining in detail how modal choices with or without AAC may be shaped by classroom activities with their associated expectations and material properties, as well as the relationship between these choices and the degree of agency children exercise in the classroom.

Having identified that the relationship between AAC and other embodied multimodal communication is a core focus of this study, this leads to consideration of existing literature from the field of multimodality of relevance to this thesis as explored below.

### 2.1.2   Communication and Multimodality

Interest in human communicative modes other than spoken and written language is not new:  as Jewitt (2009) notes, they have been extensively examined in disciplines including anthropology, media studies, musicology, art history and psychology.  In particular, a corpus of literature has accrued since the 1950s in the field of non-verbal communication (NVC) which endeavours to identify categories of non-verbal modes with their own interactional regularities and 'grammars' (Birdwhistell, 1952; Hall, 1959; Kendon, 1967; Boucher & Ekman, 1975).  These 'non-verbal modes' are grouped by Burgoon et al. (2011) into three categories: the embodied modalities of posture, gesture, oculesics, vocalics, olfactics and physical appearance; the contact modalities of proxemics and haptics; and the spatiotemporal modalities of chronemics and artifactics.  Although this research lays important groundwork for

our understanding of multimodal communication, the field of NVC could also be criticised for its implicit logocentrism: as its name might suggest, non-verbal modes are relegated to a kind of orbital role supporting verbal speech with its assumed centrality.

More recently, 'multimodality' has emerged as a recognised inter-disciplinary field of study in its own right. This emergence is often traced to seminal works by authors such as Hodge & Kress (1988) and Kress & Van Leeuwen (1996) who drew upon the linguistic principles of social semiotics (Halliday, 1978) to identify 'grammars' or regularities in usage in other modes of human communication. For instance, Halliday's three *metafunctions* - the ideational, interpersonal and textual - have since been extrapolated to non-linguistic fields such as art, architecture, film, colour and music (O'Toole, 1990; Wingstedt et al., 2010). However, the field of multimodality now encompasses a wide proliferation of approaches to research in addition to social semiotics such as Conversation Analysis, geosemiotics, Multimodal Interaction Analysis, multimodal ethnography, multimodal corpus analysis and multimodal reception analysis, each with their own epistemological and methodological commitments (O'Halloran & Smith, 2012). Two particular approaches to the study of multimodal communication (multimodal Conversation Analysis and Multimodal Interaction Analysis) are used in this study and are therefore discussed further in the following chapter on methodology (Sections 3.3 and 3.4 respectively).

Despite the diverse nature of the field, Jewitt et al. (2016) maintain that three points of commonality may be identified. Firstly, there is the recognition that human interaction is undertaken with a wide range of semiotic resources which have different communicative potential. Kress (2009) refers to this potential as the 'affordances' of a mode, arguing that this derives both from the materiality of the mode – for example, its sound, movement, or surfaces – as well as what has historically been done with this materiality within a certain culture. Secondly, there is a broad consensus that language should not be *a priori* privileged over other modes nor should 'non-verbal modes' be presumed to play an orbital or supporting

role to language.  Thirdly, there is a commitment to analysis of how communicators select and orchestrate semiotic resources to produce a 'multimodal whole'.

These points of commonality raise the question of what is meant by a 'mode'. From a social semiotic perspective, Kress (2009) argues there are two ways to identify a 'mode'.  Firstly, the analyst might take a *formal* approach by using a threefold test derived from the three metafunctions of Halliday (1978): that is, if a communicational resource can represent what is going on in the world (ideational function) and the social relations of the interactants (interpersonal function) and can do so in a way which coheres internally and with the environment (textual function), then it may be called a mode.  Alternatively, the analyst might take a more *social* approach to the identification of a mode by arguing that 'a mode is what a community takes to be a mode and demonstrates that in its practices' (p.59).  This social approach to identifying mode resonates with the Ethnography of Communication framework which emphasises the importance of discerning the emic perspective of the speech community on communication (Saville-Troike, 2008).  From the perspective of Multimodal Interaction Analysis, Norris (2004) describes a mode as 'a semiotic system with rules and regularities attached to it' (p.11) but goes on to emphasise that 'a communicative mode is never a bounded or static unit, but always and only a *heuristic* unit' (p.12).  For this reason, the definition is never absolute but rather, she argues, should be defined in a way which serves the subsequent analysis. Meanwhile, as Jewitt et al. (2016) note, not all multimodal analysts use the term 'mode', with some preferring terms such as 'semiotic resource' or 'interactional resource'.

Multimodality is not without its critics.  Mercer (2010) argues:

> *Language remains for me the prime cultural tool of the classroom.  Spoken language enables, in unique ways, the development of relationships amongst teachers and learners and the development of children's reasoning and understanding; so I would not subscribe to an analytic approach which diluted its significance to that of just one of several modes.* (p.10).

On the one hand, Mercer might be accused of misrepresenting the core idea of multimodality which is not to purposefully 'dilute' any mode in analysis but rather to treat modes as *prima facie* equal until data analysis suggests otherwise. However, multimodal analysts such as Norris (2004) have conceded that for verbal participants, at least, such data analysis frequently *does* end up supporting the idea of spoken language playing a central role in much in-person communication.

In this study, I understand the term 'mode' as a heuristic unit (following Norris, 2004) which facilitates temporarily disaggregated analysis such as multimodal matrices (Chapter 4). I take 'mode' to mean whatever appears to be oriented to by Purple Class as a mode, following Kress' (2009) social approach to identifying mode. In the case of Purple Class, this will include the use of AAC strategies such as Makaton and PECS which are recognised systems of communication for both children and staff. I would identify this study as multimodal as it aligns with the three core commitments of multimodality suggested by Jewitt et al. (2016): that is, the recognition that the materiality of modes offer different affordances and constraints, the resistance to automatic privileging of language over other modes, and a commitment to the analysis of how communicators orchestrate a 'multimodal whole'. At the same time, this does not for me call into question the validity of pursuing language/AAC acquisition as educational goals for minimally verbal children. I see validity in Mercer's (2010) claim that language occupies a unique status within a multimodal repertoire, whose affordances might include efficiency in communicating with unfamiliar communication partners, the possibility of imaginative talk, and the possibility of making referential statements beyond the immediate spatial or temporal environment because one is no longer reliant on deictic referencing of artefacts or people (Dreyfus, 2006). Consistent with my critical realist perspective on disability, I feel that it is important to critically examine what an embodied multimodal repertoire with minimal/no language can and cannot do and where its reach may end. This is particularly the case where disabled people rely on others to decide the extent of their AAC provision, which can be argued to have implications for personal agency and power relationships (Brewster, 2007).

Conceptualising communication as multimodal raises certain related questions around turn-taking and intentionality: for example, whether we include as 'communicative' actions which are executed below our level of conscious awareness; and whether we can really identify discrete 'turns' when multimodal information is being constantly exchanged.  This is explored in the section which follows.

### 2.1.3 Communication, Intentionality and the idea of 'turn-taking'

 A starting point for the modern field of Communication Studies is often taken to be Shannon & Weaver's (1949) 'transmission model of communication' which envisages the linear transmission of a message from 'sender' to 'receiver'.  According to Day (2000), the transmission model 'favour[s] linguistic and psychological theories that understand language to be intentional and conscious' (p.806).  The legacy of this type of transmission model of communication can be seen in many contemporary definitions of communication (Guerrero & Floyd, 2006).  This idea of a 'speaker' and a 'listener' who alternately take turns to hold the floor is a core tenet in the Conversation Analysis concept of 'adjacency pairs' (Liddicoat, 2007), discussed later in Section 3.3.1.

However, transmission models of communication have been subject to criticism.  For instance, Finnegan (2002) argues they could be seen as 'implying a narrow, mechanistic and ultimately unrealistic view of what is involved in communication' (p.15).  She goes on to argue that communication is instead 'a fluid, situational and multiplex process' (p.16).  This suggests that it is not straightforward to identify a 'sender' and 'receiver' and it is more difficult to analytically isolate a 'message' or a 'turn' since multimodal communication is constantly flowing between interactants.  Similarly, Bakhtin (1953) questions the conceptualisation of communication in terms of 'speaker' and 'listener', arguing that 'these fictions produce a completely distorted idea of the complex and multifaced process of active speech communication' (p.229), although he does go on to say that whilst such terms may be an incomplete account of communication they do 'correspond to certain aspects of reality' (p.229).  In this sense, blurring the distinction between 'speaker' and 'listener' by acknowledging the constant flow of information between interactants which is being absorbed on

varying levels of consciousness makes it more difficult to sustain the idea of a clear dichotomy between 'intentional' and 'unintentional' communication: as Hall (1966) argues, communication can 'occur simultaneously on different levels of consciousness, ranging from full awareness to out-of-awareness' (p.4).

Communicative intentionality can also be understood in the context of child development literature which seeks to explain how typically developing infants progress from 'pre-intentional' to 'intentional' communication. Sigafoos et al. (2000) draw upon Austin's (1962) Speech-Act Theory as a framework for explaining the development of intentionality in three stages:

- *Perlocutionary*: caregivers respond to acts which may be involuntary or a response to external stimuli;
- *Illocutionary*: the infant begins to intentionally use non-verbal means to convey requests to and direct the attention of listeners;
- *Locutionary*: the acquisition of symbolic communicative acts such as speech or signing.

Carvey & Bernhardt (2009) find consensus in the literature that intentional communication starts to emerge in typically developing children at around 8-9 months old (Bates et al., 1979; Wetherby et al., 1988, Warren & Yoder, 1998), with Warren & Yoder (1998) arguing that the development of the illocutionary stage is a necessary foundation for the emergence of symbolic (locutionary) communication. Both Bates et al. (1975) and Iacono et al. (1998) raise the possibility that the shift from pre-intentional to intentional communication in infancy may correlate to Piaget's (1953) sensorimotor stage five when means-end and tool use behaviour emerges. Gergely & Watson's (1999) socio-bio-feedback model emphasises the role of primary caregivers in developing the infant's understanding of contingency through the caregivers' contingent reflection of the infants' emotions and behaviours. Similarly, Brinck (2008) argues that the non-verbal 'proto-conversation' (p.1) which takes place between infant and caregiver through the exchanges of gaze, smile, noises and facial expression lays the groundwork for the development of

intersubjectivity, which 'plays a critical role for language acquisition and is central to intentional (preverbal) communication' (p.1).

The above literature taken together appears to show some consensus around the idea that the development of frequent non-verbal but highly intentional actions form an essential foundation for language acquisition.  By extrapolation, this might suggest that children with disabilities who continue to have relatively low rates of illocutionary acts – that is, intentional but non-verbal - beyond the age of infancy should receive approaches such as Intensive Interaction which work on the development of intentionality before AAC is considered (Barber, 2011).  However, this view is contested by Stephenson & Linfoot (1996) who argue that AAC implemented before demonstrable intentionality may support the user in grasping the concept of contingency by observing how others respond to their AAC usage.

In this study, I accept the idea that communication is a constant dynamic exchange of multiple modes which are constantly being interpreted and responded to by each interactant.  At the same time, it seems to me that amidst the constant exchange of more or less intentional multimodal behaviours, it is still possible for analytic purposes to identify a cluster of modes executed simultaneously or in close succession which appear to be oriented to broadly as a 'turn' by both parties.  I therefore retain and use the concepts of 'turns' and 'turn-taking' as heuristic units for analysis in this study whilst acknowledging that they inevitably involve a degree of analytic judgement on my part regarding where a 'turn' begins and ends.  Section 6.3.1 illustrates how 'turns' were identified from multimodal matrices in this study.

Similarly, I accept that 'intentionality' cannot be inferred with certainty from observed behaviours and might be best conceptualised as a continuum rather than a categorical distinction.  At the same time, I maintain that some communicative actions are relatively more intentional than others and that encouraging an individual to progress from less intentional to more intentional behaviours is worthwhile insofar as it enables them to consciously pursue desired outcomes.  For this reason, I find it useful to adopt Stiegler's (2007) adapted definition of a 'communicative act' which

was formulated with minimally verbal participants in mind. This definition considers an act as communicative, rather than simply a behaviour which has been ascribed meaning by a caregiver, if it meets more than one of the following criteria:

a.   Acts directed toward the interactant by means of gaze, body orientation, or gesture;
b.   Acts that had an effect on the interactant;
c.   Acts that conveyed a recognizable message that could be "translated" into words;
d.   Acts that were persistent (Stiegler, 2007, p. 404)

I find this definition to be helpful since it is adapted for children who do not primarily communicate through verbal speech, it accommodates multimodal communication, and it is flexible in offering four criteria of which only 'more than one' need be met. At the same time, it helps to retain a view of children as active learners who are capable of developing a repertoire of more intentional, conscious and precise communicative acts with the appropriate resources and educational opportunities.

Considering the question of individual intentionality in communication leads to a related question of whether communication is best conceptualised as an autonomous individual skill originating primarily from the speaker's brain/ body, or conversely as a distributed phenomenon which involves other interactants, artefacts and time. This is explored in the section which follows.

### 2.1.4   Communication: Autonomous or Distributed?

In this section I consider literature which is helpful in addressing the question of whether communication is an autonomous, cognitive skill or a distributed practice involving other people and objects as well as prior knowledge. I draw upon literature both with a specific communication focus and with a broader perspective on (distributed) cognition more generally.

Communication impairment in clinical literature (Section 2.2.1) as well as special needs policy and practice (Section 1.2) is predominantly conceptualised as an autonomous, cognitive phenomenon with a focus on individual remediation. In contrast, distributed cognition theory (Hutchins, 1995) argues that higher-order

functions including communication are not exclusively cognitive but rather are distributed across three non-neural dimensions: that is, other members of the social group, material artefacts, and time.  This might be said to have parallels with the social model of disability (Section 2.2.2) since as Duff et al. (2012) argue:

> *A view of communication as socially distributed cognition fundamentally shifts the unit of analysis from individual-with-deficit to the communicative practices of communication partners managing cognitive-communication disorders within functional activities.*  (p.3)

Distributed cognition has been suggested as a useful framework for understanding communication difficulties in the cases of autism (Francis, 2006) and traumatic brain injury (Duff et al, 2012).  Whilst we all routinely distribute our meaning-making across a multiplicity of everyday artefacts such as smartphones, shopping lists and diaries, people with minimal speech may benefit proportionally more from distributed communication practices including the provision of artefacts and/or sensitive communication partners who know them well.

The important role of responsive communication partners in achieving meaning-making with people with communication difficulties has been well-documented. Dreyfus (2006) explains that in interactions with her son, 'the communication partner needs to use Bodhi as the guide by questioning him, in order to clarify and confirm that they are getting it right' (p.260).  Similarly, Goodwin (2010) considers the case of a man with severe aphasia who has only the three spoken words *yes, no,* and *and,* but who nevertheless manages to '[act] as a powerful speaker in conversation' (p.373).   He does this through what the author terms a process of 'cooperative semiosis' (p.389) which involves 'working reflexively with cognitively rich interlocutors, who use whatever signs he produces as a point of departure for further work and inference of their own' (p.389).

In relation to artefacts, Francis (2006) notes that they can be usefully deployed by people with learning disabilities for the purposes of memory off-loading, computational off-loading or shared problem solving.  This could involve artefacts in

use by the general population such as smartphones, specific assistive technologies designed for disabled people including AAC, or objects in the environment which are spontaneously appropriated for communicative purposes (Dreyfus, 2006). Distribution of communication across artefacts could also be understood in broader terms encompassing the very design structure of the space in which communication occurs.  For example, Pierce (2012) draws upon geosemiotic analysis (Scollon & Scollon, 2003) to consider the relationship between communication and space in an ESL classroom, noting that students showed varying degrees of involvement in activities by the way in which they moved around the space and used material markers, responded to the physical environment in eye/body vectors, body movement and proxemic behaviours, and were influenced by variations in the indexicality and salience of materials and information around the room arising from their placement.

Material objects in classrooms have also been considered from the perspective of their role in child development by Bomer (2003) who examines concrete tool use in the classroom by drawing upon Vygotsky (1978).  According to this perspective, young children use tools 'as a pivot that moves consciousness from one context into another' (Bomer, 2003, p.227), firstly more concrete tools such as the example of using a stick to pretend to ride a horse, but later involving increasing levels of abstraction as they acquire more complex tools including language:

> *'…there is a continuum of representation, of objects as signs becoming more and more unlike the referent. Somewhere on that continuum, Vygotsky would put a threshold between play and symbolization, when meaning is so detached from the sign that the sign becomes arbitrary, as is the case with spoken and printed words'* (Bomer, 2003, p.228).

Parallels might be drawn here with the work of Bruner (1966) who argued for three modes of representing and organising knowledge:

- the *enactive*, which involves the handling of physical objects;
- the *iconic*, or the use of pictures to represent objects;

- the *symbolic*, where objects and ideas may be represented in codes such as language.

In this sense, the use of artefacts in communication by minimally verbal children might be understood in terms of presenting items to indicate a need for assistance (enactive), using a symbol card with a picture which is relatively transparent in its depiction of the desired object (iconic), and using communication systems which are relatively further removed from depiction of the referent such as speech or Makaton signs (symbolic).

Finally, in relation to distribution across time, Dreyfus (2006) suggests that she looks to past interactions as a resource in interpreting and co-constructing the meaning-making of her son. She gives the example of her son pointing at a street he passes in the car, an act which can be interpreted as a comment that his friend lives there and which requires an affirmative response, but only by a communication partner who is equipped with the relevant background knowledge. This could be seen as an example of distributed meaning-making which draws upon past shared experiences and mutual understandings to supplement the meaning of the gesture performed in the here-and-now.

Salomon (1997) argues that there are at least two levels of engagement with the idea of 'distributed cognition'. The first is the 'strong version' (p.xv) which holds that cognition in general should be re-examined as a fundamentally distributed phenomenon. The second and less radical conception of 'distribution' acknowledges both solo and distributed cognitions which 'are still distinguished from each other and are taken to be in an interdependent dynamic interaction' (p.xvi). This position might be seen to have parallels with the relative interactionist perspective on disability (Section 2.2.4) which considers individual impairment and environment to exist in a mutually interactive relationship from which dis/ability arises as an emergent property. In this thesis I align with this less radical conception of distribution: whilst it is clear to me that interactional partners, artefacts and prior knowledge of the children have the potential to play very significant roles in enabling

communication for the children in this study, I am reluctant to analytically underplay the idea that they can also cognitively acquire and retain new communication skills which increase their autonomy and reduce their need for distributed communication support.  This is consistent with my position on individual agency which is discussed in Section 2.3.5.

As I am acknowledging the role of interactional partners, artefacts and prior knowledge in shaping communicative practices, this requires consideration of different ways of framing the relationship between communication and the setting in which it occurs.  This is explored in the section which follows.

### 2.1.5  Theorising the relationship between communication and setting

Ethnography of communication (Hymes, 1972) addresses the nexus between ethnography and linguistics by locating interactions within the culture of a *speech community*, a group whose members have significant commonality in how they use, value or interpret language.   The approach addresses the issue of *communicative competence* within the community: what does a speaker need to know to communicate appropriately within the speech community, and how do they learn to do so?  The concept of 'speech community' is also used by Gumperz (1968) who defines it as 'any human aggregate characterised by regular and frequent interaction by means of a shared body of verbal signs and set off from similar aggregates by significant differences in language usage' (p.114), as well as by Labov (1972) who writes of 'participation in a set of shared norms' (p.120).  However, the concept is not as straightforward as such definitions may suggest: a group may comprise multiple overlapping and interacting communities, and an individual may identify to varying extents with multiple communities.  Even within one identified 'speech community' there is variation in the resources available to individual members, with Saville-Troike (2008) noting that 'different subgroups of the community may understand and use different subsets of its available codes' (p.41).  Such difficulties led Hudson (1996) to argue that '[speech communities] turn out to be too fluid and ill-defined to be seriously studied in their own right' (p.229).

As an alternative to the idea of a 'speech community', some authors have attempted to identify a set of axes upon which communication choices hinge.  Fishman (1972) argues that an individual's communication choices may be explained by the sociocultural concept of *domain,* which has three dimensions: the topic of communication, the relationships between communicators, and the setting (locale and timing) of communication.  Considering the modal choices of children who use AAC, Light et al. (1985) argue that relevant contextual dimensions can include the listener, the play context, the content conveyed, the communicative function and discourse role served.  Meanwhile, the Speechome project (Roy et al., 2012) uses video cameras placed throughout a family home to capture an infant's language acquisition in naturally occurring contexts over the first three years of life.  The project authors argue that their data suggests 'activity contexts' or regular and recurring constellations of location, time and participants where certain words tend to be deployed: thus, for instance, vocabulary such as *juice, eat, fork* and *mango* was highly associated with the meal-time 'activity context' which typically took place around noon in the kitchen involving the infant and his nanny (Roy et al., 2012).

 A third way of considering communication is by drawing on the concept of a 'community of practice'.  This term was originally suggested by Lave & Wenger (1991) and later defined by Eckert & McConnell-Ginet (1999) as 'a group whose joint engagement in some activity or enterprise is sufficiently intensive to give rise over time to a repertoire of shared practices' (p.185).  This concept is drawn upon by the Intensive Interaction approach, with Firth (2011) arguing that it can facilitate the 'legitimate peripheral participation' (Lave & Wenger, 1991) of children with disabilities in interaction.  This in turn has the advantage of addressing one of the criticisms levelled at the concept of 'speech community' by Bucholtz (1999) that it has resulted in the analytic privileging of central members of the community rather than those at the margins.

For the purposes of this study, I find it useful to have a frame for conceptualising the relationship between communication behaviours and setting.  The prospect of considering Purple Class a 'speech community' was initially appealing but upon

reflection the criticisms levelled at the concept regarding the heterogeneity of 'members' appeared significant in my study: for instance, between staff and pupils there is very significant disparity in mastery of spoken English, and even between students there is variation in for example ability to recall Makaton signs unprompted. I did however feel it could be useful to consider clusters of circumstances which appeared to give rise to certain vocabulary and/or ways of communicating, and I noted considerable convergence in the findings of Fishman (1972), Light et al. (1985) and Roy et al. (2012) regarding the core axes of location, timing, relationships and content which shape the communicative choices of children. Drawing from the literature above, I am using the term 'communication context' to refer to constellations of physical setting, timing, interlocutor relationships, artefacts, content, modal choices and speech functions which coalesced with regularity in Purple Class.  What is meant by 'speech functions' for the purposes of this study is explored in Section 2.1.6 below.

### 2.1.6   Speech functions

The endeavour to classify the 'function' or purpose of utterances has seen the development of a number of candidate taxonomies with varying categorical emphases (Austin, 1962; Searle, 1976; Halliday, 1975; Dore, 1975).  As Stiegler (2007) notes, there continues to be much interest in the classification of speech functions in clinical literature, often with a view to identifying the communicative functions exercised by children considered to have disordered language. One particularly noteworthy study is the review of previous taxonomies by Sigafoos et al. (2000) specifically in relation to their relevance to children with disabilities and minimal speech.  The authors propose nine speech functions for the purposes of their Inventory of Potential Communicative Acts (IPCA) for children with disabilities: *requesting an object, requesting an action, attention to self, commenting, social convention, rejecting/protesting, responding, requesting information,* and *imitation*. One possible addition to Sigafoos et al.'s (2000) inventory is the idea of 'phatic' communication.  This has been defined by Laver (1975) as communication 'which serves to establish and consolidate the interpersonal relationship between two participants' (p.236).  This suggests that there is no desired object or action, no

particular exchange of information or identifiable 'reason' to communicate other than bonding with your interactional partner.  It is a term frequently referenced in Intensive Interaction literature where fostering such interpersonal connection is a core objective (Hewett (2011a), as discussed in Section 1.4.4) and is likely to be a relevant speech function where such an approach is in use.

Speech functions have also been used to evaluate the content of AAC vocabulary provision, with concern expressed about the over-representation of object requesting (Logan et al., 2017, Light et al., 2002).  It could be argued that this emphasis on requesting is developmentally justified: Wetherby et al. (1986) note that children with autism demonstrate more requests for objects or actions and relatively less social interaction than typically developing children, a finding which has subsequently been supported by other research (Shumway & Wetherby, 2009; Stone et al., 1997).  In contrast, Logan et al. (2017) argue that expanding the communication of children with autism beyond object requesting may have 'far reaching benefits in terms of accessing social and educational opportunities' (p.52). Further, as noted by Brewster (2007), the overemphasis on providing 'requesting' vocabulary in AAC risks perpetuating the conceptualisation of disabled people as needy, dependent, passive recipients of services.

Nevertheless, it is not always straightforward to assign a 'speech function' to an utterance.  Ninio et al. (1994) identify three reasons why definitive categorisation is difficult: intentions do not map directly onto the forms of utterances, the demands of politeness can require deniability or ambiguity, and it is possible for utterances to express multiple simultaneous intentions.  Whilst acknowledging these difficulties, I would maintain that it is necessary in any consideration of the nexus between communication and agency for minimally verbal people to have some means of identifying the functionality of a given utterance or action, since as Brewster (2007) notes, an overemphasis on speech functions such as requesting has implications for power differentials.  I therefore draw upon the nine speech functions of the IPCA (Sigafoos et al., 2000) listed above in this study, with the addition of the phatic speech function suggested by Laver (1975).

As noted above, Brewster (2007) raises the issue of the relationship between AAC, speech functions and power. This leads to the question of whether a child with autism is able to conceptualise themselves as anything other than a 'requester' if they have not been provided with the vocabulary to support alternative speech functions such as rejecting, protesting or commenting. This relationship between communication and conceptual development is unpacked further below.

*2.1.7 Language and Thought*

In this study it is important to critically consider whether minimally verbal children need to reach a cognitive threshold which will permit them to acquire language and/or other forms of symbolic communication, or conversely whether the modelling and scaffolded use of language they do not yet understand can support emergent conceptual understanding. The Piagetian perspective on child development emphasises the need to attain cognitive and developmental milestones through a combination of biological maturation and environmental exploration in order for the associated communicative behaviours to manifest (Piaget, 1953). Specifically, as noted in Section 2.1.3, it has been argued that the attainment of sensorimotor stage five is a prerequisite for the emergence of intentional communication since this is the stage of development which is characterised by goal-directed behaviours and attempts to indicate desires to an adult (Bates, et al., 1979; Lombardino & Langley, 1989, Iacono et al., 1998). Jones et al. (1990) subsequently suggest that attainment of this stage is a prerequisite for AAC implementation. This sixth and final sensorimotor stage leads into the next period of development which is development of 'symbolic function' between the ages of two and four. According to Piaget, it is during the acquisition of symbolic function that children's use of language develops in new directions as they can now engage in pretend play, create scenes from their imagination, refer to past or present experiences and to people, places and objects which are not currently present.

The Piagetian conceptualisation of cognitive development preceding and driving language development appears to exert influence on some clinical literature on AAC.

Beukelman & Mirenda (2005) critique what they term the 'candidacy model' of AAC provision which judges certain children to be ineligible for AAC if they have not demonstrated certain prerequisite skills, typically including understanding of cause-and-effect, means-end planning, and object permanence. Further, even if access to AAC has been granted in principle, perceptions of pre-existing cognitive levels driving the production of language may still result in AAC users being given only the words which adults consider relevant to their perceived developmental stage. Kangas & Lloyd (1988) caution that such candidacy models are problematic since the relationship between cognitive development and the emergence of speech is complex to unravel in children with disabilities, who may demonstrate language skills before there had been any prior indication of the expected cognitive prerequisite skills, or conversely may demonstrate attainment of the skills associated with Piaget's sensorimotor stage six yet still not develop functional speech.

In contrast, Vygotsky (1987) considers thought and language to be interdependent processes. The acquisition of language, he argues, can actually be constitutive of thought processes and higher mental functions by enabling processes such as imagination, memory usage, concept formation and action planning.

> *The relationship of thought to word is not a thing but a process, a movement from thought to word and from word to thought …. Thought is not expressed but completed in the word …. Speech does not merely serve as the expression of developed thought. Thought is restructured as it is transformed into speech. It is not expressed but completed in the word.* (Vygotsky, 1987, pp.250-251).

He goes on to argue:

> *… the central moment in concept formation, and its generative cause, is a specific use of words as functional "tools"'.* (Vygotsky, 1986, p.107).

This raises important questions for AAC users who may depend on others for the limits of their vocabulary, since tightly circumscribed vocabulary sets may constitute a limited toolkit with which to generate new conceptual understandings. The difficulty of ascertaining whether a particular idea, concept or time frame is not being referenced by an AAC user because of their learning disability or because of limited

language provision is described as a 'chicken and egg situation' (p.182) by Dreyfus (2006) who finds it difficult to ascertain whether one factor drives the other or whether there is 'interweaving' (p.182) between them.  From a Vygotskian perspective, however, the provision of presently unfamiliar symbols/signs, with the appropriate scaffolding and social modelling of their usage by 'More Knowledgeable Others' (Vygotsky, 1978, p.86) could support emergent conceptual understanding. Cress & Marvin (2003) argue:

> *Use of symbolic words and concepts does not have to wait until children understand those concepts, even for typically developing children … acquisition of a particular cognitive construct does not necessarily precede the productive use of language that represents that construct.* (p.260).

The above literature seems to point to a complex relationship between the development of language and thought.  I would argue that since it is possible that language plays at least some degree of generative role in the formation of conceptual thinking, it is important to critically consider whether the parameters of AAC vocabulary provision for children are decided with reference to staff perceptions of their existing cognitive ability or with the intention of supporting future conceptual development.

### 2.1.8   Framing 'Communication' In This Study

In this study, communication is approached with a multimodal commitment to studying the interplay of various modes in interaction and not assuming the primacy of any mode until such status is supported by the data (Jewitt et al., 2016). Communication is viewed as a partly cognitive, individual skill which can be developed with skilful teaching and learning opportunities which expand the child's repertoire of words, whether through speech, signing or symbols. From a Vygotskian perspective it was suggested that children who use AAC might benefit from the modelling of unfamiliar words in context by More Knowledgeable Others, as this could both extend their communication opportunities and scaffold their emergent conceptual understanding of the unfamiliar words.  It was also argued that whilst 'intentionality' may exist on a continuum and is not always easy to ascertain, it is still

useful to have a working benchmark of what we consider to be intentional communication which is flexible and multimodal in its application (Stiegler, 2007). I feel that having a framework for the analysis of when communication is more or less intentional speaks to the relationship between communication and agency which is foregrounded in this study, since the ability to intentionally convey meaning to another brings opportunities to exert influence on them and one's world. In terms of 'turn-taking', I argued that whilst communication may be a continual and complex exchange of information on varying levels of consciousness, it is nevertheless possible to identify clusters of modes performed together which are orientated to as turns by interactants for the purposes of analysis providing that the analyst remains reflexive about their own role in locating the turn. Similarly, it was noted that whilst speech functions are not always straightforward to categorise, they are nevertheless useful heuristic tools which can serve important purposes such as identifying the relationship between speech functions in AAC and power relations between AAC users and providers (Brewster, 2007).

The discussion of communication in Section 2.1 has pointed in numerous ways to the complex relationship between what a person with autism and minimal speech can express through the vocabulary and speech functions which are available to them in multiple modes, the responsiveness of the environment to their multimodal communication, and the degree of influence they exert on their environment. In Section 2.2, I go on to consider the question of 'autism' and how it can be understood from a range of competing perspectives, before setting out how it is understood for the purposes of this study.

## 2.2 Viewing 'autism' from a range of theoretical perspectives

In this section, I will explore how 'autism' is understood from the medical, social, constructionist and relative interactionist perspectives. I will then justify my decision to adopt a relative interactionist understanding of autism for the purposes of this study whilst remaining open to insights from other perspectives when they facilitate a particular aspect of my analysis.

## 2.2.1   The Medical Model

The medical model of disability foregrounds the issue of individual impairment, with a subsequent emphasis on individual remediation (Sullivan, 1991).  This model was touched upon in Chapter 1 where I noted that 'special needs education' in the UK has been critiqued for its uncritical acceptance of within-child deficit models of disability (Hodge & Runswick-Cole, 2009).  Similarly, Reindal (2008) argues that special needs education is founded on 'a positivistic and functional paradigmatic frame, where a medical model of disability is the platform for classification systems used' (p.135).  Given that the medical model has been so influential on special needs policy and practice, it is useful to set out how clinical and psychological research has framed the idea of individual deficit arising from autism.

In the UK, the diagnostic classification system ICD-10 (WHO, 2016) defines ASD as:

> *A type of pervasive developmental disorder that is defined by: (a) the presence of abnormal or impaired development that is manifest before the age of three years, and (b) the characteristic type of abnormal functioning in all the three areas of psychopathology: reciprocal social interaction, communication, and restricted, stereotyped, repetitive behaviour.* (F84.0).

In clinical research, attempts continue to specify the aetiology of ASD: Watts (2008) acknowledges a 'seemingly confusing and uncertain pathogenesis' (p.99) which is likely to be multifactorial, encompassing both genetic and environmental factors not currently well understood.

Attempts have also been made to understand autism on the cognitive psychological level of analysis, with three prominent theoretical models. Firstly, the *executive function theory* of autism argues for a core deficit in organisational skills such as managing one's behaviour, time and attentional focus (Pellicano, 2012) which could explain language difficulties on the basis of impaired working memory (Schuh et al., 2012) or organisation (McCrimmon, 2014).  However, it could conversely be argued that language deficit may hinder the development of executive function due to the importance of internal rehearsal and 'self-talk' in developing self-control (Zelazo et al,

2003; Joseph et al, 2005). Secondly, Baron-Cohen (2000) argues that *theory of mind*, which refers to the ability to infer a full range of states such as emotions, beliefs, desires and intentions in the minds of other people, is impaired in people with autism. This is argued to have implications for pragmatic language skills such as turn-taking, staying on topic, being sensitive to the role of your conversational partner, and tailoring one's speech to their informational needs. However, Tager-Flusberg (2007) argues that this fails to account for other aspects of autism including repetitive behaviour patterns, imitation and difficulties with empathy and face recognition. Additionally, as with executive function theory, the directionality of the relationship is debatable since our understanding of theory of mind may be enhanced by ongoing verbal interactions with others (Dunn et al., 1991). Thirdly, c*entral coherence theory* (Happé & Frith, 2006) argues that people with autism have a cognitive style which favours 'local processing' or attention to small detail which can result in a failure to extract global form or meaning or central coherence from the 'bigger picture'. Noens et al. (2004) argue that since communication involves a complex dynamic interplay of modes, contents, functions and social reciprocity, communication is a particularly challenging area for someone whose cognitive style tends to privilege detail over general sense-making. However there is currently no consensus about the validity of central coherence theory, with some subsequent empirical findings failing to support it (Mottron et al., 1999; López et al., 2003).

Whilst debates continue over medical aetiology and competing cognitive explanations, it appears that somewhere between one third (Bryson, 1996) to one half (Lord & Paul, 1997) of people with a diagnosis of ASD do not develop sufficient spoken language to meet their communication needs. It has been argued that frustration arising from such communication difficulties can lead to aggression and self-injury (Van Berckelaer-Onnes et al., 2002; Sigafoos et al, 2000). From a medical perspective, the focus of communication intervention would be to make the person more comprehensible to others, whether through the acquisition of spoken language (Rogers et al., 2006) or through a form of AAC (van der Meer et al., 2011). However, the medical model has been criticised for its decontextualised emphasis on individual impairment which downplays the communicative environment or the role of the

communication partner (Muskett et al., 2010; Potter & Whittaker, 2001).  It might also be criticised for reifying through its diagnostic criteria ableist hegemonic constructions of 'normal' (verbal) communication which unnecessarily problematise the 'differently voiced' (Ashby, 2011).  These two critiques respectively form the basis of the alternative 'social model of disability' (Section 2.2.2) and the constructionist approach to disability studies (Section 2.2.3) which are explored below.

### 2.2.2   The Social Model

The 'social model of disability' (Oliver, 1996) challenges the core premises of the medical model described above by foregrounding the environmental barriers faced by disabled people rather than individual impairment. In this section I review literature which argues for the broad idea of creating a more enabling communication environment for minimally verbal children, although it may or may not draw explicitly on the social model of disability.

Potter & Whittaker (2001) argue that the optimum 'communication-enabling environment' for a child with autism should involve the use of minimal speech by interactional partners, the provision of AAC where appropriate, playful exchanges which draw upon the child's non-verbal embodied communication and the careful facilitation of peer interaction.  Here, it could be argued that the author's recommendation of drawing upon children's non-verbal embodied communication in play could be seen as a practical application of the social model of disability by recommending that the environment adapt to the individual instead of attempting to 'normalise' them.  The authors' argument that AAC provision is one aspect of a 'communication enabling environment' might seem surprising since AAC was suggested in Section 2.2.1 to be a potential example of individual remediation.  However, other studies have also suggested that AAC provision might constitute an enabling environmental response to communication needs providing that we retain a focus on the role of AAC in the environment as a whole.  For instance, Mankoff et al. (2010) argue that AAC provision must be accompanied by support for the child's peers in learning how best to interact with the AAC user if it is to result in social

inclusion.  Similarly, Pennington et al (2007) note that clinical studies evaluating the 'success' of an AAC intervention typically detail only individual characteristics of the user and neglect to detail communication partners and their attitudes towards interacting with AAC users.  These studies suggest that from the social model perspective AAC may be a helpful tool but must be considered within enabling and disabling environmental factors more broadly.

Other studies have emphasised the importance of a classroom environment which is responsive to multimodal competence.  For example, in a study which is explicitly framed by the social model of disability, Flewitt et al. (2009) present a case study of the communication of a young child with disabilities which stresses the importance of 'valuing individuals' idiosyncratic and multimodal meaning-making' (p.211).  The authors argue that staff responsiveness to the child's embodied responses to story-telling, such as excited rocking in her chair, allows her to be respected as 'a symbolic being, able to express precise meanings albeit in non-linguistic and non-conventional modes' (Flewitt et al., 2009, p.230).  In this wider sense of responsiveness to multimodal communication, communication passports (Section 1.4.5) might also be considered a practical application of the social model perspective since as Goldbart & Caton (2010) have argued, the passports are an environmental 'intervention' directed at caregivers rather than an attempt to 'fix' the individual.

From the above, the 'medical' and 'social' models might appear diametrically opposed.  However, as Gustavsson (2009) argues, they share an ontological 'essentialism': the medical model in the sense of accepting the reality of individual impairment, and the social model in the sense of contextual essentialism about the reality of economic, social and political barriers. A different way of conceptualising disability is to problematise the use of discourse in constructing bodies as deviant or non-normative, which is explored in the following section.

### 2.2.3  Constructionism

Constructionism has been described as a cluster of theoretical positions (Danforth & Navarro, 1998) which draws upon the linguistic and cultural turn of the social

sciences from the 1980s onwards and is generally characterised by several key ideas. The first of these is the claim that 'the terms by which we understand our world and our self are neither required nor demanded by "what there is"' (Gergen, 1999, p.47). This claim provides a robust challenge to correspondence theories of language which take for granted that the language which we use to talk about embodied phenomena such as gender, sexuality or disability directly corresponds to an underlying biological reality, and thereby opens up spaces for exploring alternative discourses. For example, instead of talking about 'non-verbal' or 'communication disordered' children we might talk of the 'differently voiced' (Ashby, 2011) or 'multimodal communicators'. A related claim is that the discourses we adopt have 'effects in the real' (Foucault, 1980, p.237): they wield as much power as material or economic barriers to injure, oppress and exclude as well as to locate in the subject in a position of powerlessness and dependency. For this reason, the constructionist approach to disability focuses on analysis of cultural and linguistic representations of disability, undertaking critical scrutiny of issues such as diagnosis, constructions of 'normalcy' and the exercise of power implicit in 'interventions' (Meekosha & Shuttleworth, 2009).

Taking this approach in the context of communication and learning disabilities results in a radical rethinking of the perceived 'problem': rather than aiming to 'fix' the person (medical model) or 'fix' the surrounding environment (social model), it might question the grounds on which we assume that anything needs to be fixed at all. Goodley (2011) argues:

> *An individual whose speech is difficult to understand is assumed to have a problem because they challenge a colonising stance of certainty about how people should speak.* (p.79)

This approach reminds us that terms such as 'nonverbal' or 'minimally verbal' could serve to legitimise disempowerment because they imply that there is no voice to listen to, whereas terms such as 'differently voiced' (Ashby, 2011) problematises the ability of the listener to read/hear what is being communicated multimodally. This perspective might also invite critical scrutiny of what might be regarded as 'taken-for-

granted' needs for interventions and therapies and to question whose interests are best served by such approaches.

In summary, the three perspectives outlined above respectively foreground individual impairment, environmental barriers and the role of discourse in constructing disability. Whether a model of disability can accommodate all of these potential explanatory levels is the subject of the following section.

### 2.2.4    Relative Interactionism

Gustavsson (2004) argues that disability arises from the interaction of multiple levels of influence which may interact in complex ways but cannot be reduced to each other. These may include individual physical or intellectual impairment, environmental barriers and facilitators, social constructions, discourses and beliefs about the impairment, as well as individual characteristics. This broad perspective has been explored by Shakespeare (2013) who calls for 'analysis that gives weight to different causal levels in the complex disability experience' (p.73) and Danermark & Gellerstedt (2004) who insist that 'only by taking different levels, mechanisms and contexts into account, can disability as a phenomenon be analytically approached' (p.350). Such approaches aim to avoid the potential reductionism of viewing disability through the lens of medical, social or constructionist lenses which might risk reducing the complex experience of 'disability' to a physical, social or discursive phenomenon alone (Shakespeare, 2013).

One well-known example of the relative interactionist perspective is the World Health Organisation's *International Classification of Functioning, Disability and Health* or ICF (WHO, 2007). This biopsychosocial model conceptualises disability as an emergent property of the interplay between individual impairment and environmental barriers and facilitators. For this reason, the ICF explicitly lists AAC as an environmental facilitator which may assist people with communication difficulties. Fried-Oken & Grandlund (2012) argue that 'The ICF fits our international AAC community like an old shoe that we have been wearing for many years' (p.1).

However, a criticism of ICF biopsychosocial model is that it posits the ontological existence of an *a priori* impairment which stands outside of the discourses used to describe it (Imrie, 2004), a position which would be contested by the constructionist perspective (Section 2.2.3).  An alternative version of relative interactionism which arguably addresses the postmodern critique more satisfactorily is critical realism.  A critical realist takes the position that 'things exist and act independently of our descriptions, but we can only know them under particular descriptions' (Bhaskar, 1975, p.250): in other words, there is a level of reality independent of our descriptions, suggesting ontological realism; yet our ability to talk about it is always and inevitably mediated through our discourses, suggesting a critical epistemology.  A critical realist perspective might therefore propose that we are not denying the reality of communication impairment but on the other hand we can simultaneously remain critical about the implications of our own use of language.

Having reviewed four broad perspectives on disability, the following section explains the perspective adopted in this study.

### 2.2.5   Framing 'autism' in this study

In Section 2.2 I have reviewed literature suggesting that how we conceptualise autism is not a straightforward matter, with multiple competing perspectives.  In the present study, I adopt a critical realist perspective on autism and communication: that is, I am open to the possibility that the communication dis/ability of participants suggested in the data may arise from complex interactions between their individual difficulties with communication, their classroom environment, and wider discourses surrounding special needs education and disability more generally.  In Section 2.3, I go on to explore a range of perspectives on childhood 'agency' before setting out how the concept is framed for the purposes of this study.

### 2.3 Agency

Whilst the power(lessness) of children to act in ways which influence their worlds has been considered extensively throughout history from multiple disciplinary

perspectives, the question began to be framed in terms of 'agency' from the 1970s onwards as part of what might be called the 'scientification of the social' (Baader, 2016, p.145). In this section I review the literature relating to 'agency' in relation to children generally and to disabled children in particular. In Section 2.3.1 I consider the emergence of Giddens' (1984) Structuration Theory and how it laid the foundations for the concept of childhood agency as understood in Childhood Studies. Section 2.3.2 considers the critical realist perspective on agency, and In Section 2.3.3 I consider some criticisms which have been levelled at the concept of 'childhood agency'. Section 2.3.4 reviews existing literature on the agency of disabled children in particular. Finally in Section 2.3.5 I present my framing of the concept of 'agency' for the purposes of this thesis.

### 2.3.1   Gidden's Structuration Theory and its contribution to Childhood Studies

The work of Giddens (1984) is a useful starting point for a consideration of childhood agency, since his work has been acknowledged as the primary influence for the idea of agency in the emergent field of Childhood Studies. James & Prout (1990) argue:

> *Gidden's social theory provided Childhood Studies with a means for analysing the double (re)construction of childhood, such that children were themselves seen to be reflexive and agentic subjects, who could both interpret social settings and act in relation to those settings with a view to the achievement of their intentions.* (p.28)

Giddens (1984) was one of the first sociologists to problematise the relationship between individual action and societal constraint in the social sciences, arguing that whilst an individual's autonomy was constrained by structural factors, those structures were also maintained and adapted by the exercise of individual agency in a process he called *structuration.* In the nexus between agency and structure, he contended, we can reproduce and support existing social structures by acting in compliance with them, or we can modify those social structures by choosing to act outside of their constraints.

As James & Prout (1990) note above, this was a significant development in social scientific discussion of the child which now foregrounded the child's potential for agentic action rather than their role as passive recipients of adult care. Previously, pre-1970s social sciences had considered childhood principally through the lenses of developmental psychology, social anthropology and sociology which shared a common 'dominant framework' regarding children: they are incomplete and inadequate and depend upon adults to invest in their upbringing (Lee, 2001). Further, their lives tended to be studied for what they could reveal about adult life, which was the end goal: children were 'becomings' rather than 'beings' (Qvortrup, 1994).  The influence of Giddens was to therefore to foreground what Oswell (2016) describes as a 'child-centred epistemological and political standpoint' (p.20) on what children could and did achieve in their interactions with others to influence the course of their own lives and those of others around them.  However, a slightly different perspective on the agency-structure dialectic is proposed by critical realist literature, as explained below.

### 2.3.2   The Critical Realist Perspective on Agency

An alternative perspective on agency is founded on critical realism.  As already discussed in Section 2.2.4 in the context of disability, a critical realist takes the position that 'things exist and act independently of our descriptions, but we can only know them under particular descriptions' (Bhaskar, 1975, p.250): in other words, there is a level of reality independent of our existing language, yet our ability to talk about such reality is always and inevitably mediated through our discourses. Archer (1995) argues that whilst critical realism would agree with Giddens that structure and agency exist in a dialectic relationship, the difference is that the critical realist position maintains that it is possible to analytically unpick causal dynamics by recognising the temporal order of the relationship between the two.  This departs from the Giddensian idea of agency and structure being simultaneously co-constitutive, arguing instead that at any given moment agents are both constrained and enabled by prior existing structures, and their subsequent actions lead to the reproduction or the transformation of the pre-existing structure which in turn provide a structure or context of action for future agents.

In many ways, the relatively recent emphasis in Childhood Studies on the agency of children, whether seen as a Giddensian dialectic or from a critical realist perspective, could therefore be said to provide a useful counterpoint to the established tendency of social sciences to portray children as vulnerable, developmental and incomplete. However, the concept of childhood agency has also been subject to criticism, as detailed below.

### 2.3.3  Criticisms of the Concept of Childhood Agency

The concept of children possessing individual agency has been argued to be problematic from a number of standpoints.  For instance, Esser et al. (2016) note that it appears to take for granted a Western conception of agency, 'a worldview in which the masculine and autonomous subject is treated as the gold standard' (Esser et al., 2016, p.8).  This neo-liberal postulate of autonomy is contested both in Disability Studies and feminist ethic of care theory, the former arguing that the question of impairment may constitute 'narcissistic wounds to the neoliberal belief in the free and autonomous subject' (Davis, 2015, p.62) and the latter reminding us that our celebration of the autonomous subject may point toward societal devalorisation of care for others (Wihstutz, 2016).  This shared recognition of the role of relationships, vulnerability and mutual dependence has led to calls for both fields to 'make common cause in the struggle for an ethics of care that is founded on embodied interdependence' (Hughes et al., 2005, p.260), with a common 'aspiration to locate agency in social relations and interdependency instead of independence and autonomy' (Esser et al., 2016, p.8).

A further criticism of the concept of 'childhood agency' as used in Childhood Studies is that it sets up a number of binaries or dualisms which are analytically unhelpful including mind/body, individual/society and micro/macro (Raithelhuber, 2016). According to such dualist thinking, the human actor possesses an individual, cognitive essential quality sometimes known as the 'capacity concept of agency' (Passoth et al., 2012, p.1) which enables them to act against the limitations of structure. This means that the child is assumed to be *a priori* in possession of stable and inherent agency

regardless of the empirical evidence of practice (Esser, 2016), and this agency is uncritically taken as a positive quality acting against the negative limitations of structure leading to the 'romantic dichotomy according to which the adult is a representative of a conservative structure and children act as rebellious, fresh newcomers' (Esser, 2016, p.51). Conceptualising 'agency' as an individual, cognitive, primordial 'property' of the individual child can additionally be accused of failing to acknowledge its interconnectedness and relationality (Raithelhuber, 2016), its embodied nature (Yoshida, 2011), and the distribution of 'agency' across non-human artefacts and the material environment (Ogilvie-Whyte, 2003).

One possible approach to address the problem of duality in relation to agency is the idea of 'practice' in social sciences. The concept of 'practice' places the analytic focus not on a posited agency-structure dialectic preceding practice but rather on agency as a characteristic arising from the practice itself (Schatzki, 2001). This means that there is no *a priori* assumption that the child 'is' or 'is not' agentic, but rather an acknowledgement that children partake in a flow of practices involving relationships and artefacts which provide fluctuating potential actor positions and subjectivities (Brennan, 2008).  This redefines agency not as 'a potential that is determined not by a pre-practical autonomy of the subjects but by the contextuality [and] temporality … of the practices' (Reckwitz, 2003, p.297).  Such perspectives, then, can be said to lead to 'a kind of differential agency research that focuses on the heterogeneous resources, practices and contexts that establish the variability of children's agency rather than simply taking the assumption that children are actors as a general premise' (Bollig et al., 2016, p.35).

As this discussion of childhood agency from diverse perspectives might suggest, the question of whether and how the concept of 'agency' might relate to disabled children is not often made explicit in literature. This question is explored further below.

## 2.3.4   The Agency of Disabled Children

Despite the prominent concept of 'agency' in Childhood Studies very little appears to have been written about 'agency' in the context of the lives of disabled children (Olli et al., 2012). Whilst a new sociology of childhood was emerging from Childhood Studies which insisted on the subjectivity and agency of the child, a simultaneous but separate social model of disability was developing which privileged self-advocacy for disabled people based upon analysis of the disabling effects of the social rather than a focus on individual impairment (discussed in Section 2.2.2). Yet, as Nind et al. (2010) argue, disabled children tend to remain 'conspicuously absent' (p.655) from both Childhood Studies and the social model of disability. This results in a certain disjuncture in the literature: whilst non-disabled children are increasingly viewed as actors and agents who purposefully shape their own futures, disabled children continue to be characterised as 'passive, vulnerable and dependent' (Davis et al., 2002, p.159). In this section, I review the limited amount of literature which considers the concept of agency in relation to disabled children.

A difficulty which has been identified in the application of 'agency' to disabled children is the application of prerequisite criteria which define who may be said to 'possess' agency and who does not (Olli et al., 2012). For example, Bandura's (2001) social cognitive perspective on agency requires *intentionality*, *forethought, self-reactiveness* and *self-reflectiveness* as four preconditions of 'agency', and this degree of cognitive competence and autonomy is very difficult to establish with very young or disabled children.  Similarly, Olli et al. (2012) note parameters in the 'rights' accorded to disabled children, with the UN Convention on the Rights of the Child (UN, 1989) according the right to express views only to 'the child who is capable of forming his or her own views' (Article 12). The authors go on to argue that 'seeing agency as an instrumental value gives adults too many opportunities to speculate about who will benefit from it and who will not' (Olli et al., 2012, p.805), arguing instead for a reconceptualisation of agency as an essential property of the human being, irrespective of cognitive or verbal ability:

*Agency is seen as a feature in all human beings and the realization of agency as dependent on interactions with other people. Thus, in interaction a child's agency is realized when her/his need to have an influence is taken into account and responded to. Other peoples' inability to understand a child's self-expression or unwillingness to let the child have an influence may restrict the child's agency from being realized, but it does not eliminate the existence of agency.* (Olli et al., 2012, p.794).

Three factors are then identified by the authors as potentially facilitating the expression of disabled children's agency. The first of these is *attitudinal* factors: the child's expression of their agency will be facilitated if educators view the child as a person rather than simply an instance of impairment. The second factor is *communicational*: the authors argue that if adults see 'communication difficulties' as a shared problem there is more space for thinking about creative solutions, whereas 'if the professional refuses to change her first impression about a failure in communication as the child's fault, the communication will not evolve into dialogue' (p.801). Efforts which may be needed on the part of the adult, they argue, may include provision of well-planned AAC resources to enable the child to express themselves, the ability of adults to infer the meanings of the child's actions from sensitive observation of their non-verbal behaviours, their degree of participation in an activity, and the prior knowledge of the child they possess from their shared history. In this sense, the suggestions of Olli et al. (2012) have significant parallels with the work of Potter & Whittaker (2001) discussed in Section 2.2.2 above, in suggesting that AAC and responsiveness to multimodal communication can be complementary characteristics of a communication (and agency) enabling environment.

The final factor enabling agency identified by Olli et al. (2012) is institutional*:* if children's participation in decision-making is not embedded in the culture of the organisation at all levels, then the efforts of an individual practitioner to enable agency for children in that setting will necessarily be limited. However, as Olli et al. (2012) acknowledge, the extent to which the institution foregrounds the enablement of student agency may be compromised by wider societal factors including institutional funding being linked to meeting national targets, which in turn squeeze

out opportunities for extensive 'listening' to the subjectivity of students who may not express themselves verbally.

The question of the relationship between multimodal communication, agency and social context for children with disabilities is explored by Nind et al. (2010). They argue that whilst the disabled children they observed were in all contexts 'active negotiators and meaning makers' (p.667), they tended to demonstrate higher levels of agency in their own homes where interactions were often characterised by an unhurried pace, quality attention, matched intonation and mood, assumptions of competence, subtle adjustments for optimum arousal levels and a high level of responsiveness. This is contrasted with some of the educational settings observed, where 'the adults' eager prompting restricted the communicative space' (p.662) available to the children, and where despite the use of learnt symbolic gestures one participant 'required greater resourcefulness to make her meanings understood' (p.660). Interactions, they argue, played out differently in different settings because of what the different parties brought to the interaction, which in turn was 'defined by the histories, structures and aims of the different settings' (p.666). The exercising of agency, then, was closely linked to the valorisation of what the authors call 'multimodally negotiated distributed competences' (p.665). This research is of particular interest to the current study as it explicitly considers the relationship between multimodality and agency for disabled children. However, it differs from the current study insofar as it foregrounds the agency-enabling potential of recognising a child's embodied idiosyncratic communication, and I am eager to delve further into the relationship between agency and AAC. Specifically, I am interested in exploring the features of different forms of AAC provision which may or may not contribute to the exercising of agency.

The literature in relation to the agency of disabled children therefore appears to suggest a mixed picture: disabled children often seem to be analysed as a qualitatively distinct group, quite unlike 'non-disabled' children who are assumed to have considerable agency. Furthermore, where the agency of disabled children is acknowledged it seems sometimes to be contingent on pre-requisite demonstrations

of individual capacity which are likely to exclude children without speech.  There are debates around whether agency ought to be understood as a matter of individual capacity or a result of environmental responsiveness to multimodal expressions of agency, a question which has parallels with discussions of whether communication is an autonomous skill or a distributed phenomenon (Section 2.1.4).

### 2.3.5   Framing 'Agency' in This Study

In this analysis I adopt a critical realist perspective on agency which is consistent with my critical realist perspective on disability and communication.  Whilst acknowledging that the degree of agency a child exercises can be deeply influenced by relationships with human interactants as well as the material environment, I ultimately follow Alderson et al. (2016) in maintaining that within such situational fluctuations can be identified a child who is a 'distinct, conscious, embodied individual, possessing real though limited agency' (Alderson et al., 2016, p.76).   I therefore conceptualise agency as having the possibility of acting in a way which can shape and influence events, relationships and one's world, which is an emergent property arising from the interaction of the potentially agentic characteristics of the individual and the enabling or disabling characteristics of their environment.

## 2.4 Conclusion

In this chapter I have reviewed literature in three key areas of communication, autism and agency.  For the purposes of this study, a critical realist ontological perspective underpins my framing of all three phenomena.  In terms of framing the communication impairment which has been associated with autism, I consider this to be a complex interaction of real neurological developmental difference and the characteristics of the social environment including the responsiveness of interactional partners and the availability of communication-supporting artefacts including AAC. I acknowledge the significance of studies which problematise the role of discourse in constructing autism and communication impairment which can have subsequent real influences on our educational and societal responses (Meekosha & Shuttleworth, 2009).  However, I ultimately follow Bhaskar (1975) in maintaining that

whilst we can only know phenomena through our discourses and should therefore retain a critical epistemology, we should not abandon the ontological claim of impairment having a real existence independent of our construction of it.

Because I follow Alderson et al. (2016) in thinking of the child as a 'distinct, conscious, embodied individual, possessing real though limited agency' (p.76), I consider the role of relationships, practices and artefacts to be undeniably important in enabling or disabling the exercise of agency but do not conceptualise agency to be primarily located within such networks. For this reason, I would argue that studies which have usefully focused the analytic lens on how environments may be made more enabling of children's agency (Olli, 2012) may be usefully counterbalanced with AAC studies which focus on the child's potential to acquire new autonomous skills which will increase their personal capacity for acting agentively even in less than enabling environments. Closely intertwined with this perspective on agency is my standpoint on communication: whilst I acknowledge the role of relationships, practices and artefacts in enabling or disabling communication, I feel it is important not to underplay a child's cognitive potential to move from a less intentional to more intentional communicative role or to acquire new spoken words, signs or symbols which give access to concepts not easily expressed through embodied communication.

In the next chapter, I consider how my conceptualisations of communication, autism and agency shaped the methodological approach to this study.

## CHAPTER 3: METHODOLOGY

### 3.0 Introduction

In Chapter 1, I set out the three research questions of this study.

1. How do minimally verbal children with autism communicate with staff and peers in the classroom?
2. How does the classroom environment (both in terms of materiality and activities) shape the communicative behaviours of the children?
3. What is the nature of the relationship between children's communication and the degree of agency they exercise in the classroom?

In this chapter I explain the methodological framework I used to investigate these questions. In Section 3.1 I make explicit the ontological and epistemological foundations of my thesis which derive from my positions on communication, autism and agency as discussed in Chapter 2. In Sections 3.2 to 3.4 I explore three approaches to research - ethnography, Conversation Analysis and Multimodal Interaction Analysis - and the potential benefits of each for the purposes of this study. Finally, in Section 3.5 I explain my decision to draw upon elements of all three approaches to create a hybridised methodological framework which is helpful in the context of this study.

### 3.1 Ontological and Epistemological Foundations

As discussed in the previous chapter, this study takes an ontologically critical realist view of disability. I follow Shakespeare (2013) in arguing that the reality of impairment must not be underplayed amidst legitimate and necessary analysis of social and environmental barriers to communication or discourses which construct 'disabled people'. I also take an ontologically realist view of the individual as agent: whilst I acknowledge how agency is shaped by a variety of material and social factors, I retain a perspective of the child as a 'distinct, conscious, embodied individual, possessing real though limited agency' (Alderson et al., 2016, p.76).

Nevertheless, critical realism combines ontological 'realism' with a critical epistemological stance about the extent to which any one individual or group may articulate a definitive view of a phenomenon, however 'real'. This leads to an epistemological position which might be described as 'weak constructivism' (Sayer, 2000): whilst there are real phenomena which exist beyond the 'knower', I always remain conscious that 'as a knower [I] am placed within the world that I'm trying to know about' (Olsen, 2009, p.xxxi). This means being reflexive and open about my role as researcher in producing knowledge, obtaining multiple accounts and perspectives on the phenomena being studied, and remaining open to further challenge and alternative insights. It is also for this reason that I talk of 'generating' rather than 'collecting' data, since a constructivist epistemological position acknowledges the active role of the researcher in creating data (Given, 2008). The hybridised methodological framework proposed in this chapter was constructed on these foundations and draws upon ethnography, multimodal Conversation Analysis and Multimodal Interaction Analysis. Section 3.2 considers the relative contributions of each of these approaches to the current study in turn.

## 3.2 Ethnography

This section reviews ethnographic literature of particular relevance to this study. In Section 3.2.1 I define what is meant by 'using ethnography' for the purposes of this study. In Section 3.2.2 I consider how and why ethnography can be a particularly useful approach in the study of communication between members of a group or organisation, and more specifically how ideas around 'disordered communication' are enacted in everyday life. In Section 3.2.3 I explain the contribution of ethnography to the current study.

### 3.2.1 Defining 'Ethnography'

Ethnography has been described as a 'systematic approach to learning about the social and cultural life of communities, institutions and other settings' (LeCompte & Schensul, 2010, p.1). Starting from the assumption that research participants have

their own *emic* perspective on events which helps them to make sense of their world and may account for their behaviour in the setting, it encourages the researcher to spend time in the field trying to understand this perspective in order to provide a rich, detailed, qualitative account of the setting, participants and their actions. As Flewitt (2011) has argued, these detailed observations can then be usefully positioned in a wider cultural, historical and policy-based context.

However, the level of ethnographic commitment required of the researcher is contested, with Brewer (2000) pointing to fundamental disagreements about whether 'ethnography' constitutes a philosophical orientation, methodology, research tool, or simply a synonym for qualitative research with participants aiming to provide 'thick description' (Geertz, 1973). Green & Bloome (2004) usefully distinguish between three levels of ethnographic engagement:

- *doing ethnography,* involving long-term immersion in the field;
- *adopting an ethnographic perspective,* involving a more focused, less comprehensive study of particular aspects of a culture;
- *using ethnographic tools,* involving the use of methods and techniques associated with fieldwork such as fieldnotes, participant observation and video recording.

The current study does not lay claim to providing a longitudinal immersive account of life in Purple Class due to the relatively short time of one half-term spent in the field, the implications of this time frame being critically discussed in Section 4.3. Instead I would locate it on the level of using ethnographic tools including observations, fieldnotes, classroom video recording and interviews, and these methods are presented in further detail in Chapter 4. Given that communication is a major focus of the current study, the next section reviews the usefulness of such ethnographic methods in studying the communicative practices of participants.

### 3.2.2 Ethnography with a communication focus

Ethnography does not necessarily require a comprehensive account of *all* aspects of community life: as LeCompte & Schensul (2010) go on to argue, limited time frames

and budgets for research have led to a move toward more focused ethnographies where researchers chose to focus the analytic lens on a particular dimension of community life.  This might involve for example a focus on beliefs, values or attitudes towards a particular phenomenon, social networks, patterns of conflict and resolution, power structures, or patterned use of space and time.

One particular analytic focus for some ethnographers has been the communication of participants as they interact with each other as part of everyday life. In Section 2.1.1 I have already reviewed literature which seeks to understand the use of AAC in the classroom using ethnographic tools, although not necessarily explicitly identifying with ethnography as a research paradigm.  However, there are also approaches which orient more explicitly and systematically to the interface between ethnography and communicative practices. For instance, in the previous chapter I discussed the approach known as Ethnography of Communication (Hymes, 1972) which provides tools for understanding patterns of interacting within a 'speech community' and what a member must know in order to achieve 'communicative competence' within that community (Section 2.1.5).   Specifically, Hymes (1972) proposes three units of analysis to examine the relationship between setting and communication:

- The *communicative situat*ion is the context in which the communication occurs - for example, a court trial, auction or university lecture - which will tend to have a consistent overall ecology in which communication takes place.
- The *communicative event* consists of a relatively unified interaction with a consistency of purpose, topic, participants, language variety and setting, and ends following a change in one of these factors or a period of silence. Some events may be highly spontaneous, such as a conversation between friends over coffee, whilst others may be highly formalised, such as the enactment of a religious ceremony.
- Finally, the *communicative act* is a single interactional function within an event which may be verbal or non-verbal.

Ethnography of Communication also examines the phenomenon of 'code-switching', meaning a participant switching from one set of communicative conventions to another:   as Saville-Troike (2008) notes, this is interesting from an ethnographic perspective as the switch may indicate a range of moves including group identification, solidarity, distancing, or softening or strengthening a demand. Code-switching also has interpersonal implications in the classroom: Lin (2008) argues that teachers use code-switching to signal a shift in the 'frame' of the interaction with the student, with possible frames including formal, institutional learning or friendly and informal.  In this study participants cannot be said to be 'bilingual' so the concept of code-switching is used loosely. By switching from AAC usage to informal embodied communication or Intensive Interaction conventions, students are not switching to a different 'language' but the implications of their switching between these ways of communicating may nevertheless be said to have parallel implications to those described by Lin (2008) above.

 A second approach explicitly addressing ethnography and communication is Kovarsky's (1988) 'Ethnography of Communication Disorders' which explores the nexus between language, culture and clinically identified communication disorders. This approach calls on practitioners to recognise the clinical significance of understanding the feelings, rationale and emic perspective of the person designated 'client' (Kovarsky, 2016).  Also taking an ethnographic approach to communication identified as disordered, Solomon (2008) finds that ethnography provides a helpful counterpoint to the clinical conceptualisation of a 'disembodied cognitive process awaiting remediation' (p.150) by locating children's communication *in situ.*  This, she argues, acknowledges them to be members of families and communities where they are 'socialised into sociocultural competence' (p.150) and where patterns of language use are always linked to particular cultural practices. An ethnographic approach has also been drawn upon to contest decontextualised identification of communication 'deficits' (Ochs et al., 2004), with the authors arguing that any interpersonal exchange unfolds in a sociocultural setting of organised practices, roles, institutions, beliefs and knowledge.  Taken together, these studies suggest that the use of an ethnographic approach to explore the communication of children with autism is

valuable in reminding us that 'while social functioning needs to be understood as a general domain of ability, it also needs to be examined as an on-line, real-time process involving knowledge of historically rooted and culturally organized social practices' (Ochs et al., 2004, p.157).

In summary, then, ethnography has been useful in studying communication *in situ* and contextualising how communication occurs within a complex web of relationships, practices and a material environment.  In the next section I consider what it might bring to the current study.

### 3.2.3 Contribution of ethnography in this study

In this section I reflect on what ethnography contributed to this thesis.  I do this firstly by setting out the influence of ethnography on my research design and process.  I then explain why I felt that an ethnographic approach was important in light of my chosen research title.

In Section 3.2.1 I explained that this study does not lay claim to being an 'ethnography' due to the relatively brief duration of fieldwork, but can be said to make use of ethnographic tools (Green & Bloome, 2004).  Nevertheless, the ethnographic approach to research influenced this study on multiple levels.  For instance, the research title and research questions of this study were framed to allow for a rich qualitative account of how communication unfolded in everyday classroom life.  Whilst investigating these questions I have endeavoured to be open about my own positionality as a researcher in line with the ethnographic approach (Chiseri-Strater, 1996): for instance, in Section 1.1 I set out my professional and family background which influenced the study, in Section 4.3 I discuss my location on the participant-observer continuum in the classroom, and in Section 4.3.4 I explain how I kept a reflective journal throughout fieldwork to allow space for personal reflection on my classroom experiences and observations.  The methods of data generation in this study, which are described more fully in Section 4.3, were chosen in order to generate data which would allow me to reflect on the emic perspectives of participants on the children's classroom communication, as well as providing rich

contextualised instantiations of classroom communication through multimodal transcription (Chapters 6-8).

My data analysis was similarly informed by ethnographic insights on research, beginning with a period of immersion in the full corpus of data and an iterative approach of going back and forth between different data sources and informants in order to glean a multidimensional view of communication in Purple Class (Section 4.5 expands more fully on this process). From this process I made decisions about which pieces of video data to foreground for the purposes of detailed multimodal analysis but ethnography informed my decision to undertake very careful and thorough contextualisation of these transcribed moments of interaction on three levels. Firstly, Chapter 5 provides overarching contextual detail on the staff and students of Purple Class as well as the material properties of the classroom and the typical nature of the school day. Secondly, each chapter of multimodal analysis (Chapters 6-8) begins with contextualising detail which focuses specifically on the communication contexts of snack time, Intensive Interaction and outdoor play respectively. Thirdly, each piece of multimodal data which depicted a short interaction (typically 1-3 minutes long) was contextualised with an introductory paragraph which drew loosely on the SPEAKING mnemonic suggested by Hymes (1967). This mnemonic provides a framework for researchers to contextualise interactions for their reader with reference to Setting and scene, Participants, Ends, Acts sequence, Key, Instrumentalities, Norms, and Genre. Whilst I do not adhere rigidly to these suggested categories, it was a useful guide to setting the scene for the reader to understand the context in which the depicted interaction arose. Finally, I undertake reflection about what the four transcripts presented for each identified communicative context might suggest about the practices, norms, expectations and routines of Purple Class in relation to the enactment of communication in that context by drawing upon relevant ethnographic literature, most commonly Ethnography of Communication (Hymes, 1972; Saville-Troike, 2008).

Having explained how ethnography influenced the research process of the current study, this leads to the question of what I hoped to gain from drawing upon

ethnographic approaches.  Firstly, as previously noted in Section 2.2.2, clinical literature which seeks to evaluate a particular AAC intervention often contextualises the study primarily with reference to the individual characteristics of the child and relatively few widen the analytic lens to look at the broader context of everyday classroom life (Pennington et al., 2007).  This in turn has implications for ways of conceptualising disability which were discussed in Section 2.2, since a focus on the child may potentially reinforce a within-child deficit model of disability whereas a wider focus on classroom context is more akin to the social model of disability which emphasises the role of environment.  As this study takes a critical realist perspective on disability (Section 2.2.5) I have endeavoured to maintain a balance between accounts of individual variation between children (Chapter 5) and ethnographic study of how the classroom environment may have shaped their communication.  This means that the study is relatively unusual in situating AAC use/disuse within the broader context of everyday classroom routines.

The second, related advantage of an ethnographic approach is that it is well-placed to yield insights into the busy classroom environment with competing interests and potentially limited time, budgets and training.  My own experience of classrooms in special schools is that they often bear limited resemblance to AAC literature which may evaluate an approach in optimal conditions such as a quiet space with no competing demands, a one-to-one staffing ratio and staff very highly trained in the approach being implemented.  Whilst such literature may have its own role to play in establishing what the approach being evaluated *could* offer minimally verbal children if implemented in ideal conditions, this needs to be counterbalanced with rich ethnographic descriptions of how such approaches are enacted in busy classroom environments and the challenges which they may pose for classroom staff.

Finally, I feel that an account of how and why the children of Purple Class communicated as they did in the classroom based entirely on detailed multimodal analysis of interaction is likely to underestimate the influence of a range of contextual factors exerting a very real influence on what is being observed, from the National Curriculum to special needs education policy to the accountability culture

which requires quantifiable progress data (Barber, 2011).  The possibility of complementarity between multimodal analysis and ethnography is expanded upon later in Section 3.5 where I justify my hybridised methodological framework in this study.  In the next section, I explore the potential contribution of Conversation Analysis to the current study.

## 3.3 Multimodal Conversation Analysis

### 3.3.1 Traditional (verbal) Conversation Analysis

Conversation Analysis (CA) is a methodological approach to the study of everyday talk in interaction. Naturally occurring exchanges are typically audiorecorded or more recently videorecorded, systematically transcribed and analysed in order to elucidate the taken-for-granted 'machinery of conversation' (Liddicoat, 2011, p.6). The 'Jefferson system' of transcription (Jefferson, 2004) is preferred, which provides highly detailed transcription of speech in addition to symbolic representation of interactional phenomena such as pauses, eye gaze, prosodic features, laughter and overlap.  According to CA, any given utterance is both *context-shaped* and *context-renewing*.  This means that it is constrained by the limited range of potentially relevant next actions made possible by the previous utterance of the interactional partner, and it in turn contributes to the sequentiality of the interaction by setting up its own limited range of potentially relevant next actions for the conversational partner (Heritage, 1984).

 CA has demonstrated through repeated empirical study how conversational partners enact certain features of conversation including openings and closings, turn-taking, adjacency pairs, preference organisation and repair.  Some of the identified regularities in interaction from a CA perspective which become relevant in this study are detailed below.

- Turn-taking is structured around the ***turn constructional unit*** (TCU), which denotes a recognizably complete and meaningful contribution in the ongoing talk (Sacks et al., 1974).

- Towards the end of a TCU comes a ***transition relevance place*** (TRP) which the speaker may subtly indicate by changes in syntax, eye gaze, intonation and/or prosody, and it is in the TRP that a change in speaker becomes a legitimate next action (Sacks et al., 1974).

- An ***adjacency pair*** denotes a pair of TCUs which belong together known as the 'first-pair part' (FPP) and 'second-pair part' (SPP), the FPP having a normative force in determining the content of the SPP (Heritage, 1984).  Commonly-seen types include a summons-answer sequence which is typically performed to establish identity and recipiency before the substantive conversation can begin; opening adjacency pairs such as greetings requiring a return greeting; terminal adjacency pairs such as the exchange of 'goodbye'; and questions which require an answer.  Failing to provide the expected completion would be considered an accountable action requiring repair (Goodwin, 1981).

- A speaker may intentionally secure for themselves an interactional space to take an ***extended turn*** at speaking such as telling a story (Sacks, 1992).  This is normally achieved by some form of 'pre-telling' or 'story preface' in order to ensure the ongoing recipiency of the listener during an extended turn which would otherwise be considered a violation of usual turn-taking conventions.

- A speaker may also ***hold the floor*** open for oneself to retain speakership despite a delay which might be occasioned by attempting to retrieve a word, phrase or idea (Clark et al., 2002).  This may be undertaken with devices such as *uh…* or *uhm…* or alternatively 'sound stretches' which involve lingering on and lengthening the current word, in order to make it clear that speakership is being retained and there is no TRP.

- Another feature of the 'machinery of conversation' is ***gap management***.  A slightly lengthened transition space between turns results in a gap which is not necessarily problematic if neither speaker is accountable for the silence, although if the gap occurs after the first TCU of an adjacency pair this would be interactionally problematic.  Typically, interactional work is undertaken to repair the interactional trouble in this situation such as the first speaker's repetition of or elaboration upon the first TCU already spoken (Liddicoat, 2007).

- Interactants may also need to undertake ***overlap management*** when a TCU is initiated before the previous TCU has been completed.  Schegloff (2000) notes that speakers have a range of strategies to manage overlap including cutting off the talk, repeating an element which may not have been heard, increasing volume or using a higher pitch, or using a faster or slower pace of talk until the overlap is resolved.  However, overlap is not inevitably problematic where for instance the overlap suggests enthusiasm, agreement with or support for the first speaker (Tannen, 1994).

-  CA also examines how interactants achieve ***closure***, which requires interactional work in order to ensure that everyone has had the opportunity to say what they intended and also to avoid the relationship being made vulnerable by perceptions of an abrupt disengagement (Liddicoat, 2007). Schegloff & Sacks (1973) argue that this is achieved by exchange of *terminal components* or TCUs ('*See you later'/ 'Bye then'*) although this point is usually preceded by conversational pre-closing sequences which set the stage for the terminal exchange.  During this pre-closing sequence 'each party declines at least one opportunity to continue talking' (Schegloff & Sacks, 1973, p.214) and indicates that there are no further 'mentionables' to be added to the conversation. This could be '*okay'/ 'alright'/ 'right'* with falling intonation which functions as a final chance to add any new information; an explicit warrant for ending the exchange ('*I gotta go'*); orienting to a future continuation of the exchange ('*I'll tell you all about it later'*); an appreciation ('*well thanks for letting me know'*); or a back reference ('*so we'll do it Saturday then'*) which suggests that there is nothing further to be added.

- Providing such appreciation or summary formulations gives rise to a ***closing implicative environment*** where it would no longer be an accountable action to perform an exchange of terminal components. However, a failure to collaborate in such pre-closing sequences is a potentially accountable action that may be interpreted as expressing anger, rudeness or hostility (Liddicoat, 2007).

Notwithstanding these insights derived from extensive empirical study of conversation, early CA literature has been accused of giving undue primacy to the role of verbal speech in communication (Erickson, 2010). This may be the case both in its early data collection methods - primarily audio-recordings - as well as its transcription practices which tended to focus on speech accompanied by eye gaze and 'non-lexical soundmaking' (Thomas, 1987) such as sighs, in-breaths and laughter. Whilst analysis of embodiment in interaction was certainly not absent from the early literature (see for example Enninger, 1987; Goodwin & Goodwin, 1986; Sigman, 1987), Nevile (2015) identifies a significant *'embodied turn' in* CA literature taking place from 2001 onwards which increasingly exploited video-recording technologies to enable visual representation and analysis of the role of the body in social interaction. This is explored in the following section.

### 3.3.2    The Multimodal Turn in Conversation Analysis

As noted previously, CA has become increasingly focused on analysis of the multimodal sequential organisation of interaction: according to Mondada (2016), CA brings 'careful and precise attention to temporally and sequentially organized details of actions that account for how co-participants orient to each other's multimodal conduct, and assemble it in meaningful ways, moment by moment' (p.340). By way of example, the same author studies the enactment of a surgical theatre procedure using Jefferson transcription juxtaposed with photographs and supplementary notation symbols for embodied action (Mondada, 2011). She notes 'a complex web of situated collective multimodal actions' (p.224) where multiple parallel streams of action, some compatible, some mutually exclusive, are fluidly co-ordinated through multimodal alternating and sequencing procedures. Stivers & Sidnell (2005) distinguish the vocal/aural from the visuospatial modalities, finding that one may support, extend or modify the other's interactional work and that both 'provide important resources in the collaborative production of emergent turns-at-talk'. (p.15). Goodwin (2011) uses Jefferson transcription juxtaposed with line drawings of participants to demonstrate how a man with aphasia and only three spoken words successfully participates in complex interactions. Lerner et al. (2011)

demonstrate with the use of video stills how an infant draws on the 'activity context' - the sequential structure of the caregiver's actions as she feeds another child - as a framework supporting the composition and placement of her own pre-lingual, embodied demands for food.  These studies point to the usefulness of CA in examining the role of the body in the sequential organisation of conversation. This leads to the further question of its potential usefulness specifically in cases of autism and AAC usage, as explored in the section below.

### 3.3.3   Multimodal Conversation Analysis, autism and AAC

The multimodal turn in Conversation Analysis, explained in Section 3.3.2 above, has been exploited in a range of CA studies of the communication of minimally verbal communicators with autism or other forms of disability.  For instance, Korkiakangas & Rae (2014) take a multimodal approach to Conversation Analysis to examine the interactional use of eye gaze by children with autism.  Dickerson et al. (2007) argue that *palilalia* - the repetition of one's own prior utterances - by a child with autism seems to constitute a pragmatic adaptation to interacting with a limited lexicon when analysed sequentially, whilst Stribling et al. (2007) use CA to similarly reframe *echolalia* - repetition of the previous speaker's utterance - as a productive form of interactional work.  Similarly, Samuelsson & Ferreira (2013) argue that both echolalia and *echopraxia* – repetition of the previous speaker's actions – can constitute a form of 'recycling' (p.146) which is a meaningful contribution to communication when analysed in a contextualised, sequential way.  Taken together, these studies might suggest that the CA emphasis on sequentiality has the potential to bring a significant analytic dimension to the current study.  However, a multimodal approach to CA is important here: as Muskett & Body (2013) argue, in the case of participants with minimal speech it is important for CA to adopt a multimodal orientation in order to facilitate analysis of participant's use of 'multiple semiotic resources including, but not limited to, talk' (p.837).

CA with a multimodal emphasis has also been used in analysis of AAC-mediated communication.  For instance, Bloch & Wilkinson (2004) illustrate how two AAC users attempt self-repair of communication problems via their devices, noting how

embodied and technologically aided modes co-exist in the phenomenon of conversational repair.  Similarly, Clarke et al. (2013) note how an AAC user switches his eye gaze from his device to his conversational partner as part of the speaker transfer negotiation, whilst Wilkinson (2013) observes an AAC user supplementing his speech with iconic gestures which contribute semantic meaning to the interaction but also accomplish social actions such as answering or repairing.  Taken together, these multimodal CA studies of atypical communication, disability and AAC usage point to its potential usefulness for analysis in the current study.

### 3.3.4 Usefulness of Multimodal Conversation Analysis in This Study

CA has certain advantages as an established approach to the systematic study of the sequential organisation of interaction.  Because it emphasises study of a child's utterances in the context of an unfolding sequential interaction with a partner, this has the potential to challenge and disrupt conventional understandings of individual 'deficit' in children with atypical communication (Muskett et al., 2010) and to bring into focus the role of the communication partner. Additionally, because CA strives to identify the functionality of an act within the unfolding sequence, it is well placed to uncover interactional significance in highly idiosyncratic acts which might otherwise have been dismissed or pathologised in clinical literature.  This therefore could constitute a fruitful perspective for considering multimodal video data.  However, other perspectives on multimodal analysis usefully foreground other dimensions of interaction which could also be highly relevant to minimally verbal children, in particular the concepts of modal intensity and complexity suggested by Multimodal Interaction Analysis.  These are discussed in the section which follows.

### 3.4. Multimodal Interaction Analysis

### 3.4.1 Conceptual framework of Multimodal Interaction Analysis

Multimodal Interaction Analysis or MIA (Norris, 2004) is an approach to multimodal analysis which produces transcripts of video data composed of video stills with overlaid text to explore how participants deploy multiple embodied and disembodied modes during their everyday face-to-face interactions, and provides a subsequent analytic toolkit for examining how the modes intersect and shape each other as the

interaction unfolds. Norris (2004) acknowledges a threefold lineage in the development of MIA.  From Interactional Sociolinguistics (Gumperz, 1982), it draws upon the idea that successful communication does not rely only on formal grammatical and lexical knowledge but importantly requires a considerable amount of social background knowledge relating to the socio-cultural context of interaction. For this reason, meaning-making must be studied as a dynamic, emergent process in interaction rather than in the decontextualised language of individual speakers. From Mediated Discourse Analysis (Scollon, 2002) it draws on the concept of the 'mediated action': actions, including communication, are always achieved by actors through the use of mediational means.  This serves as a useful reminder that as well as obvious forms of mediation such as AAC, speech and vocalisations are mediated through the materiality of the human vocal apparatus, whilst Makaton is mediated through the movement and gestural possibilities of the fingers, hands and arms. Finally, Multimodal Interaction Analysis draws upon multimodality (Hodge & Kress, 1988) to foreground the *a priori* equal analytic weight that is given to modes in analysis.

Multimodal Interaction Analysis foregrounds 'mediated action' or simply 'action' as the primary unit of analysis rather than mode.  Norris (2004) writes of 'higher-level actions' which are bracketed by an opening and closing of a meeting or interaction, and which in turn are composed of chains of 'lower-level actions' such as shifts in eye gaze, posture, proxemics, language, head movements, engagement and disengagement with the environment.  It is common for us to undertake multiple higher-level actions simultaneously which may be parallel or divergent depending on whether they are all contributing towards one or multiple aspects of our social world. Norris (2004) additionally argues that our simultaneous higher-level actions may be placed on a foreground-background continuum, with some dominating our attention and awareness and some occupying the mid-ground or background.

This conceptual framework consisting of higher-level actions organised on a foreground-background continuum, with the most salient for the actor in the foreground, and each composed of complex chains of lower-level actions provides

the basis for a theoretical account of how the interplay of multiple modes may contribute to the execution of a higher-level action.  A higher-level action which is in the foreground of the actor's attention and awareness will, according to Norris, possess high modal density.  There are two ways for a higher-level action to possess modal density.  Firstly, it may be a result of *modal intensity*, when one mode is intensely focused on the performance of the higher-level action, such as an emotionally charged conversation or an intense stare.  Norris argues that modal intensity may be recognised where the discontinuation of a particular mode would necessarily entail the discontinuation of the entire higher-level action, such as speech in the case of a rapid, emotionally charged conversation. Secondly, modal density may be achieved through *modal complexity*, when multiple modes of moderate intensity are orchestrated together towards the realisation of the same higher-level action. An example of this would be two friends having lunch, where modes such as posture, gaze, gesture, speech and head movement contribute in a complex modal configuration without any particular mode having intensity.  It is also possible for a higher-level action to contain both modal intensity and modal complexity, where one hierarchically structuring, intense mode jointly functions together with several other complexly intertwined modes.  These concepts of modal intensity and complexity do not seem to require the presence of language within an interactant's multimodal repertoire, but MIA has not yet been used in the context of children with autism or minimal speech.  Critical thought therefore needs to be given to its application in the current study, as detailed below.

### 3.4.2 Usefulness of Multimodal Interaction Analysis in this Study

This framework provided by Multimodal Interaction Analysis is particularly useful for this study for several reasons. Firstly, it provides useful tools for identifying the higher-level actions which are at the foreground, midground and background of a participant's attention.  Where both teacher and student are foregrounding the same higher-level action, Multimodal Interaction Analysis can elucidate how this shared attention is realised through the multimodal actions of each actor, and where they are mismatched, it can explore the interactional consequences of different strategies that a teacher might employ to address the mismatch. For instance, Norris (2004)

identifies that teachers may use 'means' – that is, a pronounced lower-level action which changes the course of the higher-level action - to realign the student's foreground with her own.  These actions may be divided into 'beats' -  an emphatic in/out or up/down movement such as an eyebrow flash, a head movement, a clap or a gesture' or 'deixis' - an action which has the effect of pointing the partner to a new higher-level action, either physically with a manual point or figuratively through directional language.  Alternatively, instead of working to 'pull' the student away from their foregrounded higher-level action, the teacher might instead choose to exploit the student's interest as a teaching opportunity by realigning her own foreground with that of the student, which would be indicated by an increase in modal density relating to that higher-level action.

Secondly, I would argue that the very nature of the framework gives a 'level playing field' to minimally verbal communicators insofar as it is easy to transfer concepts such as modal complexity and intensity to their communicative work without needing to appropriate terms clearly designed to describe verbal communication.  Minimally verbal communicators may still choose to participate in, reject or redirect higher-level actions chosen by adults as well as setting the agenda for interaction themselves by orchestrating their modal intensity and/or complexity at any given moment to achieve their interactional objectives. The framework offers a conceptual possibility for analysis of the 'voice' of a person without natural speech through their multimodal configurations and fluctuations in modal density relative to self- or other-initiated higher-level actions.

Having argued for the distinctive and complementary contributions of ethnography, CA and MIA, the section below considers how they work together in the hybrid methodological framework proposed in the current study.

### 3.5 The hybrid methodological framework developed for this study

In this study I adopt a hybridised methodological framework which draws upon both multimodal Conversation Analysis and Multimodal Interaction Analysis for the fine-grained examination of video data, alongside an ethnographic approach which

enables me to identify and analyse the wider layers of influence within which these interactions unfold.  In this section I explain firstly my reasons for combining multimodal analysis with ethnography, and secondly my reasons for drawing upon two different forms of multimodal analysis.

In relation to the decision to combine ethnographic methods with multimodal analysis, I felt that it was important to acknowledge that fragments of multimodal interaction are inflected by a range of diverse influences including staff beliefs and attitudes, school policies, planning and assessment practices, and more widely the National Curriculum and the adoption of communication intervention 'packages'. This conclusion is not new: for instance, Flewitt (2011) argues for the usefulness of situating a detailed multimodal analysis within the 'rich backstory' (p.307) provided by an ethnographic perspective, whilst Street et al. (2009) claim that 'an ethnographic lens gives multimodal analysis a social map' (p.197).  This dual focus provided by 'zooming in' with multimodal analysis and 'panning out' with the wider ethnographic location of data is particularly effective when it allows the researcher to identify in the data 'the legacies of special educational discourses and practices' (Flewitt et al., 2009, p.222).  Kress (2011) discusses the possible complementarity between ethnography and multimodal analysis based on the idea of 'reach' (p.241), asking what a particular methodological approach brings to a given research question and where its 'reach' runs out.   Similarly, Saville-Troike (2008) argues that from an ethnography of communication perspective the contextualisation of the wider communication culture and the fine-grained microanalysis of communicative acts and events within that culture 'are in a necessary complementary relationship to one another if an understanding of communication is to be reached' (p.106).  An ethnographic approach therefore allows for the positioning of fragments of interaction within wider considerations of the classroom communicative culture and the beliefs and values which participants attach to different ways of communicating.

However, it must be acknowledged that the admissibility of ethnographic contextualising detail is sometimes contested from a conversation analytic perspective in particular: McHoul et al. (2008) note a 'sequential purism' (p.43) in the

work of some CA scholars which argues that only aspects of 'context' which are empirically evidenced and invoked in participants' talk should be considered analytically relevant. Similarly, Maynard (2006) claims there is a 'limited affinity' (p.83) between CA and ethnography, with the wider-than-sequential context only admissible where it can be demonstrated to be procedurally consequential in the interaction. However, it could equally be argued that a detailed conversation analytic study without contextualising ethnographic detail risks obscuring, for example, imbalances of interactional power between participants deriving from their wider status in the community: CA sometimes appears to assume *prima facie* equal standing between interactants which can 'direct analytic attention away from partially shared resources, misunderstanding and unequal rights to define the procedures to be employed' (Svennevig et al., 2005, p.11). This is particularly pertinent in the case of minimally verbal participants who depend on others to decide the content of their AAC provision. Further, such reticence about the admissibility of ethnographic detail is not ubiquitous in CA literature, with Moerman (1988) calling for a 'culturally contexted Conversation Analysis' (p.6) that acknowledges the diverse ways in which historical background, context and rich cultural meanings play through local interactions. For these reasons, it is important to draw upon ethnographic contextualising detail as part of my hybrid approach in order to fully understand the relative positions occupied by participants as well as how their interactions may be shaped by wider educational concerns which inform the nature of classroom activities.

Secondly, I outline why I chose to draw upon two traditions of multimodal analysis in my hybridised approach. I was conscious from the outset that analysis of participants' communication required forms of both multimodal analysis and also multimodal transcription (Section 4.6.1) which were sensitive to the possible interactional significance of deeply unusual or atypical acts, and I could see potential advantages of both Conversation Analysis and Multimodal Interaction Analysis. For instance, Conversation Analysis attends specifically to the sequential functionality of speech or actions in interaction, and as noted in Section 3.3.3 this has been useful in elucidating the interactional significance of 'echolalia' (Stribling et al., 2007), 'palilalia'

(Dickerson et al., 2007) and eye gaze (Korkiakangas et al., 2014) for minimally verbal children with autism.  I therefore drew from CA a commitment to the sequential analysis of interactions on a second-by-second, time-annotated basis in order to elucidate what the sequential function of multimodal actions might be.  I also drew from Conversation Analysis an awareness of how verbal interactants typically behave in conversation, with regularities of behaviour around turn-taking, preference organisation and repair being now well-established with a large corpus of empirical evidence.  These conversational regularities derived from CA which were outlined in Section 3.3.1 are drawn upon by the current study in analysis of multimodal interactions in Chapters 6-8.  At the same time, I chose to hold these concepts loosely for the purposes of this thesis, drawing upon them where they appeared helpful in interrogating my data but simultaneously aware that some of the most fundamental assumptions of CA, such as eye gaze denoting attention to the speaker, may be based on observations of neurotypical participants and may play out differently in the cases of children with autism.

The framework of Multimodal Interaction Analysis, in contrast, focuses on analysis of how dynamic fluctuations of modal complexity and modal intensity are used to foreground or background higher-level actions for participants.   I found this to be a helpful perspective because the relevance of the conceptual framework of Multimodal Interaction Analysis to minimally verbal participants is immediately evident without the need to achieve a contrived 'fit' between atypical, embodied communicative acts and conceptual terms used to describe and index verbal language: as Machin (2009) asks, 'should we be using models that were designed to study language to think about everything else?' (p.181). In this case, Norris' (2004) model is directly relevant to verbal and minimally verbal participants alike: the participants in my study are capable of actively deploying modes in ever-changing configurations of varying intensity and complexity just as verbal communicators do, and there is therefore no sense of contrivance in using the model to interrogate the data.  I was also drawn to Norris' (2004) preference for transvisuals comprised of annotated video stills as a primary transcription method rather than as an occasional adjunct to a primarily verbal transcript.  I found this emphasis on the visual to be

more suited to the study of interactions which I anticipated as being predominantly embodied and spatial with minimal or no verbal speech to transcribe. The influence of Multimodal Interaction Analysis on my transcription decisions is further explicated in Section 4.6.1.

In summary, I felt that the three approaches of ethnography, Conversation Analysis and Multimodal Interaction Analysis brought distinctive yet complementary contributions to my hybridised framework in this study. CA brings a sequential understanding of the potential functionality of multimodal actions by close attention to temporal unfolding of the interaction as well as an established body of empirical evidence on how (neurotypical) interactants often behave, whilst MIA foregrounds the variations on modal intensity and complexity across the interaction and the subsequent implications for the actions which achieve prominence in the interactants' continuum of awareness. Ethnography provides a frame for contextualising these detailed microanalyses of interactions within the relationships, roles, expectations, practices and accountability frameworks of the setting. All three therefore a drawn upon in order to achieve a fuller understanding of communication and agency within Purple Class.

### 3.6 Conclusion

In this chapter I have presented the ontological and epistemological foundations of this study, arguing for a critical realist perspective which combines a realist view of phenomena such as disability and agency with a critical epistemological perspective on the extent to which one can arrive at a definitive account of such realities. I then proposed a hybridised methodological framework for the present study which draws upon elements of ethnography, multimodal Conversation Analysis and Multimodal Interaction Analysis. I argued that each perspective brings something distinctive to the analysis of minimally verbal multimodal communication: ethnography brings an understanding of the established communication norms, practices and regularities between participants; Conversation Analysis brings a systematic and sequential dimension to the study of how interaction is organised by participants; whilst Multimodal Interaction Analysis uses the concepts of modal complexity and intensity

to examine how participants achieve their interactional goals.  I therefore decided to draw upon all three in order to benefit from their distinct but complementary perspectives to the data in the present study.

In the chapter which follows, I explain the research methods which were adopted in this study as a result of this methodological framework.

## CHAPTER 4: METHODS

### 4.0 Introduction

In the previous chapter I presented the methodological framework for undertaking this study.  In this chapter I lay out in detail the specific methods which were used to generate, transcribe and analyse data.  Section 4.1 introduces the school where the research was conducted for the purposes of contextualisation, whilst Section 4.2 introduces the child and adult participants in the study.  In Section 4.3 I describe the ethnographic methods which were used and I itemise the data set which was subsequently generated.  In Section 4.4 I reflect on the ethical implications of undertaking this study.  Section 4.5 explains the process of moving from analysis of the total data set to the selection of data which would be interrogated in greater depth, and in Section 4.6 I explain the approach taken in this study to the transcription of audio and video data.

### 4.1 The Setting

The school in this study is a maintained special school in the Midlands of England, offering provision for children aged 4 to 11 with moderate learning difficulties, severe learning difficulties and/or ASD.  All pupils attending the school have a Statement of Special Educational Needs/ EHCP.  A large majority of pupils are White British, and a greater than average proportion of pupils are disadvantaged.  The school was selected as the setting for the study on the basis of four factors: its geographical accessibility to the researcher; the expressed enthusiasm of the school for participation in the study on first contact; their provision of small autism-specific classes which made good potential settings for fieldwork; and the explicit provision of an autism policy and associated approach to 'social development and interaction' on their school website.  Initial contact was by letter with the school's assistant headteacher as there was no headteacher in post at the time of the study, and he acted as gatekeeper to the setting and gave the initial consent for the study to proceed.

Students in this school are placed in small classes, typically 5-10 students, based on the nature of their identified special educational needs rather than by chronological age.  The classes are then given thematic names since their students may span a range of year groups.  The school offered me a choice of three autism-specific classrooms in which to base my study.  After visiting all three, I selected a class I will refer to as 'Purple Class'.  I chose Purple Class for two reasons: it had the smallest number of students (five) making it feasible to include all students in the study, and staff in the classroom showed much enthusiasm for involvement in the project.  The staff and students of Purple Class are listed in Section 4.2, and then described more fully in Chapter 5.

The communication observed in Purple Class cannot be fully understood without reference to wider contextual factors, including how school communication policy drew from pedagogical approaches to communication such as PECS and Makaton.  The 'School Aims' section of the school website talks of providing 'a Total Communication Environment that maximises pupils' language skills' (School Website, accessed 1 January 2015).  As outlined in Chapter 1, 'Total Communication' is an approach which suggests that individuals should have recourse to any combination of 'communication tools' to maximise their communicative success including manual signing, visual symbols, Intensive Interaction, photographs, objects of reference or IT software, and use of embodied communication strategies such as touch, eye gaze and facial expression (Jones, 2000).  This commitment is further explained in the school's Autism Policy which argues that 'different children may need a different 'mix' of the best known approaches to meet their needs' (accessed 1 January 2015), and then goes on to list PECS, Makaton and Intensive Interaction as three key communication approaches.

My observations suggested that the generation of 'evidence' of communication progress was a significant factor in shaping classroom life: three out of five students had communication targets on their Individual Education Plans (IEPs) which related to requesting using formal communication systems (single word spoken requests in the cases of Luke and Dominic, PECS requests in the case of Albert), and sometimes at

snack table a member of staff would sit with a folder recording evidence of the student's performance.

Having described the setting for this study, the next section goes on to give an overview of the participants involved in the study.

## 4.2 The Participants

In the following tables I give a brief overview of the staff and student participants taking part in the study. Further description of the staff of Purple Class can be found later in Section 5.2, whilst a more comprehensive description of each child participant drawing on ethnographic data which addresses their communication is located in Section 5.3.

*Table 1: Staff Participants*

| Pseudonym | Role | Notes |
|---|---|---|
| **Lizzie** | Class teacher, full-time | Lizzie was a part-time class teacher in Purple Class before Christmas when consent forms were signed, but became the full-time class teacher in January following the redeployment of Katherine to another class.  She was therefore the full-time class teacher for most of the fieldwork period. |
| **Katherine** | Class teacher, part-time | Katherine shared the teaching of Purple Class with Lizzie before Christmas and in the first days of the new year before redeployment elsewhere, and she featured in some of my early observations and fieldnotes (for example, Appendix A). |
| **Jacqueline** | Teaching assistant, part-time | Jacqueline worked three days per week in Purple Class. |
| **Helen** | Teaching assistant, supply | Helen had only recently started work at the school as a teaching assistant from a supply agency. |
| **Jane** | Teaching assistant, part-time | Jane worked three days per week in Purple Class but was full-time in the school, working her other two days elsewhere. She had been at the school for many years and could remember the children in the study when they first started school. |
| **Frances** | Teaching assistant, full-time | Frances was the only full-time teaching assistant in Purple Class. She was often observed to be given responsibility for managing paperwork relating to the children such as documentation of evidence of attainment. |
| **Luis** | Music Therapist | Luis visited once a week for a short Music Therapy session with all five children together.  His role is documented in some fieldnotes and video data although he is not portrayed in the transcribed and analysed data as Music Therapy was ultimately not chosen as an analytic focus. |

*Table 2: Student Participants*

| Pseudonym | Age | Diagnosis/es received | Notes |
|---|---|---|---|
| **Albert** | 8 | Autism Spectrum Disorder | For fuller description see 5.3.1 |
| **Anna** | 7 | Autism Spectrum Disorder | Home language is Polish<br><br>For fuller description see 5.3.2 |
| **Dominic** | 8 | Autism Spectrum Disorder | For fuller description see 5.3.3 |
| **Luke** | 6 | Autism Spectrum Disorder; Global Developmental Delay | For fuller description see 5.3.4 |
| **Thomas** | 7 | Autism Spectrum Disorder; Global Developmental Delay | Home language is Polish<br><br>For fuller description see 5.3.5 |

Having given an overview of the setting for the study (Section 4.1) and the participants therein (Section 4.2), I go on to describe in the next section the process of data generation during fieldwork.

**4.3 Data Generation**

I spent six weeks (one half-term) in Purple Class, in a role that varied on a participant-observer continuum: I sometimes helped out with simple classroom tasks such as tidying or fetching required items, most typically when one or more member of staff had left the classroom and it seemed like an extra pair of hands would be useful for the remaining teaching assistants, whilst at other times I pulled back from participation and was primarily focused on gathering data. This is consistent with the argument of Blomberg et al. (1993) that different scenarios within the same study will provide opportunities for researcher to position themselves at varying points on a fluid participant-observer continuum and the researcher's role need not be regarded as a dichotomous choice. At the beginning of fieldwork I made it clear to classroom staff that I was happy to assist with any classroom tasks required of me. This was done partly on ethical grounds – in terms of beneficence (Section 4.4.1) it

felt only fair to be helpful toward participants who were opening their classroom to research scrutiny - but also because it was helpful to the study in enabling me to glean insights from both an observer and participant perspective. Schensul & LeCompte (2013) argue that participant observation can give the researcher a deeper understanding of how people relate to each other within the community being studied, and I found this to be true as I re-read my fieldnotes which ranged from notes taken from an observer standpoint as I watch staff enact an activity without my assistance to retrospective writing up of my own involvement with the children and classroom activities.  Finally, Bernard (2017) argues that the researcher's participation in the activities of the community can foster a sense of trust which increases the likelihood of participants opening up and sharing their emic perspective with the researcher.  I felt that this was the case in this study, as my many informal brief exchanges with staff about the events of the day were often rooted in prior joint participation.  I therefore felt that there were multiple advantages to remaining flexible about my location on the participant-observer continuum as events unfolded each day.

Six weeks was the access period granted by the school, and such a relatively short time-frame makes some aspects of research possible but not others.  For instance, my approach could be argued to be 'time intensive' rather than 'time extensive' (Knoblauch, 2005): I was able to use the time to gather significant quantities of videorecorded data which I could then immerse myself in over the ensuing months and interrogate using detailed multimodal analysis.  This echoes what Hammersley (2006) refers to as a turn to 'micro-ethnography' which has been enabled by technological advances in audio- and video-recording.  I was able to observe all five children repeatedly in a range of communicative contexts which were part of their everyday classroom life: activities such as 'snack time', 'Intensive Interaction' and 'outdoor playtime' happened at least once daily, and so repeated observations allowed me to form a view of what constituted their typical enactment as well as what was relatively anomalous.  A longer fieldwork period would have generated additional insights: for instance, the possibility of an over-time perspective on the development of the children's communication skills throughout the year, or perhaps

a deepening relationship of trust with staff which might have facilitated more candid exploration of potentially sensitive topics such as physically 'challenging behaviour'. It would also have allowed me the luxury of a longer acclimatisation period in the field to 'hang out' with participants before beginning research in earnest: as Sharma et al. (2016) note, this has multiple advantages including building rapport with participants, introducing the study's aims and objectives and absorbing elements of the emic perspective on community events.  In the current study I took one week at the beginning of fieldwork to be present in the setting without videoing or taking notes, which was valuable insofar as it allowed me to orient to the need for sensitivity toward certain students who might be easily distressed by a sudden approach from a relative stranger, although a longer acclimatisation period would have undoubtedly facilitated a deeper immersion in the life of Purple Class and been instructive in guiding my subsequent data collection decisions.  However, given these caveats, I would argue that this relatively short fieldwork period did yield some valuable insight into how the children were communicating in Purple Class at this point in their educational trajectories.

Table 3 provides an overview of the data generated through this study, most of it during the six week period of fieldwork with the exception of the staff interviews which took place three months after fieldwork ended.  The reason for this interval was that I wanted to have time to undertake some initial sorting and analysis of my video data in order to inform my interview questions.  I then go on to describe each research method and what it brought to the study (Sections 4.3.1 to 4.3.6).

*Table 3.   Summary of data generated in this study*

| Data | Quantity |
|---|---|
| Videorecordings of classroom interaction | 134 recordings with a total play time of 6 hours 25 minutes. These are listed individually in Appendix A. |
| Fieldnotes | Total 18,122 words.  A sample day is shown in Appendix B. |
| Photographs | 42 photos.  Six of these are shown in Appendix C. |
| Reflexive Journal | Total 6,782 words (12 entries). |
| Documents | <ul><li>Class timetable (shown in Appendix D)</li><li>Termly planning document</li><li>School Autism Policy</li><li>Screenshots of webpages within school website which contained reference to Purple Class, autism or communication</li></ul> |
| Documents (note form only) | Notes from:<ul><li>Individual Education Plans (IEPs)</li><li>Individual Behaviour Plans (IBPs)</li><li>Statements of Special Educational Needs</li></ul> |
| Interviews with staff | <ul><li>Four photographs from card-sorting exercise, shown in Appendix E</li><li>Interviews with:<ul><li>Lizzie [class teacher] [30.11 mins audio]</li><li>Jacqueline [Teaching Assistant] [18.00 mins audio]</li><li>Jane [Teaching Assistant] [41.49 mins audio]</li><li>Frances [Teaching Assistant] [26.07 mins audio]</li></ul></li></ul>The interview schedule I used is shown in Appendix F. A sample page of transcription from Lizzie's interview is shown in Appendix G. |
| Parent Interviews | <ul><li>Interviews with:<ul><li>Albert's family [46.06 mins audio]</li><li>Anna's family [1:00.15 mins audio]</li><li>Dominic's family [1:22.49 mins audio]</li><li>Luke's family [no audio – 954 words notes]</li><li>Thomas' family [1:15.50 mins audio]</li></ul></li></ul>A sample page of transcription from interview with Albert's mother is shown in Appendix H. A sample section of the IPCA document which was used as a framework for the interview is shown in Appendix I. A sample page from the notes from the interview with Luke's family are shown in Appendix J. |

## 4.3.1 Video-recording

I used a small handheld videorecorder to capture instances of interactions in Purple Class.  These were typically very brief, ranging from less than a minute to twenty minutes with the majority being under five minutes (see Appendix A).  This was because the children of Purple Class were usually moving around unless engaged in structured seated activities such as snack time, and interactions were frequently fleeting.  Their need for frequent movement and changes of activity was accommodated in the timetable, where very short bursts of learning were typically interspersed with 'choose' sessions where students could move freely around the classroom and explore toys and resources.  Occasionally I was drawn to interactions which arose in the transition spaces between organised activities, as was the case in *'Interacting with Gestures'* (Section 7.3).

The researcher cannot avoid making decisions about what to video and what to omit as well as how to frame the recording in terms of camera angle, start and end point, and such decisions inevitably have implications for data generation and subsequent analysis (Jewitt, 2012).  My decisions about what to video were partly guided by my research questions: I endeavoured to retain a focus on multimodal interactions and consciously tried to include a balance between interactions which contained AAC and those which did not as well as a balance between student-staff and peer interaction. I was additionally conscious of the need to ensure that less obviously communicative students were not underrepresented in footage and that the footage portrayed a range of the classroom activities.  Often, however, my decision-making was based on my own immediate responses to events unfolding in the classroom, and the video camera would be quickly turned on when an interaction caught my attention. Sometimes, the possibility of video recording was simply precluded by pragmatic considerations such as the presence of non-participating students or staff from another class, or the difficulty in getting a good camera angle without disturbing the activity. Inevitably, the decision to take a relatively *ad hoc* approach to videoing interactions which were of interest to me and seemed to speak to my initial research questions (Section 1.5) brought certain advantages and constraints: Erickson (2009)

might argue that such an approach lacks assurance of the typicality of depicted interactions which would be gained from a more systematic sampling process. However, as Jewitt (2012) argues, it is also feasible to use overarching research questions to frame initial video collection decisions and to subsequently refine one's research focus through repeated viewing of video data, and this is the approach which was taken here. It is therefore acknowledged that the video data collected in this study does not constitute a complete representation of communication in Purple Class and there will have been many communicative incidents which did not capture my attention and subsequently were not represented in my corpus of video data.

Almost all the video data depicted in this thesis was taken in the classroom or the adjacent enclosed outdoor space, except for one scene (*'Give Me a Push!'*, Section 8.2) which was taken on a visit to a local playground. Sometimes I experimented with positioning the camera statically with a tripod which could be useful when I knew that students would be remaining seated for at least a few minutes, but more usually I held it myself for maximum flexibility. When 'framing' an interaction with the camera, I endeavoured to include all interactants as well as materials or furnishings which appeared interactionally relevant, which is consistent with my conceptualisation of 'Purple Class' as constituting people, artefacts, physical space and layout and routines and practices enacted therein (Chapter 5).

### 4.3.2 Fieldnotes

During fieldwork I took written fieldnotes on a daily basis and typed them up that evening. Fieldnotes detailed the date and time, the setting/ lesson activity being observed, who was present and notes on the communication which was taking place. They also recorded the many short informal chats I had with staff about their interpretation of a particular event or interaction. As with video recording, my fieldnotes were inevitably selective and guided by my own responses to emergent events in the field as well as my theoretical interests as stated in my research questions. Emerson et al. (1995) argue that ethnographic fieldnotes tend to emphasise one of two techniques: either *the salience hierarchy* which involves noting down events which subjectively strike the researcher as salient, often because they

are perceived as anomalous; or *comprehensive note-taking* which means endeavouring to write regularly about everything that transpires including the mundane and usual.  This latter approach may be done using the timetable of the community being observed as a frame for observations.  As can be seen from Appendix B, my own approach was perhaps closer to the second of these: the natural daily rhythm of Purple Class involved a lot of very short activities with frequent changes, with organised activities rarely scheduled to last beyond ten or twenty minutes at the maximum and 'choose' (free play) sessions slotted in between organised activities.  I therefore tended to use the frequent transition points as reminders to make a note of the time and write my observations of what was happening.  However, there were elements of a salience hierarchy in my fieldnotes too: after having observed snack time multiple times, for example, I tended not to take notes on staff-student exchanges which seemed predictable or regular and was more likely to write about interactions which appeared anomalous in some way. This focus, as Bezemer & Mavers (2011) note in the context of transcription, can 'direct attention to 'telling', 'critical', or 'key' clips in which social norms – ways of saying and doing things which are normally taken for granted – become subject to (re)negotiation' (p.4), and was later to influence the emergence of 'agency' as a theme emerging from my data.

### 4.3.3 Photographs

I took a total of forty-two photographs of the classroom layout in general as well as particular artefacts which were salient in observed interactions so I could later reflect on how these may have shaped classroom interactions.  Examples are provided in Appendix C. In general it was not necessary to draw extensively on the photographs because classroom video data could be used to extract video stills which simultaneously illustrated classroom layout and participants, although they were useful for close up depiction of artefacts such as symbol-based classroom resources (for example, Figure 15).

### 4.3.4 Reflexive Journal

In parallel with my fieldnotes, I separately kept a reflexive journal to provide a space to reflect on my thoughts and feelings about what I was observing. Twelve diary entries were written in total: I did not feel the need to write an entry on every day of fieldwork but rather once every few days to reflect on the evolution of my thinking about communication in Purple Class. Like Ortlipp (2008), I found that my reflexive journal constituted a useful space for exploring my thoughts, reflections and responses to the day's observed events as well as my own role as researcher. Ottenberg (1990) writes of the interaction between fieldnotes which are relatively static once recorded and 'headnotes' which are ever-evolving impressions and experiences of the field which are too vast to record. The reflexive journal was a place where the relationship between fieldnotes and headnotes could be safely explored as I contemplated my evolving impressions of Purple Class. The diary was also a space to consider emergent themes, patterns or phenomena of interest which might merit further exploration, as well as considering possible links between the day's observed events and existing literature. It also permitted me to explore the ethical and methodological issues which arose as fieldwork progressed and to reflect on the advantages and limitations of the decisions I had made regarding research design.

### 4.3.5 Documents

I collected a range of documents which seemed to have the potential to contextualise what I was observing in the classroom (Appendix D). Relating to individual students, I collected the following: current IEP (Individual Education Plan) and IBP (Individual Behaviour Plan) targets; information from their 'Pen Portraits' which was a quick-read summary of information considered essential about each child for a newcomer to the classroom; records of 'wow' moments or achievements which were celebrated with a note on the 'wow' noticeboard; and records from each student's literacy folders. I also read and took notes relevant to communication from each student's Statements of Educational Needs/EHCP as it was not possible for the document to be copied due to confidentiality and data protection. In relation to Purple Class, I

collected planning documents for whole class activities and individualised interventions, the class timetable, and the webpage content for Purple Class on the school website. At school level, I collected the school's Autism Policy and relevant content from the school website relating to autism and communication provision. Finally, I was already in possession of practitioner training material relating to the three primary approaches used for communication teaching in this class which were PECS, Makaton and Intensive Interaction.

### 4.3.6 Interviews

Three months after fieldwork ended, I returned to the school to undertake audiorecorded interviews with four of the five members of staff who had participated in the study (one was not available for interview). The interview schedule is shown in Appendix F. I felt that it was important to obtain the emic perspective of staff in order to deepen my understanding of why everyday activities were enacted in the way they were in the video data. The interview began with a card-sorting exercise which was as open as possible in order to avoid imposing my own 'etic' categories as the outside observer. Staff participants were given blank cards, invited to reflect on the range of communication contexts they thought that students encountered in their everyday classroom life and to write one per card. They were then invited to add to each card any particular patterns of multimodal communication or dominant modes which they associated with this context, and to arrange the cards on the desk with perceived communication dis/similarity indicated by grouping and distance of cards. The arrangement of cards was photographed for my records (Appendix E) and formed the basis of the first half of the interview, during which I invited staff to reflect upon and explain more fully the communication contexts they had identified and possible explanations for identified variance or similarity in how children communicated across these contexts. This was a variation on more traditional card-sorting approaches which typically consist of cards which have been pre-written by the researcher and may additionally contain pre-existing categories for sorting purposes (Rugg & McGeorge, 2005), and was a useful way to elicit staff perceptions of student communication without the imposition of researcher-led categories. It additionally provided a useful springboard for reflection and discussion in the

subsequent interview around questions such as why AAC is strongly associated with some contexts but not others.

 At the same time, I noted that staff identification of communicative contexts seemed to largely follow the labelling of timetabled activities which they were directly responsible for planning. For instance, Music Therapy was not identified by any staff member possibly because it was delivered by a visiting specialist, and neither was outdoor play time which involved only minimal staff supervision.  I therefore considered the data from this approach alongside my own observations of the children's behaviour in different activities and environments.  It is acknowledged, however, that even by combining the staff perspective with my own observer perspective this does not necessarily encompass every communicative context as perceived by the children of Purple Class.  For the final part of the interview, I showed the interviewee an example of a multimodal transcription in which they were depicted and invited discussion of the transcription method.

I also conducted audio-recorded interviews with four families of the student participants: one family declined audio-recording and I relied on notes from this session instead.  The interview schedule is shown in Appendix G.  My aim for this session was to elicit information from parents about how their child communicated multimodally in the home in order to enable me to reflect on the convergence and divergence of students' communication at home and at school.  I wanted questions to be as open-ended as possible in order to open up opportunities for parents to expand and elaborate upon their narratives, but I was equally conscious of the possibility that without explicit prompting parents might restrict their discussion of 'communication' to modes which have been legitimised by their child's communication targets such as speech and AAC.  I therefore found a compromise in the form of the *Inventory of Potential Communicative Acts* or IPCA (Sigafoos et al., 2000) which was described previously in Section 2.1.6.  This provides open-ended questions about the child's multimodal communication choices in different contexts, but allows for considerable participant freedom by actively inviting anecdotes and examples.  I might therefore have begun by asking 'How would your child

communicate that they are happy about something?' and then asked the parent to recount incidents when this had happened.  An example question from the IPCA is shown in Appendix J.  This was followed by some questions of my own regarding the child's communication at home and the extent to which practices such as Intensive Interaction and AAC were used in the home setting.

Having described how data was generated in Section 4.3, I now go on to reflect on the ethical implications of conducting the study (Section 4.4).

## 4.4 Ethical Implications of This Study

This project was carried out in line with the BERA Ethical Guidelines for Educational Research (BERA, 2014) and was approved prior to commencement of fieldwork by the Faculty of Development and Society Research Ethics Committee at Sheffield Hallam University.  A copy of their approval confirmation letter is included in Appendix L.  The document *Research Ethics Policy and Procedures* (8th ed.) of Sheffield Hallam University (2017) identifies six key principles of research ethics: beneficence (doing positive good); non-malfeasance (doing no harm); informed consent; confidentiality and anonymity; impartiality and integrity.  These are each considered in turn.

### *4.4.1 Beneficence*

I was mindful that by consenting to take part participants were helping me in my doctoral studies and I endeavoured to ensure that they in turn derived some form of benefit from the study.  It is hoped that the five students of Purple Class derived some benefit from the time I spent in their classroom as I assisted them with various everyday activities and enjoyed spending time interacting with each of them using the principles of Intensive Interaction to which they were accustomed. Additionally, I observed the delight the children took in looking at photos and videos of themselves during 'reflection time' at the end of each day, and so at the end of fieldwork I created a laminated photobook for each child consisting of video stills depicting a range of their happy and engaged moments in the classroom and sent a copy home

to each family to share with the child.  I also left copies in the classroom for their perusal. Some sample pages from the photobooks can be seen in Appendix R.

With regards to classroom staff, I endeavoured to be helpful in the classroom by assisting with classroom tasks such as tidying resources.  I also compiled a written summary of the range of multimodal communication I had observed for each child individually and gave these to the class teacher.  This was a form of feedback which she suggested would be particularly helpful in terms of evidencing progress and also in terms of learning about their communication practices in the home, a topic which interested her but which she did not have time to investigate. Finally, in relation to parent/carer participants I provided them with a copy of the same written report of their child's multimodal communication strategies.  It is my hope that this was a positively worded, affirmative document focusing on what their child *could* communicate which might provide a counterbalance to the more usual medicalised reports on children with diagnoses. For both parents and classroom practitioners, I hope that involvement in the research was also a satisfying experience in that the ethnographic methods, particularly interviews, valued and invited expression of their emic perspective and gave them a chance to explore their thoughts about the children with someone else.  Two teaching assistants commented that it was a positive and thought-provoking experience to have time to stop and reflect on classroom practice, as the typical day is busy and leaves little time for reflection.

### 4.4.2 Non-malfeasance

The principle of non-malfeasance urges the researcher to ensure that the research does not cause harm, difficulty or inconvenience to any participants.  For students with autism, I was very aware that the presence of a new person in their classroom was a potential source of anxiety, and did not approach any individual child to observe them or undertake video-recording until they were freely approaching me with what I considered to be behavioural indications of curiosity and ease.  I also consulted staff and followed their guidelines in this regard.

In terms of decisions regarding the appropriateness of video-recording children, I felt that the camera should not be used in the following situations:

- where the children were less than fully clothed - for instance receiving toileting or personal care assistance or getting changed;
- there was any suggestion that the camera was causing them distress;
- it appeared to be constituting a distraction from the task staff wished them to complete.

After some deliberation, I also made the decision not to film the children during periods of distress and/or physically challenging behaviour: there were infrequent instances where children were screaming, hitting staff, and being physically restrained and/or sent to the enclosed outdoor area on their own which I chose not to film. From the perspective of the research this might be considered a loss of potentially valuable data since the use of behaviour deemed challenging might constitute an important part of a minimally verbal child's communicative repertoire and therefore of their personal agency (Dreyfus, 2006). However, my eventual decision to put down my camera at these moments was guided by my instinct that filming such moments made me part of a sort of Panopticon (Foucault, 1977) which kept the children under constant processes of surveillance, assessment, discipline and diagnosis even in their most vulnerable moments. A further dilemma arose when considering whether to continue filming when a student was performing an action which would be considered a misdemeanour by staff when staff had not yet noticed it, or whether to intervene, such as one child repeatedly rearranging the symbols on the class visual timetable. In the end, I concluded that although my presence was probably not encouraging the action since the child's attention was absorbed with the symbol cards, it would be better to not video record such contentious moments: as Price (1996) argues, it is better to 'compromise the research rather than compromise the participants' (p.207).

Overall, however, it should be said that the camera did not appear to elicit from children anything other than mild curiosity and a fleeting awareness of its presence.

To place this in context, the children were frequently photographed by staff as they engaged in activities as documented evidence of their attainment which would be printed and glued into their folders, so the presence of cameras was an everyday feature of classroom life.

Finally, I considered the possibility that my presence in the lives of these children for six weeks only might cause harm in some way. Stalker (1998) notes that for people with learning disabilities, the presence of a researcher can simply add to 'the succession of different faces drifting in and out of people's lives' (p.10) which they are not able to control.  Conversely, as Nind (2008) has argued, a participant with learning disabilities may misconstrue a researcher as a personal friend, with their subsequent departure causing hurt.  As I stayed for only six weeks in the classroom, I felt that the former scenario was more likely to be the case than the latter.  This was a source of regret for me although I did not see any alternative as ongoing involvement in the children's lives beyond the agreed end of fieldwork was not possible.

For classroom staff, I was aware that video-recording in a classroom may be perceived as yet another layer of intrusive and potentially judgemental scrutiny in the already highly scrutinised profession of teaching.  As Flewitt (2005) notes, the use of visual images can render practitioners 'vulnerable to criticism, anxiety and self-doubt' (p.6).  At the time, I felt that I took sufficient steps to avoid harm, stress or inconvenience to participants.  In addition to explaining the study formally through information sheets I chatted informally with staff about my research, I stopped filming where there was any indication that a situation was stressful, challenging or in any way difficult to manage, and I asked staff to indicate if video-recording was undesirable to them in any given situation, assuring them that to stop filming would not be a problem.  I also endeavoured to be helpful to staff to the greatest extent possible, assisting with tasks around the classroom and avoiding any research activity which could interfere with the progress of a lesson.  However, in retrospect I now think that as an inexperienced researcher I possibly underestimated the extent to which video-recording in the classroom is a daunting prospect for classroom

practitioners.  This is particularly true in the context of a six week study where I did not have the luxury of time to slowly build relationships, confidence and trust as I might have liked.  This in turn may have contributed to the dilemmas outlined above where I shied away from filming or otherwise recording difficult or challenging situations, which might have become possible in the context of a more gradually negotiated relationship.

I was also aware of the implications of portraying staff in video stills.  Staff were fully briefed about this being the case and had been provided with examples of what a visual transcript would look like before giving consent (Appendix P), yet as Flewitt (2005) notes, life circumstances can change and with that can come corresponding shifts in attitude about what was once consented to.  I was also conscious that there are many points of contact and overlap between the educational academic and practitioner communities, and that anyone associated with this school community might subsequently read my thesis and recognise the participants therein.  This was a difficult balancing act.  Due to the nature of the multimodal analysis in the thesis I felt that I could not, for example, compromise on the necessity of depicting facial expression, but I took steps to reduce visual identification (see discussion of Confidentiality/ Anonymity).  I was also mindful of how I portrayed staff participants in my data and my subsequent analysis, and at times I experienced this as dilemmatic.  On the one hand, it was tempting to focus my data selection on moments which I interpreted as positive, fun, constructive multimodal interaction in order to protect participants from any possible future discomfort should they peruse the thesis.  On the other hand, as outlined previously in the context of challenging behaviour, to discount interactions which appeared to invoke disinterest, lack of motivation or even active hostility from students would be to write a very partial account of the Purple Class experience.  I therefore chose to include, for example, *'The Banana Conundrum'* (Section 6.2), which depicts Anna grabbing a teaching assistant's arm in what appears to be frustration at what is being expected of her.  At the same time, I hope it is apparent from my analysis that I considered this frustration to arise from a complex range of factors including school policy around

PECS and Total Communication rather than being in any way a personal indictment of an individual practitioner.

Finally, I considered non-malfeasance in relation to the parent/carer participants in the study. I remained mindful of the psychological pressures faced by some parents when their child receives a label of autism, which may include feelings of parental incompetence and susceptibility to depression and stress (Dunn et al, 2001), ongoing uncertainty about their child's long-term trajectory (O'Brien, 2007) and self-blame (Altiere et al, 2009). I therefore endeavoured to speak positively about their child's competence at undertaking communication through modes other than speech and to elicit examples of such creative meaning-making in the home. I was also conscious that raising the issue of AAC (Makaton and/or PECS) and whether or not it had 'travelled' across the home/school divide might be understood as a judgement or allocation of blame if it was not in fact used in the home, so I endeavoured to phrase such questions tentatively and very much in the context of exploring dimensions of their multimodal competence.

*4.4.3 Informed Consent*

Ethical considerations relating to informed consent are particularly salient when designing a study that will involve children who are potentially vulnerable not just due to age but also due to the presence of a learning or communication difficulties which may prevent them from verbally voicing concerns, protests or the desire to withdraw from the research. I therefore considered carefully the issue of 'consent' and what this would mean for participants who did not speak. It did not appear possible for me to meaningfully explain to the children even in symbolised form abstract concepts such as research, publication or even video recording. I therefore decided to follow Nind's (2008) suggestion of combining proxy informed consent from both parents/carers and school staff with the child's *assent*, which means inferring their degree of comfort with my presence as researcher from their non-verbal behaviours. For this reason, I endeavoured to remain mindful at all times of the child's behaviours and what they might suggest about their comfort with my presence. I did not go into fieldwork with a pre-determined 'checklist' of behaviours

which I would take to convey 'assent' or lack thereof as this would be a questionable approach in the case of children whose use of non-verbal behaviours is considered atypical. I preferred instead to reflect on the children I encountered and their observed behaviour *in situ* on an ongoing basis and to consult classroom staff in cases of doubt. Of course, this is not always straightforward since observed resistance to a classroom activity might be due to the nature of the activity itself, making it a potentially interesting piece of data, or resistance to doing it whilst I watched, making it ethically problematic. Moreover, a six week period of fieldwork is not necessarily long enough to establish reliable knowledge of how to interpret a child's non-verbal indications of distress, and as Flewitt (2005) cautions, the desire to pursue one's own established research agenda can blind the researcher to subtle non-verbal suggestions of unease. Nevertheless, I felt that the process of inferring assent was the most pragmatic solution in the circumstances. To offset some of the above-mentioned limitations, I sought initial guidance from the class teacher about which of the children were most likely to demonstrate unease and how I would recognise this, and I asked classroom staff to tell me to withdraw from observing a situation if my presence was detrimental to the child and I had not already inferred this for myself.

As indicated previously, the school's assistant headteacher acted as gatekeeper to the setting for the purposes of this study. The project was discussed initially with him and his written consent for the school's participation in the research was obtained (sample consent form in Appendix M) as well as that of the class teacher and all other Purple Class staff (sample consent form in Appendix N). The consent of Purple Class staff had to be carefully re-negotiated when staffing changes occurred over Christmas in between the signing of consent forms and the beginning of fieldwork, meaning that new potential staff participants became involved in the study. Information sheets and consent forms relating to the child's participation in research were also sent home to parents (Appendix O) and were followed up by telephone calls in order to offer parents an opportunity to ask questions about the research. These forms made it clear that signatories had the right to choose non-participation for themselves or their child in the first place or to subsequently withdraw consent during the fieldwork or for a specified period afterwards. Participants were provided

with a description of my anticipated role in the classroom as an observer with a video camera and there were opt-out options for video-recording/ audio-recording which allowed participants to specify the level of involvement which felt comfortable to them.   I was conscious that if I wished to portray participants in annotated video stills in order to facilitate multimodal analysis this would necessarily reduce the level of anonymity I was otherwise offering by altering names and identifying details.  I therefore wanted to be crystal clear about what opting into video-recording entailed, so I provided along with each consent form a colour copy of some annotated video stills in order to ensure that participants would be able to easily visualise how they or their child would appear in a multimodal transcript (Appendix P). Separate consent forms were used to obtain consent for the interviews in the homes of parent/carers (Appendix Q), and all families gave consent although one family opted out of audio-recording.  In line with the suggestion of Flewitt (2003), consent was treated as 'provisional' rather than 'informed' given that it is not always possible to anticipate the precise course of a qualitative ethnographic study or how feelings and relationships may evolve in the course of fieldwork. Consent is therefore not contained in a single signature but rather must continue to be monitored through the ongoing attitudes, behaviours and responsiveness of the participants in a situated context (Simons and Usher, 2000).

### 4.4.4 Confidentiality & Anonymity

Wiles et al. (2006) note that whilst the terms confidentiality and anonymity tend to be conflated in the literature on research ethics, they are related yet distinct concepts: in the words of the authors, 'anonymity is a vehicle by which confidentiality is operationalised' (p.4).  However, the two terms are subsumed under the heading of 'privacy' in the BERA Ethical Guidelines for Educational Research (BERA, 2014). Further complications arise in the case of studies using visual data such as video-recording. As Wiles et al. (2006) note, video and photo data require a particular balancing act between considering participants' right to confidentiality and anonymity on the one hand, and exploiting the very affordances of visual data which justified its usage on the other hand.  This is particularly the case where the multimodal communication of participants, such as posture, proxemics, haptics,

gesture and facial expression, is actually fundamental to the research question(s) of the study. Wiles et al. (2006) outline a range of possible approaches to this dilemma involving the use of software to pixelate, blur, block out, convert to cartoon or line drawing format or otherwise obscure parts of participants' bodies and/or identifying background detail.

As discussed previously, consent was sought on the basis that participants would be visually represented in colour photos without distortion of any form apart from the blurring of school logos on sweatshirts, and an example transvisual of a publicly available YouTube video was provided to illustrate to participants how they might be depicted in such images (Appendix P).  However, after fieldwork was complete I made the decision that converting the images to black and white line drawings would make the identity of my participants less immediately visible than colour photographs without incurring any loss of necessary detail for multimodal analysis. Some additional editing such as the superimposition of circles over logos on school sweatshirts was also performed on the converted images.  However, photographs of the classroom environment and/or material artefacts have been left as colour photographs where no participants were in shot.

The school is referred to only as a special school in the Midlands of England throughout this study, and all participants are referred to by their pseudonyms.  In the case of the children, these pseudonyms were in some cases chosen by parents who wished to do so.  Purple Class is also a pseudonym for the class in question, reflecting the nature of its real name which followed a 'theme' used for naming the mixed age classes throughout the school rather than indicating the year group of its students.

In addition to seeking consent for participation in this study, my consent forms also sought consent to use the data in other future research activity including journal articles and academic conferences.  It is acknowledged that if someone who was familiar with the school were to view the data in these settings it is likely that they could identify the school and the participants, although this eventuality is also

present even by quoting participants' words since people often have identifiable ways of speaking and this is difficult to preclude entirely.  Finally, data were stored securely on an external data drive with password protection during the study.

*4.4.5 Impartiality*

The research was funded by a studentship awarded by Sheffield Hallam University, and I did not have any conflicts of interest to declare.

*4.4.6 Integrity*

The term 'integrity' is used in the *Research Ethics Policy and Procedures* document (SHU, 2017) to refer to the idea that research should be 'scientifically sound and the purpose should be to contribute to knowledge' (p.3), and that supervisors should take reasonable steps to ensure the research integrity of students' research by accessing data sets periodically throughout the research.   Here I consider how I addressed issues of generalisability and validity in order to ensure the integrity of the research.

The term generalisability is often taken to mean statistical generalisability, wherein if a sample is sufficiently representative of the target population through satisfactory sampling procedures it is deemed to yield statistical results which may be extrapolated to the population at large.  However, Firestone (1993) argues for two further forms of generalisability.  The first of these is *analytic generalisability* which involves generalising from particulars to broader constructs or theory through rigorous discussion and analysis of qualitative data.  Supporting this conceptualisation of generalisability, Thorne et al. (2009) argue:

> *When articulated in a manner that is authentic and credible to the reader, (findings) can reflect valid descriptions of sufficient richness and depth that their products warrant a degree of generalizability in relation to a field of understanding.* (p.1385).

The second form of generalisability according to Firestone (1993) is what the author calls *case-to-case translation,* also referred to as transferability (Lincoln & Guba,

1985). Polit (2010) describes transferability as providing 'detailed descriptions that allow readers to make inferences about extrapolating the findings to other settings' (p.1453).

In the context of the current study, it is clear that the thesis cannot lay claim to any form of statistical generalisation: the study of five children in one autism-specific classroom in one particular special school is not a basis for drawing firm quantitative conclusions about any sort of wider population such as children with autism, AAC users or minimally verbal communicators. However, I would argue that there is analytic generalisability in the sense that the communication practices of Purple Class described in this study link to wider theoretical concepts of the relationship between communication and agency. This means that it is possible to move from the particulars gleaned from ethnographic methods to broader discussions about, for example, the extent to which and in what circumstances different kinds of communicative opportunities enable the agency of users. Generalisability is also present in the sense of transferability: that is, there is sufficient 'thick description' (Geertz, 1973) of Purple Class for the reader to be enabled to critically reflect on aspects which might or might not hold true in the particularities of their own setting.

Secondly, the term *validity* is often taken in research with a positivist framing to denote the accuracy with which the findings encapsulate the 'truth' of the phenomenon under investigation (Golafshani, 2003): that is, the precision with which the reported findings accurately represent the data set and in turn the precision with which the data set represents the phenomenon. Polit & Hungler (1995) describe this as 'the degree to which an instrument measures what it is intended to measure' (p. 656).

Hammersley (1992) argues that from a qualitative perspective 'an account is valid or true if it represents accurately those features of the phenomena that it is intended to describe, explain or theorise' (p.69), whilst Stenbacka (2001) contends that 'the understanding of the phenomenon is valid if the informants chosen are part of the problem area and if the interaction between the researcher and informant gives the

latter the opportunity to speak freely according to his/her own knowledge structures' (p.555).

In this study I took a range of measures to ensure that the thesis provided a rigorous and thoughtful account of the communication of the children in Purple Class. Firstly, I sought to ensure that a range of perspectives were represented by presenting a range of data and explicitly reflecting on similarities and divergence between them (Slevin, 1999). This was done on multiple levels: efforts were made to represent all five child participants relatively evenly (Section 4.5), interviews were conducted with multiple staff to draw comparisons between their perspectives on the topic of classroom communication, the parental perspective on each child's communication was explored, and video data and fieldnotes were gathered across multiple activities in the everyday life of Purple Class in order to gain a fuller picture of how the children communicated in different constellations of circumstances. The thesis also involved triangulation of methods, which as Flewitt (2006) argues can provide 'multiple avenues to arrive at multiple 'truths'' (p.102). Amongst these methods particular mention should be made of the reflective research journal I kept throughout fieldwork (Section 4.3.4) which provided a space for me to work through my own personal positionality, the emotions which my observations sometimes evoked and how my subjectivity was inevitably shaping and influencing the direction of my research. This positionality was explicitly addressed in the thesis (see Section 1.1) which contributes to validity by making explicit to the reader where the researcher stands in relation to the topic under scrutiny (Morse et al., 2002). The thesis is explicit about the total data set generated (Section 4.3) and the process of selecting data for detailed representation (Section 4.5), and a data trail allows the reader to trace these decisions (Koch, 2006). Respondent validation has also been argued to be a component of validity in the context of qualitative research (Long & Johnson, 2000) and in this thesis this was undertaken in two ways. Firstly, as Flewitt (2003) notes, the frequent, informal exchanges with staff about the significance of observed events as they occurred found their way into both fieldnotes and the reflexive research journal where they became 'embryonic themes' (p.115), shaping both data

generation and analysis in an ongoing iterative process.  Secondly, transcripts of all interviews were sent to the relevant participants for validation.

Finally, as Sandelowski (1993) argues, the validity of qualitative research may be enhanced by engagement with other researchers in the wider academic community in order to draw attention to one's own interpretative biases and possible alternative interpretations of a piece of data.  My data were shared and discussed with my supervisory team on an ongoing basis throughout the study, as well as at data-sharing sessions within my university. I also shared and discussed my interpretation of data at several academic conferences in the course of the study which was useful in helping me to consider interpretative 'blind spots' or perspectives that I had not previously foregrounded.

Having set out my approach to research ethics in Section 4.4, I now go on to consider how I used the data which was generated during the study in the process of analysis (Section 4.5).

## 4.5 Data Analysis

Initially all the data generated by the methods described in Section 4.3 were brought together using NVivo 11 software. This provided a platform to collate multiple forms of data – document scans, photographs, videos, typed transcripts and notes – which were initially uploaded and classified by format.  I then created five 'nodes' or clusters of data for each of the child participants in order to bring together documents, photos, videos, field notes and interview extracts which were relevant to them.  This was done manually by highlighting and coding data of my choice within NVivo rather than being a software-driven analysis.

The result of this was that I now had a choice of two 'ways in' to my full data corpus. I could focus on any individual child and the communicative consistencies and variations within the 'node' containing their data, or I could look at a particular recurring communicative context in Purple Class such as 'group time' to build a picture of how it was enacted and how students tended to communicate in this

context. I alternated between both approaches as I immersed myself in the data set, with my emergent views on one informing the other in a form of iteration. When I looked at either an individual student or a recurring context in Purple Class, there was also an iterative process of moving between video data and the other data sources such as interviews, fieldnotes, documents, and my reflexive journal. This was helpful as I could both find documents, quotations from interviews and fieldnotes which clarified or elaborated upon moments of interaction seen on video, as well as finding video footage which instantiated themes emerging from the other data sources.

Having immersed myself in the data in this way, I was able to identify a degree of recognisable individual variation in the way each child appeared to communicate during the study, even in different environments and communicative contexts. This is acknowledged in the descriptions of individual communication repertoires for each child in Chapter 5. However, I also recognised that classroom activities had recognisable expectations and patterns of enactment which shaped the children's modal, functional and interactional partner choices whilst they were engaged in those activities. I noted a continuum from very highly structured, staff-led activities such as snack time and group time where communication was almost scripted to activities with relatively lower levels of staff involvement and direction such as outdoor play time, and observed that formal AAC-mediated communication was associated more strongly with the former than the latter. Table 5 (in Chapter 5) presents seven daily recurring activities which account for most of the day in Purple Class (break time, choose time, group time, Intensive Interaction, snack time, lunch time, worktime) with contextualising details.

Having worked across the full data set in this way, I felt that it was important to represent in the thesis both the idea of individual variation, which is described in Chapter 5, as well as the variations in communicative practices seen in various communicative contexts (Chapters 6-8). The identified communicative contexts are explored from an ethnographic position in order to understand the emic participant perspective on communicative expectations therein, as well as through fine-grained

multimodal analysis of interactions depicted in classroom video data.  In order to be able to undertake such detailed multimodal analysis of classroom interactions, it was necessary to make a careful selection of video data from the total data set, and this process of selection is set out separately in Section 5.5.

In order to undertake analysis of classroom video data as well as the audiorecorded interviews with parents, a form of transcription was necessary in order to create a visual or readable representation of the data.  My approach to transcription is made transparent in Section 4.6.

## 4.6 Approaches to Transcription in This Study

In qualitative research it is increasingly recognised that decisions we make about transcription, including what to represent or foreground and how to do this in practice, are deeply shaped by both theory (Ochs, 1979) and politics (Bucholtz, 2000). In the words of Flewitt (2006):

> *The processes of representation always involve processes of selection, limiting what the reader of a research text can know about the dynamic event … It is therefore the responsibility of individual researchers to be crystal clear about why certain choices have been made, in order to be accountable for the implications of those choices.* (p.45)

In this section I discuss firstly how I chose to undertake multimodal transcription of classroom video data (Section 4.6.1), initially experimenting with multimodal matrices, annotated video stills and narrative vignettes and eventually deciding to use matrices alongside illustrated 'story boards' which incorporated both annotated stills and elements of narrative vignette.  These two forms of transcription are both drawn upon in my subsequent multimodal analysis in Chapters 6-8.  I then reflect upon my decision to send audio-recorded interview data to a professional transcriber (Section 4.6.2).

### 4.6.1 Multimodal Transcription of Classroom Video Data

A minimally verbal participant could be misrepresented as unresponsive or communicatively incompetent by transcription practices which fail to capture

idiosyncratic, multimodal communication (Muskett & Body, 2013). This warrants critical reflection on the advantages and limitations of different transcription methods when working with minimally verbal participants.  My starting point was to look to the transcription practices traditionally favoured in Conversation Analysis and Multimodal Interaction Analysis respectively.   CA, discussed in Section 3.3, typically uses the Jeffersonian notation system (Jefferson, 2004) which is a highly standardised approach to symbolic transcription of human interaction emphasising detailed depiction of the sequential unfolding of the interaction.  As CA originally developed from a corpus of primarily audio-recorded data, it is not surprising that the focus of the Jefferson system has been primarily on transcribing the spoken word, with symbols used to denote non-verbal aspects of communication considered to have close links to speech such as pause, sigh, laughter, in-breath or rising intonation. However, as I noted in Section 3.3.2, there has been a relatively recent multimodal 'turn' in Conversation Analysis with increased emphasis on the role of embodied action in sequential organisation, resulting in some creative adaptations to the original notation system.  These include Jefferson transcriptions juxtaposed with video stills (Korkiakangas & Rae, 2014); the development of a set of extended symbolic conventions for transcribing embodied communication (Mondada, 2014); and Jefferson transcription combined with arrows linking to line drawings of relevant moments (Goodwin, 2011).

In the case of Multimodal Interaction Analysis, Norris (2004) produces an initial transcription where speech is transcribed using the Jefferson system but spatially enacted modes such as proxemics, posture and gesture are transcribed differently. For these modes, she extracts series of time-stamped video stills from the interaction every time a shift is noted in the particular mode under focus, thereby visually representing the series of physical shifts and adjustments which occur throughout the interaction.  Finally, a transvisual is assembled for the reader with the aim of representing the overall interaction as clearly as possible, with a selection from the video stills chronologically arranged to represent important interactional moments overlaid with annotations.  These annotations might include arrows indicating directionality of movement, and speech which is typed yet with a strong visual

dimension such as curved text to indicate rising/falling intonation, use of size and bold font to indicate pitch and volume, and the use of space between typed text indicating gaps or overlaps.

With both of these approaches in mind, I also considered how researchers identifying with other traditions within multimodality approach transcription. One particular approach which seemed potentially useful for this study was the use of the multimodal matrix, a tabular format used by a number of researchers to provide a frame for the description of simultaneously occurring modes in separate columns (Flewitt, 2006; Lancaster, 2007; Domingo, 2011; Taylor, 2012). This seemed to offer the advantage of systematicity by requiring the researcher to disaggregate modes and transcribe them separately, as well as the detailed attention to temporality. I was also drawn to the 'narrative vignette' approach to transcription (Mavers, 2012) which involves writing in prose the 'story' of what unfolds in the video data. This offered the advantages of immediate readability as well as fluid descriptions of the deployment of multiple modes within the same sentence, which is perhaps more intuitively representative of the flow of an interaction than a disaggregated matrix.

Having reflected on potential usefulness and limitations of the various approaches to multimodal transcription, I decided that my hybridized approach to analysis (Section 3.5) might be best executed with a customised approach to transcription which I considered appropriate for my participants. I identified five criteria which were important to me as a researcher in choosing a transcription approach:

(a) It should contain detailed, time-stamped recording of the sequential unfolding of the interaction in order to allow me to draw upon the conceptual tools of CA;

(b) It should treat modes as *a priori* equal and therefore give them equal analytic attention in the first instance;

(c) It should be capable of capturing atypical or unusual communicative acts which contributed to the interaction in order to maximally convey the communicative competence of minimally verbal participants;

(d)     It should contain a strong visual component to reflect the lifeworlds of my participants, where embodiment, space and material artefacts seemed fundamental to the enactment of communication, relationships and agency whilst language appeared relatively more peripheral;

(e)     My transcription approach should incorporate at least one format which is immediately 'readable' to audiences outside of the academy. This is particularly important to me because I would like my research to inform future conversations about the nature of the relationship between communication and agency for minimally verbal people, and I feel that such conversations should involve a range of stakeholders including disabled people, families, therapists and classroom practitioners. However, I was also mindful it might be necessary to prioritise 'readability' in one form of transcription but detail and sequentiality in another as there might be a degree of mutual exclusivity: as Goodwin (2001) argues, 'different stages of analysis and presentation will require multiple transcriptions' (p.161).

Guided by these criteria, my decision was to take a two-stage approach to transcription. Firstly, I constructed a multimodal matrix for each of my chosen extracts of video data. The matrix involved repeatedly watching the short video clip in order to systematically examine each participant's use of speech, vocalisation, AAC, eye gaze, facial expression, gesture, object manipulation, proxemics (use of space), posture and haptics (use of touch). The sound was muted during analysis of modes such as posture and proxemics in order to focus analytic attention, and the video was at times watched in slow-motion or advanced frame-by-frame in order to establish the precise chronological ordering of participant actions. The matrix is designed to be read chronologically by scanning from left to right to ascertain what each participant was doing at that point in time, or alternatively to use the colour coding of the modal groupings to identify how, for example, the postural and proxemic shifts of one participant influenced those of the other. An example of a nine-second excerpt transcribed in this way is shown in Figure 3 by way of example.

*Figure 3:  Example of a multimodal matrix.*
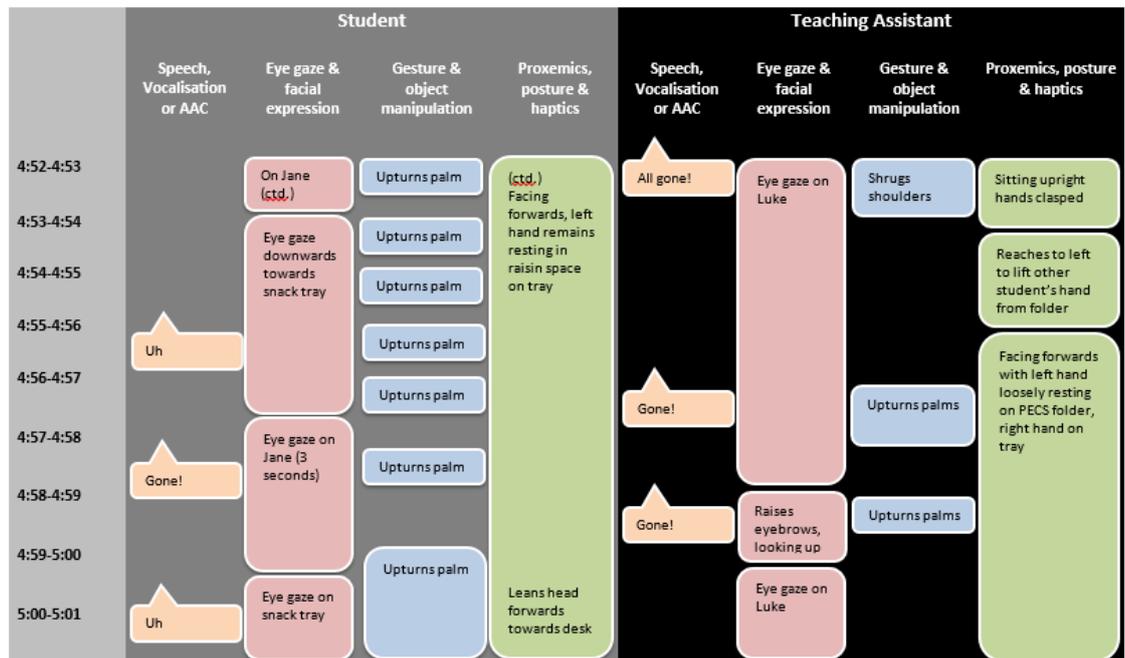


As with all approaches to transcription, this format had its advantages and constraints.  At the analytic stage, constructing each matrix encouraged me as a researcher to systemically disaggregate modes for individual viewing before watching the video as a whole again.  The very structure of the matrix with its individual columns ensured that modes received near-equal analytic attention and acted as a conscious counterbalance to my own tendencies to underplay the significance of posture and proxemics in particular.  The matrix also permitted detailed analysis of the sequentiality and temporal organisation of the exchange as it is chronologically ordered with time indicated in the far left column.  It is acknowledged that it is not as minutely detailed as a CA Jefferson transcript: for instance, Mondada's (2014) multimodal version of the Jefferson system achieves an even closer level of microanalysis with symbolic notion of an action's preparation, apex and retraction.  However, this modest compromise on microanalytic detail was considered justifiable because the matrix offered the combined advantages of a good level of sequential, time-annotated transcription with a high degree of immediate readability.

Along similar lines, it would also be possible to critique my decision to combine separate modes into the same column.  This was a decision I made consciously because it would otherwise have proved physically impossible within an A4 page to juxtapose the two participants in a left-right matrix arrangement had every mode occupied its own column.  It is acknowledged that the modal combinations I opted for in my matrix column headings might be categorised differently by another researcher: for instance, AAC might be argued to have most affinity with spoken language due to its formal, symbolic content, or with gesture because of the spatial enactment of Makaton, or with object manipulation because of the nature of PECS usage.  However, I placed high value on the juxtaposition of the two interactants side by side in order to visually represent the multimodal actions of each at any given moment and therefore felt that this compromise was justified.

Further, as Flewitt et al. (2009b) have argued, the matrix layout tends to favour the verbal element by placing it on the left, often associated with privilege and priority in Western traditions of visual literacy.  I could have consciously chosen to locate my 'Speech/Vocalisation/AAC' column in a position other than far left in order to counteract this, but at the same time the problem seemed to me to be naturally offset by the relative sparsity of detail in this column due to the nature of communication in Purple Class in any case.  For this reason, it ultimately remained on the left.  There were also occasions where the multimodal actions were described more briefly than I might otherwise have done had I not been condensing, for example, eye gaze and facial expression into the same column.  Overall, however, I did not feel that observed actions were omitted or significantly understated due to this limitation.  Finally, a CA analyst accustomed to the Jefferson system of notation might critique the very minimal use of symbolic notation and/or punctuation in my transcription of speech.  This was intentional on my part: I did not feel it would be analytically helpful in this study to annotate the modest amount of speech with an extensive range of symbols to indicate for example micropauses or in-breaths.  I felt this was justifiable since the multimodal repertoires of my participants centred so much on embodied action which was detailed visually in my second transcription method of visual stills, a complementary method which is not usually used so

extensively by CA researchers.  I therefore used only the conventions shown in Table 4 below, which were chosen as they seemed the most significant features of speech/ other vocalisations to emphasise and also because they are generally relatively transparent in their meaning due to their usage in written English.

*Table 4: Transcription Conventions*

| [] | Square brackets denote my description of a vocal noise: for example [blowing raspberry noise] or [laughing] |
|---|---|
| **EYYYYY** | Capitals denote a relatively louder noise than surrounding speech or vocalisation |
| ! | Denotes a noise that I perceived as emphatic, akin to an exclamation. |
| ? | Denotes a noise that I perceived a questioning, usually with rising intonation combined with a sense of expectation of a response from other speaker. |
| - | Hyphens denote syllables of non-verbal vocalisations which appeared to be linked in a single utterance: for example da-SO-bee-bey |
| **'Please'** | Words in inverted commas denote a Makaton sign. |

Finally, in transcribing the non-verbal vocalisations of participants I chose to use a relatively simple orthographic approach rather than a strictly phonetic approach: that is, I endeavoured to represent the sound I heard with a spelling that would be likely to suggest an approximation of that sound to other speakers of English.  Thus, for example, a string of syllables might be written *da-SO-bee-ey.*  I chose to do this because my research questions are more concerned with the functional, pragmatic roles of utterances, either in sequential organisation of the interaction or the deployment of modal intensity and complexity to achieve an interactional aim, rather than phonological analysis. In order to address my research questions certain detail was essential such as the second-by-second sequential transcription of modes, but it seemed relatively less important to evoke a precise pronunciation of a non-verbal utterance.  An orthographic approach therefore seemed justifiable and also increased the readability of the matrix.

My second method of transcription was to use annotated video stills (Norris, 2004) combined with a brief narrative vignette (Mavers, 2012) in the form of a 'story

board'. I felt that using this additional method was important for several reasons. First, the primarily visual nature of the representation aligned more naturally with the primarily embodied nature of participants' communication, and gave analytic prominence to modes such as haptics, gesture, posture and proxemics which seemed to have prominence in their multimodal orchestrations. This is of fundamental importance in the case of minimally verbal participants who could very easily be portrayed as silent, withdrawn, unresponsive or communicatively incompetent by a logocentric approach to transcription. This type of transcriptional decision-making is both framed by and further contributes to existing discourses around disability, since the choice of transcriptional tool(s) can enable (or disable) our perception of participants with learning disabilities as 'people with … something to say that is worth hearing and experiences that are worth understanding' (Nind, 2008, p.4).

Secondly, it seemed to me that the use of visual methods correlates well with a theoretical commitment to multimodality. Norris (2004) argues:

> These multimodal transcripts, like any transcripts, reflect the theory of the researcher … The images, due to their salience in the multimodal transcripts, highlight the visual aspects within interaction. The verbal is positioned in relation to aspects of other modes, and is thus de-emphasised. (p.65)

In this regard, video stills might be said to have particular advantages over other transcription methods: they capture aspects of surrounding classroom layout and furnishing which may become relevant to the interaction; they illustrate embodied interaction more elegantly than verbal descriptions of a participant's physical movements or extensive symbolic notation; and they situate the student in an interaction with a partner in order to illustrate their physical and affective orientations towards each other.

Thirdly, annotated video stills are highly readable, and when used as in this study to tell the story of the video excerpt as a type of comic strip or 'storyboard' they are a transcription form that could easily be used as a basis for dialogue with non-academic parties such as families and classroom practitioners. An example of my use of video stills is shown in Figure 4.

*Figure 4: Example transcription with video stills.*



| | | | |
|---|---|---|---|
| 1. Albert is waiting for his turn to come to choose. | 2. The teacher turns to Albert and places the PECS folder before him. | 3. Albert reaches out and selects the 'marshmallow' symbol card. | 4. Still holding the card, Albert shifts his gaze to look directly at the teacher. |
| 5. Albert and teacher both extend hands for exchange. Eye contact is maintained throughout. | 6. As the symbol is placed into teacher's hand, Albert lowers his gaze. | 7. Teacher says 'marshmallow'. Albert taps twice on card, establishing brief eye contact on second tap. | 8. Teacher says 'please' as a prompt. Albert performs Makaton sign for 'please'. |

In order to construct these visual stories of the interaction, I needed to identify what I considered to be key moments in the exchange. This was done through an iterative process of repeatedly watching the video for moments where activity on the part of one or both interactants was driving the exchange forwards and comparing this to the multimodal matrix, which was always created prior to the video stills due to its rigour and systematicity as a method. It is fully acknowledged that this is a subjective process and that other researchers might have chosen to illustrate the interaction differently. I did briefly consider the alternative possibility of extracting video stills at regularly timed intervals but felt that this suggested a positivist perspective on the scientific validity of video data which was not consistent with the thesis. In the end, therefore, I decided that it was preferable to embrace and reflexively acknowledge my own creative role in selecting 'telling moments' (Gabb & Fink, 2015) from the interaction. For this reason, as the time-stamps on the video stills indicate, I sometimes made the decision to illustrate several moments which are temporally clustered together but which each seemed interactionally important, and at other times I let several seconds go by without feeling the need to illustrate what was happening. These decisions inevitably have the effect of foregrounding certain features of the action and backgrounding or omitting others, which was helpful on the level of analysis. For example, the process of visually representing the complexity of multimodal communication depicted in the multimodal matrix for a given

interaction led me to think more deeply about the difficulties of identifying 'turn-taking' (Section 2.1.3). This ultimately led to me developing the intermediary step of overlaying the multimodal matrix with what I considered to be identifiable multimodal turns from repeated viewings of the video in order to provide a basis for telling the story through video stills (see for example Figure 36).

These visual transcripts (or transvisuals) were created using Microsoft PowerPoint and then subsequently converted to JPEG images. Typically the 'story' of an exchange was told in between eight and twenty video stills, the one illustrated above being the shortest transvisual in the thesis. When a 'telling moment' that I wished to illustrate had been identified, I moved the video forwards and backwards on a frame-by-frame basis until I found a suitable image. Typically this might be one which clearly illustrated a gesture or posture referenced in the description below the image: for example the point where the gesture was at its apex rather than its preparation or retraction. The extracted images were then converted to a line drawing using Sketch Drawer 5.1 software. The images were arranged chronologically with time stamps. Some annotation was overlaid on the video stills, although less than used by Norris (2004). I limited annotation to spoken words or non-verbal vocalisations, contained in speech bubbles, and Makaton signs denoted by words in inverted commas placed near the hands of the signer. Notation conventions were consistent with their use in the multimodal matrix. My annotations were limited because I made the decision to include a short commentary under each image inspired by the narrative vignette approach to transcription (Mavers, 2012), allowing the image itself to remain relatively unobscured. I had originally experimented with writing narrative vignettes as a third transcription method but in the end this did not seem to contribute significantly more to the analysis. However, I felt that video stills combined with brief commentary produced a transcription which told the story of the interaction in a readable format which did not require the reader to cross-reference elsewhere for comprehension.

As noted above, the use of transvisuals has many advantages including the goodness of fit between visual representation and predominantly embodied modes, the

portrayal of artefacts and the physical environment, and easy readability. However, they are not without limitations: as Mavers (2012) notes, they do not capture the dynamism of movement which must be inferred from postural changes between frames or indicated through arrow annotations, and they can force a misleading sequentially linear structure on the depiction of what is a dynamic, co-constructed process of meaning-making. Further, the use of video stills carries the risk of the 'deceptiveness of the visual' (Thomson, 2008, p.10), where footage is unconsciously afforded the status of 'true' or 'accurate' and the creative role of the researcher in framing, filming, selecting, editing and annotating the footage is obscured. Nevertheless, it was felt that particularly when presented in conjunction with multimodal matrices, the significant advantages of this visual approach warranted its use in the study.

Finally, I also used Elan software to provide a visual depiction of turn-taking, gap and overlap management in interactions and therefore to contribute to the Conversation Analytic dimension of data analysis. Elan allows the researcher to watch, segment and annotate video data using multiple tiers underneath the video which may be used to denote participants, modes or anything else analytically relevant. The timeline can then be printed showing which features of the video were annotated on which tiers at which point in the timeline, leaving a clear visual representation of the interaction depicted in the video. The use of Elan can be seen in Figures 37, 54, 56 and 77.

### 4.6.2 Transcription of Interview Audio Data

As noted previously, in addition to classroom video data I also had audio data from parent interviews to consider for the purposes of transcription. It was my initial intention to transcribe my interviews with staff and parents myself, but due to time constraints the audio recordings were ultimately sent to a professional transcriber. These were not multimodal transcriptions, containing only the verbal speech of the interviewer and interviewee. I felt that audio-recording rather than video-recording was appropriate for these interviews for three reasons. Firstly, the primary focus of this thesis is the multimodal communication of the children in Purple Class, and the

communication of parents and teaching staff was not the analytic focus but rather communication *about* the analytic focus.  I therefore felt that an accurate transcription of verbal speech in order to permit quotation of participants was sufficient.  Secondly, I felt that it would appear unusual and intrusive to video-record participants in their homes and might make them feel that their interview 'performance' was under scrutiny.  Finally, it was simply not feasible in terms of time constraints to produce detailed multimodal data from interviews in addition to classroom video data.  I therefore felt that my pragmatic compromise on multimodal detail in this instance was justified.

**4.7 Conclusion**

In this chapter I set out the methods used in this study.  The setting for the study was briefly introduced and the data generation methods that I used during fieldwork were detailed.  The total corpus of data generated was specified.  I then reflected on how I moved from data generation to data analysis, making explicit my decisions to direct the analytic focus on some data and not others. I also set out my approach to the transcription of video and audio data, and explained the ethical considerations which underpinned the study.  This was done in order to provide a platform for understanding the data presented in the four chapters which follow and the decision-making processes behind its generation.

In the next chapter, I provide rich ethnographic description of the students, staff, daily routines and material properties of Purple Class.

## CHAPTER 5: PURPLE CLASS

### 5.0 Introduction

In Chapter 2, I explained that I see communication, autism and agency as partly residing within individuals and partly distributed across material artefacts, places, practices and interactants.  For this reason, I use the term 'Purple Class' broadly to denote the staff and students, artefacts in the form of classroom furnishings and objects, the physical space and layout of the classroom and outdoor area as well as other places visited by staff and students during the school day, and the routines and practices which have been developed therein.

The purpose of this chapter is two-fold: firstly, to present a rich ethnographic account of Purple Class as defined above, and secondly to build further upon this 'thick description' (Geertz, 1973) by analysing its significance in relation to the literature presented in Chapter 2. For example, Section 5.1 presents detailed description and illustration of the material features of Purple Class which were drawn upon in everyday classroom activities, and then goes on to discuss how communication and materiality intersect in Purple Class by drawing upon existing communication literature from Section 2.1.4.   In Sections 5.2 and 5.3 I describe the staff and students of Purple Class respectively, drawing upon rich ethnographic accounts generated by home visits, discussions with parents and staff, document scrutiny and my own observations.  This focus on participants is concluded with theoretical analysis of two questions.  Firstly, Section 5.3.6.1 reflects on what the description contained in Section 5.3 might suggest about dis/continuities between home and school communication practices, which is analysed in relation to existing clinical literature on AAC and Speech & Language Therapy from Chapter 2.  Secondly, Section 5.3.6.2 considers whether (despite such contextual variation) students might also be said to have some relatively enduring tendencies, preferences or abilities across different settings, again with reference to previous clinical literature presented in Chapter 2.

In Section 5.4 I consider how the concept of a 'communicative context' (as defined previously in Section 2.1.5) might manifest in Purple Class by identifying regularly occurring constellations of place, time, artefacts, interactants and communicative behaviours and reflecting on how such constellations may have shaped the expression of children's multimodal repertoires. Finally, in Section 5.5 I explain how I propose to move from the ethnographic overview of communication in Purple Class provided by this chapter to the more detailed multimodal focus on selected areas of classroom life in Chapters 6 to 8.

## 5.1 Purple Class: The Physical Setting

In this section I describe and illustrate the layout, materiality and artefacts of Purple Class. This is important because I would argue that the materiality of the classroom partly shapes the communicative practices which unfold within it. Purple class occupied a spacious room in a modern building with a door leading to a small enclosed outdoor area. The room layout is shown in Figure 5 below, with numbers in yellow linking to the subsection where this zone is discussed and illustrated. Additionally, I discuss observed settings outside of the classroom in Section 5.1.10.

*Figure 5: Classroom map.*
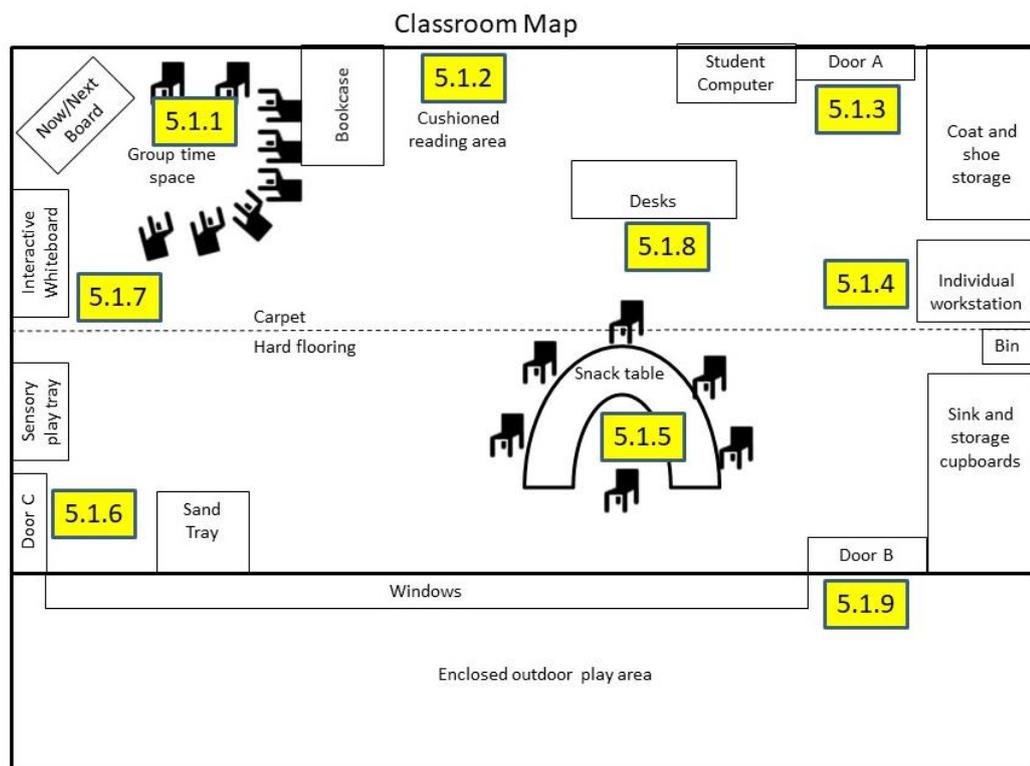
## 5.1.1 Group Time Space

In the corner was the area I have called 'group time space'. This was an area where the children gathered several times per day for structured group activities. Chairs were gathered in a circle around an 'a-frame' board (Figure 6).

*Figure 6: Photograph of a-frame board used for group time.*



As can be seen in Figure 6 above, the a-frame board contains several components. The day of the week is indicated with a large symbol as well as the written word. A now/next board underneath contains spaces with Velcro for the teacher to affix symbols for the activity which are 'now' and 'next'. These symbols do not form part of the PECS system where cards are intended for students to exchange for a desired item, but rather simply as visual support for comprehension of the timetable which is non-negotiable for students. Typically, before the school day began the teacher would arrange the symbols which would be needed in the correct order along a long strip of Velcro on the wall behind the circle of chairs, making it easy to quickly update the now/next board at any time (Figure 7).

*Figure 7: Visual timetable symbols.*



Finally, the register board was used to conduct morning and afternoon registers, with a recognised routine: student and staff photos would be placed in a box; each student would take one and give it to the person to whom it belonged; and that person would then affix it to the register board to show that they were present (Figure 8).

*Figure 8: Luke takes part in morning register.*



### 5.1.2 Reading Corner

The reading corner consisted of a bookcase with a selection of books and some soft cushions. It was associated with 'choose' sessions which were interspersed

throughout the school day, when students could freely choose to sit on the cushions and explore books (Figure 9).

*Figure 9: Anna in the reading corner.*



### 5.1.3 The door area

In the corner of the classroom was a door leading to the corridor, with a handle to unlock near the top that only an adult could reach.  Also near the top of the door were a range of symbols that students could not reach: they were for staff to use to explain what was happening next if it involved leaving the classroom.

*Figure 10: The classroom door.*

Towards the bottom of the door were two PECS cards which were for students to use to make requests.

*Figure 11: PECS cards on the classroom door.*



Beside this door was a shoe and coat storage area where students would be encouraged to put on their own shoes and coat before going outside.

*Figure 12: Shoe and coat storage area.*

## 5.1.4    Individual Workstation

The classroom had one individual workstation which was used as a computer desk.

**Figure 13: Individual workstation.**

On one side of the workstation, two PECS cards were available to students for requesting.

**Figure 14: PECS cards on the individual workstation.**

A C-shaped table was used for snack time, with the teacher sitting in the small hollow created by the 'C' and the five students sitting around the other side of the table. This facilitated the routine of snack time as the teacher could turn and shift their angle to face each student in turn with the snack tray, a large tray with four compartments to contain different snack items on offer.  Items would be chosen using PECS cards and/or Makaton (this process is discussed in detail in Chapter 6).

***Figure 15: Snack table.***



***Figure 16: Anna using PECS at snack time.***

### 5.1.6  Storage Cupboard

In one corner of the room was a locked door leading to a storage cupboard, where many classroom resources and toys were stored.  When I began fieldwork, a selection of PECS cards was available on the door enabling students to request an item from the cupboard.  However, this set of cards was removed and locked inside the cupboard during my first week of fieldwork following staffing changes within Purple Class, meaning that students had to play with whatever had been made available that day in the classroom and could not request alternative items.

**Figure 17: Storage cupboard door.**



### 5.1.7  Interactive Whiteboard Area

To the left of the group time space was a wall mounted Interactive Whiteboard and on occasions students would be asked to move their chairs from the group time space to this area.  These occasions included watching educational videos on the whiteboard; 'reflection time' which involved watching videos or photos of the class activities from that day; and music therapy, as the therapist tended to set up his keyboard in front of the Interactive Whiteboard.  The activities in this area tended to be teacher-led and have a degree of structure although were perhaps slightly less formalised than group time.

*Figure 18: Music therapy, in the interactive whiteboard area.*



### 5.1.8    Middle Carpeted Area

In the middle of the room was a carpeted area with two small desks.  These desks were mainly for 'choose' activities and so a selection of toys, puzzles or pen and paper were made available on the desks for students to engage with if they wished. The carpeted area was frequently used by students during 'choose' time for differing purposes: Thomas would run back and forth on the carpet, Anna crawled rapidly back and forth, and Luke enjoyed playing with toys on the carpet.  It was also an area that was often used for sessions of Intensive Interaction.

*Figure 19: Luke playing in middle carpeted area.*

## 5.1.9    Enclosed Outdoor Area

Purple Class had a small enclosed outdoor area in the shape of a long rectangle, with a very high perimeter fence all around.  It contained a trampoline, some toys, a plastic table with chairs, and had some mirrors and decorative animal pictures attached to the fencing.

***Figure 20: Enclosed outdoor area.***



The enclosed outdoor area was where I observed the majority of instances of peer interaction, which was generally mediated through embodied communication, such as physically prompting a peer to play 'chase' and then running away, or physically negotiating sharing of valued resources such as the trampoline.  Four of these types of interactions are illustrated and discussed in Chapter 8.

Staff were often indoors during break time, busy preparing the next activity to take place afterwards.  When staff were with the children in the outdoor space, they tended to interact with them in playful ways such as singing songs together, chasing or drawing on child-led principles from Intensive Interaction to join in with the child's actions.

*Figure 21: A chasing game, enclosed outdoor area.*



The door leading to the outdoor area had two PECS cards at student eye-level, although I did not observe them ever being used.

*Figure 22:  PECS cards for outdoor play.*

## 5.1.10 Settings beyond the Classroom

In addition to observations within the classroom, I was also able to undertake observations of the five children in the school's soft play facility, sensory room, playground, P.E. hall and dining hall, although there is no photo or video data from the dining hall or the playground due to the presence of non-participant children. I also accompanied the children on the school minibus on two 'community visits' to a local supermarket and a local playground. Whilst these visits took us outside of the usual material parameters of what I have called 'Purple Class', I would argue that there was sufficient continuity in terms of participants, relationships and practices to still consider these visits part of classroom life.

***Figure 23: Visit to local playground.***

*Figure 24: School soft play area.*



Having described and illustrated the materiality of the setting of 'Purple Class', in the next section I reflect on how the setting influenced the communication practices which took place therein.

*5.1.11 Reflections on the relationship between communication and setting*

In Section 2.1.4 I considered what existing literature has suggested about the potential role of artefacts and classroom layout in shaping communicative practices. The material presented in Section 5.1 points to how communication and materiality may have intersected in Purple Class. For instance, in the case of snack time (Chapter 6), the arrangement of chairs around the central focus of a staff member who managed access to the snack time artefacts limited possibilities for student movement or proxemic and postural adjustments. It also had implications for body/eye vector positioning which encouraged attention to be focused on the central organising staff member and associated artefacts such as PECS cards (Pierce, 2012). This had the effect of privileging AAC-mediated communication (PECS and Makaton) as students were physically oriented toward the staff member who was conducting interactions in this way. It also facilitated systematic turn-taking with the staff member occupying the pivotal position interacting with each student turn. By way of contrast, Intensive Interaction (explored in Chapter 7) could take place anywhere in

the classroom or outdoors as it was not tied to any particular artefacts, furniture, or spaces and the nature of the interactions could be quite heterogenous whilst still demonstrating common Intensive Interaction principles such as repetition of and elaboration upon a student's actions.  In Chapter 7, three of the Intensive Interaction episodes illustrated happen to take place across a table and one takes place with both participants seated although no table.  This has the effect of placing the emphasis of the repetition and elaboration on the student's facial expression, vocalisation and upper body movement, although Intensive Interaction in a space such as the outdoor area could in principle incorporate repetition of whole body movements and proxemic and haptic behaviour.  Finally in relation to outdoor play (explored in Chapter 8), there was no expectation of sitting and students moved around freely in the space provided with minimal direction from staff except for the occasional intervention where physical contact between students was deemed potentially problematic.  There was also no provision of PECS cards with the exception of 'chasing' and 'playtime' which were on the inside of the door leading to the outdoor space and therefore not easily accessible once students were outside. With the exception of students occasionally drawing on Makaton signs they had memorised from the classroom (for example, '*If You're Happy and You Know It*' in Section 8.3) AAC did not tend to feature prominently outdoors.  By way of contrast, games based on proxemic and haptic behaviours such as chasing (*'A Game of Chase'*, Section 8.2) rose to prominence and the outdoor space appeared to create a more level playing field in terms of interactional partner choice with both supervising staff and peers being viewed as possible interactants.  This is explored further in Chapter 9.

Having considered the role of the material environment, I now go on to consider the role of the staff of Purple Class in shaping communication practices.

## 5.2 Purple Class: The Staff

There were five regular members of staff in Purple Class: Lizzie (class teacher), Frances, Jacqueline, Jane and Helen (teaching assistants).  However only three of the four teaching assistants would be present at any one time due to part-time working.

Also included in the research was Luis, a visiting Music Therapist who delivered a weekly music session.  There was some staffing change during the first week of my fieldwork: the previous class teacher was relocated to another class and was replaced by Lizzie who had previously been teaching part-time in Purple Class but now became full-time, whilst a regular part-time teaching assistant also left and was replaced by Jane.  Staff varied in their degree of classroom experience generally and specifically in terms of their training in the approaches of PECS, Makaton and Intensive Interaction: for instance, Jane had worked at the school for many years and was a particularly fluent Makaton signer, whilst Helen had recently come to the school through a supply agency after having worked in mainstream schools.

 All staff members were fluent native English speakers, which gave them access to a rapid and flexible means of communication amongst themselves which did not include students who either could not follow the speed and complexity of such conversations or could not formulate rapid responses in order to participate.  The behaviour of students such as eye gaze, gesture, proxemics, and posture did not generally suggest to me that they foregrounded staff exchanges, with the possible exception of Luke whose rapidly alternating eye gaze between speakers frequently suggested that he was attending to such conversations.  This reminded me of the argument of Dreyfus (2006) that non-verbal multimodal communicators occupy a 'transmodal communication environment' (p.251): they are deeply embedded within a community of fluent English speakers who use speech as a primary means of interaction.

Having introduced the staff of Purple Class, I turn now to the five central participants: the children of Purple Class, introducing each in turn.

## 5.3  Purple Class: The Five Student Participants

In this section I bring together ethnographic data from family and staff interviews, observations and documents to describe in rich detail the communication repertoires of each of my five student participants.  I acknowledge that such descriptions cannot lay claim to providing a complete and comprehensive picture of each child for at least

two reasons: they draw upon knowledge accrued over the relatively short time-frame of one half-term, and they focus specifically on communication practices to the exclusion of other important dimensions of the child's life such as their educational history, their cultural, religious or ethnic background or their family structure.  They are also not intended to suggest that the communicative characteristics which have been ascribed to each child are stable inherent qualities of the child across time and place.  As Chapter 2 suggested, I regard both agency and communication as partially distributed phenomena which arise from an interaction between autonomous skills and environmental factors such as interactional partners and artefacts.

Nevertheless, I would argue that individual portraits of each child are valuable as opportunities to foreground what appeared to be discernible individual differences between the children which remained relatively constant over the time I observed them.  The portraits also allow for the integration of data from interviews with parents in the family homes.  Whilst the stated analytic focus of this study is on communication within the setting of the classroom and other settings visited during school hours, consideration of how children communicate at home can by implication help to elucidate how the institutional characteristics of the educational setting might contribute to shaping their communication practices during the school day.

### 5.3.1 'Albert'

**Figure 25: Albert.**



Albert was eight years old at the time of the study and had been diagnosed with Autism Spectrum Disorder aged two.  I did not observe Albert using spoken language at any point during fieldwork but he seemed to me to orient more strongly to Makaton signing as a modal preference than any other student: his observed repertoire of Makaton signs (*drink, biscuit, sleep, toilet, horse, more,*

*apple, raisins, please, thank-you, good morning, good afternoon, hooray, happy* and *know*) appeared relatively more extensive than any other student.  I observed Albert demonstrating the ability to recall and deploy Makaton signs spontaneously outside of formal, structured teaching contexts: for instance in '*If You're Happy and You Know It*' (Section 8.3) he spontaneously uses the Makaton sign '*more*' during an embodied performance of the song to request another verse.  Similarly, when an unexpected school visitor entered the room, I observed Albert requesting permission to leave the Group Time circle to greet the visitor through a combination of eye gaze behaviour and Makaton signing '*please*'.  This seemed relatively uncommon in Purple Class where, with the occasional exception of Luke, I only observed students using Makaton in highly structured contexts such as snack time where it was an imitation of a staff member signing.

My observations suggested that in the classroom Albert was compliant with the use of PECS in structured, prompted contexts such as snack time (see '*I want marshmallows, please*' in Section 6.2) and was capable of 'reading' a wide range of symbols since he carried his own personal timetable folder which illustrated with symbols what he would be doing 'now' and 'next'.  However, I did not observe him using symbols outside of structured, prompted contexts.

During fieldwork Albert appeared to demonstrate a preference for interaction with adults in the classroom rather than his peers: my observations frequently depict him engaging with staff for a variety of purposes including requesting (see '*I Want Marshmallows, Please*' in Section 6.2), performing a song (see '*If You're Happy and You Know It*', Section 8.3) or simply for the pleasure of phatic exchanges (see '*Mark-Making*', Section 7.2).  I noted Albert occasionally using objects in the environment to make his meaning clear to adults: for example on one occasion he held up an empty cup to request a drink, and on another occasion pushed his dinner plate away to indicate 'finished'.  I also observed him using objects in playful, phatic exchanges: for instance, he initiated a game with a teaching assistant by taking his hat and placing it on her head, approached a teaching assistant to show her his toy cow, and came to me to share a photo of himself at horseriding.  It seemed to me that he took pleasure

in the social exchanges with staff which were possible during Intensive Interaction and enjoyed the turn-taking which could evolve from someone copying his actions such as drumming fingers on a book.  Despite Albert's observed preference for adult interactants, I did see him on several occasions willingly joining in with simple peer games usually initiated by Thomas (see '*A Game of Chase*', Section 8.2).  However, Thomas was typically the initiator of such brief exchanges and Albert was typically the first to disengage.

At the time of fieldwork Albert lived with his mother, for whom English is an additional language, although she speaks English with her son.  He also had the opportunity to visit his father and his father's new partner regularly.  Albert's mother reported that he would often greet people in a very tactile way with kisses and hugs, which was not something I ever observed him doing at school.  She also said that Albert enjoyed interacting with her in the style of Intensive Interaction, as he liked her copying his strings of syllables as they walked home together after school.  She gave many examples of Albert presenting her with objects from around the home for communicative purposes: shoes and jacket indicated a desire to go out, food from the kitchen indicated hunger, and the remote control indicated a request for television.

Albert's mother found it to be of great practical benefit that Albert had started to perform the Makaton sign for *toilet* spontaneously when out and about:

> *He is definitely improving especially with the signs he is making and it is simple things like, showing he needs toilet, which is such a massive, definitely there is no worries about being in shopping centre and then suddenly having a little incident yes.* (Interview: Albert's Mother).

She also noted that at home he spontaneously performed the Makaton sign for *sleep* when he wanted to go to bed, and used the Makaton signs *more, again, drink, please,* and *thank-you* in functional contexts with her.  She remarked that on one occasion she brought him to school and he indicated that it was the scheduled day to go horseriding by pointing to a picture of himself on horseback on a school noticeboard and then performing the Makaton sign for *horse.*  When Albert appeared to have

acquired a new Makaton sign, either in school or his father's house, she would consult the school or the internet to find out what it was.  Albert's mother went on to express the desire to have Makaton lessons herself because Albert seemed to be good at using it, noting that at home Albert enjoyed watching *Something Special,* a popular children's television programme where the main character uses Makaton, and had learned some signs from that such as *iPad.*

In relation to PECS, I learned that Albert had a set of symbols at home which had been provided by school, although his mother reported that these had been more useful previously than now. For example, when beginning toilet training she used to carry the symbol card for 'toilet' for him to use, but more recently he had become able to perform the Makaton sign for 'toilet' instead and no longer needed the symbol card.  However, she noted there were occasions when symbols were more useful such as deciding on a destination for an outing.

Albert's mother expressed confidence in her own ability to interpret Albert's behaviour and body language in order to ascertain what he wants or needs, although she acknowledged that this could have its limitations if he needed to be more specific but did not have the means to do so:

> *I know what he wants and he knows how to ask me, in a way … you kind of know what he wants when he gets upset, it's just when it comes to if he is feeling unwell, you are second guessing constantly why is he crying, he is not usually like that …* (Interview: Albert's Mother).

She also noted that she did not have an easy way to consult Albert about his opinions, giving the example of trying to guess whether a pair of shoes was comfortable from the way he was walking and then discovering he had developed blisters because they were not.  When there was something wrong with Albert she had to attempt to infer this from his behaviour, which would often be general, non-specific withdrawal:

> *If he is sad or anxious, he prefers to be left alone so you can't come and comfort him, he wouldn't give you hugs, he will just probably take himself upstairs in the bedroom … he will just, he will just walk away.  And you think oh he has been*

*upstairs for 20 minutes I wonder what he is doing, so I went, I go upstairs and*

*he climbs out of bed, shows me out through the door and shuts the door …*

(Interview: Albert's Mother).

### 5.3.2 'Anna'

**Figure 26: Anna.**

Anna was seven years old at the time of the study and had been diagnosed with Autism Spectrum Disorder aged three. During fieldwork I heard Anna use some single words spontaneously and in functional contexts including *no, chocolate, walking, go, please,* and *hello.* I regularly observed her using PECS symbol cards when prompted to make choices of food and drink at snack time, and less frequently I saw her spontaneously using the small range of PECS cards made available around the classroom, for example, the '*toilet*' card on the door, to make a request to staff. My observations suggested that Anna used Makaton signing only occasionally and when prompted to do so in structured contexts such as snack time.

Anna appeared to me to be primarily motivated to communicate for two purposes. The first of these was phatic (social) interaction during Intensive Interaction achieved using non-verbal embodied modes. For instance, I often saw her engaging in extended exchanges with interactional partners who attempted to replicate her string of vocalisations, gestures or facial expressions, acting to regain their attention if they lost focus, and rewarding them with smiles, hugs and direct eye contact when they copied her successfully. One teaching assistant described her exchanges with Anna during Intensive Interaction as just like a 'real girly chat'.

The second motivation for Anna appeared to be achieving a desired practical outcome as quickly and efficiently as possible. For instance, in an episode from snack

time presented in the chapter which follows *'The Banana Conundrum'* (Section 6.2) Anna physically expressed her impatience with the requirement to recast a food request through multiple modes before she could receive banana, and in an episode of outdoor play presented in Chapter 8 (*'Give Me a Push'*, Section 8.2) she shrieked when Thomas stopped pushing her on the swing, suggesting a high degree of motivation to achieve desired practical outcomes without delay.  I also saw Anna pursuing practical goals by physically manipulating her interactional partner or objects in the environment: examples included pushing a teacher's hand towards the cupboard to indicate 'more chocolate', and holding out the two ends of her coat to an adult to request help with zipping.

Anna often seemed content with her own company and did not appear to significantly orientate towards peer interaction for its own sake, and any observed peer exchanges which did occur tended to involve necessary practical negotiations of shared resources or spaces.  For instance, her peripheral involvement in the play of peers often seemed to centre on her desire to gain control of toys rather than to interact with peers (see *'Squash Me'*, Section 8.2) or to obtain a desired sensation such as uninterrupted swinging which could be provided by peers or staff alike (*'Give Me a Push'*, Section 8.2). My observations both in the outdoor play area and in the classroom suggested that she was relatively more likely to interact with Thomas or Luke, particularly if there was a practical reason such as gaining control over a space or toy, and relatively less likely to interact with Albert or Dominic.

Anna was living with her parents and her aunt, all of whom have Polish as their first language.  They spoke in Polish to each other and often in Polish to Anna, although her mother had also been trying to use English for key words such as *'no'* which she perceived to be important in the classroom. There appeared to me to be the possibility of some disparity between Anna's perceived level of spoken Polish at school and the level she demonstrated at home:  following assessment by a bilingual teaching assistant Anna's degree of intelligible spoken Polish was considered to be negligible at school, but at home Anna's mother reported accurate use of the Polish words for *hello, goodbye, drink, egg, movie, come, please, thank-you, okay.* These

were merely examples which her mother was able to recall rather than an exhaustive list. Anna's mother also reported that Anna could count to five in Polish as well as taking part in the evening ritual of praying together according to the religious faith of the family. The prayers were jointly performed by Anna and her mother in Polish - Anna's mother would say one line and pause which prompted Anna to say the next line - and the routine is concluded by Anna saying *'Amen'* in Polish followed by '*Kocham cię'* (*'I love you'*) to her mother.

Anna's mother reported that she appeared to associate certain concepts more strongly with Polish and others with English:

> *And she erm… decide what is easier for her which word. Because for example dziękuję thank you and she use more Polish version but erm… for example please, we use proszę for please and she decide to use please more often. Even always I can say that, that she use please if she wants something.* (Interview: Anna's Mother).

Anna's mother told me that she will also use embodied means to communicate, such as getting her mother's attention by physically turning her head or taking her hand and leading her somewhere. Anna was also reported to use objects as artefacts to make meaning such as presenting her mother with a CD of music, a piece of clothing that she needs help with zipping, a DVD or a remote control. She did not have a clear means to indicate which DVD or television programme she would like which necessitated a degree of inference and guessing from her behaviour.

Anna's mother reported that she had a degree of awareness of the Intensive Interaction used in school and that she also found at home that playful exchanges based on imitation of Anna's sounds were a useful way to connect with her daughter:

> *I think possibly I heard somewhere about [this approach] … we were together and she look at me and she started to talk so I started to repeat this and I saw that I have her attention so I did this always after bath you know when I use comb and I always am in that position so I am in the same level, eye level with her, and she started to do this and I repeat it. And that was amazing because I had contact, eye contact with her so that was for me very important*. (Interview: Anna's Mother).

She went on to explain that it was not always possible for Anna to detail a specific problem such as pain or discomfort:

> *Well if she feels sick I, I can't be sure. She is of course more quiet, she doesn't look good but sometimes it looks like she is tired … she had a problem with urine infection and of course you know she couldn't tell me that she feel pain … so I am scared that kind of situation because that really I can't be sure because she can't tell me.* (Interview: Anna's Mother).

AAC did not seem to have transposed easily to the home environment: Makaton was not being used by Anna at home and although the family received some support with implementing PECS cards from Anna's nursery school and also from undertaking a course for parents of children with autism, these did not subsequently become embedded as a significant part of her home repertoire:

> *She doesn't want to use symbol at all at home, she knows exactly what it is, she knows that if she wants a drink she use [the symbol] a few times because on the fridge it is a bottle of water, erm... she can use this but she prefer different ways. She prefers show me. Or take herself …* (Interview: Anna's Mother).

### 5.3.3 'Dominic'

**Figure 27: Dominic.**



Dominic was eight years old at the time of the study and had been diagnosed with Autism Spectrum Disorder aged three. I sometimes observed him verbally producing single words, often with prompting and modelling but sometimes spontaneously: for example, he spontaneously said *marshmallows* when they were produced at snack time, and could say *no* to resist activities. He did not appear to be highly oriented towards using available AAC in school: whilst I saw him using PECS at snack time to make choices from the available food and drink as expected, he sometimes did not seem particularly motivated by the food item he had chosen which led staff to discuss

whether he really wanted it at all.  He was not observed to make use of the PECS cards available around the classroom outside of these structured contexts and I did not observe him using Makaton during my study.

Dominic could reposition adults for communicative purposes: for example, on one occasion I was pointing to pieces of fruit in a book and naming them, and when I finished he took my finger and repositioned it on the page which I interpreted as a request to repeat the naming of that item.  I did not observe him making significant use of artefacts around the classroom to make meaning during the study even though this was a very frequent strategy at home, as discussed below.  It is possible that could be explained by the unavailability of desirable items in the classroom, or alternatively by the inaccessibility of artefacts which would indicate food in general: snack time items such as the jug and tray as well as the associated PECS folder were kept in a high cupboard when not in use.

Dominic's overall communication style seemed to me to be very strongly characterised by a desire for physical closeness, touch, and cuddles with both adults and peers in equal measure.  I observed many instances of Dominic enjoying physical contact with or proximity to adults without the specific interactional characteristics of Intensive Interaction: examples include receiving a head massage, sitting on an adult's lap listening to a song, tapping on an adult's leg.  Moreover, when an Intensive Interaction-based exchange did succeed in engaging Dominic it was almost invariably rooted in proxemic or haptic closeness.  An example of this can be seen in the illustration of Dominic engaging in an Intensive Interaction-style exchange with a teaching assistant in *'Chatting during Worktime'* (Section 7.2).

In terms of peer interaction, most of the exchanges I observed involving Dominic were with Luke, the student who was most likely to respond positively to Dominic's desire for touch and proxemic closeness.  For example, I observed Dominic spontaneously sitting beside Luke and putting his arm around his shoulder after he had been admonished for rearranging the visual timetable, on another occasion stroking him on the head, and on a further occasion lightly tapping him on the leg.

Similarly, playful interactions observed in the outdoor play area often seemed to involve physical contact for Dominic (see for example the transcribed play sequence in *'Squash Me!'*, Section 8.2).

Dominic was living with his mother and three older siblings and was also very close to his grandmother who he saw regularly. His mother reported that he was very tactile with the family and would greet people with kisses and squeezes. He had developed embodied strategies for getting his mother's attention such as coming and holding her hand or physically lifting her face until she looked directly at him. If he wanted a cuddle he would physically reposition his mother into a sitting position so that he could then climb onto her lap. Dominic's mother also reported that he enjoyed getting a massage in the evening before bed and would guide her hand to where he wanted her to massage.

According to his mother, Dominic had some limited use of spoken language in the home. His older sister had taught him to say *'bye'* and wave when he is leaving people, and he would do this sometimes prompted by his sister and sometimes spontaneously. He was reported to sometimes use echolalia communicatively such as repeating his mother's utterance *'no, this way'* when he was insisting on taking a familiar route.

Dominic's mother also reported that he could use the word *'no'* to protest, for example about getting his hair dried after a bath. With three siblings there was considerable competition over the television and she recounted how Dominic had developed strategies including saying the word *'Sponge'* as a request for the television programme *Spongebob Squarepants* whilst physically fighting for possession of the remote control. He would fetch his doll and say *'night night'* to indicate that he wanted to go to bed, and would give his mother the phone and say *'momma'* meaning that he wanted her to phone his grandmother.

Dominic was also reported to make use of objects around the family home to make his meaning clear: for example, leading his mother to the kitchen and then sitting at

the kitchen table as an indication that he wanted food, or alternatively bringing a food item from the kitchen and presenting it to his mother.  His mother also recalled instances of him fetching ice-cream from the freezer as well as a bowl and spoon from the cupboard and laying these on the table, as well as requesting his favourite breakfast of bacon and eggs by fetching the frying pan and placing it on the hob. Further recounted examples of household artefact usage included presenting his mother with her handbag to request sweets which she often carried in her bag, or presenting her with the remote control if she had guessed wrongly about which television programme he wanted.

I learned that Dominic did not have a way of communicating that he wanted to use the toilet, which at home was not a problem since he would go to the bathroom independently.  However, his mother noted that this had proved problematic when out and about as he would suddenly undress and urinate in public.  He also did not have a means to specify the cause of distress or pain, which would leave his mother the task of deducing the likely problem from the circumstances:

> *When he is poorly, he is in an illness it is not always apparent. Because when Dominic is ill, he is still although he looks pale, you wouldn't be able to think he was ill because he acts normally.*  (Interview: Dominic's Mother).

Although the family had been given support and resources to use PECS symbol cards in the family home, Dominic's mother noted that PECS had not become significantly embedded as part of Dominic's home repertoire:

> *When I had early intervention woman in … she was fantastic, she spent hours on end with him, to try and engage him in [PECS] … he wasn't quite on board to begin with but I just assumed that would come in time.  But it didn't seem to.  I am sure he does brilliant at school with it, but he doesn't do well at home with it.*  (Interview: Dominic's Mother).

The one exception to this that she could think of was the '*drink*' symbol card affixed to the family fridge: Dominic's mother kept a jug of orange juice in the fridge for Dominic to help himself but if it was finished he would use the symbol card to ask her

for more.  She also reported that Dominic was aware that if he presented the same symbol card to his older brother it would produce a different result as he could get Coca-Cola, which his mother did not allow him to have.

### 5.3.4 *'Luke'*

**Figure 28: Luke.**



Luke was six years old at the time of the study and had been diagnosed with Autism Spectrum Disorder and Global Developmental Delay aged three.  I observed Luke using single word speech which was often used after prompting but sometimes spontaneously: during fieldwork I heard him say *please, orange, me, choose, toilet, Luke, raisins* and *crisp*.  Luke was also observed to use a number of basic Makaton signs including *no, thank-you, more, please, orange* and *eat* and although they were most often observed in structured settings such as snack time he was occasionally seen using them spontaneously, such as signing *more* to get more cuddles in the playground.

My observations suggested that Luke had a very strong orientation towards the use of symbol cards found around the classroom, both PECS cards and symbol cards for other purposes such as representing visual timetables.  In addition to using PECS cards with ease in structured contexts such as snack time, he was the student in Purple Class who was most frequently observed to spontaneously use the small number of PECS cards permanently available to students on the classroom walls ('*help*' and '*toilet*').  Luke was also observed on many occasions attempting to exert influence on his environment by subverting or transgressing the intended usage of visual resources in creative and original ways.  At the dinner table, I saw him presenting the PECS card for 'spoon', which was envisaged by adults to function as a request for cutlery when dessert has arrived but appeared to be re-appropriated by

Luke as a statement that he was finished with dinner and wanted dessert. I also saw him repeatedly engaged with the symbol cards on the class visual timetable, rearranging them to promote his favourite activities to 'now' or 'next' status and posting the cards for his dispreferred activities behind furniture. These timetable symbol cards did not have the same status as PECS cards: they were designed to support student comprehension of the order of their daily routine and were not intended for active student manipulation like PECS cards as the timetable is non-negotiable. Luke also was observed several times to take advantage of momentary lapses in staff attention at the snack table to take symbol cards from inside the folder and promote them to the Velcro strip on the folder's front cover, which would change their status from unavailable to available: on one occasion, the symbols for sweets, chocolate, popcorn and ice-cream were promoted in this way. The data might therefore point to Luke's high level of understanding of the meaning of a wide range of pictorial symbols and their communicative uses within the parameters set by Purple Class staff as well as how to creatively subvert such parameters when they did not suit his purposes.

Regarding peer relationships, it seemed to me that Luke was relatively open to interactions with staff and peers alike, generally enjoyed being the recipient of attention, and did not show a marked preference for whether it came from adults or children. My data seemed to suggest that Luke was willing to engage with anyone who would engage with him, which most often was either Thomas, who was highly motivated by peer interaction generally, or Dominic, who found Luke receptive to the kind of close physical contact he wanted. I noticed that Luke really enjoyed the opportunity afforded by the play time after lunch on the main shared playground to interact with children from other classes who had a wider range of dis/abilities and communicative repertoires than his four peers in Purple Class:

> *Down on the [shared] playground [Luke] had a lovely interaction with two boys, one was pulling him around in a cart type thing, the other was deliberately bashing into him with his trike and they were laughing. When Luke wanted to be put down he indicated to the boy pulling him by pointing both his fingers to the ground. The boy immediately understood and put him down.* (Fieldnotes, 19 January).

Luke lived with his parents and sibling who all have English as their first language. The interview was conducted with his mother and his aunt, the latter of whom was present on that occasion but did not live in the family home. Luke had a lot of contact with his aunt and with his cousins. The interview was not audio recorded at the family's request so the information provided here is a summary of my notes taken during my visit to the family home.

Luke's family reported that he could use a lot of single spoken words at home to communicate. They were able to recall him using the spoken words *hi, hello, bye, toilet, drink, banana, chips, chicken, ice-cream, broken, bath, peas, beef, dinner, that* and *no.* With some of these words the pronunciation was reported to be approximate but comprehensible, and I learned that when Luke said the word *'no'* he would typically also perform the Makaton sign simultaneously. At home he used the Makaton signs *more, please, thank-you, stop* and *no*, all of which the family recognised. The family had also been provided with some PECS cards from school and Luke would sometimes use the cards for *dinner, drink* or *toilet* to make a request, although the family noted that sometimes he also appeared to be playing with them and rearranging their order on the Velcro strip where they were stored.

I learned that Luke could communicate with his family through embodied action, such as pointing to the cupboard where the snacks are kept, or tickling his mother to initiate a game of tickling. He would present an adult with a DVD or remote control to make a request for television, or if these items were out of reach he would point up to them. In order to enable him to choose a specific television programme the family would scroll through various options on screen using the remote control, with each option having a visual preview so Luke didn't need to read the title, and Luke would point and say *'that'* or *'uh'* upon reaching his desired programme.

Luke's family reported that sometimes they needed to infer what he wanted or needed from his behaviour. They gave the examples of him making a grunting noise and walking off when he didn't want to do something, or in more extreme cases

throwing himself on the floor kicking and screaming.  His family tended to anticipate quickly when he needed help before he asked for it because if they didn't offer help quickly enough he could become frustrated.  They reported knowing that Luke was happy if he was running around and laughing, but that he would be quieter if unhappy or frustrated.  If he was in pain or poorly he would be pale and quiet and would typically fetch his favourite bear and blanket and lie down.   If he was tired he would fetch his favourite bear and lean against his mother, and his eyes would be heavy.

### 5.3.5    *'Thomas'*

**Figure 29: Thomas.**

Thomas was seven years old at the time of the study and had been diagnosed with Autism Spectrum Disorder and Global Developmental Delay aged three. I did not observe Thomas using spoken language at any time during my fieldwork, but I saw him using PECS cards to select from a range of food and drink on offer at snack time in a structured, prompted context.  However, there did not seem to be a high degree of observable enthusiasm for using symbols and he sometimes required much prompting. I saw Thomas copy a small number of Makaton signs, although he was not observed to use them spontaneously without prior prompting.

I observed Thomas on some occasions making use of artefacts around the classroom to request adult help, such as holding out the zip of his coat for assistance, or presenting his outdoor shoes. Thomas was also observed to use physical repositioning of adults to make requests: for example, leading a teaching assistant to

the coat pegs and putting her hand on a peg to indicate he wanted to go outside, or leading an adult to the computer to indicate that he wanted it turned on.

My observations suggested that Thomas could sometimes be engaged through Intensive Interaction when an adult copied his actions, for example in an incident when a teaching assistant copied the rasping noises he was blowing with his lips (explored further in '*Blowing Raspberries*', Section 7.2).  However this was not always successful, and I later described this event in fieldnotes as 'possibly the most engaged I have ever seen Thomas' (13 January), pointing to its atypical status.  One member of staff described Thomas as 'difficult to reach' at times.

However, of all the students in Purple Class, Thomas appeared to demonstrate perhaps the highest degree of motivation for peer interaction: for example, Chapter 8 illustrates examples of him initiating and sustaining a chasing game with Albert ('*A Game of Chase'*, Section 8.2) and pushing Anna as she lies on a basket swing (*'Give Me a Push'*, Section 8.2).  He typically undertook these exchanges using non-symbolic embodied strategies such as gesture, proxemics, eye contact and haptics.  Whilst peer exchanges were relatively infrequent in Purple Class generally, Lizzie (class teacher) commented that they often involved the dyads of Thomas-Albert or Thomas-Luke with Thomas playing a pivotal role in organising and sustaining them, and this was supported by my own observations.  Thomas was also frequently observed standing alone watching the play of children in an adjacent but unrelated mainstream primary school through the perimeter fencing of the outdoor play area, and was the only student in Purple Class to show any degree of interest in the activities of these unfamiliar children.

Thomas lived with his parents, sister, aunt and grandmother, all of whom had Polish as their first language.  The interview was conducted with both of Thomas' parents. His family have made a conscious decision to speak to Thomas in English and it was their impression that Thomas had a higher level of comprehension of simple spoken English than Polish.  Consistently with school, Thomas did not seem to use spoken language, English or Polish, at home.  The only example recounted by his parents was

a recent incident when he was upset and appeared to be attempting to verbalise *mama* and *dada*, which his mother described as a *'shock'* to hear.

It also seemed that Thomas may have been attempting to use Makaton signing on occasions at home but his family were not familiar with the signing system:

> Dad: *Trying to show something with his hands, we don't know what it is. Just waving his hands around and sometimes making like it was a Makaton.* (Interview: Thomas' Mother and Father).

When I demonstrated to Thomas' parents some of the key Makaton symbols he encountered most frequently in Purple Class they immediately expressed recognition for the sign *'more'* and felt sure that he had been performing this sign in the context of wanting more crisps.

Thomas' family had been provided with PECS symbol cards from school to use with Thomas but had not found them especially useful in the home environment. The cards had since fallen into disuse. His father expressed the view that Thomas associated PECS more with the school environment and was more willing to use them there:

> Dad: *We try to do it with the PECS and everything but it will seem like, use them at school, we cannot make this transition with home … It was like he didn't seem too bothered with it …They send us from school exactly the same as they use at school and we tried to show him whatever was on the pictures about …* (Interview: Thomas' Mother and Father).

My own observations did not particularly support the view that Thomas was any more enthusiastic about spontaneously using PECS cards in the classroom than at home, as his observed use of PECS was only in highly structured and prompted contexts such as snack time.

Thomas' parents expressed the view that he was a very independent character who preferred to go to great lengths to do things for himself at home and thereby to avoid the need for communication. They cited the examples of him attempting to prepare

food for himself, run baths for himself, and fetching chairs to climb on to retrieve desired items which were out of reach or to turn on the wall-mounted television.

> *Dad:* *He is smart, it is easier for him to get a chair and climb up and grab whatever he wants than to show us … He knows where [biscuits] are so even if they are hidden behind, locking the jar and everything he will just grab a chair get up  there just take everything out, I will have a biscuit …* (Interview: Thomas' Mother and Father).

Thomas' parents also felt that they were often able to infer what Thomas wanted or needed from observation of his behaviour.  For instance, they reported that if the sound of another child crying was disturbing him he would physically attack them to make it stop, and if his iPad stopped working because it needed charging he would throw it across the room.  He would jump up and down when he was pleased with the television programme they chose for him, he would cry and stamp his feet when angry, or he would slap himself on the chest when he was unhappy with something.

Additionally, Thomas was reported to perform embodied actions which appeared to signify meaning in a more intentional way than the behaviours described above.  For example, he would give his parents a gentle pinch on the arm as a request for attention or a more forceful pinch as an expression of anger, he would initiate physical play with his father by giving him a gentle head bump, and he would take his mother's finger and use it to point to an item he wanted.  He was also reported to make use of artefacts around the family home to make meaning: for instance, giving his parents bread from the kitchen to indicate he wanted a sandwich, giving his father the joystick from the games console to initiate a game, or presenting his shoes to suggest he wanted to go out somewhere.

However, there were limitations to what could be inferred from this type of communication.  For example, by presenting his shoes there is a clear request to go out somewhere but in his father's words 'I don't think he expresses exactly where he wants to go' (Interview: Thomas' Mother and Father).  Additionally, Thomas was not able to be specific about feeling poorly or experiencing pain:

> *Dad:    Whenever he is ill we don't exactly know what is wrong with him.  We can, we can kind of [inaudible, 50.22] that sore throat because he doesn't want to drink, or eat so we know sore throat we can see runny nose other than that we just are guessing what is wrong with him.*
> (Interview: Thomas' Mother and Father).

Having drawn together and presented ethnographic data on each student, I now reflect on what can be learned from these individual pen portraits about students' communicative repertoires.

### 5.3.6    *Reflections on Student Communicative Repertoires*

As explained in Chapter 2, I take a critical realist perspective on dis/ability, communication and agency, seeing them as emergent properties arising from interactions between contextual factors such as people, artefacts and time on the one hand and individual characteristics on the other.  It is therefore interesting to reflect on the data presented above about individual repertoires (5.1.1-5.1.5) from two perspectives: the contextual and the individual.  Firstly, I consider how the data might point to certain continuities and discontinuities between the home and school communicative environments.  Secondly, I analyse whether there are discernible and relatively enduring individual differences in communication abilities and preferences amongst the five children as individuals even across different settings.

#### 5.3.6.1 *Dis/continuities between communication at home and at school*

In this section I focus on the features of communication in the home environment which were suggested by my interviews with parents and identify possible points of dis/continuity with my classroom-based observations.  These can only claim to be tentative suggestions given that I visited the family home only once and conducted parental interviews rather than extensive observations of communication *in situ*.

The first notable feature of parental talk around communication was expressed self-confidence in the ability to quickly and successfully anticipate or deduce what the child needed from observation of their behaviours, without the child necessarily needing to perform an 'intentionally' communicative act as defined by Stiegler (2007)

in Section 2.1.3.  For instance, comments included 'you kind of know what he wants when he gets upset' (Albert's Mother); 'You know as a parent you know when they cry' (Dominic's Mother); 'he will just clap his chest and I know it is too much I have to stop' (Thomas' Father).  It seems reasonable to suggest that parents might be more precisely attuned than professionals to correctly interpreting, for example, different pitches of crying or different self-injurious behaviours given their closeness to their child and the longevity of the relationship, and that these interpretative skills might to an extent naturally reduce reliance on AAC-mediated communication in the home.  This is consistent with Marshall & Goldbart (2008) who acknowledge parental interpretative expertise, arguing that for parents of children who use AAC 'there is often an additional communicative responsibility involved in acting as an interpreter when their children communicate with other, less familiar, people' (p.29).

A second prominent feature of home communication was the use of artefacts.  Objects which were reportedly presented frequently to parents with intended meaning included television remote controls (Albert, Anna, Dominic and Luke); CDs and DVDs (Anna and Luke); food items and kitchen items associated with food such as cutlery and crockery (Albert, Dominic, Thomas); and shoes and clothing (Albert, Anna and Thomas).  Whilst my observations of each child presented above do include some instances of the communicative use of classroom objects, this appeared from parent reports to be a relatively more frequent and pervasive feature of their home communication.  It is difficult to say with certainty whether this might be explained by the relative accessibility of artefacts around the family homes compared to the classroom where, for example, the items associated with snack time were kept in a high cupboard out of reach when not in use; or by the presence of artefacts associated with highly desirable and motivating activities (DVDs, CDs, joysticks and remote controls) which were not present in the classroom at all; or whether artefact usage was a consequence (or cause) of a relative disuse of AAC in the home for equivalent requests.  It is also possible that, consistent with the findings of the Speechome project (Roy et al., 2012), there was a particularly strong association between spatial zones of the family home and the activities, routines, artefacts and vocabulary  associated with each: whilst the child in the Speechome project was

observed to produce certain utterances more frequently within certain areas of the family home, Dominic might be said to be performing a gestural, postural and artefactual equivalent when he sat expectantly at the kitchen table with bowls, cutlery and food items. This association between space, activities and artefacts is likely to be stronger in the family home where a wide range of easily available artefacts are likely to be deployed daily in certain contexts, whereas in the classroom only two observed activities (group time and snack time) consistently used the same artefacts and student access to these objects was restricted outside of those times. This restriction was achieved in the former case by rules forbidding the manipulation of symbol items on the a-frame board, and in the latter case by physical inaccessibility.

Thirdly, it was not my impression that AAC formed a particularly significant role in communication at home.  For instance, the families of two students (Thomas and Dominic) openly expressed their perception that symbol cards such as PECS were more successful in the school environment than at home.  Whilst all five families acknowledged receiving PECS resources and advice from educational professionals at some point in the past, the interviews suggested that the symbol cards appeared to constitute a negligible part of everyday communication on an ongoing basis with students preferring to use artefacts, lead their parents to items and point, obtain the item or activity through independent effort, or rely on interpretation of non-specific behaviours.  According to parents, Makaton signing appeared to play a modest role in home communication in the cases of Albert and Luke, most particularly in Albert's case where there was particular enthusiasm for the approach from some family members, whilst Anna and Dominic's parents indicated that they tended not to sign and Thomas may have attempted signing at home which was not recognised as such.

The question of the home/school relationship is sometimes framed in clinical AAC literature as a question of professionals leading the efforts to overcome parental reluctance and secure 'buy-in' of the need for AAC implementation at home (Lindsay, 2010; Ganz, 2014; Akamoglu et al., 2018).  In the cases of the families in this study it did appear that there was generally more explicitly expressed enthusiasm from

professionals than from parents for AAC acquisition.  For example, as noted above efforts to create and implement the use of PECS in the family home appeared to have been driven by visiting professionals, and Lizzie (class teacher) oriented strongly to the teaching of AAC as preparation for life as a disabled adult:

> *However as he gets older, moves to his secondary school and probably into adult services, then you know they are going to need those slightly more formal ways of communication that actually give them a voice … if they have got ways of communicating they are able to communicate with you what they want, rather than it being a guessing game for staff.* (Lizzie, class teacher: Interview).

However, I would be hesitant to suggest that this study constitutes evidence of the supposed parental 'buy-in' problem (Lindsay, 2010; Ganz, 2014; Akamoglu et al., 2018) for three reasons.  Firstly, the five families in this study are not necessarily representative of all families of AAC users: Marshall & Goldbart (2008) note that AAC families are heterogenous, ranging from parents who appear entirely uninvolved in AAC to parents perceived as 'pushy' (p.27) because they are more ambitious about AAC provision for their child than any of the involved professionals.  Secondly, despite the expressed professional enthusiasm for AAC in this study my observations did suggest that PECS was significantly more successful at school than at home, and I observed it being used as a communicative strategy usually only in very structured, scripted contexts such as snack time (as I explore in Chapter 6) with limited opportunities for spontaneity.  Thirdly, taking an ethnographic approach to exploring parental attitudes in this study suggested that parents were very able to elaborate and critically reflect on the different dimensions of their child's multimodal repertoire and the reasons why the AAC provided had been discarded in favour of alternative strategies such as artefact usage, gesture, haptics and proxemics. It appeared that the AAC provided to parents frequently consisted of food and drink symbol cards, which in a family home are particularly easy for children to convey through alternative means such as fetching food and drink items directly. At the same time, parents also critically reflected on instances of where the 'reach' of such direct artefactual or gestural strategies ran out and a symbolic form of communication such as symbols or signing might have played a more supportive role in home communication because direct deictic referencing to an item not possible. Identified

instances of potentially useful roles for AAC included specifying the cause of distress or the location of pain (Albert, Anna, Dominic, Thomas), asking for the toilet when out and about (Albert, Dominic), selecting a television programme (Anna, Thomas), and suggesting a destination for a family outing (Thomas, Albert).  In some of these instances, AAC was already being used to support communication: for instance, Albert had mastered the Makaton sign for 'toilet' and could recall it spontaneously when out and about, and he was shown pictures of places to support choosing a destination. However, in most instances AAC was not being used as a support and the family were simply expressing dissatisfaction with communication in these areas. This raises the question of whether home-school liaison might more effectively identify a useful role for AAC in both settings, a question which is explored further in Chapter 10.

Having established some contextual differences between the children's communication at home and at school, it is now useful to pose the opposite question: namely, whether there were individual tendencies to communicate in certain ways which persisted across both settings.

### 5.3.6.2 *Individual differences in communication*

As outlined in Chapter 2, I maintain that in addition to environmental factors shaping communication there can also be real individual differences between participants which appear relatively consistent across settings and cannot be accounted for by environment alone.  In this section I look across my data from both home and school to identify any features of individual communication which appeared to distinguish the five student participants from each other.

It has already been argued in AAC literature that individual students may demonstrate preferences for particular AAC modalities such as PECS, Makaton or speech-generating devices (van der Meer et al, 2012; Mirenda, 2009).  To an extent, this was sometimes supported by my findings when reflecting on the modal preferences of the students more widely, incorporating both AAC-mediated and other modes. For example, Albert appeared to consistently orient towards Makaton

signing more than any other child both at home and at school, Luke appeared the most highly motivated by the use of visual symbols, whilst haptics and proxemics appeared particularly important for Dominic in both settings. However, I would argue that it is difficult to make decontextualised assertions about a child having an orientation towards a particular modality because modal choices in any given communicative context seem to be inextricably interwoven with other dimensions of individual variation which become apparent when the child is observed *in situ*. Three particular dimensions of individual variation suggested by my data are discussed below with analysis of their possible relationship to apparent modal preference.

In terms of *interactional partner choice*, the students of Purple Class appeared to range in their motivation to interact with peers. My observations suggested that Thomas demonstrated a consistent marked preference for interacting with children rather than adults, Luke and Albert appeared to show moderate receptiveness to advances from other students (most frequently, Thomas) although were slightly less likely to be initiators, Dominic was interested primarily in Luke who was receptive to his need for physical closeness and cuddles, and Anna oriented relatively less to her peers unless for a pragmatic purpose such as negotiating the use of shared resources or spaces. It is extremely difficult to disentangle these interactional partner preferences from modal preferences and establish definite causal relationships. For instance, it is possible that Thomas showed low levels of motivation for the use of AAC because it was primarily provided to facilitate vertical (staff-student) requesting which did not correlate with his own motivation to engage peers, or conversely that he had a strong preference for engaging in non-symbolic, embodied communication which by necessity meant that peer relationships were more easily accessible for him.

Secondly, students also appeared to vary in their *topical/ functional preferences* when interacting with the adults of Purple Class. Albert had a high degree of interest in interacting across a range of speech functions including requesting, commenting (by showing artefacts), phatic communication, and engaging with adult led-activities such as the song in *'If You're Happy and you Know It'* (Section 8.3). Anna's

interactions with adults were a mixture of highly practical requests such as having a need met for food, drink, help with dressing or access to the toilet and phatic communication enabled by Intensive Interaction, but typically at her own behest and for a duration of her choosing. Dominic's interactions with adults often seemed to reflect a need for closeness, comfort and social engagement and suggested a relative lack of interest in transactional exchanges such as PECS requests, whilst Thomas showed the lowest degree of orientation towards adults in general and requested occasional practical help when necessary. These topical/functional preferences again existed in a complex relationship with modal preferences in ways which are difficult to unpack. For instance, it is possible that Dominic's relative lack of enthusiasm for AAC was preceded by a primary motivation for phatic communication which was not enabled by the AAC provided in Purple Class, or conversely that his modal preference for embodied communication featuring haptics and proxemics resulted in infrequent transactional exchanges as they were expected to be mediated by PECS symbol cards in Purple Class.

The third dimension of individual variation involves the idea of *'personality'*. Here, it is not my intention to substantially unpack various existing debates within 'personality psychology' including how to conceptualise the interaction between inherent traits and situation (Hogan, 2009; Heller et al., 2009) or the relationship between traits and states (Nezlek, 2007). Rather, it is simply to acknowledge in the broadest sense that a person may appear to demonstrate certain propensities towards acting in certain ways in relation to others which may be more or less enduring and more or less situational, and which may influence and be influenced by their communicational style. Whilst Spere et al. (2004) find limited evidence for a link between personality characteristics and the development of language and communication skills, both Marshall et al. (2007) and Peacey (2005) note that personality-based explanations feature prominently in parental accounts of identified communication disorders in children.

In this study, Thomas' father was the only parent to orient explicitly to the relationship between communication and personality, describing his son as

independent in nature and stating that he would go to great lengths to obtain desired outcomes for himself without the need for communication.  If this were the case, it might point to why the number of interactions Thomas initiated with Purple Class staff was relatively low compared to other students.  Other parents did not orient to the question of their child's 'personality', although this may be a product of the design of the Inventory of Potential Communicative Acts (Sigafoos et al., 2000) which was used as a springboard for discussion and tended to result in a focus on presently occurring communicative behaviours.  It was my own impression from classroom observations that there were certain variations in what might be described as 'personality' or established ways of interacting with others which had subsequent implications for communicative choices: for instance, Luke was the only student in Purple Class who regularly and creatively transgressed classroom expectations regarding communication by rearranging the visual timetable, removing undesirable cards, and changing the selection of food denoted as available at the snack table. Whilst other students might occasionally give a fleeting reaction of displeasure to staff such as Anna's frustration at being made to recast the same message through multiple modes (see *'The Banana Conundrum'*, Section 6.2), Luke was the only student observed to actively challenge adult decision-making by suggesting alternatives. For instance, he persistently refused to accept that raisin supplies would not be replenished at the snack table and went to great lengths to suggest this as a desirable course of action (*'But I'd Rather Have Raisins!',* Section 6.3), an effort which requires an orchestration of multiple modes including eye gaze, vocalisation, gesture and artefact manipulation since the PECS cards provided did not allow for the requesting of unavailable items.  In contrast, my observations suggested that Albert was generally highly compliant with the expectation of requesting available items only at snack time (see *'I Want Marshmallows, Please'*, Section 6.2) and the use of Makaton and PECS appeared to be enabling modal choices for compliance.  As with all the other identified dimensions of variation, however, the direction of the relationship between 'personality' and modal choice is complex to unravel: it is difficult to speculate whether Albert was more compliant than Luke as an inherent and relatively stable characteristic of his personality or whether the available symbol cards at the snack table channelled him towards compliance with requesting an

available food item, and whether he might have wished to question the absence of other foods if, for example, a symbol card or Makaton sign had been provided for this purpose.

In summary, in this section I have suggested that each child's multimodal repertoire showed a degree of individual variation which was possible to identify by looking across the data from both school and home. The children appeared to show identifiable differences in their multimodal repertoires which varied across (at least) three dimensions: interactional partner preferences, functional/topical preferences and 'personality' variation. It was argued that the interplay between these three dimensions (and their relationships with modal preferences) is likely to be complex and not reducible to simple causal relationships, but that all dimensions must be considered in order to understand an individual child's modal and communicative choices.

Having examined the questions of home-school variation and individual preferences suggested by the five pen portraits, in the next section I focus more specifically on the classroom. Looking across the full corpus classroom-based data which was generated (observations, fieldnotes, video, photographs, staff interviews), I consider the diverse 'communication contexts' of the school day and how they shaped communication. This is done in order to locate the three contexts chosen for detailed analysis – snack time, Intensive Interaction and outdoor play – within the overall school day and to acknowledge the daily activities which are not portrayed in Chapters 6-8.

## 5.4 Contextualising Communication within the School Day

As noted in Chapter 3, I am using the term 'communication context' to refer to particular constellations of physical setting, timing, interlocutor relationships, artefacts, content, speech function and modal choices which were observed to coalesce with regularity throughout the school day in Purple Class. As explained in Section 4.3.6, I conducted a card-sorting exercise which asked staff to generate their own ideas about the coalescence of certain ways of communicating during the school day and to note the main communication features and modalities they would

associate with each context.  Photographs depicting the outcome of the card-sorting activity can be seen in Appendix E.

My repeated observations and viewings of video data combined with my analysis of staff interview data as well as the outcome of the card-sorting exercise suggested that there were certain regularities in how topic/activity, interlocutor relationships, setting, and artefact usage including AAC tended to coalesce. These are shown below in Table 5.

*Table 5: Communication contexts of the school day.*

| | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| *Break time* | Took place in small tarmacked outdoor area adjacent enclosed by high fencing. Toys available included a small trampoline with handrail, a green plastic table, some reflective and mirrored panels attached to fencing, and a selection of small toys. Two PECS cards were available on the *inside* of door leading to outdoor area ('chasing' and 'playtime', see Figure 30) but as re-entry into the classroom was not generally permitted during breaktime these were not accessible. | Morning break was scheduled for 10:45-11a.m. (directly after morning snack time) although there was often a fifteen minute break time in the afternoon also which was not timetabled. | One or two staff would typically stand at the door joining the outdoor play area to the classroom, thus discouraging re-entry to classroom. They would monitor play, intervene where physical contact between students was deemed potentially problematic, sometimes play with students and sometimes talk amongst themselves.<br><br>Students would most often engage in solitary or parallel play with the available toys. Less frequently, they would engage in playful exchanges with staff or with each other. Although exchanges between peers were not frequent, they seemed to be relatively more frequent in the outdoor play space than in any other context. | PECS was not observed in use, possibly due to unavailability. I observed Makaton being used spontaneously only by Luke and Albert when interacting with staff, and in both cases it was the sign for 'more' to request continuation of an activity (for illustration see 'If you're happy and you know it', section 8.3).<br><br>Communication was much more likely to be embodied in nature with students initiating, sustaining and discontinuing interactions with staff or peers using orchestrations of proxemics, haptics (where permitted), gesture, vocalisation and facial expression. For illustration, see 'A game of chase', section 8.2).<br><br>The most common speech functions expressed in this way appeared to me to be *requesting an action, attention to self, rejecting/protesting, and phatic communication* (following the categories set out in section 2.2.5). |

| | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| *Choose Time* | Students could play with items arranged by staff on desks in the carpeted area of the classroom. Staff would rotate the resources placed here each day as is often seen in an Early Years setting: for example, in 'mark-making' (section 7.2) Albert voluntarily engages with the paper and felt tip pens which have been arranged on the desk that day. Students could also choose to engage with books in the nearby cushioned reading area, although Anna was the only student I observed spending time in this area.<br><br>The PECS cards for 'help' and 'toilet' on the classroom door were available for students to use during this time. The PECS cards for requesting toys from the storage cupboard were possible intended for use in 'choose time' (figure 25) but as they were made unavailable the students had access only to the staff's selection of items for that day. | Choose time was any time when students were not directly involved in an organised activity with staff. So for example, during the timetabled 'core/topic activities' (see class timetable, Appendix D) one or two students would be completing staff-directed work at the c-shaped table whilst the others had 'choose time' and then they would swap. | Available staff who were not otherwise occupied (e.g. directing work time with other students) might interact with children having choose time (see for example Jane's interaction with Albert in 'mark-making', section 7.2). However, students mostly engaged in solitary or parallel play during these times with only minimal or fleeting interactions where necessary to negotiate shared use of space or toys. | Communication was infrequent, perhaps due to the high level of solitary or parallel play. Where it occurred, it tended to be with a member of staff and was phatic and playful in nature, using haptics, gesture, proxemics, facial expression and vocalisation. Requesting was minimal as students seemed to occupy themselves and did not have the opportunity to ask for toys other than the selection provided (it seemed unlikely that they would spontaneously recall the Makaton sign for a desired toy as these signs were not modelled by staff in class). Anna occasionally used the PECS card on the door to request 'toilet'. |

| | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| *Group time* | The a-frame board (figure 14) was the central focus of group time, with chairs arranged around it in a semi-circle. There were photographs of each student and staff member which would be affixed to the 'register' on the board to indicate that person was present. Symbols from the class visual timetable (figure 15) would be placed in 'now' and 'next' position on the board to illustrate what was happening. There were also plastic boxes with props to support group time activities (such as floaty fluorescent scarves to wave during a certain song which was listened to on CD each day) and a CD player for music. There was also a set of PECS cards for various food items to be used for the group time prior to lunch, although selecting an item simply meant the group would sing a verse about that food rather than it correlating in any way to the food on offer in the dinner hall. | Morning group time was scheduled for 9:30–10:00 although did not tend to last that long in practice. It involved taking the 'register' with the photograph cards, a good morning song', and some warm up activities.\n\nThere was a brief group time before going for lunch which involved an activity with the food PECS cards.\n\nThere was also a brief group time after lunch which involved singing the 'good afternoon song'. | The staff member leading group time was the focus and directed what should happen and when. Activities were very ritualised and happened in the same way every day: for example the box with photographs would be passed around the group and each person would take a photograph, check that person was there, and then affix it to the a-frame board. | The same songs were performed every day (both singing and Makaton) by staff such as the 'good morning' song, the 'good afternoon song' and the 'food' song before lunch. Due to the high degree of formalisation of group time events there were not so many opportunities for students to shape the direction of the interaction.\n\nStudents used the artefacts such as photographs or food items when directed to by staff. The speech functions most commonly observed were social convention (for example Luke would sometimes sign 'good morning' in response to staff, Anna would sometimes verbally say 'hello'), commenting (for example placing a person's photograph on the board might be seen as a comment on their presence), and requesting an action (the selection of a food item was a request for a song about that item). |

| | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| *Intensive Interaction* | Scheduled 'Intensive Interaction' was set across three rooms so students could be divided up: the classroom, a sensory room, and a small room furnished with cushions. However, it is an approach to interaction which does not depend on any particular furniture, settings or props, and exchanges drawing upon the style of Intensive Interaction were observed to spontaneously arise within the physical settings of other communication contexts including choose time ('Mark-making', section 7.2), work time ('Chatting during worktime', section 7.2) and the brief lull at the end of group time ('Interacting with Gestures', section 7.3). | Intensive Interaction was scheduled for 11:00-11:30 daily and also encouraged outside of those times as a way of interacting with students. | The role of the staff member is to interact with students on a one-to-one basis by following their lead, noticing what they are doing or attending to and responding sensitively to it. This might involve repetition of the act or vocalisation, further elaboration on it, or a short commentary on what the student is doing or attending to with simple language such as 'whee!' 'pop!' 'oh dear!' etc.) The aim is to gently draw the child into practising early communication skills such as joint attention and turn-taking. The relationship between Intensive Interaction practitioner and student is described in detail in section 1.4.4. | AAC practices such as PECS and Makaton were not used during Intensive Interaction and staff explicitly oriented to them as being mutually exclusive practices (Chapter 9). Instead, staff drew upon embodied actions of students which may not have initially been communicatively 'intentional' (the four examples in Chapter 7 depict interactions around blowing a raspberry noise, arm gestures and non-verbal vocalisations, and copying a student's mark-making patterns), all of which shape the behaviour into intentional turn-taking and awareness of the other person.<br><br>In terms of speech function these exchanges might be said to involve phatic communication, responding and requesting an action. |

| | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| Lunch time | Students would walk to the school assembly hall which doubled as dining hall, accompanied by staff. They would collect food on a tray from a serving counter and then sit with staff at a table designated for Purple Class.<br><br>Cutlery was not distributed on table until students requested individual items using PECS (spoon, knife, fork). Students also had a 'drink' PECS card to request that a drink be poured for them and a 'finished' card.<br><br>Videos and photos were not possible in this setting due to the presence of non-participants. | Lunch was served from 12:00-12:30. | Staff sat with students at the Purple Class table and gave them assistance with tasks such as cutting up food or pouring juice. Students were encouraged to be independent about collecting their own food and taking their plate back at the end. Staff brought a folder with lunchtime targets in order to record use of PECS at the lunch table. | There was usually a choice of two items for lunch at the serving counter and students were encouraged to point to what they wanted but my observations suggested that this did not work smoothly and there was sometimes confusion followed by a student being given the food they didn't want and then rejecting it. I wondered whether the counter was too high for the students to see clearly what they were pointing at.<br><br>At the table I observed students engaging in fairly minimal communication as they were focused on eating and drinking. They complied with the use of PECS in order to request the cutlery and drinks that they wanted. Requesting was the most common speech function followed by commenting (either with the 'finished' PECS card or by pushing away unwanted food). |

|  | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| **Snack time** | Students sat around a c-shaped table (Figure 23) with one leading staff member on the inside. There was a metal tray with compartments for different snack items, a plastic jug of water, plastic cups, orange and blackcurrant squash, and a PECS folder with symbol cards for the various food and drink items (Figures 33 and 34). | 10:30-10:45a.m. | Snack time was staff-led and highly formalised. The staff member leading snack time would turn to each student in turn and present them with the PECS folder to make their choice of item. They would then be presented with it on their plate and expected to either Makaton sign or verbalise 'thank-you'. The staff member would then turn to the next student and repeat the exchange with them. This would continue going around the students perhaps three times until the food and drink was finished. | On the whole students frequently complied with the expectation of realising the requesting speech function through PECS cards and the social convention function (saying 'thank-you') through Makaton signing and/or speech. A compliant exchange is illustrated in 'I want marshmallows, please' (section 6.2) and is perhaps typical of the majority of exchanges I observed.

However, there were also occasions when the exchange took an unexpected turn, as illustrated in 'Just saying hello', 'The banana conundrum' and 'But I'd rather have raisins!' (all section 6.2), when students transgressed the PECS/Makaton/speech expectations by drawing upon other embodied modes such as haptics, manipulation of artefacts or gesture to make other meanings not foreseen by staff. I did not observe significant levels of peer interaction as students tended to be eating and drinking whilst waiting for their turn to come around again. |

| | Physical characteristics (setting, furniture, available artefacts) | Timing | Interlocutors and nature of relationship | Characteristics of communication associated with this context (content, functions, vocabulary, modal choices) |
|---|---|---|---|---|
| **Work time** | The c-shaped table (Figure 23) used for snack time was also used for work time. Resources would be brought to the table which were relevant to the task: for instance a book for shared reading, paints and paintbrushes, paper and pens, shapes to be glued onto paper to make shapes. | Work time took place from 10:00-10:30a.m. and 1:15-1:45p.m. although students would not be continually working during these times: they would typically be brought to the table for a 10 minute work session and then have 'choose time' whilst another student came to complete the work. | Students would most usually work on a one-to-one basis with a member of staff completing a short activity, typically with a lot of support sometimes including physical prompting. Less frequently all five students worked in parallel at the table at the same time, such as the painting activity which forms the background to 'Chatting during worktime' (section 7.2). <br><br> In general the focus was on compliance and completion of task in a timely manner as directed by the adult, so the fun exchange which arose in 'chatting during worktime' was perhaps anomalous. | I did not observe PECS symbol cards being used for work tasks. Sometimes students were prompted to Makaton sign words like 'more' or 'finished'. <br><br> Students interacted with staff in ways which showed possible signs of engagement (eye gaze, facial expression, voluntary co-operation) or sometimes in ways which suggested disinterest (turning away from staff, pushing work or item away, shaking table). |

The seven communication contexts presented in Section 5.4 account for most of daily life in Purple Class although are not exhaustive: other contexts were observed including Music Therapy, play time at lunch on the large shared playground, Assembly and soft play. I have chosen not to describe the contextual factors surrounding communication in these settings for reasons including their weekly rather than daily enactment and/or the impossibility of collecting video data due to the presence of non-participant children. However, I am satisfied that the activities and routines that I observed within Purple Class on an everyday basis are depicted in Table 5.

As suggested in Table 5, the seven communicative contexts ranged in the extent of control exerted by staff, the amount of AAC which was expected to be used, and the acceptability of embodied, idiosyncratic communication without AAC. This raised the question of choosing the contexts that would be subject to a more detailed analytical focus, as explained in Section 5.5 below.

**5.5 Moving from ethnographic overview to selective multimodal analysis**

Having considered Purple Class from a broader ethnographic perspective, a degree of selectivity was needed in order to identify the contexts where I wished to focus with a detailed multimodal analytic lens. There were 134 separate video recorded interactions with a total play time of 6 hours 25 minutes. These were all viewed multiple times, and each one was documented and summarised (see Appendix A). I then identified six priorities to guide my selection of video data for more in-depth transcription and analysis:

(a) A balanced representation of all five children: I often found myself naturally drawn to video data involving Luke and Albert, and wanted to devise a framework that would be more equitable in order to foreground the issue of why others sometimes appeared less obviously communicative on first glance;

(b)  A balanced representation of all staff in the study, since some appeared to have marked personal interests or experience in approaches such as Makaton or Intensive Interaction;

(c)  Representation of both staff-student and peer interactions;

(d)  Representation of interactions both with and without substantial use of AAC;

(e)  Representation of communication contexts which were highly adult-directed and those which were not;

(f)  Selection of episodes which seemed to speak to the central theme of the relationship between communication and agency for the children in Purple Class.

On the basis of these criteria, I drew up a selection grid which is shown below in Table 6.

*Table 6: Selection of data for detailed multimodal analysis.*

|  | **Snack time (Chapter 6)** | **Intensive Interaction (Chapter 7)** | **Outdoor Playtime (Chapter 8)** |
|---|---|---|---|
| **Albert** | *'I Want Marshmallows Please'* | *'Mark-Making'* | *'If You're Happy and You Know It …'* |
| **Anna** | *'The Banana Conundrum'* | *'Interacting with Gestures'* | *'Give Me a Push!'* |
| **Dominic** | --------------- | *'Chatting During Worktime'* | *'Squash Me!'* |
| **Luke** | *'But I'd Rather Have Raisins!'* | ------------------ |  |
| **Thomas** | *'Just Saying Hello'* | *'Blowing Raspberries'* | *'A Game of Chase'* |

In choosing three communication contexts as my analytic focus, this inevitably meant that other contexts such as morning group time or lunch time were not subjected to detailed multimodal analysis. Analysis of these other contexts would also have yielded valuable insights into other dimensions of the children's communication, but the three contexts shown in Table 6 were carefully chosen to illustrate varying degrees of adult direction, interaction with and without AAC, and a mixture of adult and peer-directed interactions. Table 6 was also helpful in encouraging me to look beyond features and participants which were immediately salient to me and to search for significance across a wider range of data. My choice of video data to place in each box was sometimes guided by pragmatic considerations such as video and sound quality or clear visibility of participants from the camera angle, and sometimes because the features of the interaction were particularly interesting to me. Of particular interest to me were videos that showed students communicating in ways not foreseen by adults or provided for by AAC: as I noted in Section 4.3.2, I had already begun to perceive these anomalous moments as salient even at the stage of data generation because they felt like instances of social norms being renegotiated (Bezemer & Mavers, 2011). As I moved into data analysis, 'agency' was already emerging as an important theme in the study and so the selection of moments where students succeeded in making unexpected meanings – sometimes with AAC, sometimes without, sometimes almost *despite* AAC acting as external structure – seemed to speak to the concept of agency and the possible nature of its relationship with communication.

## 5.6 Conclusion

In this chapter I have presented the physical characteristics, staff, students and communication contexts of Purple Class by drawing on a range of ethnographic data sources including photographs, field notes and interviews. The five detailed descriptions of each child's communication at home and at school permitted reflection on dis/continuities between the home and school environment as well as identified regularities across both settings which might suggest a dimension of relatively enduring individual variation. The seven main communicative contexts of everyday life in Purple Class were identified and described in order to help the reader

locate the three contexts chosen for more detailed analysis (Chapters 6-8) within the overall structure of daily life in Purple Class.

In each of Chapters 6 to 8 I address one of the three communicative contexts shown in Table 6 above – snack time, Intensive Interaction and outdoor play time.  All three chapters follow the same format, beginning with contextualisation of how this particular communicative context was typically enacted in Purple Class according to my repeated observations, staff interview quotations and photographs. This is followed by four multimodal transcripts of short interactions which were video-recorded illustrating this communicative context.  I then discuss what the four transcripts taken together might suggest about the enactment of this communicative context from an ethnographic perspective.  Finally, one of the interactions is subjected to detailed multimodal analysis drawing firstly upon Conversation Analysis and then Multimodal Interaction Analysis.  This chapter structure was chosen in order to provide a combination of breadth and depth of analysis: breadth by looking across four extracts in order to portray a range of participants and instantiations of the communicative context and to reflect on the similarities and divergences therein; and depth by selecting one for fine-grained analysis of multimodal communication.

**CHAPTER 6: SNACK TIME**

## 6.0 Introduction

In this chapter, I begin by explaining how, when and where snack time was enacted (Section 6.1). This is important in order to contextualise the detailed multimodal analysis which follows within the daily practices of Purple Class as well as the material affordances of items such as tables, chairs and PECS folders which partly shaped the enactment of the communicative context. I then present four transcribed pieces of video data recorded during snack time in order to build a picture of snack time across a range of participants and scenarios and to facilitate its analysis from an ethnography of communication perspective (Section 6.2). Finally, I conduct a fine-grained multimodal analysis of one of these transcriptions drawing upon both Conversation Analysis and Multimodal Interaction Analysis (Section 6.3), in order to explore in detail how Luke orchestrates the use of speech, PECS, Makaton and other embodied modes to make meaning at the snack table.

## 6.1 Snack Time in Purple Class

Snack time took place twice daily in Purple class, morning and afternoon. It happened around a C-shaped table, with the teacher or a teaching assistant sitting on a chair in the hollow of the table facing the five students who were seated around the exterior curve of the table (Section 5.1.5). As noted in Section 5.1.11, the design of the table positioned the leading staff member as a central and pivotal figure who could easily rotate her posture to directly face each student in turn whilst presenting them with the food and PECS folder. The table also limited the possibilities for student movement or proxemic and postural adjustments, and physically oriented students to the use of AAC (PECS and Makaton) due to how it directed body/eye vector positioning towards the leading staff member.

The use of PECS (Picture Exchange Communication System) was central to the performance of snack time, and a folder of symbol cards containing food and drink items had been created specifically for this purpose. The folder was not accessible to students outside of snack time as it was stored in a cupboard out of reach. Inside the

folder were multiple pages of detachable colour symbols affixed by Velcro, a selection of which could be removed and attached to the empty Velcro strips on the folder's front cover to indicate that the items were available for choosing that day.

*Figure 30: Symbols inside the snack time PECS folder.*



*Figure 31:   Front cover of PECS folder displaying available choices of drink*



When a student's turn came to choose, the member of staff leading snack time would shift in her chair to face them, presenting them with the snack tray and the PECS folder which would have symbols corresponding to the available items on the front cover.  It was expected that students would detach the symbol of their chosen food item from the PECS folder and give it to the staff member by way of request.

This exchange is fundamental to the PECS teaching method (Bondy & Frost, 1994), with a single symbol exchange of this kind constituting the third attainment level of a possible six as explained in Chapter 1.  When the student had chosen a symbol and presented it to staff, there would then typically be further communicative work expected which drew upon Makaton or else verbal articulation of the request.  The member of staff would hold up the selected card and encourage the student to verbally articulate it and also encourage the student to sign 'thank-you' using Makaton before the food was put on their plate.  Sometimes students were additionally encouraged to Makaton sign the name of the food they had requested.  This eclectic mixing of Makaton, PECS and verbal speech at snack time appears to instantiate the school's commitment to providing a 'Total Communication Environment' as outlined in the school's Autism Policy. The snack tray would typically pass around the table two or three times until the food was finished, requiring students to make a request on each round.  A jug of water would then be presented alongside a choice of orange or blackcurrant squash, and students would again use the PECS folder to choose their drink.

My role during the enactment of snack time varied on a continuum from participant to observer.  At times, I sat separately from the group and took fieldnotes or made video recordings of interactions around the snack table.  At other times I sat with the group and assisted with the dispensing of food and the cleaning up afterwards.  As with many observed activities in Purple Class, one member of staff would sometimes be engaged in collecting written evidence of attainment of targets during snack time. At the time of fieldwork, three of the five children had communication targets on their IEP (Individual Education Plan) which were potentially demonstrable at snack time: Albert was 'to use the Picture Exchange Communication System to request items', whilst Dominic and Luke were to 'use single words to make requests on every occasion'.

All four staff members interviewed appeared to orient to snack time as a context with distinctive communication characteristics, frequently associating it with high levels of formal symbolic communication such as PECS, Makaton and speech.  During

the card-sorting activity, when they positioned their cards on the table indicating relative similarity/difference to other activities, snack time tended to be positioned close to other formalised communicative contexts such as dinner time and work time, but distanced from the more child-led playful approach of Intensive Interaction. This was reflected on by Lizzie (class teacher):

> *We use PECS more formally at [dinner time and snack time] … and we also use Makaton probably more formally at those times as well. We encourage the children to sign, particularly Albert and Luke will be encouraged to sign for the things that they want … at dinner and at snack time.* (Lizzie, class teacher: Interview)

Similarly, Jacqueline (teaching assistant) noted:

> *We use more PECS when it is around snack time and dinner time … I think it is great when you have got your symbols around and the children have got used to using it, so maybe if they get used to using it, during snack time then it encourages them to use it, for their independence skills and stuff like that.* (Jacqueline, teaching assistant: Interview)

However, later Jacqueline wondered about the place of formalised symbolic communication such as Makaton and PECS at the snack table where non-symbolic embodied communication might make meaning sufficiently clear:

> *Let's say … you have got your snack and it is laid out, so it is clear to see what it is you are offering, and sometimes I wonder whether or not well that's in front of them you have got an apple, an orange and a banana, and then you have got the PECS for it, if they could gesture towards it, then you know what they want anyway, whereas you have got the PECS so … I think it is a little bit of a grey area at times…if they can gesture towards it, what is wrong with that.* (Jacqueline, teaching assistant: Interview).

Four short scenes from snack time (*I want Marshmallows Please, The Banana Conundrum, Just Saying Hello, But I'd Rather have Raisins!*) are presented in Section 6.2. Each is presented with some introductory contextualising detail which draws loosely upon Hymes' (1972) suggestion of the SPEAKING mnemonic for ethnographic contextualisation of communication (setting/scene, participants, ends, act sequence, key, instrumentalities, norms and genre). This contextualisation is followed by a

depiction of the unfolding interaction through the medium of annotated video stills. I then explore the significance of these four extracts using Ethnography of Communication as a frame.

## 6.2 Snack Time: Ethnography of Communication Perspective

### 6.2.1 Four Instances of Snack Time Interactions

In this section I present four visual 'story boards' depicting separate interactions which I observed and video recorded at the snack table. This is then followed by a discussion of the four episodes drawing particularly upon ethnographic approach (Section 6.2.2).

*I Want Marshmallows Please*
It was morning snack time. Frances was leading snack time with children sitting around her in a semi-circle at the table. She started on the left and worked her way around each child in turn with the PECS folder and the food tray until she finally came to Albert, who was sitting on her far right. As seemed typical according to my observations, Albert was very compliant and performed the expected actions of selecting an item using the PECS system and then Makaton signing 'please'. This extract is presented as a typical, unremarkable episode where a student largely conforms to staff expectations at the snack table.

*Figure 32:*    *I want marshmallows, please!*



1. Albert is waiting for his turn to come to choose.

2. The teacher turns to Albert and places the PECS folder before him.

3. Albert reaches out and selects the 'marshmallow' symbol card.

4. Still holding the card, Albert shifts his gaze to look directly at the teacher.

5. Albert and teacher both extend hands for exchange. Eye contact is maintained throughout.

6. As the symbol is placed into teacher's hand, Albert lowers his gaze.

7. Teacher says 'marshmallow'. Albert taps twice on card, establishing brief eye contact on second tap.

8. Teacher says 'please' as a prompt. Albert performs Makaton sign for 'please.'

*The Banana Conundrum*

It was morning snack time and Jacqueline was leading snack time from behind the c-shaped table.  Anna was the second to take her turn.  She seemed to want banana, as suggested by her initial action of lifting and handling the PECS card for this item, but did not exchange it with Jacqueline as expected to complete the transaction. There then followed further communicative work around the banana request involving multiple modes of communication including PECS, Makaton, speech and embodied communication by reaching for the item, which seemed to constitute a source of frustration and delay for Anna.

**Figure 33: The Banana Conundrum**

*Just Saying Hello*

It was morning snack time and Lizzie (class teacher) was leading snack time.  The children were seated around the c-shaped table, and it was Thomas' turn to choose snack.  As was typical according to my observations, the teacher turned to face him directly and presented him with the snack tray and the PECS folder.  She said *'Thomas would like …'* as a prompt.  However, Thomas seemed more oriented towards connecting with the teacher socially then performing a request, as illustrated below.

*Figure 34: Just Saying Hello*

*But I'd Rather Have Raisins!*

It was morning snack time.  I sat in the middle of the table amongst the students, and Jane (teaching assistant) sat on the other side to lead snack time.  Luke was the second of the five students to receive the PECS folder each time it circulated.  The first time it came around to Luke, the choice was between raisins, cherry tomatoes, carrots or apple and Luke selected raisins.  The second time it came around to Luke, the raisins were all gone and Jane had removed the PECS symbol from the front of the folder, which was customary practice when an item was no longer available.  Luke attempted to open up the PECS folder to get access to the other symbols, possibly with a view to locating the raisins card, but was prevented from doing so by Jane.  He put his finger on the apple card and was given apple instead.

The extract presented here depicts the third time the tray and folder came around to Luke.  Instead of using the folder, which now had no 'raisins' symbol, he pointed repeatedly to the empty section on the tray where the raisins had been.  Jane tried to explain to him verbally and with Makaton that they were all gone.  He continued to point, looking up at Jane and repeating 'all gone' with one palm upturned in questioning gesture.

Figure 35: But I'd Rather Have Raisins!

11. Luke does small upturned palm gesture (not turned all the way over).

12. Luke then pulls the tray slowly towards himself, lifting it slightly at one end.

13. Luke looks directly at Jane again and taps the empty spot on the tray.

14. Jane says 'All gone!' with a slight shrug of the shoulders.

15. Luke does upturned palm gesture five times in quick succession.

16. Jane says 'Gone!' with upturned palms.

17. Luke looks at Jane and repeats 'Gone!' with one upturned palm.

18. Jane repeats 'Gone!' with upturned palms, raised eyebrows and casting eyes upwards.

19. Luke vocalises with upturned palm again.

20. Jane says 'Never mind' and Luke reaches for apple instead.

*6.2.2 Snack time interaction: Discussion*

The four scenes depicted above were selected from many videorecorded instances of snack time, a communicative context which I had the opportunity to observe twice daily. On many occasions I noted that upon seeing a member of staff preparing the food for snack in the kitchen area, one or more students would spontaneously and unprompted make the necessary furniture adaptations for snack time and then take their places at the table, as described in the following extract from my fieldnotes:

> *Back in the classroom. Jane starts getting snack ready. Albert notices this and sits at the snack table automatically. Dominic joins him. Luke goes to fetch a green chair from the group circle and brings it to the table and sits down. Because snack is not ready quickly Albert gets up and manipulates the now/next board symbols … He puts playtime on, then snack.* (Fieldnotes, 26 January).

This is reminiscent of Fishman's (1972) ethnographic concept of 'domain', denoting the intersection of interlocutor, place and topic which is strongly associated with a certain way of being and speaking by participants. In this case, there are multiple artefacts which help to constitute 'snack time' such as the symbol for snack time on the visual symbol timetable, as well as the PECS folder, tray, jug, plates and cups which are stored in a cupboard and used for snack time only. Spatially, the C-shaped table was designated as the invariable location for the enactment of snack time, and although it was sometimes used for other purposes during the day such as work time with an individual student, it seemed to be rarely used for other whole-group activities. The 'topic' was also equally clear - the requesting of food and drink - and the interlocutor was a member of staff who would sit on the opposite side of the table, as children were not encouraged to interact with peers at the snack table.

My observations suggested a consistently enacted communication context where all participants were familiar with certain expectations including turn-taking, the allocated role of distributor and requester/recipient of food and drink, temporal sequencing, the deployment of artefacts, and mode-function patterning. Students rarely contravened the order of turn-taking, were clearly familiar with the ritual of the PECS folder being placed before them and the expectation of detaching a card

and handing it to the member of staff.  They were also familiar with the expectation of some further form of communicative work after the symbol card exchange, although the extent of Makaton and/or speech which would be required could vary depending on the staff member conducting snack time as well as the individual student and their communication targets.  This almost invariably seemed to involve a strong and consistent patterning between speech function and mode, as shown in Table 7:

*Table 7: The Enactment of Snack Time*

|  | Staff | Student |
|---|---|---|
| The opening | Postural shift to angle body towards student being addressed, presentation of snack tray and PECS folder to student, often (not always) a verbal address such as *'Right Luke, carrot or apple?'* | Postural orientation and direction of eye gaze towards staff member and/or PECS folder in order to consider choice. |
| The request | Staff receive card and hold it up, verbalising the word and encouraging students to repeat as well as pointing at the symbol. | Detaching symbol for chosen item from front of PECS folder and handing it to staff member leading snack time.<br><br>Student expected to point at symbol card and to try to verbalise their request also. Approximations are accepted. |
| The request [supplementary stage], usually with Luke or Albert | Staff member performs Makaton sign for the item requested and encourages student to perform it also, sometimes with a physical prompt. | Student expected to try to perform Makaton sign for their chosen item.  Approximations are accepted. |
| Please/thank you | Student will be prompted to say or sign either *please* or *thank you* by the staff member (the Makaton signs for both are similar). Often food is kept in staff member's hand and not placed on plate until student complies. | Student expected to try to verbalise and/or Makaton sign *please* or *thank you.* PECS never used for this purpose (no symbols provided for this). |

In *'I Want Marshmallows, Please'*, for example, the ease with which the highly ritualised exchange unfolds suggests that Frances and Albert have a shared repertoire of practices associated with snack time which allows for its smooth enactment. Albert appears to know that his turn will be designated by the presentation of the tray and PECS folder, that PECS is a privileged mode for the performance of the request, that reaching directly for food or gesturing is not admissible, and that following the exchange of the card there will be a short delay where some further interactional work is required before his request is granted in the form of Makaton signing 'please'. Albert's familiarity with the adult expectations around the enactment of snack time does seem to suggest that he has been inducted into the snack time 'community of practice', as defined by Eckert and McConnell-Ginet (1999) as 'a group whose joint engagement in some activity or enterprise is sufficiently intensive to give rise over time to a repertoire of shared practices' (p.185). Albert may not share full membership of any 'speech community' with staff as understood in Ethnography of Communication given that staff have recourse to fluent spoken English and potentially unlimited access to PECS symbols and Makaton signs. However, he does share with them an understanding of each class member's respective roles in the enactment of snack time, an insider perspective that has been constructed through repeated engagement with the communication context. In this way, Albert demonstrates a high degree of *communicative competence* regarding his participation in the enactment of snack time (Saville-Troike, 2008).

In this particular social setting, communication was highly formalised and there were clear modal hierarchies: PECS was the accepted medium for the request although an additional attempt to verbalise would be met with audible delight from staff; and Makaton was the accepted medium for the words which were not represented by picture symbols (typically *more, finished, please,* and *thank-you).* As Saville-Troike (2008) notes:

> *When a speech event is formalised, there are fewer options for participants; thus, as language becomes more formalised, more social control is exerted on participants.* (p.35)

In *'I Want Marshmallows, Please'* Albert does appear to have a limited number of options: requesting is the expected speech function, PECS is the expected mode, and no AAC has been made available for the enabling of any other speech function such as refusing, protesting, or commenting.  Makaton signing *'please'* could also be seen as a matter of social control, as the food was typically not dispensed onto the student's plate until some approximation or attempt at *'please'* was produced. Additionally, the PECS folder as communication artefact is interesting to consider in light of Saville-Troike's (2008) argument that the vocabulary of a language can be indicative of 'speakers' social assumptions about the dynamics of role-relationships and about what rights and responsibilities are perceived in society' (p.28).  From this perspective, it is interesting to reflect on the social significance of the fact that the PECS folder, as the only significant collection of symbols in the classroom designed for use by students, was to enable students to request only.  As noted in Section 2.1.6, Light et al. (2002) notes that the requesting speech function is regularly emphasised in AAC communication, which may reflect a view of disabled people as primarily needy and dependent recipients of help (Brewster, 2007). Interviews with staff suggested that they perceived mastery of the requesting speech function as fundamental for the students' futures as adults with disabilities:

> *They will never go into a shop on their own independently and ask for a cake. They will always have somebody with them to support them so, and then hopefully you know they can give their PECS in or the sign.* (Jane, teaching assistant: Interview.)

Nevertheless, despite the heavy emphasis on requesting reflected both in the AAC resources provided and the structure of snack time as a whole, the data suggest that students at the snack table also found ways to express alternative communicative functions: in '*The Banana Conundrum*' (Section 6.2) Anna expresses annoyance and frustration at having to reformulate her request through different modes; in '*Just Saying Hello*' (Section 6.2) Thomas finds a way to have a brief moment of phatic communication with Lizzie instead of requesting; and in '*But I'd Rather have Raisins!*' (Section 6.3) Luke makes use of the snack tray as an artefact to request something else.  In order to make meaning in these ways which deviate from the strong form-function (PECS-requesting) patterning of the communication context, students by

necessity have recourse to embodied, non-symbolic multimodal communication such as eye gaze, touch and artefact manipulation because the AAC provided does not facilitate other speech functions.  As discussed in Section 3.2.2, this might be described as a form of code-switching (Lin, 2008): by switching to non-symbolic embodied communication either to supplement or to replace the AAC provided, students appear to be rejecting their designated role of requester/recipient and are transgressing the parameters of the requesting 'frame' of the interaction.

In summary, it has been argued in Section 6.2.2 that from an ethnographic perspective my repeated observations of snack time suggested a formalised communicative context where students and staff shared a degree of understanding about communicative expectations including privileged modes, organisation of turn-taking, use of artefacts and mode-function patterning. In Section 6.3 I focus in on one of the examples presented above ('*But I'd Rather Have Raisins!*') by undertaking detailed multimodal analysis of how the exchange is enacted by Jane and Luke.

## 6.3  Multimodal Analysis of an Instance of Snack Time

In this section I consider the extract '*But I'd Rather Have Raisins!*' in fine-grained detail.  This is done firstly through the lens of Conversation Analysis (Section 6.3.1) in order to foreground how Luke's multimodal actions contribute to the sequential organisation of the exchange.  The extract is then analysed through the alternative framework of Multimodal Interaction Analysis (Section 6.3.2) in order to highlight how Luke uses variation in the modal intensity and complexity of his actions to bring a higher-level action (requesting raisins) to the foreground of the interaction (Doak, 2018).

### 6.3.1  But I'd Rather Have Raisins!: Conversation Analytic Perspective

The question of taking turns is a key concept within Conversation Analysis (Liddicoat, 2011), although in Section 2.1.3 I noted that identifying 'turns' is not as straightforward as it might first appear since interactants engage in a constant exchange of communication on varying levels of intentionality.  This was evident in the present extract, as eye gaze, vocalisation, speech, Makaton, gesture and

manipulation of the snack time objects on the table were fluidly interwoven throughout the exchange by both participants.  Nevertheless, I maintain that it is possible to identify salient clusters of modes which could be said to constitute 'turns' and appear to have been oriented to as such by participants for the purposes of analysis.   This was done in two stages.  The first stage was to take the multimodal matrix created to transcribe the extract and overlay it with boxes to delineate clusters of modes which I regarded as turns (Figure 36 shows the period 4:25-4:34 with overlays as an example). The second stage was to use Elan software (Figure 37) to visually depict the sequential ordering of these turns within the whole interaction depicted in *Buy I'd Rather Have Raisins.*

*Figure 36: But I'd rather have raisins! (multimodal matrix with turn-taking overlays)*
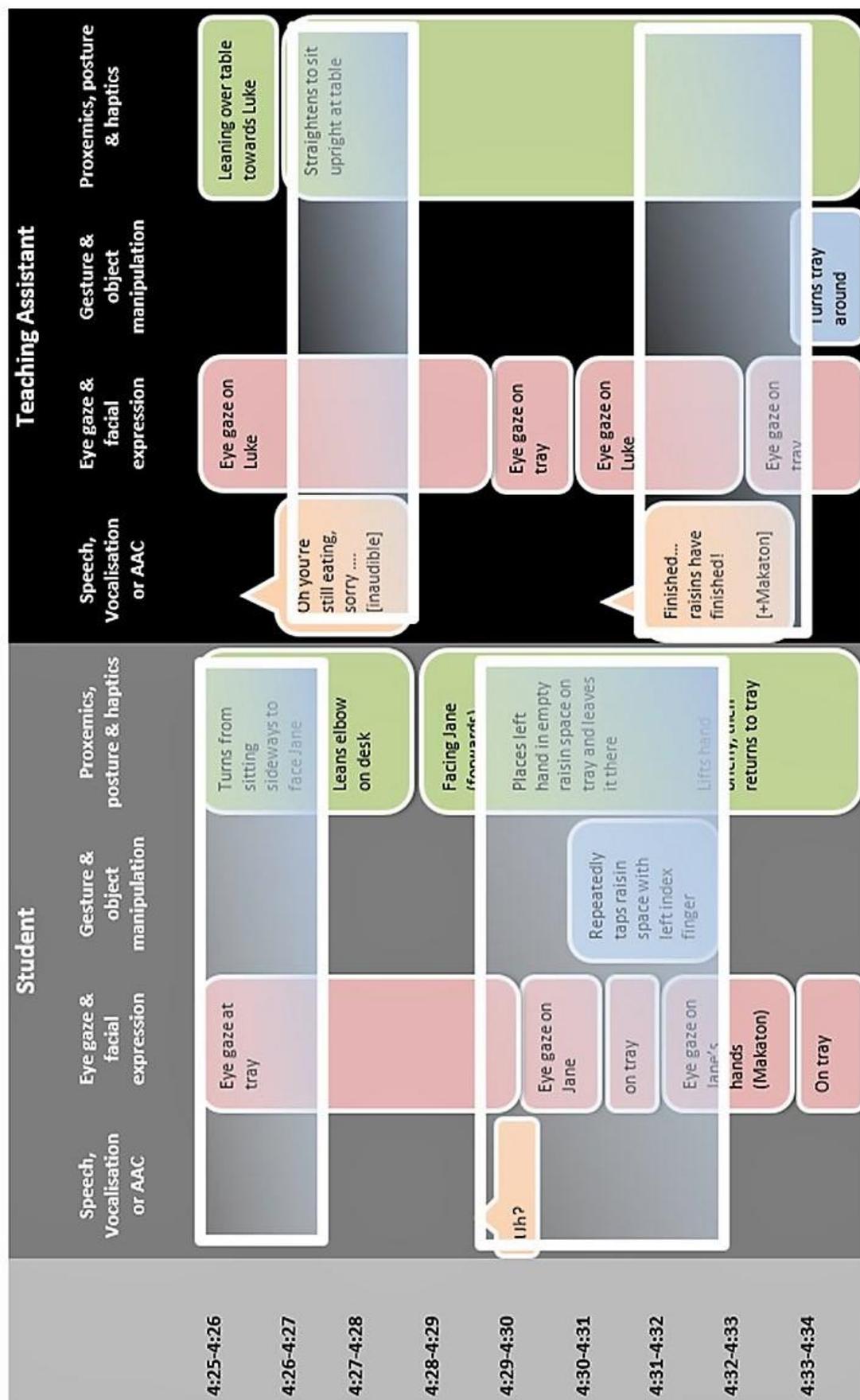
*Figure 37: But I'd rather have raisins! (Elan software transcription)*
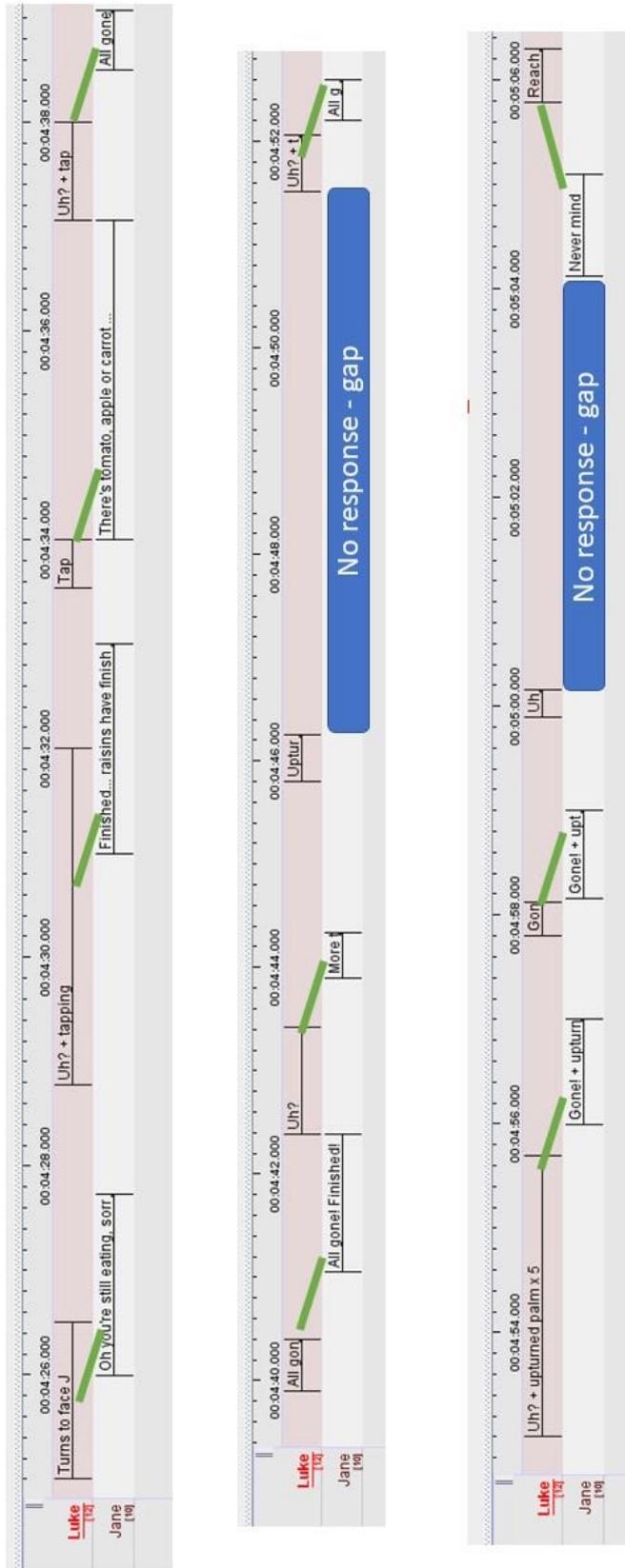
In the seconds preceding this extract, Jane had placed the PECS folder and snack tray in front of Luke, which typically constitutes the 'summons' of a 'summons-answer' sequence which is 'answered' by the student making a selection. However, in this instance Luke was turned away from the table when the 'summons' came, and his turning around to face Jane is acknowledged by her response *'Oh you're still eating'*. Now that mutual recipiency has been established, it might be expected that Luke would make a selection from the available PECS cards, argued in Section 6.2 to be a normative expectation in this communicative context. However, Luke has other ideas: he wants Jane to replenish the raisins supply and the PECS card has been removed. Having no AAC resource which might permit him to communicate *'raisins'* or the idea of *'something else'*, Luke draws upon a range of non-symbolic, idiosyncratic communication strategies to make his meaning clear.

**Figure 38: But I'd rather have raisins! (video still 2)**



In Figure 38 we see Luke declining to use the remaining available PECS cards which would have restricted his choice to tomato, apple or carrot, instead managing to convey his query about the raisins through vocalisation '*Uh?*' with rising intonation suggesting a query, direct eye contact with Jane, and a repeated tapping gesture in the empty space on the tray which functions as a form of deixis indicating the object of his enquiry. When Jane responds to his query with a response which completes the adjacency pair *('finished, raisins have finished')* he repeats his tapping gesture, indicating that the question remains open and the matter is not resolved. Jane

responds to this further turn with an alternative response attempting to redirect Luke (*'there's tomato, apple or carrot'*) but Luke persists: his next 'turn' at 4:37 consisting of *'Uh?'* and the tapping gesture once again.  This time, Jane answers his question with another alternative formulation as shown in Figure 39 below:

*Figure 39:      But I'd rather have raisins! (video stills 6 and 7)*



6. Jane says 'All gone!' with upturned palms.  Luke's hand is still in the tray.

7. Luke repeats 'All gone!' with the upturned palm gesture (left hand only)

Here Jane answers Luke's previous query with the statement *'All gone!'* accompanied by upturned palms, a gesture which has been variously associated with helplessness and/or uncertainty (Ekman and Friesen, 1968); a 'disclaimer' in response to questions (Morris, 1994); deference or an appeal for listener co-operation (Givens, 2016).  In the context of this exchange, it may suggest that Jane is absolving herself of responsibility by highlighting that she is subject to the unchangeable rules of the snack table: when an item is finished, it is not replenished.  Luke then takes his next turn by repeating her utterance *'all gone!'* as well as her palm-up gesture.  As noted in Section 3.3.3, features of talk which are sometimes clinically pathologised in children with autism such as echolalia, echopraxia and palilalia can serve functional sequential purposes in interaction when considered from a Conversation Analytic perspective (Samuelsson and Ferreira, 2013). Here, Luke's 'echolalia' and 'echopraxia' appear to fulfil multiple communicative functions: they constitute a further 'turn' in the absence of any AAC provision for what Luke wants to say; they clearly keep the question of raisins open rather than ceding to the expectations of choosing something else; and they demonstrate an ongoing orientation to turn-taking and

interactional engagement with Jane to mitigate against the possibility of premature closure of the exchange.

Following some further exchanges of this nature, Luke performs a palms-up gesture at 4:46 as a first-pair part which does not appear to be responded to with a second-pair part by Jane.  It is not clear why no second-pair part was forthcoming, although as the palm-up gesture this time was subtle and Jane's gaze was on Luke's face it is possible that it was not seen.  There ensues a gap in turn-taking of approximately five seconds, during which time Jane sits still looking at Luke while Luke looks at the snack tray, pulling it slowly towards himself (Figure 40).

*Figure 40:   But I'd rather have raisins! (video still 12)*



12. Luke then pulls the tray
slowly towards himself,
lifting it slightly at one end.
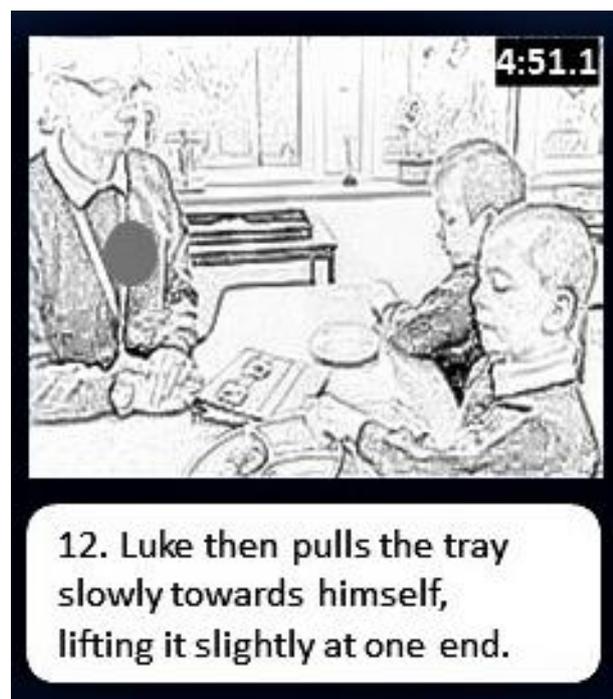
Although this five second period (4:46-4:51) could in some ways be said to constitute a 'gap' in turn-taking in that there is no ostensible turn-taking behaviour occurring, it is not an interactional vacuum where no communicative work is taking place.  This becomes evident when all modes are considered: Jane's posture and eye gaze continue to orient towards Luke although she has not provided a SPP.  Moreover, Luke's manipulation of the snack tray could be interpreted as the gestural equivalent

of a 'sound stretch' in verbal conversation: an elongated noise such as *uh* or *em* performed by the speaker to 'hold the floor' whilst they search for their next utterance (Liddicoat, 2011). In this case, the hand remaining in the tray makes it clear that although there is interactional difficulty to be resolved he remains focused on his intended outcome of securing raisins.

The interactional significance of the PECS folder and snack tray is not confined to this moment but is pivotal throughout this interaction, and the orientation of each participant to these objects plays a pivotal role in structuring their embodied modes. Often, Luke's hand is touching the snack tray (tapping, pulling it towards himself, lifting it at one end) and his eye gaze and posture suggest a primary orientation towards it, whilst Jane is more frequently seen to be readjusting the position of and orienting posturally towards the PECS folder. This is illustrated in Figure 41 below.

*Figure 41: But I'd rather have raisins! (physical orientation of participants)*
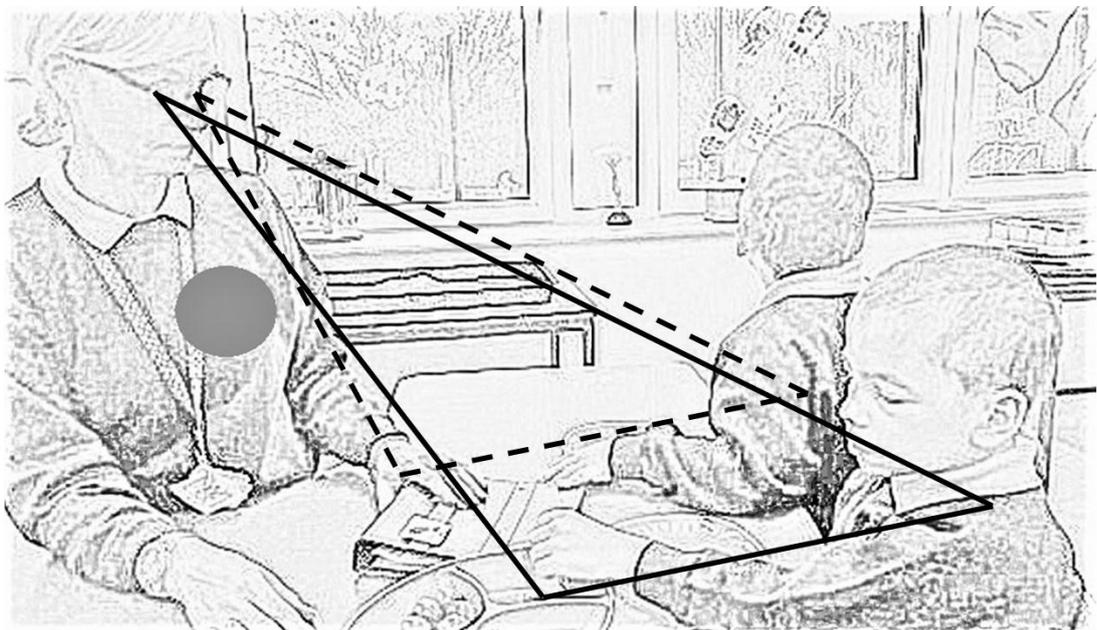


I would argue here that whilst both participants share a clear interpersonal orientation towards each other through the modes of posture and eye gaze, Luke has established a triangular relationship between himself, Jane and the snack tray, depicted as the unbroken lines in Figure 41 above. Jane's triangular relationship is

primarily between herself, Luke and the PECS folder, depicted as a dotted line in Figure 41, even though she occasionally uses the presence of the tray. Figure 42 below illustrates how these triangular relationships look sequentially in a multimodal matrix.

*Figure 42:  But I'd rather have raisins! (multimodal matrix)*
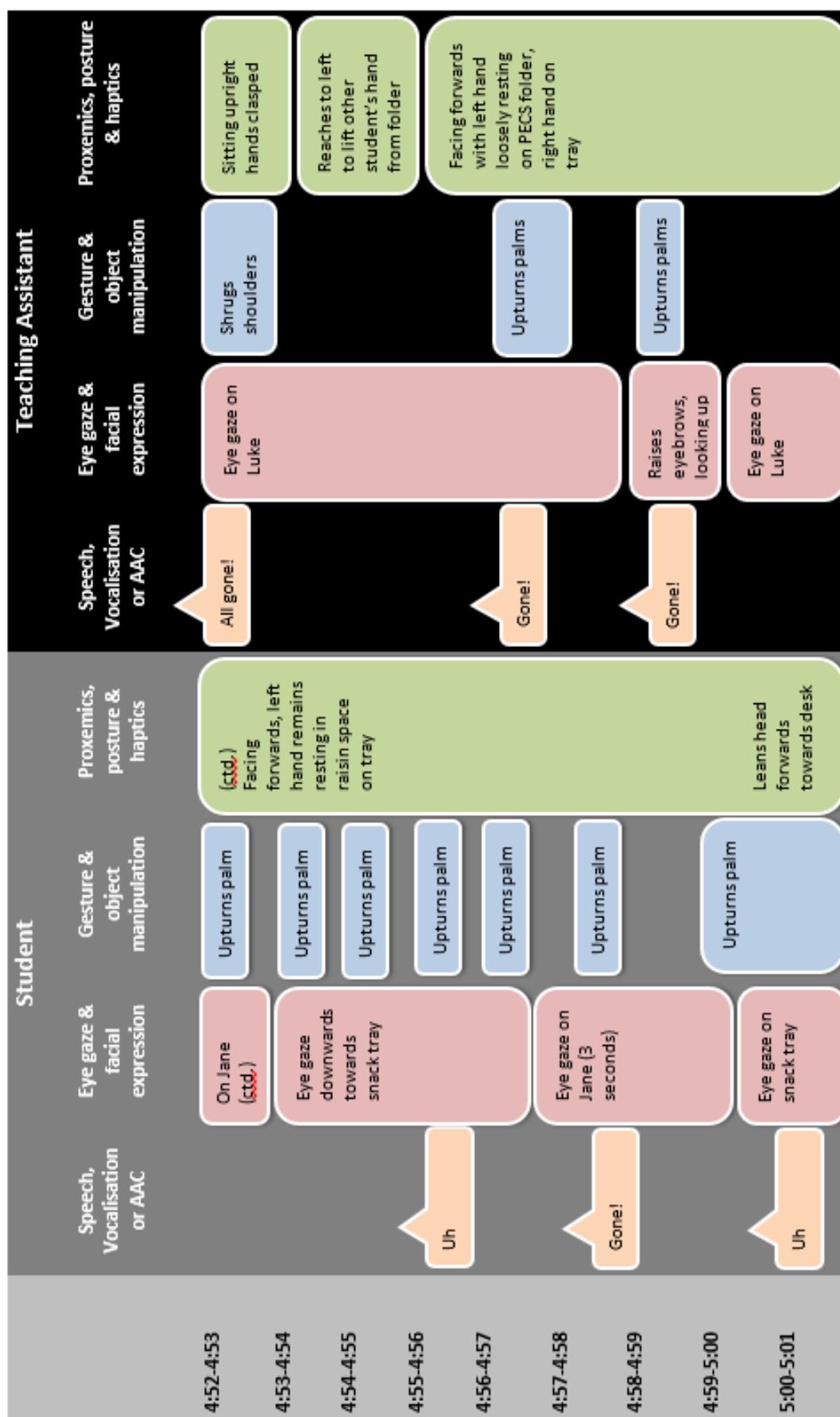
In Figure 42 it can be seen that whilst multiple vocalisations and palm-up gestures enact the request, Luke makes clear that raisins are the object of the request through the combined deictic functions of his eye gaze direction which moves regularly between the snack tray and Jane combined with his posture, facing forwards to interact but left hand lying loosely in snack tray. At the same time, Jane acts to prevent another student from accessing the PECS folder during Luke's turn and then leaves her hand resting on the folder, a postural orientation towards its ongoing relevance in the interaction.

From the above analysis, it would seem that Luke is resisting compliance with the expectations of the PECS routine by using object manipulation, eye gaze, vocalisation and gesture to request an alternative item. One possible way to frame this resistance is in terms of the CA concept of a *preferred action* which typically involves agreement, acceptance, acquiescence or other validation of the previous speaker's utterance, and is contrasted with the *dispreferred actions* of disagreement, refusal and contestation which generally require additional interactional work in order to be positioned as socially acceptable (Pomerantz, 1984). Whilst a purist approach to CA would tend to identify 'preferred' and 'dispreferred' locally in participants' transcribed talk alone, Chapter 3 of this study made the case for a hybridized approach which integrates tools from CA with ethnographic observations. On the basis of repeated ethnographic observations of the enactment of snack time, I would argue that Luke is performing a dispreferred action by refusing to accept the existing offer and simultaneously contesting the idea that raisins are finished. Choosing to perform a dispreferred action has implications for the multimodal orchestration of the act, as the 'legitimated' mode (PECS) permits only acquiescence to the expected routine, resistance requires the use of alternative semiotic resources.

The above analysis suggests that whilst PECS allowed Luke to choose between tomato, apple or carrot, it did not facilitate other choices or speech functions. He therefore made use of artefacts, eye gaze, gesture, posture and vocalisation to make his alternative suggestion clear, and whilst he did not succeed in obtaining his desired

outcome or changing the rules of snack time, he did succeed in making his meaning clear to Jane.

Having considered this extract through the lens of Conversation Analysis with its emphasis on sequentiality, Section 6.3.2 considers what can further be learned about Luke's attempts to secure raisins with the alternative frame of Multimodal Interaction Analysis.

### 6.3.2  But I'd Rather Have Raisins!:  Multimodal Interaction Analysis

As described in Section 3.4.1, Multimodal Interaction Analysis (MIA) (Norris, 2004) focuses its analytic attention on the ebb and flow of multimodal configurations in interaction and fluctuations in modal intensity and complexity.   This provides a useful approach to examining the work undertaken by Luke to convey his message that he wants raisins, a message which by necessity is distributed across multiple modes in order for it to be coherent.  This is illustrated in the video still (Figure 43) and corresponding modal density circles (Figure 44) below:

**Figure 43: But I'd rather have raisins! (video still 13)**

***Figure 44: But I'd rather have raisins! (modal density circles)***
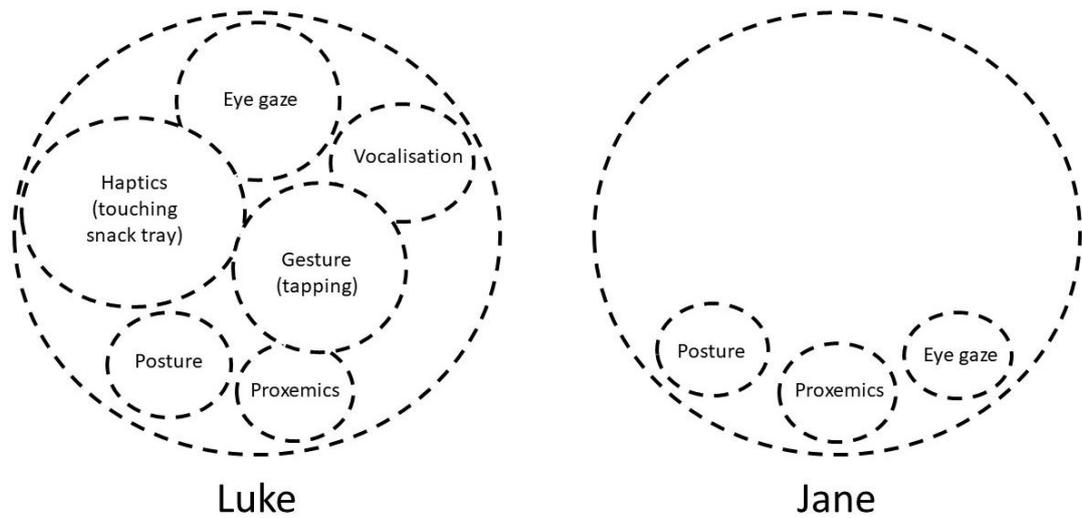


In these modal density circles I attempt to visually portray the degree of multimodal orientation of each participant towards the specific issue of *raisins,* rather than PECS usage*.* As explained previously in Section 3.4.1, Norris (2004) argues that higher-level actions can be reliant on execution of a single mode which if discontinued would significantly change the direction of the action: in this case, the mode is said to possess high *modal intensity.* It is also possible that the higher-level action depends on the execution of multiple intricately intertwined modes*,* a scenario which Norris (2004) terms *modal complexity*. In this instance I would argue that the related modes of haptics (Luke's contact with the snack tray) and gesture (tapping the empty space) are the modes which can lay claim to the highest modal intensity because if his hand were not touching and tapping the tray, it is difficult to see how his interaction with Jane would carry his intended meaning without the deictic function they provide. It is also important to acknowledge the significance of Luke *not* touching and gesturing towards the PECS folder in this interaction: by simply not orienting to the folder in any way he is silently conveying resistance to the expected format of the interaction. For these reasons, I have depicted the circles of haptics and gesture as larger than the others to convey my perception that Luke's interaction with the snack tray is more fundamental to the enactment of his higher-level action of attempting to obtain raisins than any others. It is *almost* conceivable that these modes could by themselves carry the higher-level action: by refusing to engage with the PECS folder,

touching the snack tray and tapping on the empty raisin space, it is likely that Jane would deduce his meaning even without the other modes. However, eye gaze contributes very significantly to the deictic function of the object handling by adding an interpersonal dimension of questioning or expectation. It is not a mere comment or observation that the raisins are finished but rather a problem which he expects Jane to address, and this is further suggested by the upward intonation of the vocalisation *Uh?* Finally, posture and proxemics could be said to be underlying structuring modes. Luke has not left the table, maintains a stable proxemic distance from Jane and posturally orients to her, the table and the snack tray, and these are modes which enable the other modes to occur. For this reason, I would argue that it is primarily through modal complexity (Norris, 2004) that Luke succeeds in making his meaning clear even without AAC. By way of contrast with Luke, Jane's orientation towards the raisins is considerably lower as depicted in her modal density circle: although her eye gaze, posture and proxemics indicate that she is orientating to Luke's protest on an interpersonal level, her clasped hands are making contact with the PECS folder rather than the snack tray. This appears to be indicative of a foregrounded higher level action of facilitating the completion of a PECS-mediated exchange and more widely the smooth enactment of snack time for all students present.

MIA also provides a useful analytic frame for considering how chains of lower-level actions in turn construct higher-level actions which appear to occupy different positions on a participant's continuum of attention and awareness and which can run parallel or divergent to the foreground of the other participant. Following Norris (2004), these concurrent higher-level actions could be represented heuristically on a continuum of awareness axis as illustrated in Figure 45.

*Figure 45: But I'd rather have raisins! (continuums of awareness)*
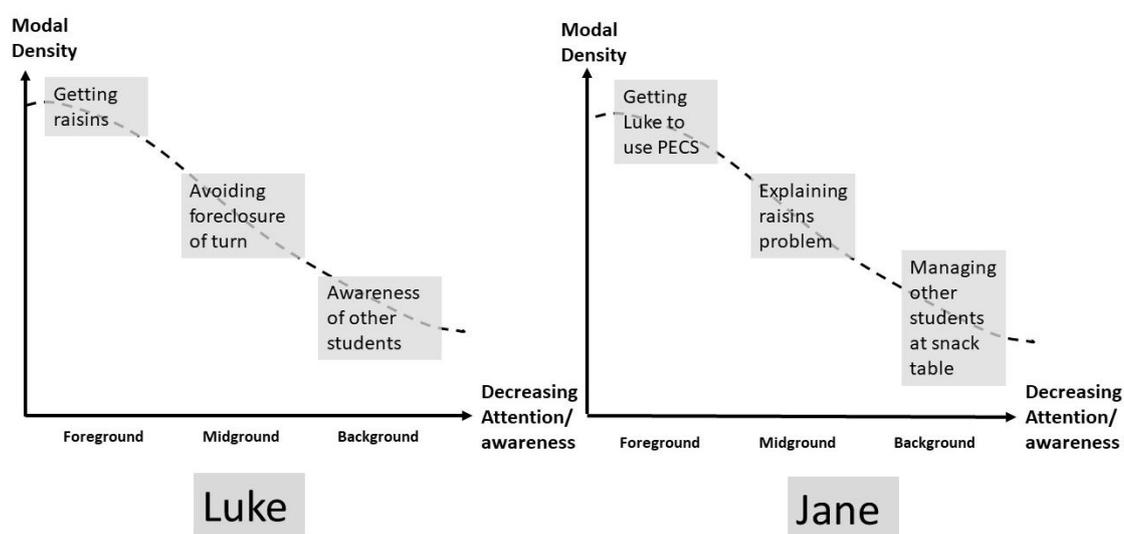


Here, I would argue that Jane and Luke have foregrounded higher-level actions which although distinct would be described by Norris (2004) as running parallel rather than divergent: Jane orients to performance of a successful PECS exchange, which is structured by her background awareness of the need for efficient facilitation of snack time as a whole; whereas Luke orients to getting what he wants with or without AAC. However, both involve the same interactional dyad, furniture and artefacts, which means that they are not significantly divergent actions in the way that, for example, Luke attending to another child on the other side of the room would be. Norris (2004) notes that teachers may use a child's foreground as a teaching opportunity or alternatively use a *means* (a pronounced lower level action such as a deictic postural change or utterance) to pull the student into their own foreground of attention. Both approaches are illustrated in Figure 46:

*Figure 46: But I'd rather have raisins! (video stills 3-4)*
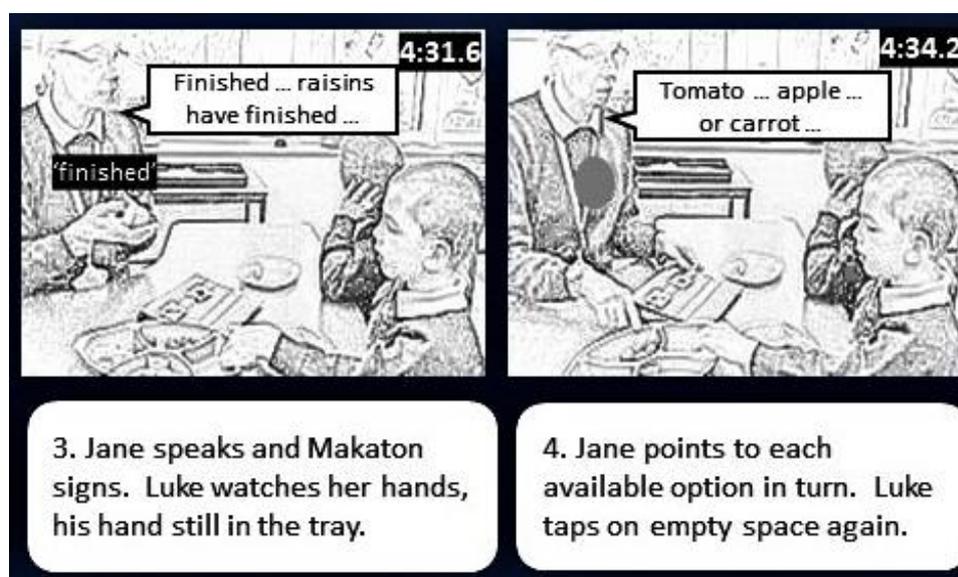


Here, Jane initially uses Luke's request as an opportunity to model both spoken language and Makaton for words such as *finished* and *tomorrow*, communication skills which are relevant to the context. She then uses three-fold *means* to attempt to pull Luke towards her own foreground of the PECS exchange: verbal labelling of the available items, a deictic point to each available food item in turn, and with the left hand a slight pulling of the PECS folder which seems to underscore its ongoing relevance in the interaction. It is interesting that in Figure 47, however, we see Luke not joining her in her foregrounded concern (PECS) but rather showing resistance through what might be termed a *counter-means* of attempting to pull Jane into *his* foreground of attention:

*Figure 47: But I'd rather have raisins! (video still 5)*



Here Luke uses the questioning vocalisation *Uh?* combined with a tapping gesture to resist Jane's suggestions of engaging with available items via the PECS folder and to attempt to position the issue of the depleted raisins in the foreground of Jane's continuum of attention too.

From the MIA perspective it is also interesting to reflect on how the backgrounded higher-level action shapes those in the midground and the foreground. Previously, I argued that the enactment of the snack-time communicative context generally is the backgrounded higher-level action for both participants although with slightly differing emphases: for Jane, there is the responsibility of simultaneously managing multiple students and their requests and facilitating the timely completion of snack time, whereas for Luke there is no such responsibility but nevertheless an awareness that this underlying higher-level action of participating in snack-time means that his turn could elapse without food if the interactional difficulty is not resolved. This awareness of the structuring function of the backgrounded higher-level action by both participants is suggested in Figure 48 below:

*Figure 48: But I'd rather have raisins! (video still 20)*



The rapidity with which Luke responds to Jane's potential closure of the turn with *'Never mind'* by reaching for apple instead suggests that the previously backgrounded higher-level action of the enactment of snack-time was nevertheless structuring his foregrounded higher-level action, as the quest for raisins was quickly abandoned when Jane's need to move on to the next student became pressing.  This suggests that Luke is able to manage multiple higher-level actions simultaneously in his continuum of attention and to rapidly switch to a backgrounded action of the need for snack-time completion when necessary.

In summary, Section 6.3 looked in detail at the multimodal interaction within *'But I'd Rather Have Raisins'* drawing upon tools from both CA and MIA.  They brought complementary perspectives to the same extract: for instance, CA highlighted the role of Luke's 'echolalia' and 'echopraxia' in maintaining the sequential orderliness of the interaction and demonstrating his ongoing commitment to resolution; whilst MIA analysed the use of both modal complexity and intensity across the communication of both participants and how they deployed means and counter-means to address partial divergence in their foregrounds of attention.  This allows for a multi-

perspectival view of the interaction which would not have been possible with one approach alone.

## 6.4 Conclusion

In this chapter, the Ethnography of Communication perspective was used to examine my repeated daily observations of and participation in the enactment of snack time. It was argued that snack time was a relatively consistent communication context where participants were familiar with certain established parameters: the enactment of turn-taking, the design of snack time in Purple Class in more detail. Finally, one excerpt was then analysed in more detail using the lenses of Conversation Analysis and Multimodal Interaction Analysis to examine how Luke succeeded in making his meaning clear both in terms of the sequential arrangement of his multimodal actions and his orchestration of multiple modes.

The data presented in this chapter suggest that snack time is a complex, multimodal mosaic of activity: despite it being a communication context which appears to privilege predominantly PECS-mediated exchanges, it is also a site where meanings, identities, roles and the (il)legitimacy of certain modes and communicative functions are continually contested and negotiated. The rich complexity of these observed interactions both highlights the methodological importance of ethnographic observation to complement the more usual quantitative approach to AAC research and also underscores the need for critical reflection on whether AAC provision is reflecting and enhancing (or conversely, limiting) the demonstrable complexity of the user's multimodal repertoire. These are themes which are developed further in Chapters 9 and 10.

In the chapter which follows, I undertake similar ethnographic and multimodal analysis of four data excerpts from Intensive Interaction, a teaching approach which centres on practitioner responsiveness to embodied communication strategies of the children and therefore provides a marked contrast with the formalised and ritualistic nature of snack time.

## CHAPTER 7: INTENSIVE INTERACTION

### 7.0  Introduction

As described previously in Section 1.4.4, Intensive Interaction is a playful, child-led teaching approach designed to foster fundamental pre-verbal communication skills such as turn-taking, reciprocity, and mutual attention.  In this chapter, I begin by examining the role of Intensive Interaction as a teaching approach in Purple Class and in the school more generally (Section 7.1). I then present four instances of Intensive Interaction-style interactions from the data and use Ethnography of Communication as a frame for their analysis (Section 7.2).  This is done in order to illustrate Intensive Interaction being used by a range of participants and staff and to bring a degree of breadth to the ethnographic consideration of what participants considered Intensive Interaction to be.  This is followed by a more in-depth multimodal analysis of one piece of Intensive Interaction video data by drawing upon both Conversation Analysis and Multimodal Interaction Analysis (Section 7.3), in order to examine in detail how Anna leads and actively sustains a playful gestural exchange with Jane even in the face of competing events which threaten a loss of recipiency from Jane.

### 7.1  Intensive Interaction in Purple Class

My observations suggested that Intensive Interaction was an approach which enjoyed a prominent status in this school.  The School's Autism Policy stated that all staff had attended training on Intensive Interaction, with one currently completing a year-long course to become a nationally recognised trainer.  Its importance and status as a legitimated teaching approach was further reflected in artefacts around the classroom: a laminated sign on the door leading into Purple Class explained the function of Intensive Interaction to visitors, and in one corner of the room recording sheets were stuck on the wall for each student where staff could record qualitative observations of evidence of the fundamental communication skills (Nind & Hewett, 1994) which had been demonstrated by students during Intensive Interaction sessions.

Intensive Interaction was scheduled to occur once daily in Purple Class, between 11:00a.m. and 11:30a.m. Students would split into three groups (containing two, two and one student(s)), each group with a facilitating member of staff. One group would go to the 'dark room' (a small room with comfortable soft furnishings), one would go to the sensory room, and one would remain in the classroom. The groups would rotate every day according to the timetable so students experienced all three environments and all members of staff. During this time, staff were expected to interact with the children in ways which are consistent with Intensive Interaction: imitating their actions, commenting on the child's focus of attention, and generally allowing the shape of the unfolding interaction to be led by the child. However, Intensive Interaction was significantly different from other identified communicative contexts such as 'snack time' or 'work time' in that it was not contained within its allotted slot but could be drawn upon in brief, spontaneous interactions throughout the day, as the Purple Class webpage noted:

> *We work in a way that focuses very much on social interaction implementing Intensive Interaction programmes across most of what we do …*

Although Intensive Interaction could be diffused across a range of physical settings and beyond its timetabled slot, staff responses to the card-sorting activity and the ensuing discussion (described in Section 4.3.6) suggested that staff did have a shared emic perspective on Intensive Interaction as an established communicative context which was relaxed, fun, child-led and tended not to involve AAC. Their views on what made Intensive Interaction distinctive as a communicative context are explored more fully in Section 9.2.

The data extracts presented in this chapter are all drawn from spontaneous, unscheduled moments of Intensive Interaction rather than footage from the scheduled sessions. This was not an intentional *a priori* decision on my part but rather arose from the process of data analysis, which suggested that brief, snatched moments of Intensive Interaction outside of the timetabled slot often felt more engaged, spontaneous and enjoyable for participants than those observed during the allotted half hour where there was an 'obligation' of sorts to perform Intensive

Interaction.  Additionally, the amount of video data I was able to collect during the scheduled sessions was sometimes compromised by my dual role as researcher/ classroom helper (detailed in Chapter 3), which sometimes created a dilemma where one staff member had two children:

> *I stayed in the classroom with Jacqueline, Thomas and Albert.  Jacqueline was interacting with Thomas.  I felt a bit of a dilemma - the most useful thing for the study might have been to video Jacqueline and Thomas but that would have left Albert alone (which is presumably what would have happened anyway if I hadn't been researching).  The teacher in me wanted to make myself useful since I am trained in Intensive Interaction.  So I did a spell with Albert …*  (Reflexive Journal, 7 January).

Four spontaneously arising scenes of Intensive Interaction are therefore drawn upon here in order to foreground moments where the children appeared to me to be very engaged with the process of Intensive Interaction and were acting with agency in some way to initiate, sustain, or shape the direction of the interaction with the adult.  Four short scenes (*Blowing Raspberries, Mark-Making, Chatting during Worktime, Interacting with Gestures*) are presented in Section 7.2.1.  As in Chapter 6, each is presented with some introductory contextualising detail which draws loosely upon Hymes' (1974) suggestion of the SPEAKING mnemonic for ethnographic contextualisation of communication (setting/scene, participants, ends, act sequence, key, instrumentalities, norms and genre).  This contextualisation is followed by a depiction of the unfolding interaction through the medium of annotated video stills.  I then explore the significance of these four extracts using Ethnography of Communication as a frame (Section 7.2.2).

## 7.2  Intensive Interaction: Ethnography of Communication Perspective

### 7.2.1 Four Instances of Intensive Interaction

#### Blowing Raspberries

This exchange took place in unusual circumstances: the class had gone out for a trip to the park and had intended to eat packed lunches as a picnic, but due to the weather they returned to the classroom and ate them at the snack table.  Perhaps due to this irregularity the atmosphere was informal and the students were simply helping themselves from their lunchboxes: this would not be the case in a regularly

scheduled lunch time or snack time.  In the foreground of the video, Thomas can be seen seated at the table with Jane (teaching assistant) to his right. Other children were also seated around the table but not in shot.  Only partially in shot is Fran, who is facing the students on the other side of the table and has her back to the camera. During lunch, Thomas made a 'blowing raspberries' noise with his lips and Fran imitated him, triggering a short exchange between the two which drew on the imitating strategy suggested by Intensive Interaction.

*Figure 49: Blowing Raspberries*

**0:33.5** [laughs] [noise]

9. Frances blows another raspberry noise. Thomas laughs and twists torso backwards.

**0:37.1**

10. Thomas twists around to face front again, eyes screwed up, smiling.

**0:38.1** EYYYYY!

11. Thomas twists backwards again, with loud happy noise. He holds position for 6 seconds.

**0:44.8**

12. Thomas suddenly and briefly twists around to front, smiling.

**0:45.2** EYYYYY! EYYYYY!
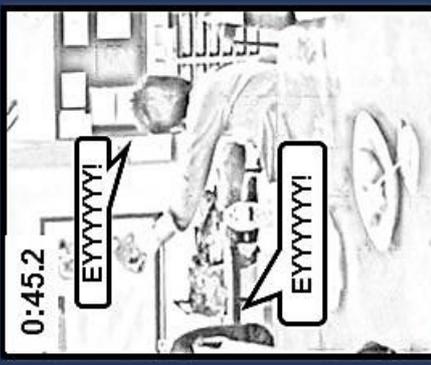
13. As he twists to backwards position again, he repeats noise. Frances echoes it.

**0:47.0** Looking … good looking!
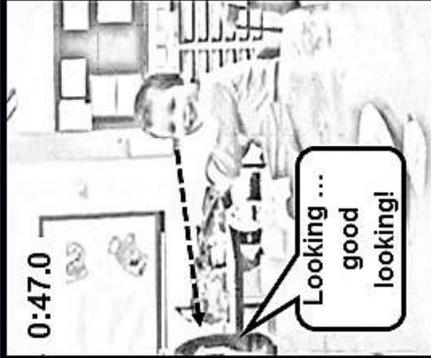
14. Twice in quick succession, Thomas quickly twists to front, looking at Frances and smiling.

**0:50.9** He was really looking ... look at the eye contact there!

15. Thomas turns to backward facing position again. Frances speaks to colleague.

**1:00.1** hee hee hee
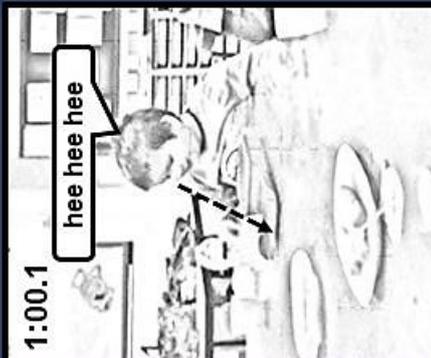
16. Thomas slowly turns forwards. He puts hand out, pauses and laughs before eating.

*Mark-Making*

It was 'choose' time, one of many regular short slots of time when students could engage in activities of their choice in the classroom.  There was a desk in the classroom where different resources are put out on display each day for students to explore during these times: on this occasion, blank sheets of paper and felt-tip pens of different colours had been left on the desk.  Albert was kneeling at the desk as there were no chairs, and Jane (teaching assistant) came to join him, kneeling at the opposite side of the desk.  Albert had a felt-tip in each hand, using sometimes the right, sometimes the left.  He was making marks of various shapes on the paper: sometimes long lines, sometimes small scribbles.  Jane contributed to the drawing by replicating each shape or action that Albert produced, on the same area of the paper.  Albert seemed to become increasingly aware that he was shaping Jane's actions and began to actively invite the turn-taking.

*Figure 50: Mark-Making*



0:01.0

1. Albert draws horizontal line from right to left across page.

0:05.2

2. Jane draws two horizontal lines across page. Albert watches, then shakes hands in air.

0:07.7

3. Albert makes small scribble near Jane's lines, then straightens back, withdrawing slightly

0:09.0

4. Jane makes a small scribble on the same spot as Albert.

0:11.6

5. Albert makes more expansive scribble with wider up/down and left/ right motion in + shape.

0:14.6

6. Albert lifts hand from page and watches, eyebrows raised, as Jane copies expansive scribble.

0:21.1

7. Smiling, Albert reaches over to site of Jane's scribble and performs similar one nearby.

Good boy!

0:25.4
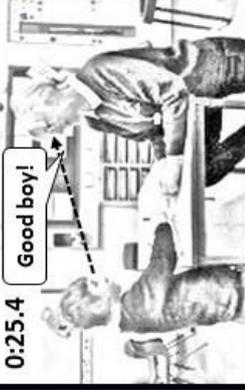
8. Albert looks up at Jane. She praises him. He smiles slightly and lowers head again.

0:27.3

9. Jane performs scribble on same spot, whilst Albert draws one long horizontal line.

0:27.8

10. Albert looks up at Jane, who lifts pen from page. He draws one long vertical line to left of page.

0:29.8

11. Jane copies his vertical line, in same position to left of page.

0:31.6

12. Albert performs another vertical line in same position, and Jane copies it again.

0:44.0

16. Again, Albert draws horizontal line and glances at Jane, who copies.

0:52.7

20. Again, Jane copies the small up/down scribble and Albert shakes hands in air.

0:40.3

15. Albert draws horizontal line and glances at Jane who copies line.

0:51.1

19. Again, Albert does small up/down scribble and glances briefly at Jane when finished.

Good boy!

good boy

0:35.8

14. Jane praises Albert (+ Makaton signs) as he reaches to left for a new sheet of paper.

0:50.1

18. Jane copies the small up/down scribble in same location on page. Albert shakes hands in air.

0:34.7

13. Albert straightens up and looks up at Jane with raised eyebrows. Jane smiles.

0:47.5

17. Albert does small up/down scribble and glances briefly at Jane when finished.

*Chatting during Worktime*

It was worktime, when students are expected to complete a short piece of work typically taking 2-3 minutes under supervision of a member of staff. On this occasion, students were taking it in turns to come one at a time to the c-shaped table to complete a piece of work under the supervision of a teaching assistant. The activity was painting and sticking pieces of fabric onto an outline picture of a bear, and the finished pictures were intended to form part of a display board about the book *We're Going on a Bear Hunt* (Michael Rosen) which was the class book for that half-term. In the foreground of the video, Dominic is standing at the table with Frances (teaching assistant) sitting opposite him. In the middle ground, another student is working with another teaching assistant on the same activity. In the background, other students and staff who are not engaged with this work can be seen moving around the classroom. During the activity Dominic started making a range of non-verbal vocalisations and although Frances initially tried to keep him focused on the task, she ended up following his lead and engaging in an Intensive Interaction-style exchange by echoing his noises.

*Figure 51: Chatting During Worktime*

0:45.2 — AY

10. Frances mirrors his movement, leaning in and echoes 'AY.'

0:47.2

11. They hold this position for a few seconds, Frances smiling.

0:48.2

12. Dominic pulls back to standing straight position. Frances mirrors this movement.

0:50.0

13. Dominic looks down to table, and then raises gaze to look at Frances.

0:51.2

14. Dominic holds Frances' gaze. She raises her eyebrows and widens eyes, head tilted back.

0:52.8 — AH

15. Dominic looks down to table, whispers 'AH' and looks up at Frances again.

0:53.4 — AH

16. Frances echoes the whispered 'AH' almost immediately.

0:56.1 — AH-GEE-DA

17. Dominic glances down to table then up to Frances, saying 'AH-GEE-DA' loudly.

0:59.8 — AH-GEE-DA

18. Frances echoes 'AH-GEE-DA'. Dominic's gaze returns to table.

*Interacting with Gestures*

This brief exchange took place in the temporary lull between two organised activities: group time which was a highly structured, adult-directed communicative event (Table 5) had just ended, and students had begun to gather at the door to go to soft play. Anna and Jane were still in their seats from the group time circle although some staff and students had started to move towards the door. Anna initiated the exchange with a gesture although as filming started a few seconds later the first 'turn' depicted is taken by Jane. For approximately 33 seconds they engaged in an Intensive Interaction-style exchange involving gesture and non-verbal vocalisation with each other, although Jane's attention was torn between the exchange with Anna and the need to liaise with the class teacher about arrangements for the imminent transition to soft play.

*Figure 52: Interacting with Gestures*



0:00.5

1. Jane places her hands on head and replaces them on lap. Anna watches closely.

0:02.0

2. Anna sits up straight in her chair and extends her palms out to each side.

0:02.6   do-GAA-see-a

3. Anna voalises, moving palms up/down in oscillating movement. Jane copies her gesture.

0:06.0   da-SO-bee-ey

4. Anna vocalises and touches head with both hands. Jane copies the gesture.

0:10.1

5. Anna yawns and fiddles with ear, looking into distance.

0:10.5

6. Jane copies ear fiddling gesture but Anna is looking away.

0:11.9   do-YA-sa-day

7. Jane orients towards conversation with teacher. Anna touches and snakes her head and vocalises.

0:13.7

8. Jane still orients towards teacher. Anna slumps on back of chair, looking away.

0:18.3

9. Anna sits up straight, directs eye gaze to Jane and touches her shoulder.

0:19.7

10. Jane reorients to Anna who extends palms, directs eye gaze to Jane's face and then her hands.

0:20.6   do-BEE-shu-shu

11. Anna vocalises and shifts gaze up to Jane's face again.

0:21.1

12. Jane copies extended palms gesture. Anna's eyes drop to Jane's hands to watch her perform it.

224

0:28.3

16. Anna touches head, smiles slightly, raises eyebrows and pushes head forward slightly.

0:32.6

Right sweetheart

20. Both rise from seats simultaneously.

0:26.8

15. Anna raises hands and pauses, eye gaze directed at Jane who raises hands also.

0:31.6

19. Jane reaches downwards to retrieve items on floor. Anna reorients eye gaze to Jane.

0:24.5

do-GAA-shee-a

14. Anna does up/down motion with palms and vocalises, eye gaze on Jane's hands. Jane copies gesture.

0:30.6

18. Anna's gaze shifts to behind Jane, whose hands fall to her lap with a light slapping noise.

0:22.2

do-BEE

13. Anna raises and lowers hands once with a short vocalisation. Jane imitates both.

0:29.0

17. Jane touches side of head and gently moves fingers back and forth. Anna watches.

*7.2.2 Intensive Interaction: Discussion*

The four data extracts above suggest that the children of Purple Class were very familiar with the practice of Intensive Interaction. They can be seen to engage in playful, multimodal exchanges with adults in a range of unscheduled settings including lunch *('Blowing Raspberries')*; work time *('Chatting during Worktime')* and in the lull between two organised activities *('Interacting with Gestures');* as well as responding to teacher-initiated Intensive Interaction in the context of mark-making *('Mark-Making').* It was also the case that as a new and unfamiliar adult in the classroom I was nevertheless very quickly assimilated as an interactant in this style, as this extract from my fieldnotes suggests:

> *Lizzie and I were in the sensory room with Dominic and Anna. Really peaceful half hour. Bubble wall was quietly bubbling in the corner, Lizzie and Dominic were cuddling up in the corner doing some vocal imitation. There were white circles of light from the rotating disco ball travelling across the floor. Anna lay beside me for some time, making noises and having me repeat them. Sometimes when she liked the way I copied a noise she looked right at me, smiling.* (Fieldnotes, 14 January).

This shared familiarity with the practice of Intensive Interaction is reminiscent of Eckert and McConnell-Ginet's (1999) definition of a 'community of practice': 'a group whose joint engagement in some activity or enterprise is sufficiently intensive to give rise over time to a repertoire of shared practices' (p.185). In Ethnography of Communication terms, it seemed to me that there was consistent form-function patterning in Purple Class linking embodied, multimodal Intensive Interaction -style communication with the phatic speech function. Saville-Troike (2008) notes:

> *Phatic communication conveys a message, but has no referential meaning. The meaning is in the act of communication itself....* (p.13).

There is no clearly referential content or 'information exchange' in any of the four interactions depicted above, yet it is clearly purposeful behaviour with the goal of close and responsive human connection: when students in Purple Class wished to undertake relational work in their communication with adults such as the expression of closeness, solidarity or connection they seemed to draw upon Intensive Interaction to do so. One possible reason for this is that the Intensive Interaction 'way of

speaking' (Saville-Troike, p.11) with its embodied, non-symbolic, multimodal exchanges has affordances of immediacy, intimacy and accessibility which make it well-suited to phatic communication.

In the previous chapter I used the concept of 'code-switching' (Lin, 2008) as a tool for understanding how the rejection of one way of communicating in favour of another could effect substantial changes in the frame of the interaction as a whole. The data here does seem to point to the possibility that the shift into the Intensive Interaction 'way of speaking' (Saville-Troike, 2008, p11) with its phatic/embodied function/form patterning has a similar effect of redefining the frame of the interaction.  For instance, in *'Chatting During Worktime'* (Section 7.2) the initial 'frame' is very much teacher-led and didactic in nature: Frances, who is leading the work activity, is responsible for issuing instructions such as 'painting' and 'glueing' and overseeing their enactment, thus ensuring that the wall display of brown bears is completed as staff had envisaged.  This frame is associated with the communication 'codes' of verbal speech and accompanying Makaton, both of which are enacted principally by Frances.  The teacher has the right to define the parameters of the activity and the student has the obligation to comply, and the relationship between interactants, although friendly and relaxed, is clearly teacher-led.  Moments, later, however, the frame has been radically redefined by Dominic, who resists Frances' efforts to keep him 'on-task' and succeeds in engaging her in an Intensive Interaction -style exchange through an inviting combination of vocalisation, eye contact and a reduction in proxemic space.  This shift away from the teacher-led verbal speech/Makaton code towards an embodied, non-symbolic way of communicating has the effect of redefining the frame in at least two ways.  First, the relationship is changed from teacher-student to one of near-equals since Dominic currently determines the content of interaction, although I would suggest that the rights which inhere in Frances' position as staff member to impose rules or insist on compliance are temporarily set aside rather than relinquished or negated by the exchange.  Secondly, the function of the exchange has been shifted from predominantly directive (Frances) to predominantly phatic: the focus is no longer the completion of the work but rather the mutual pleasure of an exchange.

A further question arising from the ethnography of communication perspective is whether there is any consistent pattern which could identify when participants are likely to slip into this 'way of being' which enacts the phatic communication function through embodied non-verbal communication. A useful starting point is Fishman's (1972) concept of 'domain' comprised of interlocutor, place and topic, which will have stable associations with certain codes or ways of speaking within the community. The above four extracts suggest that in this study Intensive Interaction for students appeared to be strongly associated with an adult interlocutor and with the phatic communication function. It did not appear to be strongly associated with any particular physical location or setting, although was more likely to spontaneously arise in settings where communication was not being formalised through the ritual use of AAC. In the four extracts above, for example, this type of interaction arises in the contexts of eating at the snack table in unusual circumstances without AAC; a free choice of mark-making activity during 'choose time'; an exchange during work time which although teacher-led is not associated with a high degree of AAC provision; and a temporary lull between two organised activities of group time and soft play. In all of these circumstances, although there was the possibility of staff performing a few simple Makaton signs, there were no symbol cards made available and no ritualised channelling of communication through AAC as there is for instance during snack time.

Having considered the role of Intensive Interaction in Purple Class from an ethnographic perspective, in Section 7.3 I focus in on one of the examples presented above ('*Interacting with Gestures'*) by undertaking a fine-grained multimodal analysis of how the exchange is enacted by the participants.

## 7.3 Multimodal Analysis of an Instance of Intensive Interaction

In this section I consider the extract '*Interacting with Gestures'* in close detail, firstly through the lens of Conversation Analysis (Section 7.3.1) and then through the alternative framework of Multimodal Interaction Analysis (Section 7.3.2). This is done in order to explore how one student (Anna) enacts a playful exchange with a member of staff (Jane) based primarily around the exchange of gestures but also

vocalisation and facial expression, and actively works to restore recipiency in the face of a potential loss.

### 7.3.1 *Interacting with Gestures: Conversation Analytic Perspective*

Given that Intensive Interaction places great value on developing competence in sustained conversational turn-taking even in the absence of language (Section 1.4.4), it is interesting to consider Anna and Jane's exchange from the Conversation Analytic perspective which emphasises the examination of turn-taking as a fundamental component of the machinery of conversation. As in the previous chapter, I illustrate turn-taking firstly by overlaying the multimodal matrix for this extract with boxes indicating my interpretation of 'turns'. Figure 53 shows the first nine second of the episode transcribed as a multimodal matrix with overlays showing where I judged turns to be identifiable. Figure 54 then shows turn-taking transcribed with Elan software.

*Figure 53: Interacting with gestures (multimodal matrix with turn-taking overlays)*
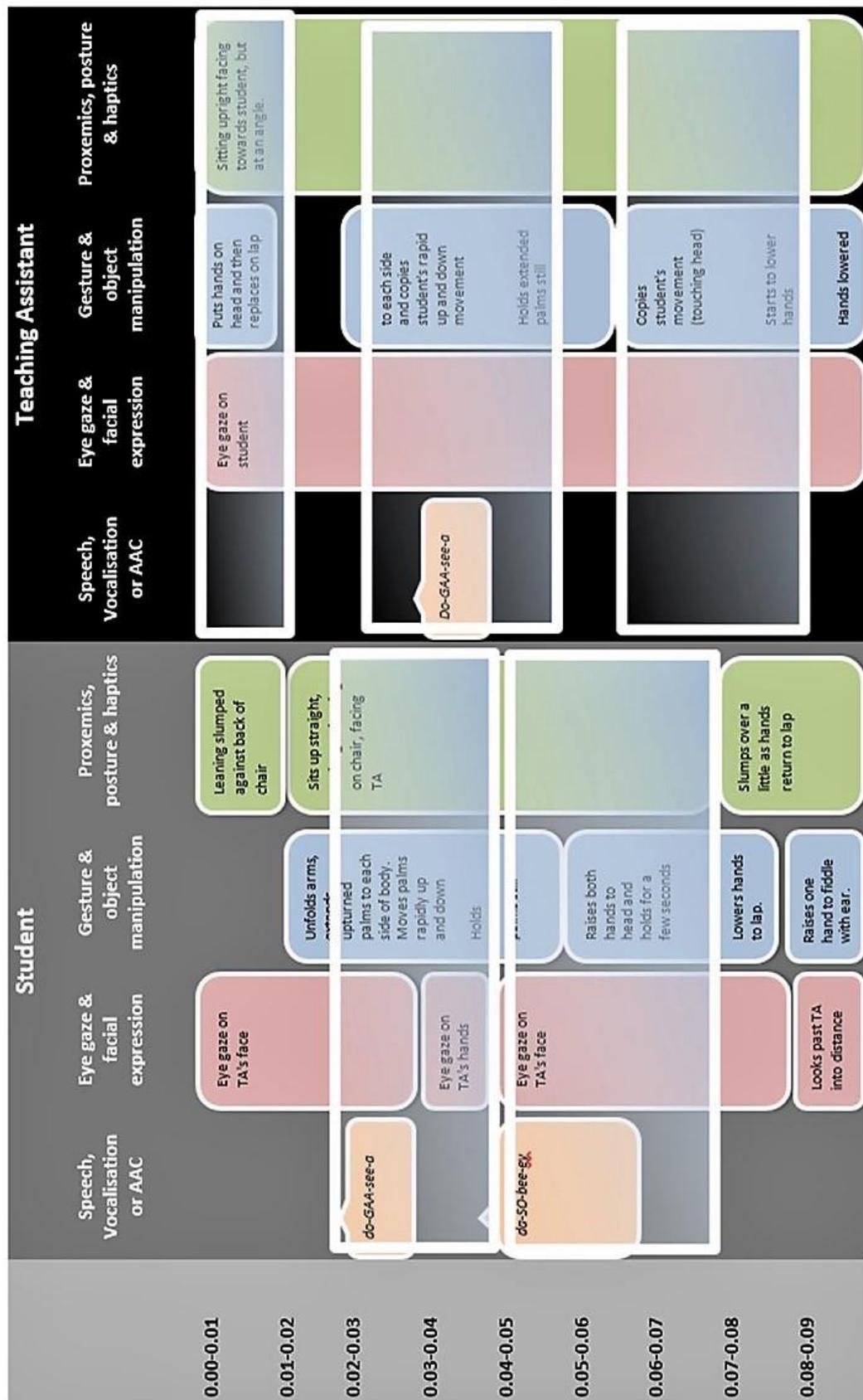
*Figure 54:    Interacting with Gestures (Elan Software Transcription)*
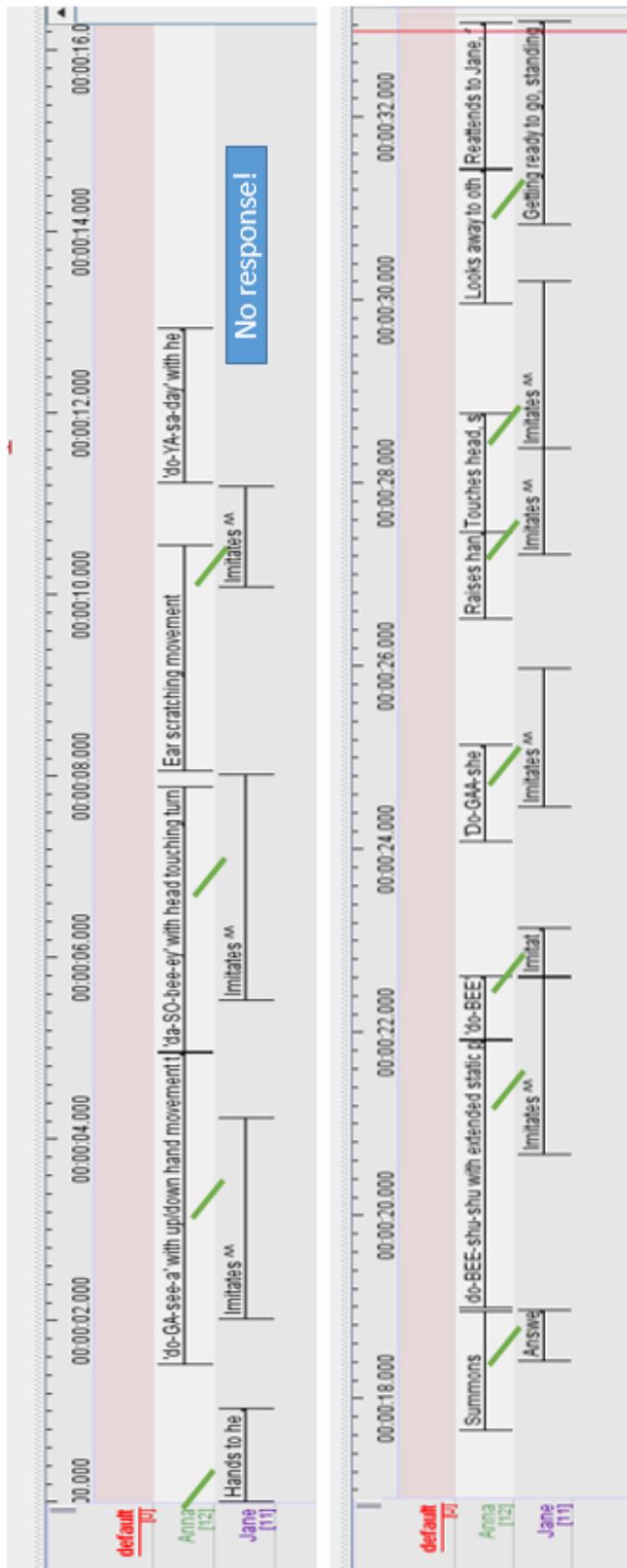
From Figure 54, it can be seen that a fairly regular pattern can be identified of Anna performing a 'turn' which is imitated by Jane typically within 2/5 – 3/5 of a second of Anna's initiation. It is also possible to identify 'adjacency pairs' in the interaction marked with green joining lines in Figure 54, with Anna's multimodal turns constituting a first- pair part which are promptly matched by Jane's second-pair part. This might suggest that this interaction is an instantiation of Intensive Interaction shaping multimodal behaviours into identifiable 'turns' or 'conversations' which resemble neurotypical verbal exchanges in their structure if not their content.

There is, however, one first-pair part which is not initially matched by Jane with a second-pair part as she is now orientating to a second exchange with the class teacher:

*Figure 55: Interacting with gestures (video stills 7-10)*
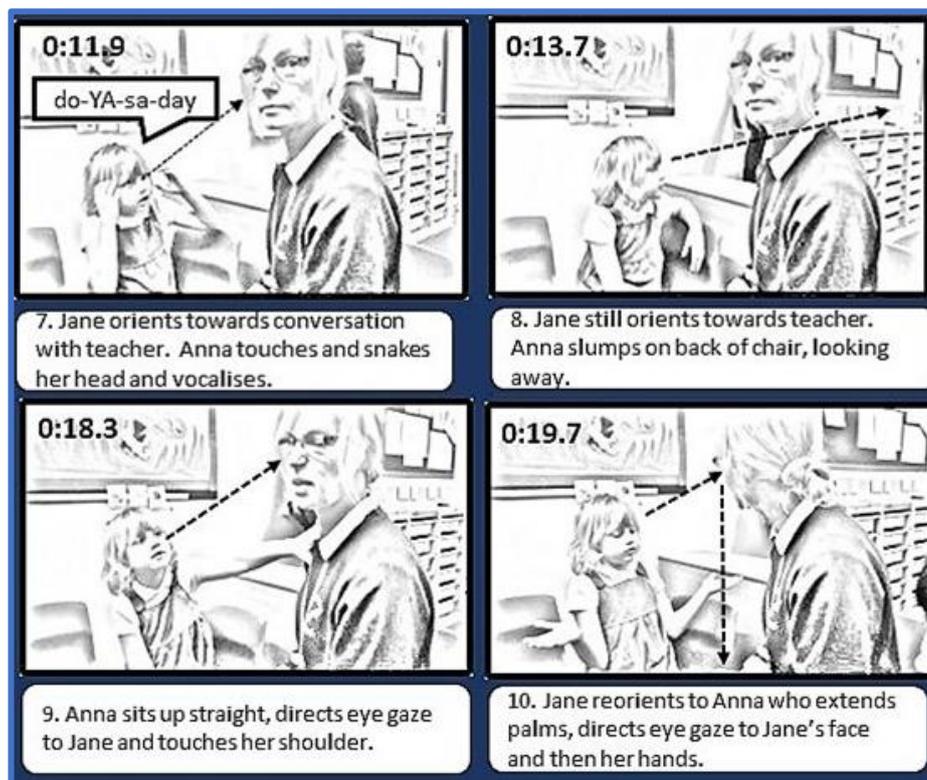


Usually, the failure to respond to a first-pair part (here, Anna's head-touching gesture combined with vocalisation *'Do-YA-sa-day'*) would be an accountable action, but Jane is unaware of the breach because of her physical orientation towards the teacher at

this moment.  After a few seconds have elapsed, Anna undertakes *repair* of the loss of recipiency from Jane through the insertion of what appears to be a gestural *summons-answer* sequence: she reaches out and lightly touches Jane's shoulder, which Jane answers by physically reorienting her upper body towards Anna.  Assured of her continued recipiency, Anna goes on to perform another first-pair part.

Another interesting feature of this interaction from the CA perspective is the management of gaps in turn-taking.  With the exception of the large gap requiring repair by the touch on shoulder at 0:18.3, only two relatively short gaps occur as indicated in green in Figure 56.

**Figure 56:  Interacting with Gestures (Elan Software Transcription 2)**
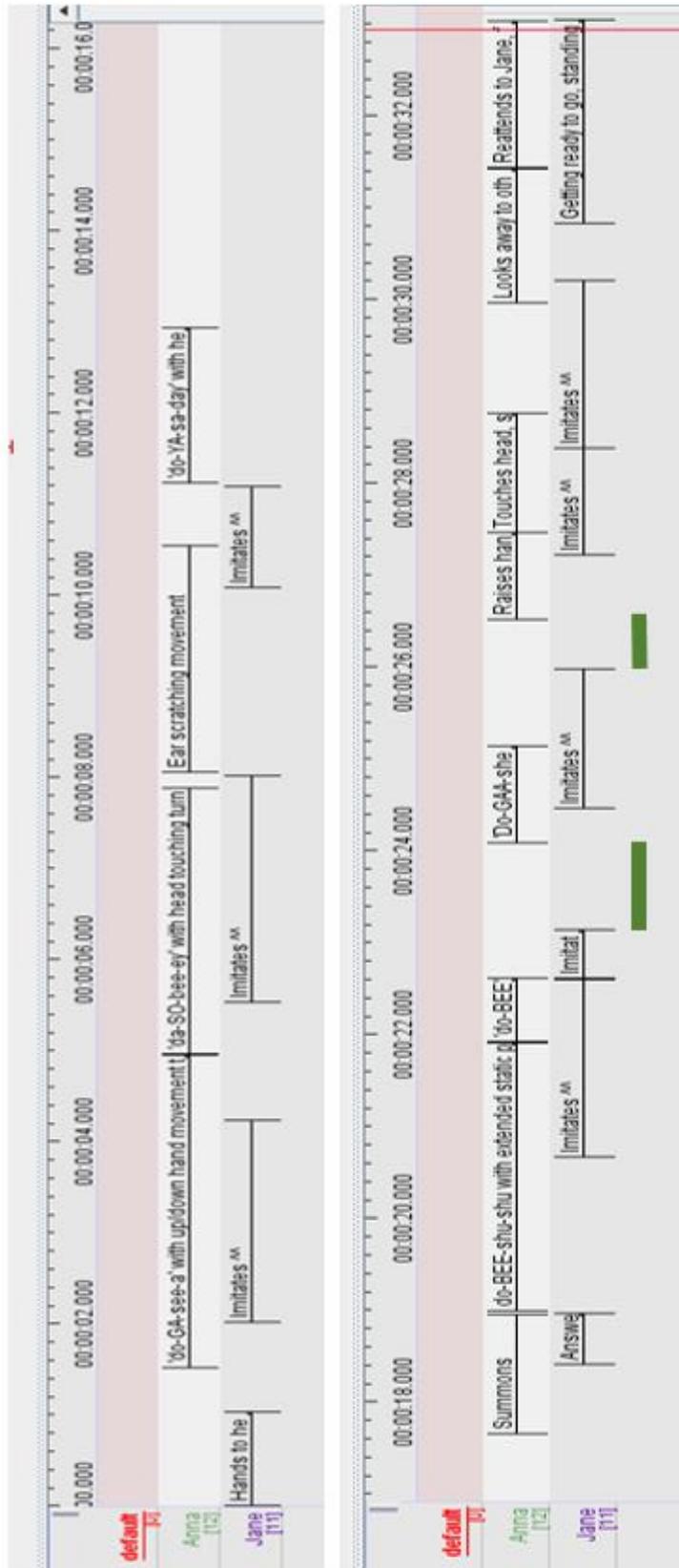
In Conversation Analysis, it is argued that a gap occasioned by the silence of a participant who is accountable for providing a response is more problematic than an inter-turn silence (Liddicoat, 2007). In both of the above instances highlighted in green, Jane has completed her expected second-pair part in the form of imitation of Anna's gesture and/or vocalisation, and the gap is occasioned by Anna who appears to be considering her next move. What is notable about the two gaps, however, is how Anna holds her baseline gestural position of two outstretched palms (Figure 57), the position which forms the basis for her various gestures throughout this interaction:

*Figure 57: Anna's Management of First Gap*



*Figure 58: Anna's Management of Second Gap*

As explained in Section 3.3.1, Conversation Analysis argues that speakers when searching for a word will often deploy devices such as *uh* or *uhm* or alternatively sound stretches which involve lingering on current word in order to retain speakership and orient to the ongoing conversation whilst they search (Clark et al, 2002).  Anna's outstretched palms here could be argued to constitute a gestural equivalent of the sound stretch: by keeping her hands in the baseline position for a further gesture instead of dropping them to her lap, she is gesturally orienting towards a continuation of the ongoing exchange even though she has yet to decide what her next move will be.  This is successful because Jane remains posturally oriented towards Anna throughout the two brief gaps despite the competing conversations and movement around the room which had previously pulled her attention elsewhere, and as the two pictures above illustrate she also replicates the outstretched palms position in readiness for further exchanges.

A further feature of the interaction which is worth considering from a CA perspective is how it is jointly brought to a close by the two interactants.  As explained previously in Section 3.3.1, Schegloff & Sacks (1973) argue that interactional work must typically take place in order to carefully disengage from talk.  The content of Anna's eight turns suggests an increasing amount of gestural and vocal back-references which in CA terms would indicate that no further new 'mentionables' (Schegloff & Sacks, 1973) were forthcoming, as the interaction moves towards completion. This is illustrated in Table 8 below, with approximate repetitions of previous mentionables in red.

*Table 8:  Interacting with Gestures: Closing the Interaction*

|  | Vocalisation | Gesture |
|---|---|---|
| Turn 1 | Do-ga-SEE-a | Palms outstretched, moving rapidly up and down |
| Turn 2 | Da-SO-bee-ey | Hands to head |
| Turn 3 | Do-YA-sa-day | Hands to head with head shaking |
| Turn 4 | Do-BEE-shu-shu | Outstretched palms, but static |
| Turn 5 | Do-BEE | One quick up-down movement with palms |
| Turn 6 | Do-ga-SHE-a | Palms outstretched, moving rapidly up and down |
| Turn 7 | Do-GA-shay | Raising hands to head |
| Turn 8 | -- | Fingers touching head, raises eyebrows, smiles slightly |

At the end of Turn 8, Anna's eye gaze redirects from Jane to the students who are moving towards the door, and Jane in response allows her hands to fall to her lap with a light slapping noise which seems to indicate finality or closure.  Now, with both parties having their hands in their laps, Jane feels able to disengage, saying 'Right, sweetheart' and rising from her chair at the same time as Anna.  A close analysis of the move towards a closing implicative environment in this exchange therefore suggests that closure is a shared interactional achievement, achieved multimodally.

Viewing this exchange in detail through the lens of Conversation Analysis suggests a high degree of agency on the part of Anna: she initiates a phatic exchange at a time when it is neither expected nor planned; she demonstrably maintains turn-taking and actively restores it when there is a risk of lost recipiency; she manages gaps in turn-taking through posture; and jointly with Jane constructs the closing implicative environment. In many ways the 'machinery of conversation' is not dissimilar to an interaction involving verbal exchange: as the visual transcription illustrates, Anna is capable of undertaking the interactional work required through the orchestration of eye gaze, gesture, posture, proxemics, facial expression and non-verbal vocalisation.

How these modes are orchestrated in relation to each other is the focus of Section 7.3.2.

### 7.3.2 Interacting with Gestures: Multimodal Interaction Analysis

As described previously in Section 3.4.1, Multimodal Interaction Analysis (Norris, 2004) focuses on how increases in modal intensity and complexity can function to bring actions to the foreground of the interactant's awareness, which is helpful in this case in terms of locating the variations in engagement from both Jane and Anna at various points in the exchange. Close analysis suggests that for the first eight seconds, the interaction is very much in the foreground of what Norris terms the 'continuum of awareness' for both Anna and Jane as they orient to each other with a sustained degree of multimodal complexity. For instance, Figure 59 illustrates a very high degree of modal complexity with multiple modes working together to make the higher-level action of mutual engagement possible:

**Figure 59: Interacting with Gestures (Video Still 4)**



4. Anna vocalises and touches head with both hands. Jane copies the gesture.
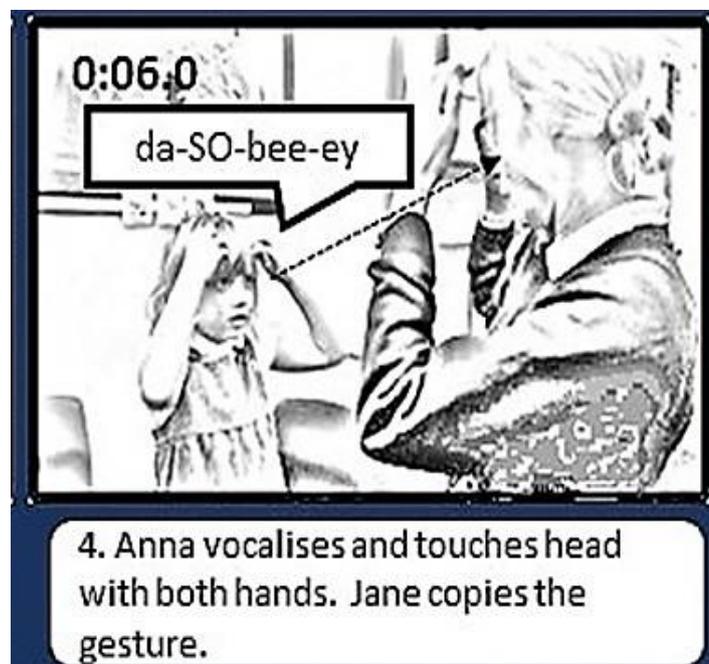
Here, Anna orients towards Jane posturally (her upper body is directed towards Jane and she sits upright in her chair, contrasting with the slumped position when she is

later distracted).  Her eye contact is directed towards Jane, and her gesture and vocalisation are both directed at Jane as an invitation to copy.  Jane, in turn, also orients posturally towards Anna with eye gaze directed towards her, copying her gesture (although not vocalisation).  Represented as *modal density circles* (Norris, 2004)*, their engagement with each other at this moment might look like this:

*Figure 60:  Interacting with gestures (modal density circles)*



Anna

Jane
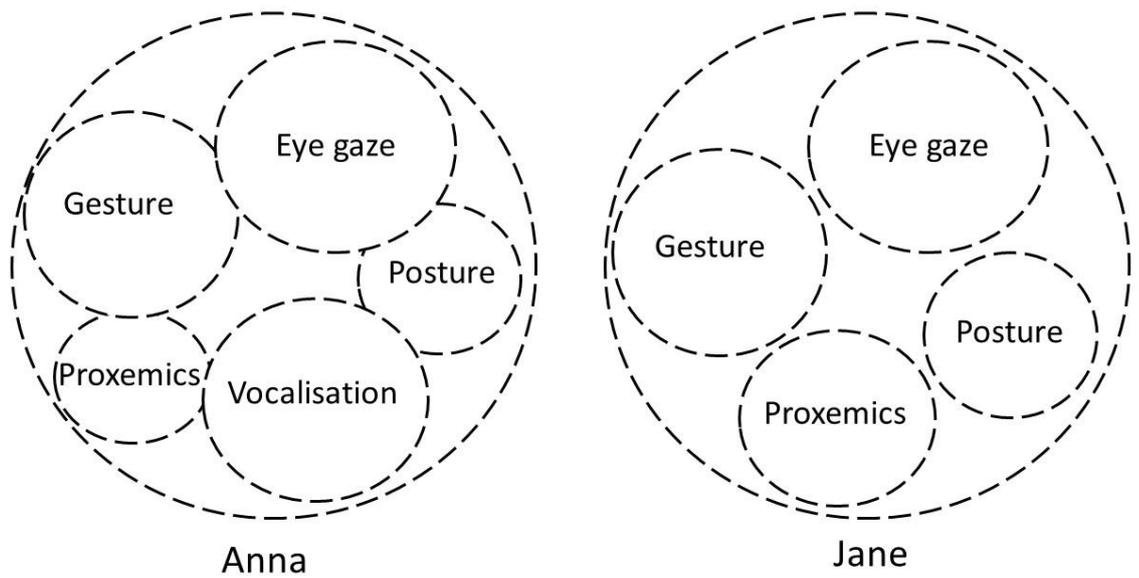
As in the previous chapter, the circles are intended to be heuristic representations for the purpose of analysis rather than any form of quantitative measurement.  Here, proxemics and posture are illustrated as slightly smaller circles in Anna's case.  Although they contribute significantly to the multimodal orchestration, it is conceivable that the higher-level action of interacting with Jane could continue if Anna were to slump back in her seat or move further away, whereas her ongoing eye gaze, gesture and vocalisation are more fundamental to securing Jane's ongoing attention.

At around 0:07.5 – 0:11.0 seconds, however, Anna's multimodal behaviour begins to suggest that the interaction with Jane has dropped from the foreground of her attention.  Her hands are lowered to her lap which contrasts with the two 'gaps'

considered earlier where she keeps her palms outstretched to orient towards a further exchange; she slumps a little in her chair which resembles her posture at the very start of the video clip; she looks past Jane apparently into the distance and raises one hand to fiddle with her ear.  I consider this to be arguably midgrounding rather than backgrounding Jane: the positioning of her body still orients towards Jane and she has not increased the proxemic distance between the two, although there has certainly been a fall in both modal complexity and intensity at this point.

*Figure 61: Interacting with Gestures (Anna orients away from Jane)*



As can be seen in the above video still, however, Jane continues to orient significantly towards the interaction with Anna: her posture and eye gaze remain directed to Anna and seconds later she attempts imitation of Anna's ear scratching gesture.  As explained in Section 1.4.4, the imputing of intentionality to ambiguous or clearly non-intentional acts is a recommended strategy in Intensive Interaction, but here it does not succeed in regaining her attention.

*Figure 62: Interacting with Gestures (Mismatched Foregrounds)*



At this moment, Anna and Jane appear to have significantly mismatched foregrounds as illustrated in the modal density circles below.

*Figure 63: Interacting with gestures (modal density circles 2)*
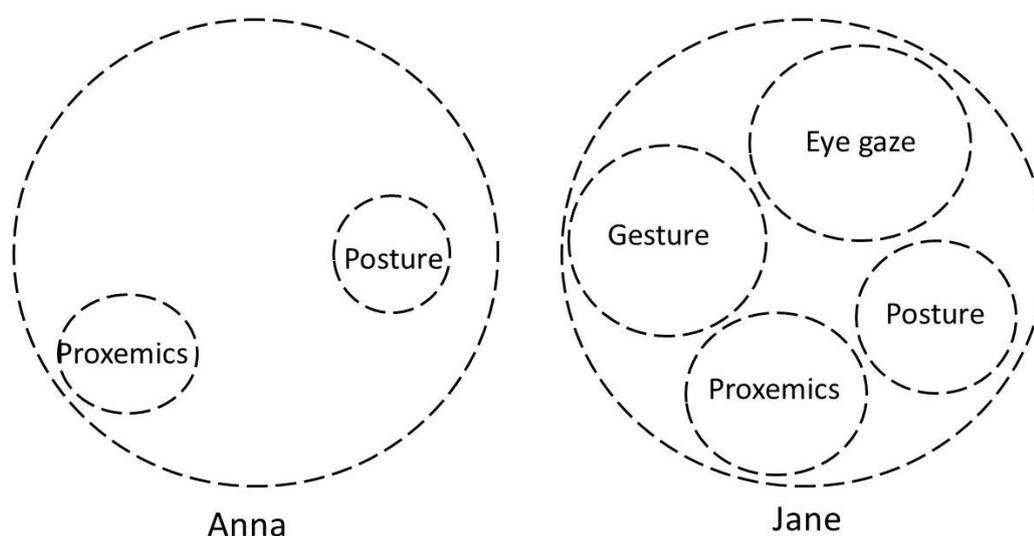


However, all of this is about to change. Jane turns to foreground the conversation with the class teacher (0:11.0), although not entirely backgrounding Anna as there is still a degree of proxemic and postural orientation towards the possibility of re-engagement. At this point Anna invites Jane to imitate once again with vocalisation,

gesture and eye contact.  Their respective foregrounds are mismatched once again, but this time in the opposite direction.

*Figure 64: Interacting with Gestures (Video Still 7)*



7. Jane orients towards conversation with teacher.  Anna touches and snakes her head and vocalises.
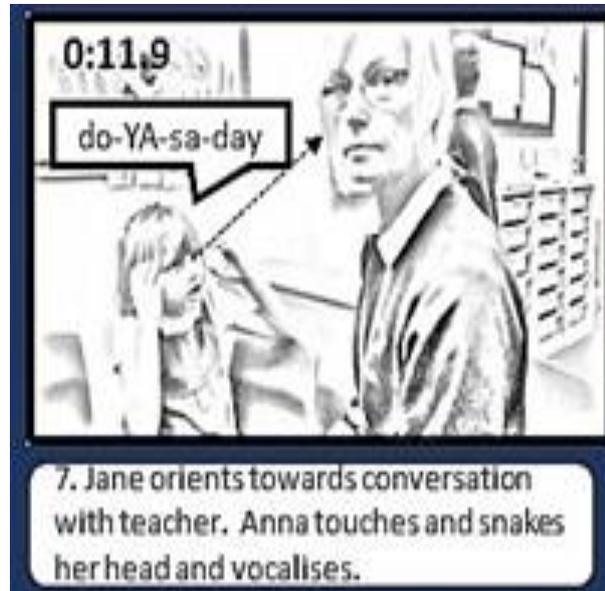
*Figure 65: Interacting with gestures (modal density circles 3)*
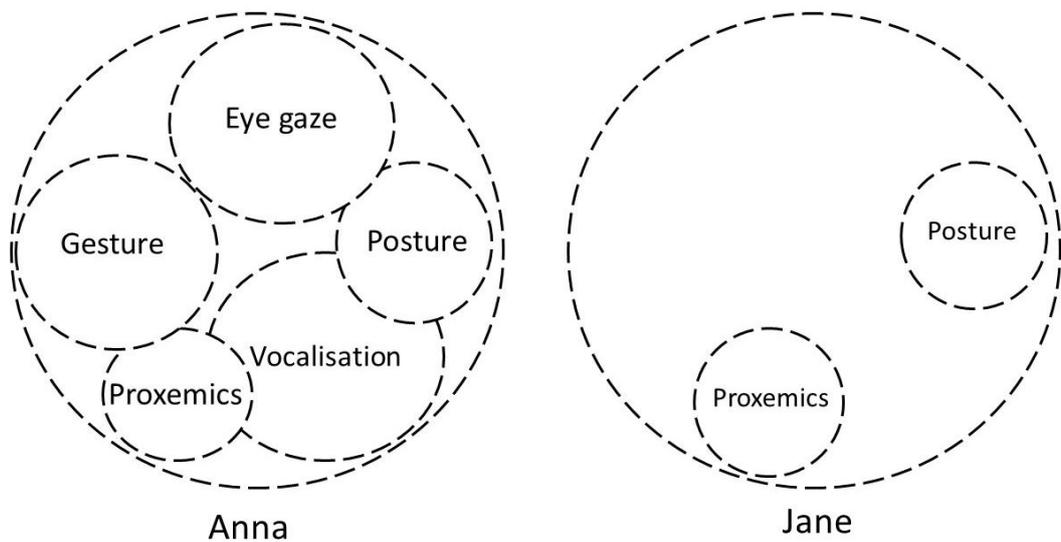


Anna

Jane

Seeing that Jane is not receptive to her invitation, Anna appears to disengage from the interaction at 0:13.0 to 0:17.0: she lowers her hands to her lap, leaning back against the chair with one arm, and looks behind Jane into the distance.

*Figure 66: Interacting with Gestures (Video Still 8)*



0:13.7

8. Jane still orients towards teacher. Anna slumps on back of chair, looking away.

At this point the multimodal behaviour of the interactants suggests a very low level of modal intensity or complexity invested in the interaction with each other. Jane is clearly foregrounding the alternative conversation with her colleague at this point whilst Anna's foreground may be the transition-related movement in the classroom or simply her own thoughts. Their behaviour suggests that they have not entirely and finally disengaged from further interaction, however, as neither has changed their proxemic distance and posturally the lower half of their bodies at least still orient to each other.

*Figure 67: Interacting with Gestures (Modal Density Circles 4)*



Posture

Proxemics

Anna

Posture

Proxemics
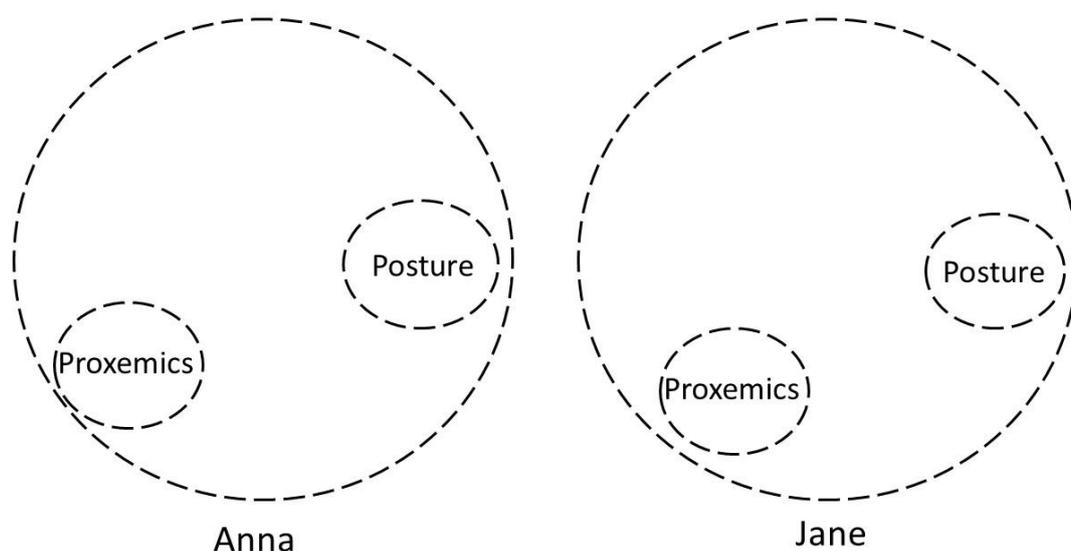
Jane

This period of mutual low modal engagement continues until Anna takes action in order to regain Jane's attention at 0:18.3 seconds:

*Figure 68: Interacting with Gestures (Video Still 9)*



0:18.3

9. Anna sits up straight, directs eye gaze to Jane and touches her shoulder.

Here there is a sudden increase in Anna's modal complexity directed towards Jane. Her eye gaze is redirected to Jane's face, she sits up straight in the chair, and she touches Jane lightly on the shoulder. As noted previously, Norris (2004) refers to this as a *means:* a pronounced lower-level action which indicates a shift in foregrounded higher-level action. As a pragmatic interactional strategy it succeeds: Jane returns her eye gaze to Anna, and there is an immediate sharp increase in the modal investment in the interaction from both parties once again as they return to their pattern of gestural and vocal exchanges. Their exchanges resume with a high degree of mutual engagement and modal complexity until the point represented in Figure 69.

*Figure 69: Interacting with Gestures (Video Stills 17-18)*
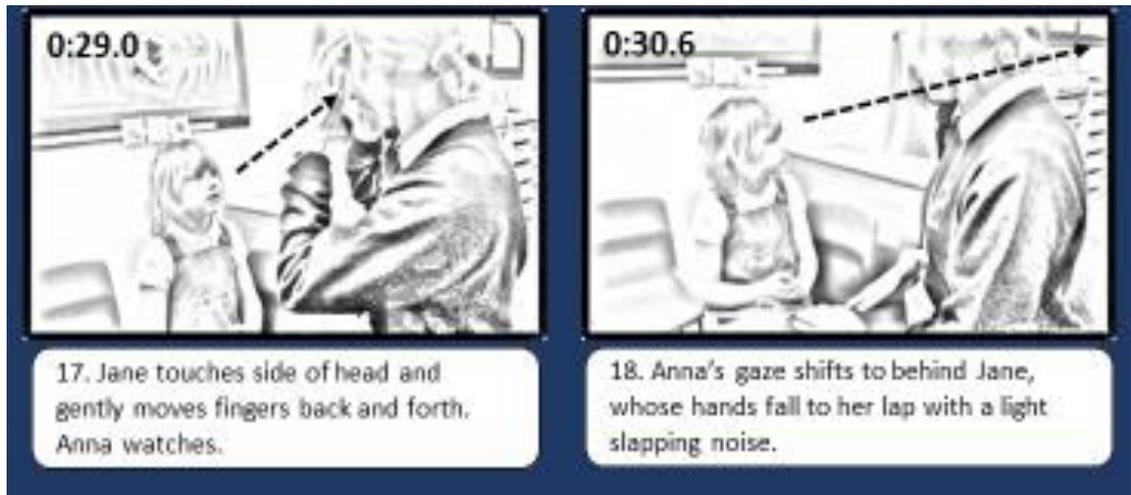


In the first of these images it appears that although Anna is still orienting to Jane posturally, proxemically and with eye gaze, she does not respond to Jane's imitation of her head-touching movement with a further gesture.  By 0:30.6 (second image), her modal complexity has reduced yet further as she slumps backwards in her seat with lowered proxemic and postural orientation to Jane.  Her eye gaze moves to the classroom door where students are starting to congregate for the move to soft play. Jane responds in kind by letting her hands fall to her lap in what appears to be a move of gestural disengagement, suggesting that for both parties the interaction has moved from the foreground to the midground of their continuum of attention/awareness.  This shift to the midground, via reduced modal complexity, is illustrated in Figure 70.

**Figure 70: Interacting with gestures (modal density circles 5)**
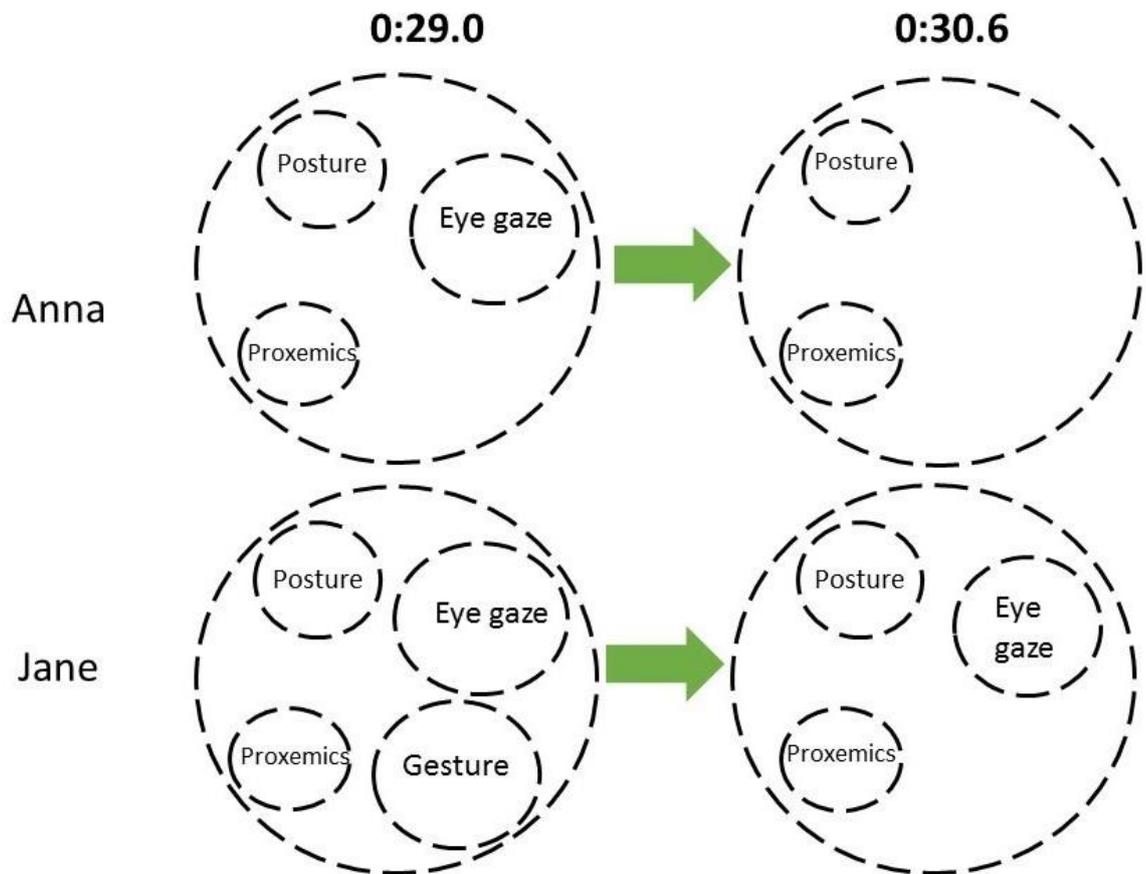


From this point, Anna and Jane orient principally to the higher-level action which now occupies the foregrounds of their attention/awareness continuum: the imminent transition to the next activity.

In summary, Section 7.3 examined the Intensive Interaction video extract *'Interacting with Gestures'* from both a CA and MIA perspective.  CA was useful in reflecting on the very clearly identifiable turn-taking between Anna and Jane, which may reflect the teaching approach which foregrounds turn-taking as an objective, and also revealed Anna to be agentic and purposeful in how she used gestural equivalent of a 'sound stretch' in CA terms to hold the interaction open.  It was also helpful in examining the closure of the exchange as a joint interactional achievement which bore a surprising degree of resemblance to the practice of exhausting previous 'mentionables' empirically established in verbal exchanges by CA (Schegloff & Sacks, 1973).  MIA was useful in viewing Anna's agency from a different angle: Anna was

demonstrated to engage with and proactively sustain the interaction through deployment of both modal intensity and complexity as well as using the 'means' of touching Jane's shoulder to realign their attentional foregrounds. Anna also makes subtle variations in her turn-taking including variations in the gesture. Anna therefore reveals herself to be a complex, thoughtful and purposeful multimodal communicator with the ability to vary modal intensity and complexity to achieve interactional goals.

## 7.4 Conclusion

In this chapter, I have examined the enactment of the teaching approach known as *Intensive Interaction* from an Ethnography of Communication perspective. I have argued that in Purple Class Intensive Interaction was less anchored in specific locations, artefacts and times than, for example, snack time, and was perhaps less clearly 'bounded' as a discrete communication context. It was noted that Intensive Interaction could spontaneously arise in most locations and times outside of its daily timetabled session, with the possible exception of highly formalised communicative contexts such as snack time or morning/afternoon group time which were highly associated with AAC. Despite this relative fluidity compared to snack time in the previous chapter, I argued that it could still be considered to be a communicative context in its own right. This is because there were characteristic regularities which would allow an observer with even a passing familiarity with the approach to identify when it was happening. Specifically this tended to involve an interactional dyad consisting of one adult and one student, a student-directed exchange, and the mirroring or imitating of the student's embodied non-symbolic behaviours and vocalisations. There appeared to be very little overlap between AAC and Intensive Interaction in general, with Thomas' prompted use of the Makaton sign 'more' in *'Blowing Raspberries'* (Section 7.2) being the only instance of AAC embedded in Intensive Interaction which I observed during fieldwork.

I then presented four brief excerpts of video data illustrating the enactment of Intensive Interaction in Purple Class. It was noted that all four episodes involved an exchange in the style of Intensive Interaction which arose outside of the daily

Intensive Interaction timetabled session, and this is consistent with my overall observation that spontaneously arising exchanges elicited more enthusiastic student engagement than attempts made during the timetabled slot.  The final excerpt was then analysed in more detail using the lenses of Conversation Analysis and Multimodal Interaction Analysis to examine how Anna sustained a gestural 'conversation' and repaired a potential loss of recipiency.

The data presented in this chapter suggested that contrary to traditional diagnostic understandings of children with autism as being socially withdrawn and lacking in interactional skills or motivation, all of the children in Purple Class engaged in purely phatic exchanges with staff which were not transactional in nature. With a wide range of familiar, embodied and non-symbolic means of communicating at their disposal, they were able to initiate, sustain and restart lapsed conversations; provide elaborate variations on their previous embodied 'utterances'; and express their pleasure in undertaking such multimodally complex exchanges.

The communication contexts chosen for depiction in Chapters 6 and were intentionally contrasting: snack time involved a high degree of teacher-led structure, formalised communication and AAC; whilst Intensive Interaction although driven by a pedagogical rationale was more responsive to embodied multimodal communication. In Chapter 8, I go on to illustrate and analyse outdoor play, a setting which tended to share with Intensive Interaction a high degree of embodied communication and a low level of AAC but where no particular pedagogical approach was in place and peer interaction became relatively more possible.

**CHAPTER 8: OUTDOOR PLAY**

**8.0 Introduction**

In the previous two chapters I examined snack time and Intensive Interaction, both of which took place predominantly indoors and tended to be associated with certain learning objectives: in the former case, the acquisition of PECS, Makaton and/or speech, and in the latter case, the acquisition of pre-verbal 'fundamentals of communication' (Nind & Hewett, 1994). In this chapter, I present a significantly different communication context – outdoor play time – in order to provide a contrasting setting which did not have learning objectives and tended to provide more opportunity for peer interaction and physical forms of play.

Consistently with the structure of the previous two chapters, I begin by contextualising outdoor play for the children of Purple Class and explain how, when and where it typically took place (Section 8.1). I then present four pieces of video data recorded during outdoor play and consider this data from an Ethnography of Communication perspective (Section 8.2). Finally, I undertake detailed multimodal analysis of one piece of video data by drawing upon both Conversation Analysis and Multimodal Interaction Analysis (Section 8.3).

**8.1 Outdoor Play in Purple Class**

There were two periods of outdoor play per day in Purple Class. The period 10:30a.m.-11:00a.m. was timetabled for snack time followed by a short period of 10-15 minutes outdoor play time, which would take place in the small enclosed outdoor area adjacent to the classroom used by Purple Class only. The longer period of 12:30p.m.-1:00p.m. was scheduled to be half an hour of outside play following lunch. This lunchtime session took place on the larger playground which was shared by all classes, and I observed but did not film lunchtime play due to the presence of non-participants. The data presented here is therefore predominantly from the short morning outdoor play session in the enclosed area, although one data extract *('Give Me a Push!'*, Section 8.2) was taken during a trip to a local park where no members of the public were present at the time of filming.

The physical properties of the outdoor play area were described previously in Section 5.1.9. During the morning outdoor session, typically one or two staff members would stand outside to monitor the play and sometimes join in, whilst the others remained in the classroom preparing materials for the next activity. In general the children were free to use the outdoor play space as they wished, although staff would intervene quite quickly in the case of physical contact between children and discourage it. It was explained to me that this was because there had been a previous instance of injury during interaction between two of the students in the class. Although many students chose to spend much of this outdoor time in solitary play there were some rich instances of peer interaction in the outdoor play area and these are reflected in the transcribed extracts. My own role during this time varied from day to day and included observing, writing fieldnotes, filming, talking informally to staff to explore their perspective on the day's events, or actively participating in the children's play when they invited me to do so.

Whilst no staff members identified 'outdoor play' as a distinctive communication context in the card sorting exercise, I felt from my own observations that it had distinctive and recognisable form-function patterning of communication. Interaction was generally phatic in nature rather than transactional, and embodied non-symbolic communication predominated although subject to the limits on physical contact described above. Although PECS was not observed in use Makaton was occasionally deployed amidst the embodied communication particularly when it involved Luke or Albert interacting with staff (as in *'If You're Happy and You Know It'*, Section 8.3). I also felt that the emic perspective of staff tended towards the identification of communication contexts involving planned activities, and this curriculum-centred perspective did not necessarily reflect the emic perspective of my student participants who in the data appear to orient to it as a distinctive time when, for example, peer interaction opens up as a possibility.

One extract from the staff interviews does, however, reference outdoor play. Frances reflects here on Thomas' favourite game of inciting other students or staff to

chase him. This was a game which I observed frequently and is illustrated in *'A Game of Chase',* Section 8.2).

> *… I think [Thomas] is clever enough to understand the system, the PECS system but there is just nothing that motivates him and when, using his body language works so well at that chasing game he doesn't, there is no point because people respond that way so I am not going to bother using the PECS I don't need to do that because I will just come up and get you and then you will chase after me. It is more functional to him I suppose, better outcome from less input.* (Frances, teaching assistant: Interview).

This comment supports my own observations that outdoor play was primarily conducted through embodied, non-symbolic forms of communication, although two students (Luke and Albert) occasionally made use of the Makaton sign for *more* with staff but not peers.

Four scenes from outdoor play *(A Game of Chase, Squash Me!, Give Me a Push!, If You're Happy and You Know It)* are presented in Section 8.2.1 in order to illustrate some of the types of play and interactions which were observed in the outdoor play space. As in the previous two chapters, the transcriptions are preceded by brief ethnographic contextualisation of the extract which draws upon Hymes (1974). These extracts then serve as a springboard for further reflection on the nature of communication in this space using both an ethnographic frame (Section 8.2.2) and detailed multimodal analysis (Section 8.3).

## 8.2 Outdoor Play: Ethnography of Communication Perspective

### 8.2.1 Four Instances of Outdoor Play

<u>A Game of Chase</u>

It was morning outdoor playtime, which followed snack time. Lizzie and Jane (the latter not in shot) were supervising the children and intermittently chatting to each other. All five students were present: Dominic and Luke are not in shot, Anna played by herself on the small trampoline, and Thomas and Albert were engaged in a chasing game with each other, mainly around the fenced periphery. Thomas inciting other children in Purple Class to chase him was a very frequently observed event in the

outdoor play area and generally elicited much excited laughter from him.  It seemed as though Albert was familiar with what was required of him in this game from previous experience.  As seemed typical during my observations, Thomas and Albert were allowed to interact freely although Lizzie's intervention (12.9-26.9) reduced the likelihood of sustained physical contact between the two when Albert caught up with Thomas.

*Figure 71: A game of chase*



0:00.1

1. Albert gives Thomas a gentle push. Thomas stumbles backwards, laughing.

0:03.9

2. Albert gets behind Thomas and pushes his back. Thomas runs forwards.

0:05.3

3. Albert looks at camera, smiles and starts to chase. Thomas, running, looks backwards to see if Albert is following.

0:07.3
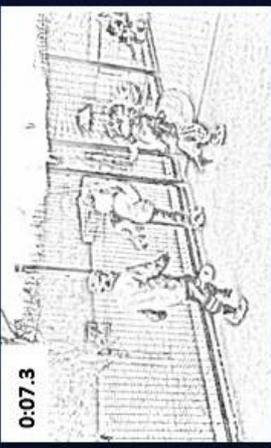
4. Thomas turns the corner as Albert closes the gap. Both boys are laughing.

0:09.4

5. Albert catches up and pushes Thomas on the back again. Both boys are still laughing.

*Guys we're [inaudible]*

0:12.9

6. Both boys slow, laughing, as they reach Lizzie. Lizzie extends hand in 'stop' position.

*Steady …*

0:15.1

7. Albert approaches Lizzie, smiling, and places his two hands in hers. Thomas starts to run off again, smiling.

0:16.0

8. Albert is rocking against Lizzie's hands. Thomas glances back and realising that Albert is not following, retraces his steps.

0:18.9

9. Albert continues rocking against Lizzie's hands. Thomas comes up from behind and pulls Albert's left arm, then steps back.

253

0:30.0

12. Thomas runs away, smiling and making happy noise. Albert leans against the wall, watching him and smiling.

0:26.9

11. Smiling, Albert releases Lizzie's hands and turns to look at Thomas. Thomas, still making happy noise, starts to run again.

0:22.8

10. Albert leans whole body to right, still rocking against Lizzie's hands. Thomas stands watching, making a happy noise.

0:48.7

15. Albert steps away from the table, leaning on the wall behind. Thomas walks towards him.

0:42.3

14. Albert is climbing on a plastic table. Thomas approaches him and touches his arm. Albert starts to climb down from the table.

0:36.9

13. Thomas turns to check if Albert is following. Seeing that he isn't, he starts walking back to him again.

0:57.2

18. As Thomas moves away Albert slows to a stop, watching him. He then returns to the plastic table.

0:56.2

17. Thomas backs away from Albert, laughing, and turns to face forwards. Albert starts to chase him, running with knees up but slowly.

0:51.1

16. Thomas takes Albert's hands in his, but Albert steps away and extracts himself from the hold.

*Squash Me!*

It was morning outdoor playtime.  The extract depicted was taken from a longer piece of video (4 minutes 12 seconds) which focused on the green plastic table and the movement of students around it as they negotiated its usage.   Lizzie and Jane were supervising the children and occasionally commenting on the action that was unfolding between the children, weighing up whether intervention was necessary due to the physical contact between the children.  Before the illustrated extract began, Luke was standing on the table jumping up and down to make a stamping noise, and Anna was standing nearby, watching and waiting for an opportunity to climb on the table herself.  She made one attempt to do so before filming began and another during the transcribed extract.  In the footage depicted here, Luke used the table as a platform for jumping down on top of Dominic which appeared from Dominic's embodied behaviour to be an invited action, although the second time he attempted it Dominic was not compliant and this elicited a frustrated response from Luke.  Thomas was watching events with interest from his nearby position on the trampoline and became involved at one stage, pushing Luke's head gently to the ground. Albert was sitting in the far corner of the enclosed area and did not become involved.

*Figure 72:  Squash Me!*



1:33.5
1:34.1
1:35.3
1:36.8

1. Luke stamps on the table, moving closer to Dominic who is standing at edge of table. Anna watches from the side.

2. Dominic raises arms towards Luke. Luke jumps up and down three times on the table.

3. Dominic lowers his arms, then extends them a second time towards Luke.

4. Luke wraps his arms around Dominic's head and jumps on him.  Dominic catches Luke's left leg.

1:39.0
1:42.2
1:44.7
1:51.0

Oh!

No Luke did that...

It's like WWE now....

5. The boys land on the ground, Dominic on top of Luke who is smiling. Staff discuss situation in background.
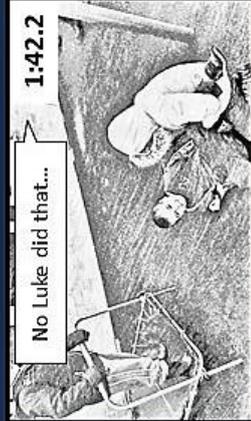
6. Dominic lifts Luke's left leg off the ground.  Luke is still smiling.
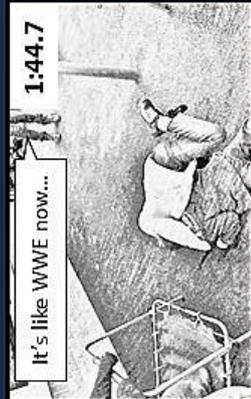
7. Luke flips over onto his stomach. Dominic throws one leg over to sit astride his back.  Staff approach them.

8. Dominic sits on Luke's back. Thomas comes along and gently pushes Luke's head to the ground.

1:54.5
1:57.3
1:59.1
2:13.8

9. Dominic, still sitting on Luke, gently taps Luke's back several times with the back of his hand.  Anna climbs on table.

10. Leaning on Luke's upper back with his hands, Dominic shifts his whole body further forwards.  Anna jumps on table.

11. Dominic rocks gently left and right on Luke's back.  Luke makes a vocalisation which sounds happy.

12. Dominic sits still and Luke lies smiling and gently kicking legs up and down.

256

**2:23.2**

13. Luke raises his head from the ground and looks backwards towards Dominic.

**2:24.5**

14. Luke starts to rise, pushing upwards from ground with elbows and knees.

**2:25.4**

15. Dominic climbs off his back and walks away.

**2:27.7**

16. Luke climbs to his feet, moving towards the table again.

**2:33.2**

17. Luke climbs onto the table. He edges around her. Anna is now standing.

**2:36.0**

18. Anna jumps down from the table and Luke turns around in a circle on the table. Dominic leans on a pole, watching.

**2:41.7**

19. Luke sits down briefly on the table and then stands again. Dominic is still watching.

**2:44.4**

20. Luke reaches his arm out to Dominic but Dominic starts twirling around the pole and doesn't interact with him.

**2:49.2**

21. While Dominic twirls around the pole, Luke jumps in a circle again on the table.

**2:55.5**
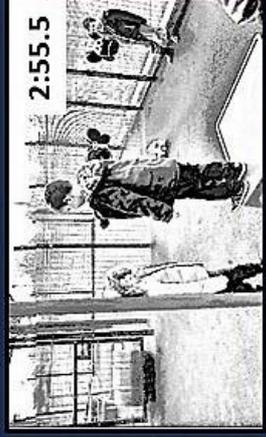
22. Dominic pauses, standing still looking up at Luke. Luke leans his body towards him as though ready to jump.

**2:57.0**

*[laughing]* he's not going to stand under you so you can jump on him is he?

23. Dominic starts to twirl around the pole again. Luke stamps his foot on the table, giving an angry shout.

**3:03.7**

24. Luke reaches out towards Dominic but he continues to twirl around the pole.

*Give me a Push!*

This interaction took place in a local park where the children had been for a walk and then had been given time to play in the enclosed playground area. All staff were present, standing at the exit to the playground supervising the children and also chatting. The atmosphere seemed relaxed and casual, similar to the classroom outdoor enclosed area. The video from which the transcription is taken lasted 14 minutes 19 seconds and remained focused on the basket swing as students moved in and out of it and negotiated its usage. Prior to the depicted episode, Anna and Thomas had been sitting on the swing together whilst I pushed them and filmed at the same time. When Thomas left, Anna had the opportunity to lie down and stretch out in the basket. Dominic came and joined Anna in the swing for a short time and then left, at which point Thomas returned and pushed Anna in the swing for a while, and the Thomas-Anna interaction forms the basis of the transcribed episode. After the transcribed extract, Thomas left and Luke came and joined Anna in the swing for a while. Anna did not seem perturbed by other children coming and going in the swing provided the swinging motion was not interrupted: Thomas neglecting to push elicited an angry response from her at 8:45.5, as depicted in Figure 73 below. Adult verbal commentary on events was by me as I filmed.

**Figure 73: Give Me a Push!**



8:30.9

1. Thomas is pushing Anna quite vigorously on the basket swing. She lies back, looking relaxed.

8:35.2 — Mo-BEE

2. Thomas' pushing slows down as he looks off to his left. Anna makes a noise which sounds contented.

8:43.4

3. The swing has almost completely stopped moving as Thomas now switches his gaze to his right.

8:45.5 — [shriek]

4. Anna gives a loud piercing shriek, then uncrosses her legs and raises her head slightly. Thomas looks at her.

8:53.8 — More? I think Anna wants more ...

5. I speak whilst filming, trying to 'translate' the shriek, as Anna lies down again.
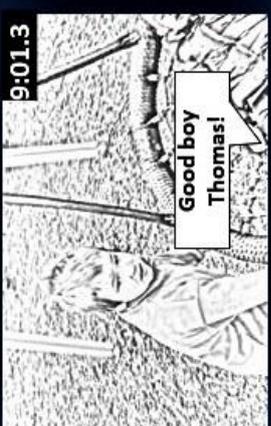
9:01.3 — Good boy Thomas!

6. Thomas resumes pushing the swing. He turns and looks briefly at me when I speak.
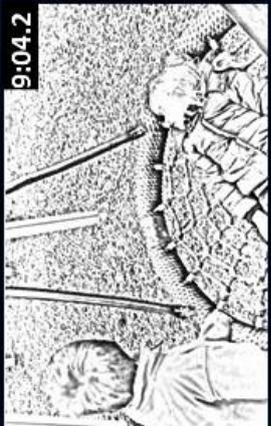
9:04.2

7. Anna is looking to her right. Thomas also looks this way, then turns forward again, gently pushing.
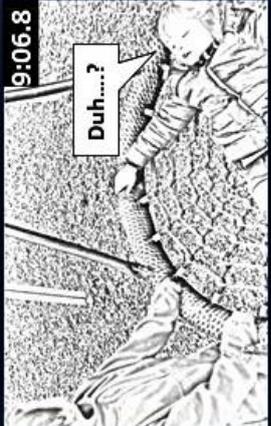
9:06.8 — Duh....?

8. Thomas continues gentle pushing. Anna extends her arms to each side, making a noise with rising intonation.

9:09.9

eeeeee......

9. Thomas continues gentle pushing of the swing and makes a noise. Anna moves head right and then left.

9:17.3

Thomas is pushing Anna ...

10. Thomas looks briefly at Anna, then me, smiles, then back to Anna, as he continues pushing.

9:22.1

[laughs]

eeeeee......

Is that funny?
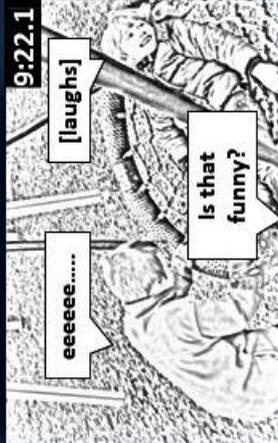
11. Thomas continues gentle pushing and makes his noises again. Anna laughs.

9:27.9
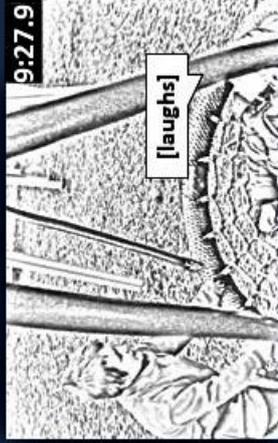
[laughs]

12. Thomas continues gentle pushing, looking up at Anna. She is smiling, and then laughs again.

*If You're Happy and You Know It …*

It was 10:45a.m.  The class had just had snack time and were now having play time outside in the small enclosed play area adjacent to the classroom.   The video clip lasts 2 minutes 29 seconds in total.  Helen (a supply teaching assistant) was facing Albert and singing the song '*If you're happy and you know it …*'.  In the background, Anna wandered in and out of the shot, trying to capture Helen's attention by tugging on her occasionally.  Other students were present but out of shot.  Helen sang and signed three verses of the song, with the actions 'clap your hands', 'stamp your feet' and 'nod your head' respectively.  Albert seemed engaged, joining in with the actions and Makaton signing.  She then seemed to suggest that the song be brought to a close by saying 'Yay!' and clapping.  However, Albert Makaton signed 'more' so she sang a fourth verse ('clap your hands').  After this verse Albert briefly walked away and spun twice around a pole, but quickly returned to Helen.  He Makaton signed 'more' and 'know' (a key word from the song) so she sang and signed a fifth verse ('click your tongue').  Albert still appeared very engaged and Makaton signed 'more' so Helen performed a sixth verse ('stamp your feet').  The extract transcribed here occurred at 0:34-1:00 (26 seconds long), and depicts the third verse ('nod your head') followed by Helen's attempt at closure with 'Yay!' and Albert's subsequent resistance.  This visual transcript is presented differently from the others because so much of the unfolding action is structured by the music.  It therefore seemed preferable to depict the lyrics in an unbroken line of text above the video stills with the words which had accompanying Makaton in yellow, rather than in discrete speech bubbles which might suggest discontinuity.

*Figure 74: If You're Happy and You Know It*



♫ *If you're happy and you know it nod your head *nod* *nod* *nod* if you're happy and you know it nod your head *nod* *nod*
[Yellow text denotes accompanying Makaton sign]

0:34.0

0:36.5 — 'know'

0:38.7 — nod-nod / march-march

0:40.9 — 'know'

0:41.7 — nod-nod / march-march

1. Albert continues marching (from previous verse), eye gaze on Helen's feet.

2. Albert directs eye gaze to Helen's hand as she signs 'know'. He continues marching, shaking his hands.
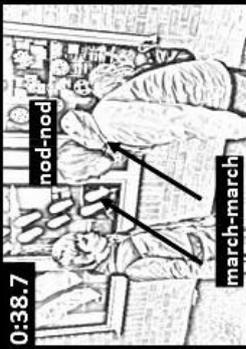
3. Albert looks directly at Helen and then shifts gaze to middle distance. He seems to synchronise marching to her 'nod-nod' movement.

4. Albert looks at Helen's hand as she signs 'know'. He then looks directly at her, continuing to march.

5. Looking directly at Helen, Albert again seems to synchronise his marching to her 'nod-nod' movement.

♫ *If you're happy and you know it and you really want to show it if you're happy and you know it nod your head *nod* *nod*

0:43.7 — 'happy'

0:45.6 — 'know'

0:46.2

0:48.6 — 'know'

0:50.7

6. Albert is looking directly at Helen. Marching and arm movements have slowed.

7. Albert is looking at Helen who signs 'know'. He smiles when he sees it and then performs the sign himself, smiling.

8. Albert directs eye gaze downwards to watch Helen sign 'show', then looks into middle distance.

9. Albert jumps up in the air on the word 'happy'. He then stands still, watching Helen perform 'know' sign.

10. Albert claps his hands in synchrony with Helen's 'nod-nod' and takes a step in towards Helen.

Yay! ........  0:53.5

Clap hands?  0:55.4

More?  0:55.9

0:58.8

♫ If you're happy ...  1:00.2

11. Helen says 'yay!' and claps. Alberts watches her and then joins in clapping.

12. Helen says 'clap hands?' and extends her hands to Albert. He puts his hands on top of hers.

13. Albert signs 'more'. Helen asks 'more?' and copies the sign.

14. Albert repeats the sign 'more' and readjusts Helen into her original straight standing posture.

15. Helen starts another verse. Albert immediately resumes participation, marching, swinging arms and looking at Helen.

*8.2.2 Outdoor Play: Discussion*

During fieldwork I observed outdoor play time every day, sometimes filming, sometimes talking to staff, and sometimes playing with the children. As argued previously (Section 8.1), I felt that there were certain recognisable parameters or characteristics of 'outdoor play' regarding communication which were understood by both students and staff: the opportunities for playful peer interactions which were predominantly embodied in form and phatic in function; the opportunity for solitary or parallel play with equipment which Anna particularly enjoyed; the opportunity to freely and eclectically draw upon the characteristics of other communicative practices such as Makaton or Intensive Interaction. There were certain rituals (such as *'A Game of Chase',* Section 8.2) which were almost exclusive to the outdoor setting. There was also shared staff anxiety about the possibility of embodied play resulting in injury which resulted in careful monitoring and relatively rapid intervention *('A Game of Chase'*, Section 8.2; *'Squash Me!',* Section 8.2). AAC seemed to play little or no role in the enactment of outdoor play: with the exception of the incident illustrated in 8.2.4 (*'Happy and you Know It')* I observed only one other instance of outdoor Makaton when Luke spontaneously used the sign for *'more'* to request to be picked up again by Lizzie. Additionally, the PECS cards on the inside of the door leading to the enclosed area (*'chase'* and *'play'*) were not always present and I did not see them in use.

The outdoor interactions which unfolded each morning were certainly far from consistent or predictable and the rotation of the available toys by staff often seemed to play a significant role in shaping interactions as the green table does in *'Squash Me'*, (Section 8.2). Nevertheless, I would argue that there were certain relatively enduring patterns in the network of relationships. Lizzie (class teacher) observed that in her view, peer interaction outside most frequently involved two pivotal dyads: Thomas-Luke or Thomas-Albert. This would also be supported by my observations, which suggested a more peripheral role for Anna and Dominic as peer interactants, with Anna often becoming involved only in negotiations over shared resources and Dominic often preferring interaction with staff in the style of Intensive Interaction. On the basis of my repeated observations of outdoor play time, I used social network

mapping (McCarty et al., 2007) to visually depict my impressions of the frequency of interactions between participants:

*Figure 75: Social network mapping in outdoor play area*
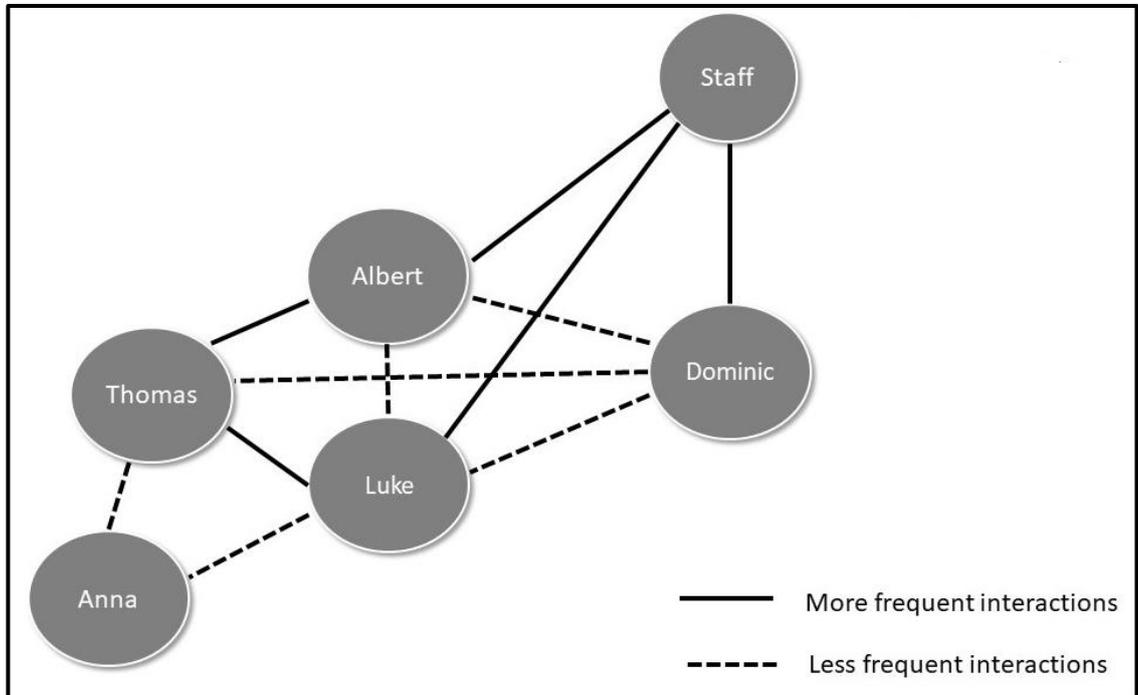


It is interesting to reflect on the centrality of Thomas' role as a peer interactant in outdoor settings given that adults sometimes found it difficult to connect with him in the classroom through AAC or Intensive Interaction (discussed in Section 5.3.5). This apparent lack of motivation to interact, however, stands in sharp contrast to the many episodes I observed of Thomas' clear desire to engage in embodied, playful exchanges with other children.  The game of chase illustrated in 8.2.1 was a frequently enacted ritual, observed many times during my fieldwork:

> *I think Thomas … actually would prefer to play the games with the other children than the staff. So, we have noticed recently he will go to Luke … and scream and run off.  And that is sort of Luke's cue to go come and chase me and sometimes Luke responds and sometimes you just see little Thomas' face if he doesn't respond and he is like going back up to him again as if to say come on, I am waiting for you. But there is no words but I think because we know them, we know what they are saying to each other through the eye contact and the gestures and the body language that they are using as well*. (Frances, teaching assistant: Interview).

Thomas' strong desire to interact with other children was also suggested by my frequent observations of him standing at the fence gazing at the children playing in the grounds of an adjacent mainstream primary school, or standing up to view these children through the window during classroom activities.  Interestingly, this seemed to be almost the reverse of Anna's typical communicative style. She demonstrated consistently high motivation for Intensive Interaction-style contact with adults in the classroom but outdoors her interactions with peers and staff were minimal and pragmatic, only where necessary to negotiate ownership and usage of desirable equipment and toys (such as the basket swing in *'Give Me a Push'* or the green table in *'Squash Me'*, both Section 8.2).

In this relative absence of formal AAC, spontaneous peer interaction using non-symbolic, embodied forms of communication emerged more frequently than in any other setting I observed, and I was happy to be able to illustrate three such interactions *('A game of chase', 'Squash Me', 'Give Me a Push'*) as a possible counterbalance to the predominantly vertical (staff-student) nature of the interactions depicted in other chapters.  At the same time, it is important to acknowledge that such short bursts of interaction were typically interspersed with long periods of minimal or no peer interaction when children either engaged with staff or else in solitary or parallel play.  I was sometimes conscious that my desire to capture and celebrate the spontaneity and joy of peer interactions when they did occur could easily run the risk of minimizing or failing to portray these long, minimally interactional periods:

> *It's easy to take little moments, little snippets of personal anecdotes, and marshal them as 'evidence' for your argument … these children have a great time engaging in interactions with each other, happy as they are, etc.etc.  And the problem with this is you can end up deflecting attention from the possibility of real loneliness, a huge desire to interact more with peers but not knowing how, needing direct instruction and structure for this to be facilitated.* (Reflexive Journal: 21 January).

On the basis of the above, I would argue that the parameters of this 'communicative context' were relatively fluid: for example, participants drew upon characteristics of Intensive Interaction and Makaton in eclectic ways.  However, I would maintain that there was sufficient mutual understanding between students and staff of the

expected parameters of outdoor play to constitute a recognised way of being and speaking (Fishman, 1972). This is suggested in '*Give Me a Push!*' (Section 8.2) where despite the change in outdoor location both staff and students were able to effortlessly adopt their habitual outdoor play behaviours without requiring explicit clarification of expectations or roles. Staff, for example, stood together at the playground gate, simultaneously talking and supervising the children, whilst the children engaged freely in play with the available equipment and interacted with each other to a limited extent through embodied means.  This is suggestive of Lave & Wenger (1991)'s concept of a 'community of practice'.  Although the outdoor repertoire of shared practices was perhaps less immediately evident than in the case of snack time with its highly formal and ritualised use of artefacts, I would nevertheless maintain that its existence was evidenced by the implicit 'communicative competence' of staff and students in the setting (Saville-Troike, 2008).  For instance, it was not necessary to clarify that interacting with peers through embodied means was permissible although subject to limitations on physical contact, or that PECS was not a privileged mode in this setting.

Having examined outdoor play in Purple Class from an ethnographic perspective, in Section 8.3 I focus in on the multimodal enactment of one of the examples presented above ('*If You're Happy and You Know It*').

## 8.3  Multimodal Analysis of an Instance of Outdoor Play Time

In this section I consider the extract '*If You're Happy and You Know It*' in close detail, firstly through the lens of Conversation Analysis (Section 8.3.1) and then through the alternative framework of Multimodal Interaction Analysis (Section 8.3.2).

### 8.3.1   *If You're Happy and You Know It: Conversation Analytic Perspective*

As in the previous two chapters, it is useful to begin by considering turn-taking and sequentiality through the lens of Conversation Analysis.  I illustrate turn-taking firstly by overlaying the multimodal matrix for this extract with overlaid boxes indicating my interpretation of 'turns': Figure 76 shows nine seconds of the episode transcribed this way as an example.  I then use the matrix as a basis for illustrating turn-taking using the format provided by Elan software (Figure 77).

**Figure 76:** *If You're Happy and You Know It (Multimodal Matrix with Turn-Taking Overlays)*
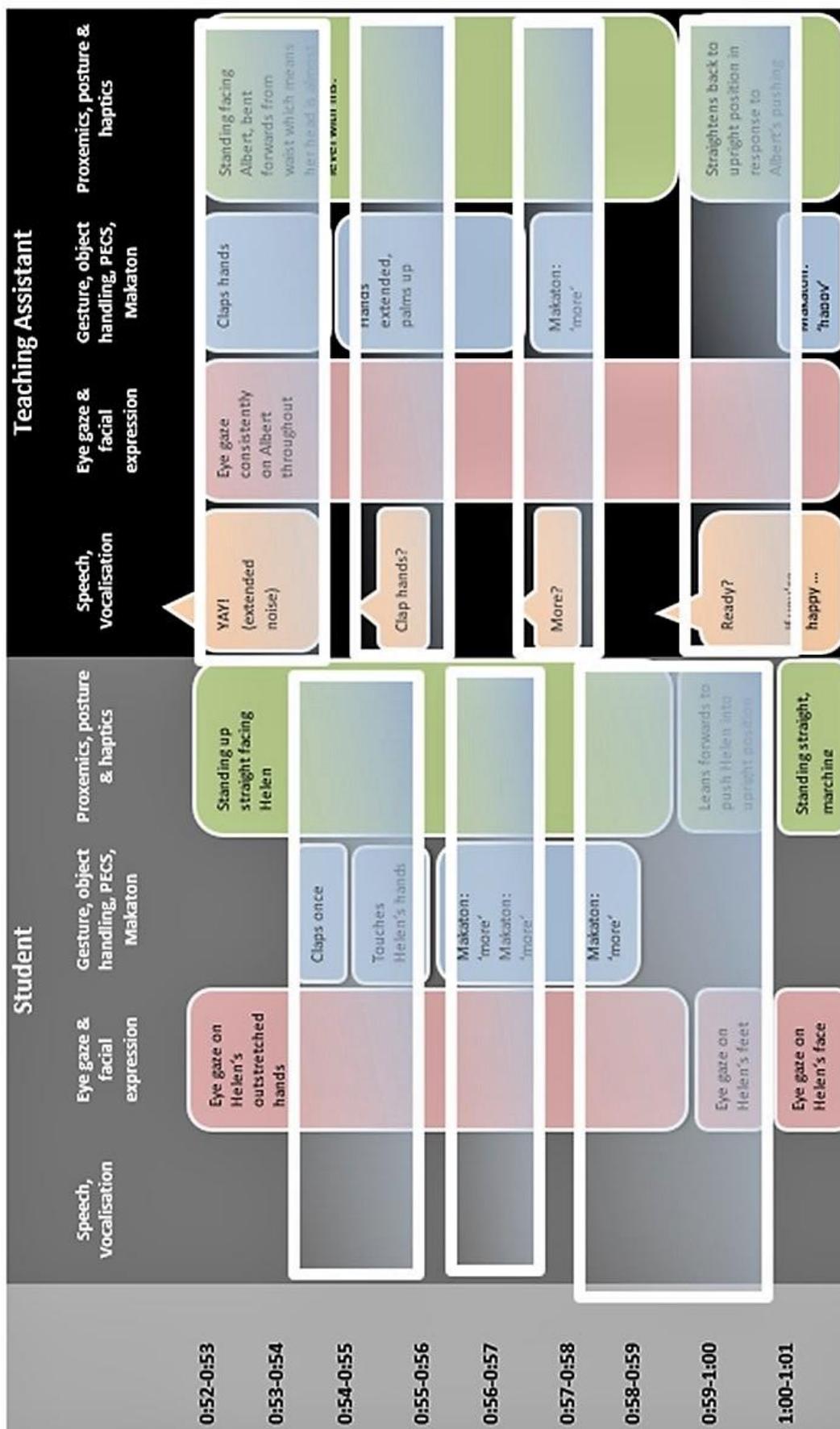
*Figure 77:* *If You're Happy and You Know It (Elan Software Transcription)*
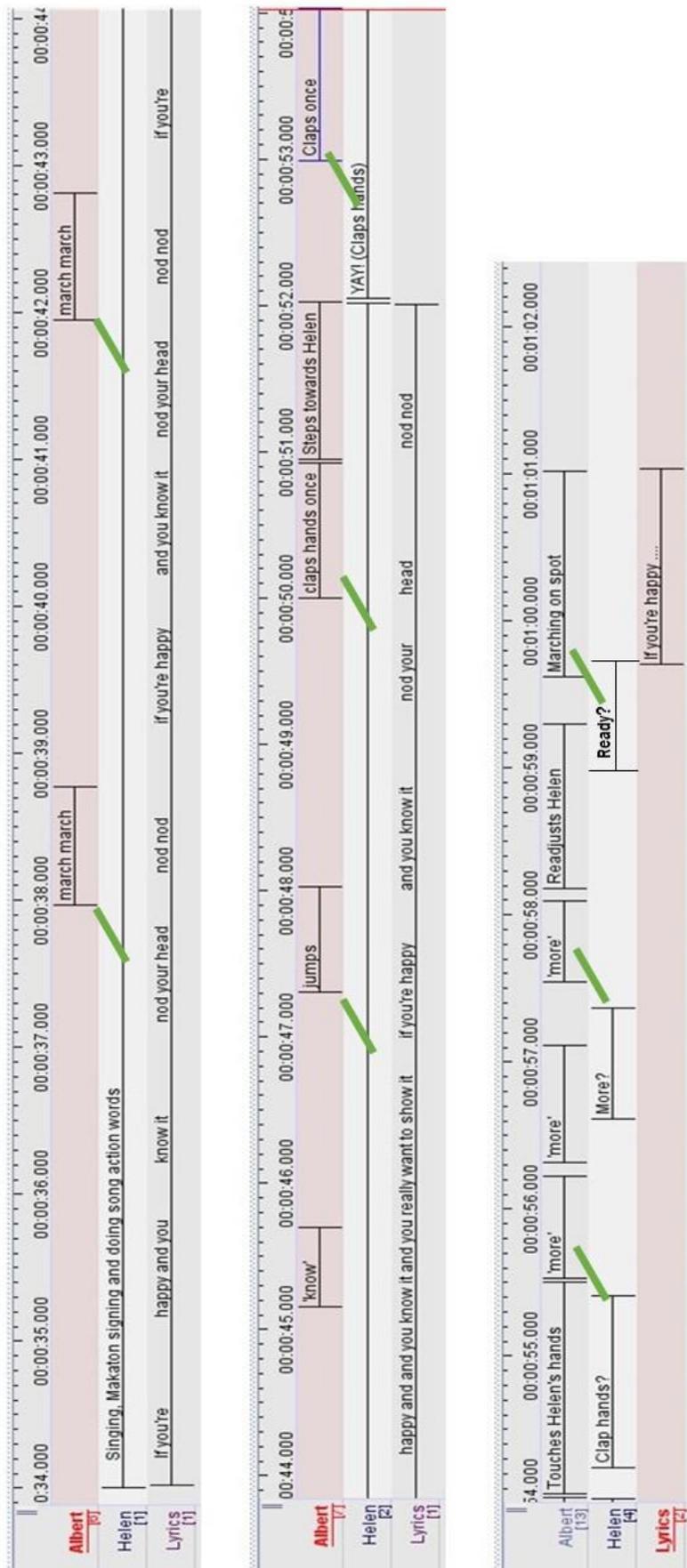
In some ways it could be said that the traditional enactment of this particular song has an intrinsic turn-taking framework in itself: that is, the main performer sings the lyrics, whilst the more peripheral participants perform the actions after each relevant phrase. However, this is not inevitably the case since in the case of verbal participants it would be possible for everyone to sing and perform in unison. Here, Helen's singing of the verse might be thought of as a multiunit, extended turn at talk (Sacks, 1992): her right to hold the floor for an extended time has been previously negotiated and established with Albert as this verse flowed directly from a previous verse; and the further continuation of the song is then re-negotiated at the end (0:52.0 – 01.01.0). For this reason the verse portrayed above might be argued to constitute one single turn at talk. Albert's contributions to the enactment of the song consist of actions which, although recycled from a previous verse, are carefully synchronised to the new nodding action by Helen (0.38.0 and 0.42.0), as well as his repetition of her Makaton sign for 'know' and an idiosyncratic movement consisting of a whole body jump on the word 'happy'.

Helen does not pause in her enactment of the song to invite these contributions from Albert, or to give any other multimodal indication that a transition relevance place (Sacks et al., 1974) is approaching, other than enacting the traditional song performance through singing the 'invitation' and speaking/performing the action. However, as my hybrid approach to analysis incorporates ethnographic data into considerations of the sequential organisation of talk, I would argue that the participants' shared knowledge of the traditional enactment of this song establishes the ground for a series of partial adjacency pairs. I refer to these as partial because the 'turn' is not completely transferred to Albert but rather shared with him during these moments. Each sung invitation phrase *('If you're happy and you know it nod your head ….')* sets up an expectation for some form of embodied response from the other participant, and Albert seems aware that a failure to produce a response would be an *accountable action*. It is not clear why he does not switch from the action of the previous verse (marching) to the current suggested action (nodding head), although one possible explanation is a difficulty in abruptly discontinuing one action and beginning another due to posited difficulties in executive function associated

with autism (Zelazo et al., 2003). It is however possible to argue on the basis of the video data that he makes good use of the recycled action from the previous verse to maintain his timely and synchronised participation in the enactment of the performance. His casual marching along with the sung invitation is replaced by a more pointed marching action synchronised to Helen's 'nod-nod' along with an emphatic downward flicking hand gesture to each side of his body (Figures 78 and 79).

*Figure 78: If You're Happy and You Know It (Multimodal Matrix)*

*Figure 79: If You're Happy and You Know It (Video Still 3)*
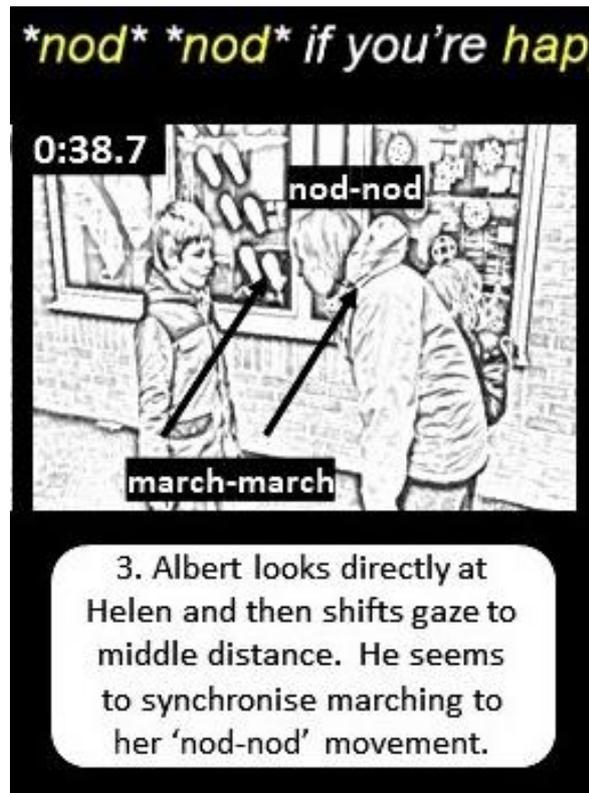


As noted in Section 3.3.3, the recycling of previous elements of a conversation which is known in clinical literature as *echolalia* (repeated utterances) or *echopraxia* (repeated actions) can constitute meaningful contributions to communication when analysed in a contextualised, sequential way (Samuelsson & Ferreira, 2013). Here, Albert 'recycles' the marching movement which was the focus of the previous verse, both in a casual way to demonstrate his ongoing orientation to the song while Helen sings and in a particularly focused way timed to coincide with her 'nod-nod' accompanied by an emphatic downward hand-flicking motion. This might be described in clinical terms as 'palilalia' or the recycling of one's own previous utterance (Dickerson et al., 2007), but its sequential significance here is clear. Similarly, his reproduction of Helen's Makaton sign 'know' contributes to conveying his general orientation to ongoing participation, as illustrated in Figure 80 below.

*Figure 80: If You're Happy and You Know It (Video Still 7)*



7. Albert is looking at Helen who signs 'know'. He smiles when he sees it and then performs the sign himself, smiling.

This use of echopraxia and palilalia throughout the performance seems to support Stiegler's (2007) claim that such phenomena can be used to fulfil conversational responsibilities and actually shows participant sensitivity to the interactional accountability of failing to complete an adjacency pair.

Earlier I referred to the summons-answer sequence (sung invitation to act – enacted response) as a *partial adjacency pair.* This is because it does not bear all the features of a traditional adjacency pair, such as the complete transfer of the floor from one speaker to the other in a transition relevance place in the interaction. On the contrary, Helen continues her enactment smoothly and there is a partial invitation for Albert to join in if he wishes, without Helen having ceded the floor. Albert's 'turns' are thus overlaid on top of Helen's ongoing extended turn at talk. Overlap is sometimes characterised as a conversational feature in need of remediation (Schegloff, 2000) but I would argue that it does not cause interactional problems here for two reasons. First, Albert's Makaton and embodied idiosyncratic communication share certain modal properties such as unfolding spatially and with visible materiality, in contrast to spoken language which is sequential with audible

materiality. This means that overlap does not result in problems of comprehension as it would with two overlapping voices.  Secondly, following Tannen (1994) it is possible to draw a distinction between *interruptive overlap*, which is a competitive strategy where one speaker attempts to gain the floor, and *cooperative overlap* where the overlap suggests enthusiasm, support for or agreement with the main speaker.  In this case, Albert's actions appear to demonstrate his ongoing orientation towards participation in the song.

As shown in Chapter 7, Conversation Analysis can also be a useful lens for considering how attempts are made to bring interactions to a close.  On completion of the verse, Helen performs two actions: the utterance 'Yay!' in a high-pitched, celebratory tone, and accompanying clapping.  It is argued here that this appears to represent an expression of appreciation for what has gone before (Liddicoat, 2007)**:** that is, an act which attaches an evaluation to the previous action in order to make it a potentially bounded event.  The issue of an appreciation formulation gives rise to a *closing implicative environment*: as it has been suggested that the interaction has run its course and been subsequently evaluated, there is now scope for it to be closed without implication of rudeness or abruptness on the part of either speaker.  However, the closure of an interaction which has entered a closing implicative environment is not inevitable: the interaction may indeed close typically via a *pre-closing sequence* followed by a *terminal sequence*; or alternatively a speaker can choose to pull the interaction back from its closing implicative environment and continue the conversation as Albert does in Figure 81 below.

**Figure 81: If You're Happy and You Know It (Video Stills 11-15)**
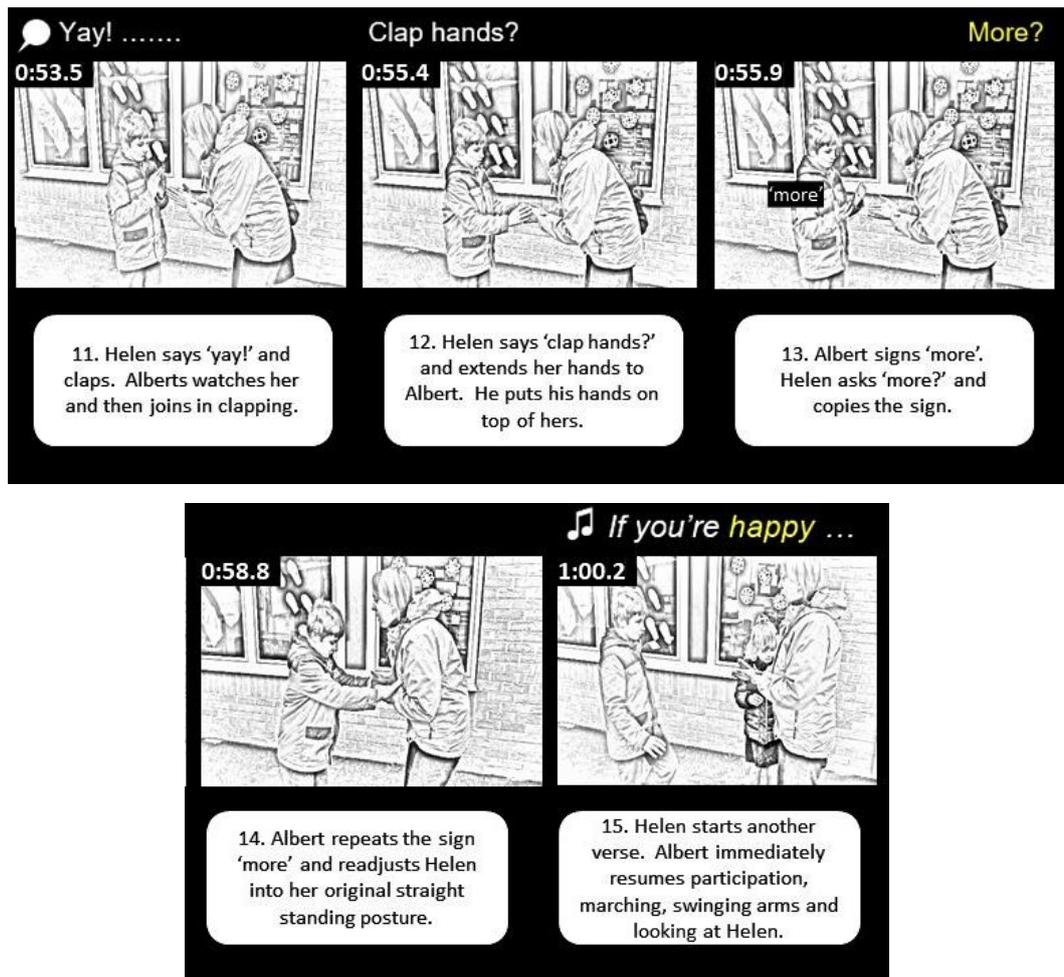


Here Albert actively resists the attempted closure of the singing in multiple ways. Firstly, he places his hands on top of Helen's hands, possibly to end the clapping although his motives are unclear. He then spontaneously signs 'more' with Makaton, which Helen copies, verbally asking 'more'? After repeating the 'more' sign, Albert readjusts Helen's posture by giving her torso a gentle push. This action does not seem to be intended to push Helen away, but rather a postural adjustment to encourage her to discontinue her 'leaning in' position which is associated with the negotiation and to resume her standing straight posture which is associated with song performance.

From the above, it is argued that Conversation Analysis suggests Albert to be a very active and creative participant in organising the sequential enactment of this song. He uses eye gaze, arm movement, posture, haptics, proxemics, Makaton and other

embodied movements to assure Helen of his ongoing recipiency and also to fulfil his conversational responsibilities in terms of completing adjacency pairs, and he actively pulls the interaction back from the potential closing implicative environment created by Helen's celebratory actions in order to ensure that another verse is performed.  In Section 8.3.2 I go on to consider Albert's use of modal density and complexity in participating in the song using Multimodal Interaction Analysis.

### 8.3.2    *If You're Happy and You Know It: Multimodal Interaction Analysis*

From a MIA perspective, this interaction differs from the previous MIA analyses (Sections 6.3.2 and 7.3.2) insofar as there is no serious competition between higher-level actions: both participants are very strongly oriented to the performance of the song throughout, with the possible exception of Albert's very brief glance into the middle distance at 0:46.2. This can be seen from the high degree of modal complexity of both participants even when Albert is not actively engaged in recycling actions or Makaton to specifically respond to Helen, as in Figure 82 below.

***Figure 82: If You're Happy and You Know It (Video Still 4)***



4. Albert looks at Helen's hand as she signs 'know'.  He then looks directly at her, continuing to march.

Figure 82 suggests that both participants orient towards each other and the performance of their interaction with multiple modes, as depicted in modal density circles in Figure 83.

**Figure 83: If You're Happy and You Know It (Modal Density Circles)**



Albert                                                Helen
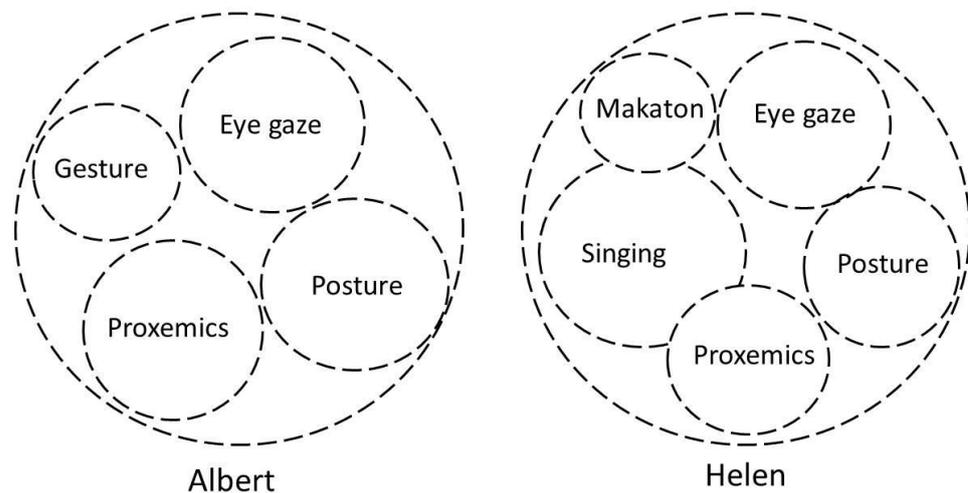
Here, Helen's singing has been represented as the largest modal density circle because so much of the interaction is structured around the words of the song.  This mode therefore also possesses a degree of *modal intensity* insofar as the enactment of the higher-level action would be substantially changed or discontinued without the lyrics of the song.  However, her eye gaze which is directed at Albert, her posture which is facing him and leaning in slightly, and her proxemic distance from him which maintains a space for actions to be performed, all contribute significantly to the overall impression that this interaction is in the foreground of her continuum of awareness.  Her Makaton signing, whilst adding significantly to the interaction and clearly oriented to by Albert, did not seem so pivotal to the enactment of the overall higher-level action and so is represented in a smaller density circle.  For Albert, the modes he deploys are structured around Helen's singing: his eye gaze alternates between her face, her hands (when signing) and her feet, and his posture and proxemic distance mirrors that of Helen, thus facilitating the maintenance of a space where actions may be performed and seen.  His casual marching whilst she sings, which contrasts with the more emphatic marching and hand-flicking

in response to her *nod-nod*, contributes to an ongoing indication of orientation to the song although is perhaps slightly less fundamental to his demonstration of recipiency than the other modes and so is portrayed in a relatively smaller circle.

The video still shown in Figure 82 was intentionally selected as an instance of a moment when Albert was not specifically offering a specific, immediate response to Helen involving echolalia or echopraxia.  It illustrates that Albert is capable of orchestrating multiple modes to enact ongoing participation in the song.  I would also argue that it is representative of the video clip as a whole insofar as both participants sustain a high degree of modal complexity in the interaction with each other and there do not appear to be other higher-level actions in significant competition for their foreground of attention and awareness at this time.  This is illustrated in Figure 84.

*Figure 84: If You're Happy And You Know It (Continuums of Awareness)*
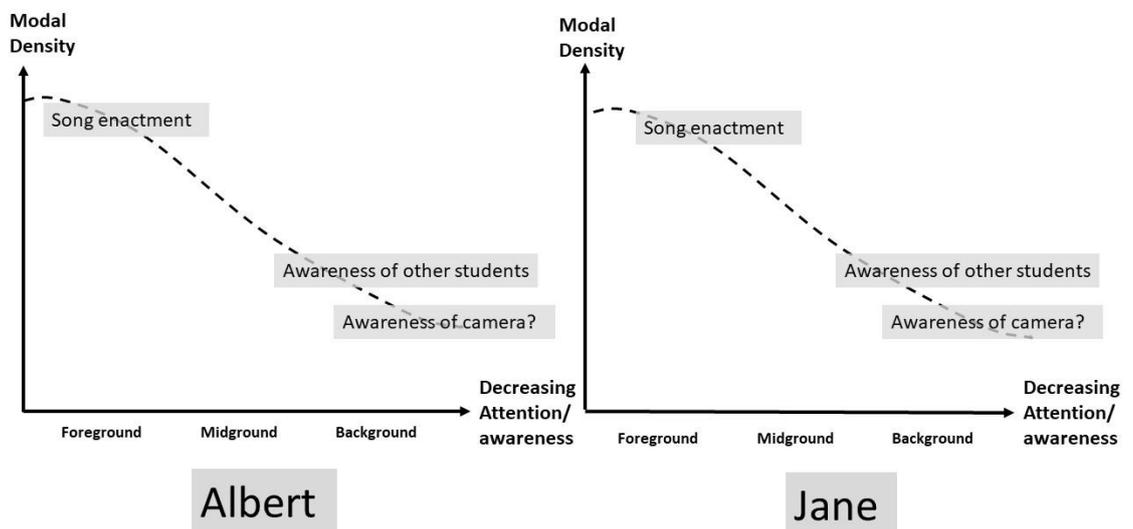


Both parties are likely to have peripheral or backgrounded awareness of the students, staff and researcher with camera surrounding them in the small enclosed area.  For instance, in non-transcribed sections of other verses Helen glances once at the camera, whilst Anna can be seen in the background occasionally tugging on her arm and forming what Norris (2004) refers to as

an *Anwesenheit* or a group who are aware of each other's proximity but are not the focus of each other's attention.  Nonetheless, these other people and unfolding events do not appear to threaten the foregrounded status of the sung interaction.  It is, however, not straightforward to say that the participants 'share' a higher-level action because although their observable multimodal behaviour seems oriented towards the same enacted performance, it should be remembered that they do not necessarily perceive it in the same way.  For instance, it is conceivable that Helen sees primarily an opportunity to teach Makaton whilst Albert sees primarily an enjoyable phatic exchange involving music.  As Norris (2004) cautions, Multimodal Interaction Analysis does not extend to analysis of underlying cognition or intentionality but rather works with what individuals visibly or audibly express.

It is also possible to use Multimodal Interaction Analysis to examine the negotiations which take place after the completion of the verse, to complement the Conversation Analysis above.  In Chapters 6 and 7 I drew on Norris' (2004) concept of a *means* to refer to a pronounced lower-level action which indicates a shift in foregrounded higher-level action.  Helen clapping and saying *'Yay!'* on completion of the verse could be construed in this way: whilst it is not clear whether her intention is to continue interacting with Albert in another way or to switch to another child or activity,  I argued above from a CA perspective that this interjection did appear to constitute an attempt to draw the song to a close.  Albert subsequently responded with a means of his own which has parallels with what I termed a *counter-means* in Chapter 6: his hands placed gently on Helen's hands, possibly to end her clapping, followed by her postural repositioning.

*Figure 85:  If You're Happy And You Know It (Video Still 14)*



0:58.8

14. Albert repeats the sign 'more' and readjusts Helen into her original straight standing posture.

The *counter-means* performed by Albert ensures the continuation of the higher-level action of song performance and protects the position of this action in the foreground of the continuum of awareness of both participants. It also points to Albert's perception of the centrality of the intersection of posture/proxemics to the enactment of the higher-level action: as Hall (1966) notes, a social actor's 'perception of space is dynamic because it is related to action ….' (p.115). Norris (2004) similarly argues that 'proxemic behaviour is tightly integrated with the higher-level actions that are being performed' (p.20).  Here, the original proxemic position, with each party standing in an upright position a short distance from the other, is well placed to facilitate eye contact and interaction whilst allowing physical space for the performance of Makaton and song actions such as marching on the spot.  This contrasts with the 'leaning in position' of Helen which seems to be more designed to facilitate the negotiation of what should happen next.  Albert's management of the proxemic space then appears to form an integral part of his exercising of agency in this extract and overriding Helen's attempt at closure.

In summary, Section 8.3 looked in detail at the multimodal interaction within *'If You're Happy and You Know It',* drawing upon both CA and MIA. With CA, it was possible to identify Albert's sequential use of what would be clinically deemed 'echopraxia' and 'palilalia' in the pursuit of interactional goals, to reflect on the management of overlap where it is primarily enacted spatially through movement rather than through speech, and to identify how Albert acts with agency to override attempts to create a closing implicative environment. With MIA, it was argued that Albert makes good use of modal complexity to demonstrate his ongoing orientation to the song, and this approach was particularly useful in highlighting the importance of maintaining the proxemic space to the song's continuation. Both perspectives therefore brought complementary insights into Albert and Helen's interaction in this extract.

## 8.4 Conclusion

In this chapter, I have used ethnography of communication to consider the daily enactment of outdoor play time in Purple Class. I argued that outdoor play time was less clearly bounded and more diffused than the communicative contexts depicted in the previous two chapters as it drew upon elements of Makaton and Intensive Interaction as well as embodied play. Additionally, it was noted that no staff spontaneously identified outdoor play as a distinct communicative context, although it was noted that staff tended to identify contexts within the framework of the timetabled curriculum rather than through the eyes of students. On the basis of my own observations, I argued that it could be said to constitute a communicative context: it had a physical location, artefacts and allocated time; it had clearly defined roles for staff of monitoring and managing physical contact between students and also for students who were permitted to play freely including with each other although subject to physical contact restrictions; and these roles and relationships were qualitatively different from the rest of the school day. Interaction was generally phatic, embodied and non-symbolic, although Makaton was occasionally deployed by staff and students.

I then went on to present four videorecorded interactions observed during outdoor play time. One was analysed in fine-grained multimodal detail, arguing that Albert manages the sequential arrangement of his multimodal actions in order to fulfil his conversational obligations and also actively resists and overrides the potential closing implicative environment created by Helen.

The data presented in this chapter suggest that outdoor play time is unique as a communicative context in this educational setting. Although parameters exist which identify communicative regularities to participants and observers, it also has a high degree of permeability and fluidly incorporates elements drawn from other communicative practices such as Makaton and Intensive Interaction. It is a context where communication is not channelled into legitimated or preferred modes such as speech, Makaton or PECS by the adults of Purple Class, and perhaps partially as a result of this, opportunities for peer interaction open up. Students interact with each other and with staff in a myriad of complex multimodal orchestrations which rarely involve language or AAC: negotiating the use of shared resources; protesting the lack of participation from another student; gaining and sustaining joint attention in a game; expressing pleasure; undertaking repair when faced with loss of recipiency; suggesting that an activity should end; and conversely resisting such a suggestion from another. These observations suggest the desire to exercise wide range of speech functions and multimodal complexity which far exceeds the AAC provision in the classroom, and this is explored further in Chapter 9.

## CHAPTER 9: REFLECTING ON COMMUNICATION AND AGENCY IN PURPLE CLASS

### 9.0 Introduction

In the preceding three chapters, I presented data relating to three specific activities within everyday classroom life: snack time, Intensive Interaction and outdoor playtime. The purpose of this chapter is to look across these data and reflect on what they might suggest about communication and agency for the students of Purple Class specifically and for minimally verbal children more broadly, as well as critically analysing my findings in relation to the pre-existing literature which was reviewed in Chapter 2. I also draw into the discussion further quotations from Purple Class staff as well as my own fieldnotes where it helps to more fully explicate a point arising from previous data about classroom communication.

Section 9.1 explores the interplay between communication and agency in my findings. In Section 9.2 I consider how the communicative behaviours of the children were influenced and shaped by the parameters of the classroom communicative contexts they encountered. Section 9.3 considers the role of peer interaction in the communicative development of minimally verbal children. Finally, in Section 9.4 I analyse the significance of the broader policy context in special education around the teaching of communication to minimally verbal children and how this context appeared to be instantiated in the everyday classroom setting from an ethnographic perspective.

### 9.1 The interplay between communication and agency

In Chapter 2 I defined agency for the purposes of this study as having the possibility of acting in a way which can shape and influence events, relationships and one's world, which I view as an emergent property arising from the interaction of the potentially agentic characteristics of the individual and the enabling or disabling characteristics of their environment. At first glance, the data presented in Chapters 6 to 8 appear replete with instances of students acting in ways which would fulfil this definition, from Luke finding a way to request an unavailable item (*'But I'd Rather*

*Have Raisins',* Section 6.3) to Anna purposefully restoring a potentially lapsed interaction with Jane ('*Interacting with Gestures*', Section 7.3) and Albert overriding attempts to close a song ('*If You're Happy and You Know It*', Section 8.3). In this section I explore in more depth the relationship between communication and agency for the five children of Purple Class by considering agency specifically in relation to AAC usage, the practice of Intensive Interaction and the use of embodied multimodal communication. Whilst it is acknowledged that these three types of communication did not always occur in isolation from each other in practice and that embodied multimodal communication in particular tended to underpin the enactment of the other two, they are disaggregated here simply to facilitate analysis.

### 9.1.1 Agency and AAC

As is apparent from the data in Chapters 5 to 8, PECS and Makaton signing were the two forms of AAC practised in Purple Class and this section considers the extent to which each approach could be said to enable the children to act with agency in the classroom. In the course of my study I observed limited instances where children appeared to deploy AAC in this way. Perhaps the most obvious example is at the snack table, where PECS facilitated the choosing of food items. On the one hand, to be able to easily choose from a prescribed selection (as in '*I Want Marshmallows Please',* Section 6.2) is a relatively more agentic position to occupy than a child who is given food or drink without consultation. On the other hand, as both Mellman et al. (2010) and Jacqueline (teaching assistant in the current study) have suggested, when the PECS cards are simply adding a layer of symbolic representation to a choice that could easily have been effected by pointing to the desired item it is questionable whether this practice actually increases the child's agency at all. It might be tempting to dismiss this practice as a functionless requirement of multimodal recasting which instead of facilitating agency simply causes frustration and extra communicative labour (as in *'The Banana Conundrum',* Section 6.2). However, to fully explain snack-time practices it is necessary to acknowledge the staff perspective which explicitly oriented simultaneously to two temporal dimensions: that is, the efficient enactment of snack time in the here-and-now on the one hand, as well as

future projections of what the child must learn to prepare them for life as a disabled adult on the other hand.

> *However as he gets older, moves to his secondary school and probably into adult services, then you know they are going to need those slightly more formal ways of communication that actually give them a voice … if you are in a café, instead of me deciding that they are going to have blackcurrant, or they are going to have a cheese sandwich if they have got ways of communicating they are able to communicate with you what they want, rather that it being a guessing game for staff.* (Lizzie, class teacher: Interview).

This appears to suggest that using symbol cards to choose a clearly available item which could be pointed at has implications for the acquisition of agency which is expected to eventually transfer to more spontaneous, genuine choices using a range of symbols in adulthood. This is consistent with the recommendations of the PECS training manual which advocates starting in this way in order to teach and reinforce the connection between symbol and reward before progressing to more complex usage such as complete individual PECS folders, sentence strips and other speech functions such as commenting (Bondy and Frost, 1994). During the course of my study I did not see indications of progression from the ritual daily enactment of snack time PECS to progression to spontaneous, creative and original use of symbols, although it is acknowledged that a more longitudinal study would be better placed to address this. The PECS symbols at snack-time formed part of a formalised routine, and the limited number of PECS symbols available around the room were only used occasionally in a spontaneous, functional way by certain children according to my observations, although these were useful to children such as Anna who could spontaneously use the 'toilet' card to request access to the toilet: embodied communication strategies such as pointing and gesturing are not particularly successful where there is a need to reference something beyond the here-and-now environment such as the toilets which were located outside the main classroom, and so the symbol assisted her to make this referential meaning and ultimately have her needs met. Overall, however, I would argue that during my time spent in Purple Class the potential of PECS cards to be agency-enabling for the children appeared to be limited both by speech function (requesting) and content (what staff wished to

make available as requesting choices). This resonates with the argument of Brewster (2007) that AAC is not inherently enabling when located within communities with asymmetries of competence and power as its content will merely reflect existing power relations.

Having outlined the limited nature of PECS provision, it is also important to acknowledge that students sometimes found ways to make meaning with symbols in ways unforeseen by adults. Luke in particular often showed considerable creativity in making meanings with symbol cards which were not actually intended by their adult creators, or alternatively finding ways to go beyond the confines of what was enabled by the cards to make alternative meaning without them. This was particularly evident at the snack table where Luke was keenly aware that the small selection of food cards for choosing on the front of the folder was not representative of the full range of theoretical possibilities (see *'But I'd Rather Have Raisins!'*, Section 6.3) as well as other (not transcribed) occasions where he seized on moments of staff distraction to remove cards from inside the folder and place them on the front to give them 'available' status. His resourcefulness was also evident in his manipulation of the visual timetable symbol cards which have different status to PECS requesting cards as they merely facilitate student's receptive understanding of the timetable and are therefore non-negotiable. My fieldnotes contained twenty-four instances of Luke being admonished by staff for rearranging the visual timetable in systematic fashion by putting his preferred activities in the 'now' and 'next' position and posting symbols for dispreferred activities behind furniture to render them inaccessible. On one occasion, I reflected:

> *Luke is told off for manipulating symbols again … There was talk of how to manage his desire to handle the symbols. Lizzie suggested lock them away in a cupboard up high. Frances suggested that maybe he could have his own set to play with. But I wondered what if he is trying to make meaning with them? What if teachers hold all the power with those symbols and he wants to assert himself?* (Fieldnotes: 13 January).

These instances of transgression were the ones which initially caught my attention as being most self-evidently 'agentic': Luke showed keen awareness of the 'structure' of

the limited speech functions/content of AAC and managed, to an extent, to consciously transcend them.  However, I am also mindful of the caveat of Esser (2016) that agency can be uncritically equated with the 'romantic dichotomy according to which the adult is a representative of a conservative structure and children act as rebellious, fresh newcomers' (p.51).  In this sense, it could be argued that Albert in *'I Want Marshmallows Please'* (Section 6.2) is not necessarily less agentic than Luke since he may be consciously choosing conformity with the expected structure of the communication context in order to efficiently access food without delay.  However, since Albert's communication style at snack time was consistently compliant with expectations, it is not easy to see how AAC would enable him to communicate anything other than choosing from a small range decided by adults or how he could intentionally shape or influence the enactment of snack time.

The range of Makaton signs which students were encouraged to use in Purple Class was also limited in both content and function: the signs which I observed being most frequently modelled by staff for children included *more* and *help* (requesting), as well as *please, thank-you, hello* and *good-bye* (social convention).  Occasionally *no thank-you* (refusal) was modelled for Luke as an option to imitate, but only after extensive efforts had been made to persuade him to accept food or drink.  There were also some instances of topic-specific Makaton signs being modelled by staff such as Helen Makaton signing her song *'If You're Happy and You Know It'* (Section 8.3); Frances modelling the sign for *painting* during the art activity *'Chatting during Worktime'* (Section 7.2); and Luke and Albert in particular being encouraged to Makaton sign specific items of food and drink at snack time.  This seemed to be partly dependent on staff confidence and proficiency in Makaton signing: all staff were very familiar with relatively high-frequency signs such as *more, help, please, thank-you, hello* and *good-bye* but varied in the extensiveness of the context-specific vocabulary they were observed to demonstrate to students.  Finally, staff signed along with songs performed daily at morning and afternoon group time.

As noted in Chapter 5, students varied individually in their receptiveness to Makaton signing but most students did at least sometimes imitate signs they saw (as Thomas

does in *'Blowing Raspberries'*, Section 7.2).  Due to the material differences between Makaton and PECS, it is more difficult to say whether a student had been 'provided' with a Makaton sign and was 'choosing' to use or not use it as there were different levels of sign 'provision', with some signs being very directly taught on 1:1 basis with physical assistance, some core signs being modelled frequently everyday by all staff, and some topic-specific signs being modelled only infrequently by some staff.  This raises a question about how much staff input is necessary for a Makaton sign to be internalised as a viable option in a student's repertoire which would enable them to exercise agency by spontaneously recalling and producing it. Luke and Albert were the only two students who appeared to have internalised some signing sufficiently to occasionally produce a sign in a functional context without prompting, typically one of the more frequently modelled core signs (as seen in *'If You're Happy and You Know It'*, Section 8.3, when Albert overrides Helen's attempt at song closure with the Makaton sign *'more'*).  This occasion seems very clearly agentic: Albert senses Helen's attempt at closure (Section 8.3.1) and consciously recalls and uses a Makaton sign without prompting to take events in a different direction.  One other instance of spontaneous student Makaton use was also observed in outdoor play when Luke used the same Makaton sign *more* to request staff to lift him again.

From the above, it is suggested that not all students used Makaton signs spontaneously with any degree of regularity.  For those who tended not to, I would argue that Makaton is unlikely to have enabled any significant degree of agency in the classroom as their usage was primarily limited to immediate repetition of a staff demonstrated sign which does not suggest students were using Makaton to shape events, relationships or their world.  However, this is not an entirely straightforward argument because as demonstrated in Sections 6.3.1 and 8.3.1, echolalia, echopraxia and palilalia from an CA perspective can constitute functional interactional work (Stribling et al., 2007). This is also arguably the case in *'Blowing Raspberries'* (Section 7.2), where Thomas' repetition of Frances' Makaton sign *'more'* confirmed that he wanted the game to continue.  I would nevertheless maintain that Makaton in itself did not add much to Thomas' degree of agency in the game, as his ongoing orientation to continuing it could also have been demonstrated to Frances through

his posture, eye gaze, facial expression and movement.  Additionally, *more* enables only acquiescence to what is already happening rather than the suggestion of an alternative.

For those students who did sometimes spontaneously sign such as Albert and Luke, their repertoire of signs which they could spontaneously recall seemed to be drawn from the words modelled frequently by staff on a daily basis. Like PECS, these were limited in content and function:  *more* and *help* (requesting), as well as *please, thank-you, hello* and *good-bye* (social convention).  The limitations of the requesting speech function in enabling agency have already been discussed above in relation to PECS. *Please* or *thank-you* were modelled frequently every day, although the extent to which they contributed to student agency at snack table is debatable: it could be seen a mere socially desirable addendum to the request itself which carries the agency, or worse, an exercise of power reinforcing the disabled person's perceived position of neediness and dependency on others.  Brewster (2007), writing about staff insistence on *please* and *thank-you* in an adult care setting, observes staff 'adopt[ing] a high status position of insisting on the resident's use of specific words' (p.157) and explicitly drawing attention to a failure to use such politeness conventions as well as withholding desirables unless and until there was compliance. This practice was frequently observed at snack table, with staff often not physically releasing the requested food item from their grasp until *please* and/or *thank-you* had been communicated through speech and/or Makaton, as illustrated by Anna's interaction with Jacqueline in *'The Banana Conundrum'* (Section 6.2). However, it could also be argued that mastery of politeness conventions such as *please* and *thank-you* secure longer-term goals of agency and participation in society as adults through the gradual acquisition of what ethnography of communication would call *communicative competence* or knowledge of how one may speak, as politeness conventions are a strategy which can be agentively deployed to achieve interactional goals.  This is convergent with earlier observations of staff perceptions of two temporal dimensions in the acquisition of agency: the here-and-now, and life as a disabled adult.  Additionally, the 'speech function' which we ascribe to a given word is not an absolute but rather a heuristic tool for analysis. This point was illustrated to

me by a non-transcribed instance when Albert, who was sitting in a circle for Music Therapy, was intrigued by a new visitor to the room and spontaneously signed *please* combined with sustained eye contact at staff which they correctly guessed was a request to leave the circle and greet him.  In this case, *please* was not a matter of social convention but of requesting, and did suggest a degree of agency since Albert's request was subsequently granted.

In summary, it is suggested that approaches to AAC such as symbol cards and Makaton signing have the potential to make a significant contribution to the agency-enabling dimensions of communication, but whether they do so in everyday practice requires a measure of criticality regarding the repertoire of signs and symbols which are materially provided and/or being actively taught to students and the rationale for these choices.  In particular, the circumscribed range of symbols and signs which are available to children in classrooms can, perhaps quite unintentionally, curtail their communicative possibilities in at least three dimensions.  Firstly, it can limit their *range of possible interactants,* because request-focused AAC does not always enable peer interaction as successfully as horizontal student-staff exchanges unless thought is given to supporting and scaffolding this.  Secondly, it can limit the *range of vocabulary* which they can use to express themselves, since only items provided by staff are available, as illustrated in *'But I'd Rather Have Raisins'* (Section 6.3). Thirdly, it can set parameters on their potential *range of speech functions,* particularly since the PECS approach centres on object requesting.  The implications for practitioners and policy in terms of how to provide a more agency-enabling form of AAC are explored further in Chapter 10.

### 9.1.2  Agency and Intensive Interaction

Having considered the extent to which AAC may or may not have supported student agency, a useful point of contrast is the child-led, playful approach to communication recommended by Intensive Interaction.  My observations of students during Intensive Interaction sessions did seem to suggest agency in the sense of influencing events by rehearsing their understanding of cause-and-effect through staff imitation,

and also in the sense of building relationships by engaging in warm, phatic exchanges which could be initiated and maintained by the student but did not require language. For example, in *'Blowing Raspberries'* (Section 7.2)*,* Thomas seemed to enjoy engaging with Frances as an equal partner in a 'conversation' where he can take turns, stop and start the interaction using the noise he is making with his lips. As noted in Section 9.1, Thomas oriented much more enthusiastically to interacting with peers than adults and appeared to show relatively low motivation for using AAC of any kind, but in this exchange he appears to enjoy being able to influence Frances' behaviour by producing his noise. It could be argued that this is not so much 'genuine' agency as the rehearsal of a kind of staged agency: before filming began, Thomas was performing the noise with no obvious orientation to Frances, and it was through Frances' decision to use the Intensive Interaction strategy of imputing communicative intentionality to the noise that he was drawn into the exchange. Thus from an agency perspective it was Frances rather than Thomas who decided that a phatic exchange would happen and to a large extent the direction it would take. Conversely, Thomas would presumably have been free to exercise non-compliance with no particular consequences since this was lunch time rather than work time, and he did experience a kind of scaffolded cause-and-effect form of agency in the interaction. This type of agency 'rehearsal' is consistent with the parallels drawn by Firth (2011) between Intensive Interaction's rationale and Lave and Wenger's (1991) idea of legitimate peripheral participation within a community of practice: students like Thomas who find interaction challenging may gradually acquire the fundamental skills of communication (and the experience of being an agent who may shape events, relationships and one's world) through a process of induction. In the words of Hewett (2011):

> *The complex learning situation gradually makes available the transfer of everything the expert does know, and also provides the dynamic social ecology necessary for the development of the cognitive substructures for the learner.* (p.142).

In *'Mark-Making'* (Section 7.2) there are similarities with *'Blowing Raspberries'* (also Section 7.2) insofar as Albert is contentedly making marks on paper by himself, as he

was often observed to do, and did not set out to invite any form of participation or phatic exchange with Jane.  However, through the increasingly complex interaction with variations in shape, length and location of the marks he is able to experience agency in the cause-and-effect sense with Jane's imitation and his eye gaze, gestures and facial expressions suggest that this soon becomes a very intentional exchange which he enjoys.  Again it is a kind of a rehearsed agency rather than a spontaneous expression: he did not invite an interactional partner, but conversely he would have been free to exercise non-compliance by walking away as this was a 'free choice' time in the classroom rather than compulsory work.  Albert therefore chose to stay and engage in an exchange which both rehearsed his understanding of influencing events via the actions of others and also involved a phatic exchange with Jane where he clearly demonstrated his pleasure at her ongoing imitation.

These data might suggest that agency for these children may exist on a continuum of intentionality: at the 'lower' end of that continuum agency may be exercised by choosing how to respond to an adult move such as the staff decision to impute communicative intentionality to raspberry blowing or mark-making.  Both Thomas and Albert could easily have discontinued the interaction by demonstrating a lack of engagement through their multimodal behaviours, and since they did not they arguably both demonstrated a level of reactive agency by sustaining what had been started.  At the other end of that intentionality spectrum we might say are actions which are more obviously spontaneous or child-initiated, more *active* than *reactive*, and this is arguably the case with Anna in *'Interacting with Gestures'* (Section 7.3). Here, Anna actively initiates a phatic exchange of her own choosing (initiated seconds before filming began); chooses when to switch her attention to other people in the room; decides when she will actively resume the interaction by touching Jane's shoulder to regain her attention; uses what appears to be a gestural form of a 'sound stretch' in Conversation Analytic terms to keep the interaction open while she considers her next move; and also leads the variations in the unfolding exchange by introducing elaborations on her various gestures for Jane to imitate.  This might suggest that Intensive Interaction has provided the scaffolding for Anna to develop real and spontaneous agency: as a confident inducted member of the Intensive

Interaction 'community of practice' rather than a 'legitimately peripheral participant', she can now initiate and discontinue phatic exchanges with staff on her own terms and introduce creative variations in the direction they take.  Whilst this thesis rejects the idea of an intentional/non-intentional binary and prefers the idea of a more complex continuum of intentionality (Section 2.1.3), it does hold on to the critical realist conceptualisation of the individual as a distinct, conscious, embodied actor who possesses real though limited agency (Section 2.3.5).  I would therefore argue that enabling students to exercise not just reactive but also active agency by intentionally initiating their own interactions is an important feature of their education and that Intensive Interaction has the potential to play an important role in this.

Another possible contribution of Intensive Interaction to agency is around the idea of personhood: Intensive Interaction may foster an awareness of both self and other as people with feelings, agency and desire to communicate, and this is the case for both staff and student.  As noted previously, Jane referred to Anna's Intensive Interaction exchanges as being like 'a real girly chat', which leaving aside the implicit gender positioning, suggests a perception of her as a *girl* in these moments rather than a diagnosed child requiring remediation.  Elsewhere, she reflected:

> *You can, see the children in a different light as well and they can see you in a different light … I find that… it makes them a little bit more aware of other people and actually oh that lady is a real lady she is a person, you know she is not just an object she is a person.*  (Jane, teaching assistant: Interview).

This fostering of the self and other concept of agency and personhood is tied in complex ways to modal choices, including the validation of the children's existing multimodal competences rather than the requirement to demonstrate performance of privileged AAC modes.  Stothard (1998), reflecting on the relationship between Intensive Interaction and AAC, argues:

> *The curriculum on offer … was teacher led and skills based.  We taught Makaton signing with a feeling that, if children could not speak, the way forward was to teach them to sign.  The expectation was still that the student*

*needed to understand our forms of communication. We had not yet taken the step of realising that they were already communicating in other ways and that it was a more realistic process for us to understand their methods than to teach them to understand ours … By not listening to them we could not teach them how to express the things they wanted to say, but instead offered words that were of no interest to them. Although signing obviously was important … it still enabled the students to express only the words that we chose to teach them … Communication was thought of as a means of asking for something instead of being a means of building relationships, expressing feelings, making sense of the world and expressing who we really are.* (Stothard, 1998, p.149).

In summary, I would argue that in the interactions I observed in this study Intensive Interaction appears to bring a distinctive contribution to 'student agency': it allows students who may experience significant lack of connection to their social and interpersonal surroundings to rehearse their understandings of cause-and-effect with another person and to be recognised as a person and active meaning-maker who can enjoy interaction by drawing on their existing multimodal competences. It also seemed to give highly scaffolded opportunities for students to become more intentional in their communication by imputing intentionality to possibly non-intentional actions until turn-taking is established, and these opportunities appeared likely to contribute to the student's self-concept as an active communicator who can intentionally influence events, relationships and one's world. At the same time, my observations suggested that there are dimensions of agency which may not fall within the 'reach' of Intensive Interaction and may be better suited to symbolic systems of representation, including the ability to refer to, request or express one's view on people, items and events which are not spatially or temporally present for indexical referencing. For instance, whilst Intensive Interaction might give Anna the confidence to approach adults and the knowledge that she can influence their actions, it does not enable her to specify that what she wants is access to the toilet, nor does it enable Luke to ask for more raisins. The relationship between Intensive Interaction, AAC and agency and the subsequent implications for classroom practice are explored further in Chapter 10.

### 9.1.3 Agency and Embodied Multimodal Interaction

In this section I focus on student agency in interactions which were not primarily structured around an expectation of formal, taught symbolic systems of AAC or the recognisable interactional style of Intensive Interaction but rather by the more general use of the body to engage with another person. Instances of such communication frequently occurred in the outdoor setting (Chapter 8) and were relatively more likely to involve peer interaction than AAC or Intensive Interaction which were teacher-led.

On one level, it could be argued that the data presented in Chapter 8 ('Outdoor Play') presents the students of Purple Class as highly agentic, skilful and creative meaning makers when they are free to express themselves physically. The transcribed data depicts students using their bodies to make complex meanings which far outstrip the tightly circumscribed content/function parameters of AAC. For instance, in *'Squash Me!'* and *'Give Me A Push!'* (both Section 8.2) Luke and Anna respectively use embodied means such as proxemics, haptics, gesture vocalisation and gesture to negotiate the use of shared resources such as the green table and the basket swing, to protest other student's non-participation and to express pleasure and displeasure at the actions of their peers. In *'A Game of Chase'* (Section 8.2) Thomas works actively to sustain his partner's joint attention in the game in the face of possible loss through retracing his steps towards him and touching his arm; as does Albert in *'If You're Happy and you Know It'* (Section 8.3) through his synchronised actions, eye gaze, facial expression and management of the proxemic space. Students demonstrate the ability to bring play sequences to an end, as when Luke asks Dominic to get off his back by glancing backwards at him and then pushing upwards from his prostrate position in *'Squash Me!'* (Section 8.2); or when Albert demonstrates his waning interest in the chasing game by slow running on the spot (*'A Game of Chase',* Section 8.2). Conversely, students can also very intentionally take action to override the potential closure of a desired activity as Albert does with his teaching assistant in *'If You're Happy and You Know It'* (Section 8.3). These ethnographic observations suggest the desire to exercise wide a range of speech functions and multimodal complexity which far exceeds the AAC provision in the

classroom and which perhaps more successfully facilitates interaction with both staff *and* peers alike. In Multimodal Interaction Analysis terms, students are able to fully exercise their existing competence to intentionally foreground and background their higher-level actions by investing in them differing degrees of modal intensity and complexity, and this process is qualitatively no different for a verbal or a minimally verbal communicator.

Nevertheless, I would argue that there are dangers of engaging in unqualified celebration of the hidden competences and exercise of agency suggested by close scrutiny of embodied, multimodal, minimally verbal interaction. As discussed previously, the data excerpts selected for transcription were selected precisely *because* they portrayed instances of multimodal interaction and were not intended to be statistically representative of all my observations: in fact, they were often interesting to me precisely as anomalies. Students in Purple Class spent much of their time outdoors either playing alone with a toy or engaging in parallel play with only minimal interaction with nearby students, and because communication was the focus of my thesis I tended to not videorecord or transcribe these stretches. It is important to stress here that (unlike Intensive Interaction or snack time where I had significant quantities of video data to select from) I did not have a great many instances of outdoor interaction to work with, and so the reification of very brief moments of multimodal interaction which appear to be generating pleasure for students may run the risk obscuring their potential need for more scaffolding in their peer interactions.

In summary, I feel that whilst it is important and insightful to consider fine-grained analysis of children exercising agency and multimodal competence through embodied interaction, it is equally important to contextualise this exercising of agency within a context of significant parameters such as a limited range of peer interactants and limited permissible resources with which to make meaning. It is also important to critically reflect on the agency which *might* be possible were those parameters to be shifted. The range of meaning-making resources available to students in the outdoor area consisted primarily of their bodies alongside memory

traces of a few learned Makaton signs for Albert and Luke, and these were deployed effectively in many respects to facilitate agency, interaction and play but also set significant parameters.  Students could only initiate forms of play which were easy to demonstrate or mime such as Thomas' chasing game or Luke jumping on Dominic from the table, and when play was not satisfactory could demonstrate only simple responses such as shrieking or foot-stamping to indicate displeasure.  This contrasts with the complex negotiations of play forms which *might* be possible amongst children with spoken language.  These limitations were compounded by the lack of More Knowledgeable Others (MKOs) within the ability-set peer group who might have scaffolded more complex forms of play or allowed students to use the verbal skills of the MKO in a form of 'cooperative semiosis' (Goodwin, 2011) as Albert does with Helen in the enactment of the song *'If You're Happy and You Know It'* (Section 8.3).  For this reason, I feel it is important to reflect critically on the limitations of physical play without speech and/or AAC as well as the additional play forms which might become accessible to students with scaffolding and support.  The implications of this point for classroom practitioners is expanded upon more fully in Chapter 10.

In the above section I suggested that agency was differently enabled by snack time, Intensive Interaction and outdoor play.  In Section 9.2, I expand further on the relationship between classroom activities and the children's communication.

## 9.2    How communicative contexts shape children's communication

In this section I draw out the implications of the data presented in relation to snack time (Chapter 6), Intensive Interaction (Chapter 7) and outdoor play time (Chapter 8) for our understanding of how diverse communicative contexts within the clasroom can enable some forms of communication whilst closing down others.  To understand the extent to which context can shape communication, I find it useful to take as a point of reference the individual variations in communication behaviours and preferences between the five children which were argued for in Chapter 5, and to consider the extent to which such individual variations could or could not be expressed in each of the three activities which were presented in detail in Chapters 6 to 8.  This in turn helps to elucidate the nature of each classroom context which

inevitably carried with it certain norms, expectations and regularities about what could be said, how, when, and by and to whom (Saville-Troike, 2008).

As explored in Chapter 6, snack time was a highly formalised and routine affair with a clear identifiable structure and clear expectations of who may 'speak' (communicate), through which modes, when, with whom, and in which order, which was illustrated previously in Table 7 ('The Enactment of Snack Time'). I would argue that to an extent this had the effect of homogenising communication and minimising the expression of individual variations in communicative repertoires by channelling students to communicate in particular ways. For instance, it was noted in Chapter 5 that Thomas appeared more oriented toward interactions with other children than with other adults, but everything about the structure of snack time from the shape of the table which positioned the facilitating staff member as a central pivot to the use of the PECS folder to enact turn-taking meant that horizontal staff-student exchanges were privileged and there was no support or scaffolding for peer interaction around the table. Meanwhile, Dominic appeared to demonstrate a strong preference for embodied communication with a prominent element of proxemic and haptic behaviour (see also Chapter 5), and the c-shaped table with chairs which effectively regulated the distance between participants as well as discouraging lower body movement limited the possibilities for movement and touch. Anna's propensity toward practical exchanges designed to obtain desired outcomes was a relatively good fit with the transactional nature of snack time communication with its emphasis on object requesting, although her patience can be seen to run out with the practice of multimodally recasting the same message in *'The Banana Conundrum'* (Section 6.2). The practices associated with snack time also seemed to be also a relatively good fit for Albert who on many occasions appeared to enjoy activities involving sitting at a desk, and was receptive to performing additional Makaton signs such as specific items of food and drink. For Luke, whilst his participation in snack time was enthusiastic and multimodal, his demonstrable curiosity and willingness to experiment with the communicative potential of artefacts combined with his willingness to test and transgress boundaries outstripped the limited AAC resources made available to him around the snack table which facilitated primarily the

requesting of available items.  Taken together, this means that whilst student communication was channelled into a relatively homogenous practice (as illustrated in Table 7) of requesting an item using PECS and thanking the staff member using Makaton/speech, the goodness of fit with the individual preferences of each student regarding interactional partner, speech function/topic and mode was variable.  These findings raise questions around how necessary everyday classroom communicative contexts such as eating could be made more communication-enabling for a heterogenous group of students, and whether our assumptions about children with autism preferring interactions with obvious transactional benefit (Shumway & Wetherby, 2009; Stone et al., 1997) can become a self-fulfilling prophecy if our classroom practices and subsequent data generation are guided by such assumptions.  These implications for practice are explored further in the final chapter of the thesis.

In relation to Intensive Interaction, I would argue that this was the communicative context which was most responsive to individual preferences in communication.  For instance, Dominic was able to integrate his desire for touch and physical closeness into his Intensive Interaction exchanges with staff (*'Chatting during Worktime'*, Section 7.2), Anna primarily exchanged different combinations of spoken syllables and sounds although in *'Interacting with Gestures'* (Section 7.3) this is accompanied by various arm movements and frequently seemed to take control of the interactions, managing staff involvement and the interaction duration herself.  As noted above, Albert seemed to derive enjoyment from table top activities and this is integrated into Intensive Interaction by Jane in *'Mark-Making'* (Section 7.2).  Luke appeared generally responsive to Intensive Interaction in the same way that he was also receptive to anyone in Purple Class (staff or student) paying him attention irrespective of the particular approach.  Regarding Thomas, it was argued in Chapter 7 that whilst *'Blowing Raspberries'* (Section 7.2) illustrates a moment of Intensive Interaction which appears to be enjoyable to him, his response to this approach seemed to be less enthusiastic than that of the other students.

Intensive Interaction might therefore be described as flexible in that it can involve a

range of modes such as gesture, voice, non-verbal noises, manipulation of artefacts, proxemics, posture, facial expression, and others, and is guided by the student's interests and motivations at any given moment. This high degree of freedom is referenced by Frances as a distinctive characteristic of Intensive Interaction in the classroom:

> *Yes I think that is nice because sort of the children are leading it, but you are responding in a different way than you might do here [gestures to other cards] … one-to-one, that is your time with the child and you can just copy each other … so it is not planned, this is just what we are going to do and just let's go with it. You could find, a range of things that happen in there … that is sort of like even over there really [pushes Intensive Interaction card further away from others] in a different place of its own totally.* (Frances, teaching assistant: Interview)

At the same time, it is important not to underestimate the extent to which the principles of Intensive Interaction inevitably shape communication in certain directions. For instance, it appears to underpin the Intensive Interaction approach that the child interacts with one trained adult practitioner who is skilled in principles of Intensive Interaction such as the development of the 'Fundamentals of Communication' and the imputing of intentionality (Hewett & Nind, 2013). Given this, it is not easy to envisage how peers could be directly involved in sessions to accommodate Thomas' preference for interacting with children, particularly in a specialist school where all children have identified learning disabilities. Additionally, there is a functional focus on phatic communication or interacting simply for inherent pleasure, which may be motivating to different extents for individual children. Finally, in Purple Class the practice Intensive Interaction appeared to almost inevitably preclude the use of Makaton and PECS. As Lizzie (class teacher) described Intensive Interaction:

> *Obviously we are not using PECS, we are not using Makaton, it is not a time to teach them those things - it is a time to get them to engage with you as a person.* (Lizzie, class teacher: Interview).

The question of whether AAC and Intensive Interaction are capable of integration within an interaction is explored further in the final chapter of this thesis where I consider the study's implications for practitioners. Here, the important point is that

for students who orient more strongly towards the use of Makaton or PECS, such as Albert and Luke respectively, the practice of Intensive Interaction appears to direct away from such modes and may therefore have implications for their full involvement in the process.

Finally, outdoor play time was described in Chapter 8 as providing a space where students could interact with each other or staff in an embodied way, making full use of proxemics, haptics and full body movement in addition to the gesture, facial expression, vocalisation and other modes which were also seen in the classroom. This shift toward embodied communication seemed to be facilitated by the material affordances of the space as well as the more relaxed rules of conduct and the near-absence of AAC provision: there were two PECS cards for 'chasing' and 'play time' which did not remain accessible once the classroom door was closed and play time began; and the Makaton sign 'more' which was recalled and spontaneously used by Albert and Luke only.  These conditions seemed to enable Thomas' constellation of communicative preferences to emerge: he had opportunities to interact with peers as in *'A Game of Chase'* (Section 8.2), and his pivotal role in peer interaction is discussed further in Section 9.3 below.  Additionally, as AAC usage was not common in the outdoor space he was free to actively initiate and maintain interactions using embodied modes, as illustrated in *'A Game of Chase'* (Section 8.2).  According to my observations, Albert engaged in peer interaction which was typically initiated by Thomas, and also engaged in exchanges with staff although most often played alone or in parallel with other students.  It is interesting that the exchange which I felt showed Albert at his most animated and engaged in the playground *('If You're Happy and You Know It'*, Section 8.3) was an interaction with an uncharacteristic amount of structure, adult input and Makaton signing, which was not typical of outdoor interaction.  This might suggest that the generally low level of AAC in the outdoor space was in some ways liberating for some students but constraining for others.

Anna was most often observed playing either alone or in parallel with other students, with only fleeting peer interactions to the extent that it was necessary to negotiate shared use of resources.  The relative lack of structure in the outdoor play area did not appear to encourage Anna to communicate with others, and although she

seemed to enjoy playing with the toys and physical movement of various kinds, her involvement with her peers seemed peripheral (discussed further in Section 9.3 below).  It is difficult to speculate whether Anna perceived the relatively unstructured nature of outdoor play time as a welcome opportunity to play alone without the requirement to interact or conversely would have welcomed more scaffolded support to interact with her peers.  Dominic appeared to derive benefit from the relative freedom of physical movement afforded by outdoor play time which allowed him to engage in tactile behaviour which would normally be discouraged in the classroom (see for example where he sits on Luke's back in *'Squash Me'*, Section 8.2). This tactile dimension to his play was most commonly seen in interactions with Thomas or Luke or else with staff.  Luke also enjoyed the relative freedom of movement afforded by outdoor play time (as can be seen in *'Squash Me'*, Section 8.2) and to use proxemics and haptics in his play, but was one of the only two students (along with Albert) to recall and integrate Makaton signs into the outdoor space by signing 'more' to an adult when he wanted more cuddles.  Neither boy was ever observed signing to peers.  It appeared as though Anna, Dominic and Thomas perceived the outdoor space as a place where AAC was not practised as it belonged within the classroom only, whereas Albert and Luke perceived it as a practice which could travel across the classroom/outdoor boundary.  Alternatively, it is simply possible that only Albert and Luke were able to spontaneously recall and sign unprompted and that the others would have done so also if they could.

From the above, it appears that whilst students had relatively enduring individual variations in the ways they expressed themselves, with constellations of preferences for modes, interactional partners and speech functions/topics, these variations played out differently according to context. Different communicative contexts placed varying emphases on who constituted an appropriate interactional partner, the privileging of certain modes and speech functions to the exclusion of others, rules around the temporal execution of the exchange from highly structured (snack time) to relatively unstructured (outdoor playtime); and were additionally performed in different spaces where the available space and artefacts had certain communicative affordances and constraints.  These situational variations in turn interacted with the

individual variations between students (Chapter 5) in complex ways: for instance, Thomas who preferred playful peer interaction using non-symbolic communication was a pivotal figure in outdoor interaction networks yet could be deemed 'difficult to reach' in the classroom.  These findings go further than the Speechome Project (Roy et al., 2006) which found that the 'form' of speech remained relatively constant around the home although the content might change: here, there were very fundamental shifts in both form and content with certain modes rising to prominence in certain classroom zones/activities and falling into almost complete disuse in others.  Taken together, this might suggest that it is difficult to make decontextualised assertions about a child's level of communication without careful acknowledgement of the types of communication which are facilitated and encouraged by their everyday classroom activities.  It also calls into question the purely within-child deficit model of disability enshrined in current policy definitions of 'special educational needs' (Hodge & Runswick-Cole, 2009), a*nd underlines the need for contextualised study of why children communicate the way they do.*

In my analysis of the relationship between communication and context in Section 9.2, I touched upon the idea that students appeared to view peer interaction as differently available in different settings.  In Section 9.3 I consider in more detail what the data in this study suggests about communication between students.

## 9.3    Peer interaction and minimally verbal children

In the previous section one of the ways in which activities were argued to shape communicative behaviours was the extent to which they enabled or disabled peer interaction: for example, it was argued that the enactment of snack time privileged horizontal staff-student exchanges and there was little encouragement for or scaffolding of peer interaction around the table.  In this section I look more closely at the question of peer interaction across the three communicative contexts portrayed in this study.

The data presented in Chapters 6 to 8 point to the concentration of opportunities for peer interaction in the outdoor space.  In Chapters 6 (snack time) and 7 (Intensive

Interaction), the scene which comes closest to depicting peer interaction is Anna's peripheral awareness of her classmates in the background getting ready to transition to soft play, although her primary focus is her interaction with the teaching assistant. This is largely typical of the total corpus of data generated where the large bulk of video data portraying peer interaction came from outdoor time, although it should be noted that peer interaction was not entirely absent from the indoor classroom. For instance, in video data from morning group time students briefly interacted when they selected a photograph of a peer from a box and handed it to the classmate depicted in the photo to affix on the register board. I also observed brief, spontaneous instances of interaction at unexpected moments, as the following extract from my fieldnotes illustrates:

> *During group time there was a lovely moment with Thomas and Luke. They were holding hands with each other and looking at each other. Luke was vocalising as though he was talking to him. Neither took part in the warm-up [activity] as they were enjoying the moment.* (Fieldnotes: 14 January).

Both snack time and Intensive Interaction appeared to be seen by staff as opportunities for a more experienced and competent adult communicator to encourage the development of communication skills with a child: in the former case, through PECS/Makaton/speech, and in the latter case the development of the 'Fundamentals of Communication' (Nind & Hewett, 1994) including eye contact, facial expression, turn-taking and enjoyment of communication. My general observations were that time spent indoors tended to consist of either students working and interacting with a staff member, or alternatively unstructured time when children were free to choose activities in which case they were more likely to play alone or in parallel with a peer than to directly engage with them.

It is in the data from outdoor play time (Chapter 8) that instances of peer interaction are depicted. Outdoor play time had some points of commonality with Intensive Interaction: it tended to involve phatic communication and fun playful exchanges with no particular transactional function and it tended to be enacted using embodied, non-symbolic communication. However, it differed in that interactions were not always composed of a staff-student dyad: on occasions they were, as in *'If*

*You're Happy and You Know It'* (Section 8.3) but they could also involve dyads or triads of students with only indirect adult supervision and monitoring.  As depicted in my previous social network mapping (Figure 75), my own observations supported the comment of Lizzie (class teacher) that peer interactions often involved the dyads of Thomas-Albert or Thomas-Luke with Thomas playing a pivotal role in organising and sustaining them.  One or two staff members typically stood at the door leading out to the outdoor play area to monitor the students and Dominic or Albert would be the most likely to choose to interact with staff, with Luke moderately likely and Anna and Thomas the least likely.

Here I feel it is important to stress that even for the students who appeared to be relatively well connected within the peer network such as Luke or Thomas, there were still long periods of solitary or parallel play even in the outdoor setting and outdoor play even for these students was not observed to be generally replete with the kind of interactions chosen for illustration in Chapter 8.  However, the interactions depicted do point to significant levels of engagement, enjoyment and communicative skill in those moments.  For example, in *'A Game of Chase'* (Section 8.2) Thomas undertakes interactional work to retain Albert's involvement in the chasing game through proxemics and eye contact, whilst the PECS card for *'chasing'* remains unused on the inside of the door, and Albert gently disengages himself from the game through a series of increasingly unenthusiastic responses.  In *'Squash Me!'* (Section 8.2) Luke is able to demonstrate through gesture and proxemics that he wants to jump on Dominic, clearly seems to enjoy the deep pressure of Dominic sitting on his back, and is able to communicate through embodied means when it is time for Dominic to climb off.  In *'Give Me A Push'* (Section 8.2) both Anna and Thomas appear to take mutual enjoyment in the swinging activity and Anna is able to express her displeasure when Thomas pauses by shrieking.

Taken together, these data appear to point to the idea that children with autism and minimal speech can and do take pleasure in interacting with peers, admittedly to varying degrees.  However, in a classroom with many staff and few peers, safety restrictions placed on the use of embodied forms of play, and teaching which orients

primarily to horizontal staff-student communication, there may be little scaffolding or support for students to develop their nascent abilities to interact with peers. Potentially compounding such factors is the segregated nature of special schools where students may not have the opportunity to mix with children with more advanced social, cognitive and communication skills who might be well placed to initiate and scaffold interactions (Chalaye & Male, 2011). The implications of these findings for supporting peer interaction in special education are drawn out in Chapter 10.

Having reflected on what my findings might suggest about the relationship between communication and agency (Section 9.1), communication and context (Section 9.2) and peer interaction in the classroom (Section 9.3), I consider in the final section of this chapter how communication teaching in special schools appears to present in everyday classroom life.

## 9.4    Reflections on approaches to communication teaching in special education

In this final section, I consider how broader policy contexts and traditions regarding the teaching of communication skills to minimally verbal children in special schools (as presented in Chapter 1) played through relationships between communication and agency in this study. Specifically, I consider how approaches such as PECS, Makaton and Intensive Interaction appear to manifest in an everyday context from an ethnographic perspective.

A key point of divergence between the policy and practitioner literature presented in Chapter 1 and the ethnographic findings of this study was the issue of 'tidiness', with the implementation of approaches such as PECS, Makaton and Intensive Interaction in everyday classroom life being considerably less neat than practitioner literature might suggest. This seemed to be the case on two levels. Firstly, everyday classroom implementation of a named approach did not always converge entirely with the model proposed in the approach's training manuals and resources: for instance, the PECS Training Protocol (Frost & Bondy, 2002) would envisage students progressing to form symbol card sentences consisting of *I want + item + please* rather than mixing

and matching PECS with Makaton to achieve the same result, whilst Intensive Interaction literature would not recognise some of the hybrid practices which were depicted in Chapter 7 such as giving verbal praise for engagement ('*Blowing Raspberries*', Section 7.2) which is generally discouraged since an enjoyable interaction should be its own intrinsic reward (Firth, 2010).  This divergence between recommended and everyday practice in the implementation of individual approaches has been noted elsewhere in literature: for instance, Vicker (2010) argues the PECS seen in classrooms might often be more loosely described as generic 'picture exchange' where children often share generic classroom resources designed only for requesting, which is not necessarily consistent with the PECS Training Protocol.  This appeared to be the case in Purple Class also, where children did not have their own PECS folders, were not during the study seen to form sentences with symbol cards and did not use it for anything other than requesting.  Similarly, Nind (2009) has criticised loose, approximated versions of Intensive Interaction which she calls the 'fuzzy and warm 'anything goes'' (p.71): such approximations may for example reduce 'Intensive Interaction' to ongoing imitation of the child rather than the flexible range of responses recommended in practitioner literature.  Furthermore, the moments of 'Intensive Interaction' depicted in Chapter 7 bring to mind Hewitt & Nind's (1998) argument that an activity cannot be considered Intensive Interaction if it occurs in a noisy classroom, is likely to be interrupted, is embedded in another activity with its own goals or ideology, or has a non-negotiable fixed ending time (p.36). The purpose of highlighting this divergence is not to level criticism at Purple Class practices but rather to emphasise the need to acknowledge in research that such approaches are inevitably competing with other classroom priorities as well as involving staff with varying levels of familiarity with the original training materials, and may therefore be enacted in complex and hybridized ways in the busyness of everyday classroom life.

The second but related way in which implementation diverged from the scene envisaged by practitioner training materials was the very co-existence of these three main approaches (PECS, Makaton, Intensive Interaction) within the classroom.  Both PECS and Makaton appear to be envisaged as stand-alone communication systems:

the PECS Training Manual (Frost & Bondy, 2002) describes a comprehensive system which has as its goal the development of an individualised folder of words which is carried by the user for spontaneous usage and can be combined in sentences of increasing complexity, whilst Makaton is also designed to be a comprehensive communication system with over 7,000 signs (Makaton Website, accessed 8 January 2018).  However, in the snack time data presented in Chapter 6 it can be seen that they co-existed not just in the same communicative contexts but even within the same utterance.

Whilst the literature on individual AAC modalities may not acknowledge the relative positioning of other modalities within the same classroom, Chapter 5 noted that the school in this study aimed to provide 'a Total Communication Environment that maximises pupils' language skills' (School Website, accessed 1 January 2015).  As noted in Chapter 1, Total Communication encourages an eclectic mix of communication approaches and may explain the co-existence of Makaton, PECS and speech at the snack table.  The findings in this study raise the question of whether Total Communication can sometimes become crystallised as a *requirement* to recast the same message through multiple modes (*'The Banana Conundrum'*, Section 6.2) or whether communicators like Albert who appear to demonstrate a proclivity towards Makaton signing are necessarily supported by delivering requests in half-PECS, half-Makaton.  The role of Total Communication in supporting student agency is critically examined in Chapter 10.

Finally, the approach to teaching communication in special needs settings which was described in Chapter 1 appears firmly based on medicalised ideas of clinical remediation: children with autism are expected to benefit most from one-to-one interactions with adults who consciously implement techniques which are overseen by a healthcare professional (Speech & Language Therapist), often with a tangible reward as inducement for performing a request (Shumway & Wetherby, 2009; Stone et al., 1997).  This largely appeared to be the underpinning rationale for much observed activity in Purple Class, with frequent requirements for students to interact with one member of staff. This was facilitated by the high staff/ student ratio, yet

there appeared to be relatively few planned activities designed to support or scaffold peer interaction. This contrasts with the classroom experiences of children of comparable age in mainstream settings, where the National Curriculum (DfE, 2014) as well as academic literature (Ogden, 2000; Vass, 2002) stress the importance of peer interaction and collaborative dialogue in the primary classroom. Whether such an adult-led and remedial approach to special education was warranted in the data presented is difficult to say: on the one hand, the high staff/student ratio did permit staff to give a lot of individual attention to students and allowed time for the scaffolding and development of interactions which appeared to be enjoyed by the student (*'Interacting with Gestures'*, Section 7.3; *'If You're Happy and You Know It'*, Section 8.3), and requesting food, drink and repeated actions were undeniably motivating in many of my observations.  On the other hand, it seems likely that at least some students might have responded well to more opportunities for interacting with other children, particularly with those who were relatively more skilled in social interaction and communication.  Additionally, the data problematises the easy assumption that requesting desirable objects and activities is an obvious route into communication for all students with autism, since Dominic and Thomas often appeared more motivated by fun, phatic exchanges than by transactions *('Chatting during Worktime',* Section 7.2, and *'Just Saying Hello'*, Section 6.2, respectively), and all students demonstrated multimodal competence in expressing a range of speech functions beyond requesting.  The implications of these observations for classroom practice are drawn out more fully in Chapter 10.

## 9.5 Conclusion

The purpose of this chapter was to reflect on what the data presented in the preceding three chapters might suggest about communication and agency in the everyday lives of the children of Purple Class.  In Section 9.1, I considered how AAC, Intensive Interaction and embodied (non-formal) communication were differently enabling in respect of children's agency, arguing for a possible complementary relationship for AAC and Intensive Interaction in the development of different dimensions of agency which requires further research. In the context of embodied multimodal communication observed primarily in outdoor play, it was argued that

whilst students did engage in simple and apparently enjoyable games with peers and staff, there were limits to how these games and interactions could be subsequently sustained, negotiated, developed and elaborated upon in comparison to the complex play activities of the mainstream playground. This raised the question of whether an iterative relationship may exist between limited communication and limited opportunities for increasingly complex forms of play.

In Section 9.2 I considered the extent to which classroom activities shape communicative behaviours of the children engaged in them. It was argued that classroom activities tended to privilege certain modes, topics, speech functions or interactional partner choices to the exclusion of others. This may point to the need for more careful contextualised studies of why children identified as having communication disorders or disabilities communicate in the way they do and the role of environment, activities and interactional partners in delineating their communicative options.

In Section 9.3 I considered what my data might suggest about peer interaction. The data appeared to indicate that children with autism and minimal speech can and do take pleasure in interacting with other children, although to varying degrees. However, multiple factors were observed to mitigate against this happening with frequency in a specialist setting: the very high staff/student ratio, the safety restrictions placed on physical play, teaching which oriented to a remedial therapeutic model of individual children working with individual staff, a near-absence of planned scaffolding of peer interaction, and the segregated nature of the setting which limited contact with children with more advanced communicative and social skills.

Finally in Section 9.4 I reflected on what my data might suggest about how communication skills are taught in special education and the way in which current policy appeared to play out from an everyday, ethnographic observer perspective. I argued that the portrayal of approaches such as AAC and Intensive Interaction in clinical literature are sometimes at odds with how they play out in busy everyday

classroom life.  On the one hand, clinical literature tends to discuss approach implementation which adheres closely to the practitioner material and is executed in isolation from other communication approaches by a highly trained practitioner, yet the observations suggesting that approaches co-exist, sometimes coalesce, and are deployed in hybridized ways which have varying levels of fidelity to the literature.  I also noted that with very few exceptions the literature on special needs education does not tend to privilege the scaffolding of peer interaction and multiple factors mitigated against children interacting together in Purple Class, yet the data suggested that the children were motivated to do so.

In the final chapter of this thesis, I consider how it might be possible to draw out more general pedagogical implications from these findings in Purple Class in relation to the education of minimally verbal children with autism in other settings.  I also critically consider the contribution of this study to literature as well as its limitations and point to suggested directions for further research.

# CHAPTER 10: CONCLUSION

## 10.0    Introduction

In the previous chapter I considered what the data generated by this study might suggest about communication and agency for the students of Purple Class specifically and for minimally verbal children more broadly.  In this final chapter, I look back on the study which I have undertaken, reflecting on its implications for practice, its contributions to literature and its limitations.

In Section 10.1 I consider what the findings of the current study might suggest for practitioners who work with minimally verbal children with autism in the classroom. In Section 10.2 I consider the implications for school leaders in special schools who have responsibility for influencing the direction of the school's communication policy, whilst Section 10.3 considers the implications for those who have responsibility for policy in the wider sense of national special needs policy, legislation and curricular advice. Section 10.4 sets out this study's contribution to knowledge, and in Section 10.5 I reflect critically on the limitations of the thesis.  Finally, in Section 10.6 I suggest how future research might further contribute to knowledge in this field.

## 10.1    Implications for Classroom Practitioners

This study has described in rich detail the communication of five children in one particular specialist setting.  Previously in Section 4.4.6 I argued that whilst this study does not lay claim to statistical generalizability or replicability, it contains sufficient 'thick description' (Geertz, 1973) to enable the reader to reflect critically on potential conceptual transfer from the particulars gleaned from Purple Class to their own setting.  In this section I suggest five possible implications arising from this study regarding the communication and agency of children with autism in the classroom which could usefully be considered by practitioners in other settings.

*10.1.1 Acknowledging individual communication preferences*

The first issue of potential relevance to classroom practitioners is the need for careful reflection on the individuality of each child's constellation of communication preferences in terms of modal choices, functional preferences and preferred interactional partners.  This study suggested that in addition to having individual modal preferences for different forms of AAC as already established in the literature (van der Meer et al, 2012; Mirenda, 2009), children can also vary in the extent to which they orient to peers or adults as preferred interactional partners as well as on the topics and speech functions which motivate them.  It was argued that these dimensions of variation co-exist in complex ways and the direction of causation is not always easy to unravel.  However, considering the interplay of these dimensions of variation from different directions may create new spaces for understanding the children's communicative behaviours.  For instance, a strong preference for interacting with peers rather than adults, as in the case of Thomas, may contribute to AAC 'disuse' if AAC facilitates only vertical student-staff exchanges.  In this sense, I would argue that it is unfortunate that the 'buying-in' of certain AAC packages such as PECS (Frost & Bondy, 2002) may risk reinforcing certain stereotypes of children with autism as being motivated to communicate only with adults who are gatekeepers to tangible rewards at least in the initial phases of the protocol, since the five children in the current study were considerably more heterogeneous than this in their communication preferences.  This may point to the need for practitioners to critically reflect on individual variation between children's communicative preferences and repertoires.

*10.1.2  Home-school liaison*

The second issue relevant to classroom practice is the need for increased liaison with parents about how the child communicates at home.  In this study there were in some cases very particular areas of divergence between home and school communication arising from circumstances such as the speaking of other languages in the family home: for instance, the data pointed to the possibility that Anna had significantly more spoken Polish language than was recognised in school.  In Section

5.3.6.1 it was suggested on the basis of parental reports that there was a general tendency for formal AAC modes such as PECS and Makaton to be used less frequently in the home than at school, although this was not always the case: for instance, Albert made use of Makaton in both settings, whilst Thomas' use of AAC appeared to be consistently relatively low in both settings.  In all cases parents had received some degree of support from professionals either from school or other agencies in implementing PECS in the family home, but with the exception of a small number of cards still in use across the five households these had generally fallen into disuse because other ways of communicating were preferred in the family home. Prominent amongst these alternative preferred strategies at home was the use of everyday artefacts such as remote controls, DVDs, CDs, shoes, clothing, and food items to make meaning, perhaps reflecting the easy availability of these items around the family home.  Parents also reported a high degree of confidence in their own ability to correctly 'read' what was being communicated by the idiosyncratic behaviours of their child and to subsequently supply what was needed, whilst acknowledging that this strategy had its limitations. These findings are consistent with Lindsay (2010) who argues that parental 'buy-in' (p.214) in relation to AAC can be low because families have devised their own ways of communicating with their children.  This level of responsiveness to subtle multimodal cues is a skill which professionals in their transient relationships with children perhaps cannot hope to replicate, and it seems important to acknowledge this.  This parental knowledge could potentially be drawn upon in producing 'Communication Passport' (Goldbart & Caton, 2010) making explicit the meaning of the child's idiosyncratic behaviours for new staff members.

As argued above, the development of such passports is not necessarily an argument against AAC provision: in fact, increased staff responsiveness to the range of meanings being made by the child across multiple modes may contribute to more thoughtful and enabling AAC provision which reflects the child's interests.  As an example, the PECS cards which had been provided to parents in this study without exception focused on the requesting of food and drink, yet a plausible explanation for lack of parent 'buy-in' to the symbol cards was that the children were already adept

at requesting such items through orchestrations of embodied action and use of readily available items around the family kitchen.  By way of contrast, areas which parents identified as being communicatively problematic included the child's identification of specific problems relating to illness, pain or discomfort resulting in a parental guessing process which was not always accurate, or the requesting of activities, destinations or items which could not be easily indicated through artefacts.

Home-school dialogue could therefore identify areas where there is potential to work collaboratively and where AAC could serve a clear functional purpose in the home, but I would argue that it should be genuine dialogue rather than the one-way exportation of interventions already decided by professionals. McCord & Soto (2004) have suggested that parents can feel distanced from AAC decision-making and that AAC subsequently does not contain vocabulary relevant to the young people's home lives, and this may be the case where vocabulary sets are 'exported' from the classroom to the home without careful contextual consideration of the communicative differences between the two settings.  It is acknowledged however that making time for extensive home-school liaison is not always easy to justify when school staff are primarily held accountable for quantifying 'progress' made during the school day: Lizzie, the class teacher in Purple Class, expressed interest in the findings from the home interviews and spoke of her wish to have more time to explore this dimension of the children's lives.

### 10.1.3 Supporting peer interaction

The third issue arising for practitioners from the current findings is the need for critical reflection on how peer interaction between minimally verbal children might be scaffolded and supported.  In this study, it was noted that there were very low levels of peer interaction relative to what one might expect to observe in a mainstream classroom: classroom activity often took the form of a student-staff dyad perhaps reflecting a therapeutic, remedial philosophy of learning and facilitated by the very high staff: student ratio, whilst  AAC (both Makaton and PECS) seemed to be considered a means of communicating with adults and I observed no instances of it being used between peers.  Whilst peer interaction was relatively more common in

the outdoor space (Chapter 8), the selection of interactive moments for illustration risks downplaying the frequent stretches of solitary or parallel play outdoors for all of the children in this study and it is important that this is acknowledged.

These findings raise at least two questions for practitioners.  Firstly, there is the question of whether it should be considered a priority to encourage peer interaction between minimally verbal children at all: it could be argued that working directly with an adult on a one-to-one basis provides the necessary structure and scaffolding that is required for children with severe disabilities to learn, and this appears to be an underlying assumption of PECS and Intensive Interaction as well as the high staffing ratios in special schools.  It could also be argued that it is a neurotypical assumption that people with autism want to be interactive at all times, and that regular periods of time which children may freely choose to spend alone are helpful in order to rebound from the demands of the school day (Nason, 2014).  Nevertheless, I would contend that there are multiple reasons to consider increased support for peer interaction.  Firstly, the data from this study suggest that the children varied in their orientation towards peer interaction, with at least one child (Thomas) appearing to be very highly motivated by interactions with other children and relatively less so with adults.  For children like Thomas, supporting peer interaction could potentially have implications for his motivation and willingness to engage with AAC.  Secondly, the data from Chapter 8 suggested that all five children could and did on occasion interact with peers and derived pleasure from doing so, although were limited to simple physical games which were closely monitored and frequently curtailed on safety grounds.  Thirdly, as Conn (2014) argues from a sociocultural perspective, children with autism are 'both different and the same' (p.14) as children without autism: whilst there may be differences in the preferred form of play with an emphasis on the sensory and physical aspects for children with autism, there are nevertheless shared human experiences of friendship, mutual enjoyment, social connection, and deriving fun from intrinsically motivated and freely chosen activities. Finally, the scaffolding of peer interaction need not become an additional classroom 'intervention' which reduces the child's time to freely chose solitary play if desired. Rather, what I am suggesting is that practitioners might critically reflect on the ways

in which existing classroom activities and routines may unintentionally limit the possibilities for peer interaction between minimally verbal children and how these parameters might be redefined.

The second question for practitioners is how support for peer interaction might be realised.  It is acknowledged that this may not be straightforward in a specialist setting where *all* children have significant levels of disability: literature which addresses peer interaction for children with disabilities often seems to assume an inclusive environment where the social skills of typically developing classmates may be drawn upon as an interactional resource (Owen-DeSchryver et al., 2008; DiSalvo & Oswald, 2002; Rogers, 2000).  The question of facilitating access to a more inclusive learning environment is not typically within the remit of the classroom teacher but is discussed further in Sections 10.2 and 10.3 below in relation to implications for school leaders and policy makers respectively.

However, I would maintain that in the context of a specialist setting there are opportunities for a classroom practitioner to facilitate increased levels of peer interaction. Firstly, critical thought could be given to the vocabulary and speech functions enabled by AAC provision and whether these could be expanded to give more opportunities for talking to peers.  For instance, Luke and Albert were both seen to spontaneously recall and use the sign for 'more' with staff in the outdoor area, so it would seem possible that they could be encouraged to use that sign with peers as well as other signs which might be useful in play such as *stop, go, finished, again, hello, play, chase, my turn*.  The use of PECS with classmates is explored in a limited body of clinical literature such as the PECS for Peers Protocol (Garfinkle, 1996), suggesting that even if the role of the adult is central in the early stages of skill acquisition of PECS it is theoretically possible for the communicative skills acquired to then be used between peers.  Since the data in Chapter 6 suggested that single word requesting (Level 3 of the protocol) is now well established with all students it seems feasible to suggest that this skill could be practised with peers, perhaps by using a selection of cards made available in the outdoor area to request a form of play.  A final way in which AAC could be made more inclusive of peers is to consider

alternative AAC modalities such as speech-generating devices which can contain very extensive vocabularies which might more easily include the names and pictures of classmates as well as phrases to greet them, get their attention or play with them. However, where speech-generating devices have not yet been adopted by a school as a recognised form of AAC, it may be difficult for a classroom practitioner to implement autonomously. The possibility is therefore discussed below as an implication for school leaders and policy makers.

A second way that classroom practitioners might support peer interaction is to take as a starting point the embodied forms of play which were sometimes seen (for example *'A Game of Chase',* Section 8.2) but were frequently fleeting in duration and sometimes curtailed by staff on the grounds of safety. Staff might consider supporting students to extend their repertoire of physical play activities with peers which would fall within the acceptable boundaries of what is deemed safe and permissible, such as simple shared ball games, clapping games, parachute games or songs. Whilst mindful of the caveat of Conn (2014) noted above that there is a paradox in making play 'something that adults direct children to do' (p.148), I would draw a distinction between directing children to play with their peers on the one hand, and modelling new forms of play to scaffold their acquisition on the other hand. This suggestion has potential to work alongside the earlier suggestion of a wider range of PECS symbols in the outdoor space to facilitate activity choices.

### 10.1.4 *Reviewing the nexus between communicative context and communication*

A further possible implication for classroom practitioners arising from this study is to evaluate and reflect upon how the children's communication may be shaped by the characteristics of the various everyday communicative contexts which comprise the school day. In this study it was noted that the enactment of classroom activities was frequently underpinned by a constellation of communicative expectations regarding who may speak, when, to whom, through which modes, about which topics, and exercising which speech functions. These activities also ranged on a continuum from very formal and teacher-directed (snack time) to very informal with more opportunity for spontaneity (outdoor play time) and drew upon different ranges of

material artefacts and furnishings which exerted their own influence on communication.  In Chapter 9 I argued that this acknowledgement of the rich contextuality of classroom life calls into question the validity of decontextualised evaluations of a child's level of communication in any given mode as well as the within-child deficit model of disability which underpins definitions of 'special educational needs'.

It is acknowledged that in the busy life of a classroom practitioner it is easy for certain routines and ways of working to become embedded into daily practice without time for critical reflection on why they happen in that way or whether they could conceivably be enacted differently.  As one member of staff commented after I had finished audio-recording their interview, it was a luxury to have time out of the classroom to pause and reflect on communication in the classroom.  Nevertheless, it remains important for practitioners to critically reflect on the communicative contexts which are created by activities provided in the course of the school day, asking themselves:

- What do we as staff perceive the main purpose(s) of this activity to be?
- Who can the child communicate with in this context?  Adults, peers, both or neither?
- Which modes of communication are available to the child in this context? (Speech, Makaton, PECS, embodied modes including touch, gesture, facial expression, vocalisation, the extent of physical movement which is possible).
- If PECS is provided, what range of symbols has been made available?  Why have we chosen those and not others?
- To what extent can the child draw upon Makaton in this situation?  Can they spontaneously recall signs previously taught, imitate signs demonstrated by staff, or do they not use it?  If, used, which signs and why not others?
- How do the material properties of the context influence communication? (This might include material provision of AAC resources but also the

influence of other artefacts and furnishings, as discussed in relation to the snack table in Section 5.1.11).

- Which speech functions does this activity encourage the child to exercise? (requesting an object, requesting an action, gaining attention, commenting, social convention, rejecting/protesting, responding, requesting information, phatic communication).

- Would it be possible to enact this activity differently in a way which would make available to the children different interactional partners, modes, vocabulary, speech functions?  What would be the barriers and the advantages to working differently?

*10.1.5  Reflecting on 'Agency' in the Classroom*

In this study I defined agency as having the possibility of acting in a way which can shape and influence events, relationships and one's world, which is an emergent property arising from the interaction of the potentially agentic characteristics of the individual and the enabling or disabling characteristics of their environment, and argued for the central role of communication in supporting this agency.  In the previous chapter I argued that AAC provision, Intensive Interaction and acknowledgement of the child's embodied multimodal competence all made distinctive and perhaps complementary contributions to children's agency.  It was argued that AAC contributes to the possibility of referring to concepts which are not easily physically demonstrable or deictically referenced in the classroom, Intensive Interaction fosters a sense of personal agency as someone who can act with intentionality and be responded to by others, and recognition of multimodal competence embraces and responds to the 'multimodal whole' (Jewitt et al., 2016) of what the child is already communicating.

Given that there is a close relationship between communication, self-advocacy and power for people with learning disabilities which persists into adulthood (Brewster, 2007), the concept of childhood agency may constitute an important lens through which classroom practitioners might view communication teaching for disabled children.  To some extent it appears that staff in Purple Class oriented towards

agency as a long-term goal: for instance, in Chapter 5 Lizzie (class teacher) remarked that it was important for the children to learn to choose desired items because otherwise carers in adult social care would make the choices for them.  Thus, practitioners might reflect on the following questions relating to agency in their own settings:

- How do we feel about the concept of childhood agency within the classroom and its use as a guiding principle for communication teaching? Are there concerns that providing the vocabulary to refuse, resist, or pursue goals which are divergent from teacher-led agendas will have implications for classroom management?
- How do we feel that 'agency' relates to speech functions (requesting an object, requesting an action, gaining attention, commenting, social convention, rejecting/protesting, responding, requesting information, phatic communication)?  Do we associate agency for disabled children with some speech functions more than others, such as the ability to request objects?
- How do we orient to the 'agency' we believe will be necessary for the children as disabled adults?  In what ways do we want them to be able to influence events, relationships and their worlds?  How does this translate into the here-and-now classroom context, and how might children be enabled to exert influence and act with agency in simple ways in the classroom which could form a basis for future more complex expressions of agency?

In summary, in Section 10.1 I argued for multiple implications arising from the current study which could constitute a springboard for reflection for classroom practitioners.  However, as discussed in relation to peer interaction (Section 10.1.3), it is not always within the remit of a classroom practitioner to implement changes in the classroom where current practice is enacted within parameters set by school management, policy, cultural/institutional and curricular considerations.  In the two sections which follow, I consider how the findings of this study might speak to those

who are in a position to effect change at these levels such as school leaders (Section 10.2) and policy makers (Section 10.3).

## 10.2    Implications for School Leaders

In this section I explore the possible implications arising from this study for school leaders who are in a position to effect change in school policy, specifically the rationale for 'Total Communication' and the approach taken to Augmentative & Alternative Communication in the school's communication policy.

For school leadership teams, I would suggest that it is important to reflect critically on how teachers are encouraged and equipped to deliver communication teaching within that setting.  If the school describes itself as a 'Total Communication' environment as the current one does, then it is necessary to be clear about why multiple forms of AAC are introduced and whether the intention is for students to permanently draw upon them all, sometimes recasting the same message through multiple modes, or to eventually specialise in one, thereby deepening and extending their vocabulary in their preferred AAC form.

Critical reflection is also needed on communication 'packages' which are bought in as pedagogical commodities in terms of resources and training (PECS, Makaton, Intensive Interaction) and how they sit alongside each other as well as their implications and limitations: for instance, the tendency of PECS to position children with autism as primarily motivated by requesting and tangible rewards has potential to become a self-fulfilling prophecy, whilst Makaton requires a significant level of investment in staff training in order for staff to memorise an extensive repertoire of signs and become fluent signers beyond the small number of high frequency classroom signs.  The typical enactment of snack time in Purple Class, which as illustrated previously in Table 7 involved the relatively consistent privileging of the PECS/speech combination for requesting and Makaton/speech for everything else, does not appear to be easily explicable by reference to any of these approaches in isolation.  It might, however, point to the possibility of classroom practitioners being

caught in a confusing interface between differing pedagogical perspectives: PECS and Makaton are marketed as stand-alone panaceas for communication disorders by their authors; Total Communication suggests that such approaches should be mixed eclectically according to the needs of the individual; experience suggests that the children are already very adept at making meaning through non-symbolic embodied means; yet as Barber (2011) notes, the acquisition of Makaton or PECS neatly satisfies the demands of the current educational climate for purposeful teaching, measurable evidence and straightforward data. In terms of clarifying the rationale for Total Communication, the concept of 'agency' provides a useful frame of reference, posing the question of whether the presence of multiple AAC modalities is increasing or diminishing an individual student's possibility of acting in a way which can shape and influence events, relationships and one's world.

I would suggest that it is also important for the setting as a whole to reflect on the *reasons* for using AAC, and whether it is considered to be primarily a vehicle for accessing the curriculum, for evidencing progress, for preparing for life as a disabled adult, and/or as I would suggest, to empower students to express their views, feelings, opinions, needs and to exercise as wide a range of speech functions as possible in the here and now.  Furthermore, in developing a communication policy for the school, thought should also be given to the extensiveness of the vocabulary provided to students through AAC and whether it is sufficiently ambitious to scaffold higher levels of conceptual development or is merely giving expression to concepts which are thought to be cognitively within the student's current reach.  In this regard, it would be helpful for school management to be aware of the full range of AAC options now available, including speech-generating devices, in order to make a careful and conscious choice: as I noted in Chapter 1, it has been argued by multiple authors that a device such as an iPad with an AAC app can potentially provide access to hundreds or thousands of symbols which could easily be used by staff to model new and unfamiliar vocabulary to support conceptual development (Light, 1997; Bedrosian, 1997; Jonsson et al., 2011).  This makes it potentially easier to access extensive vocabularies since staff are not obliged to print and laminate extensive and possibly unwieldy sets of symbol cards or commit to memory hundreds of Makaton

signs but merely to press symbols on an iPad in order to produce speech output.  As an example of how this might change the parameters of communication in Purple Class, Figure 86 (below) depicts a speech-generating device communication grid which could potentially expand the parameters of communication at the snack table.

*Figure 86: Exploring an expanded range of symbols for snack time*

This grid was based on my repeated observations at the snack table and the range of meaning making which students appeared to be already attempting.  It would allow students at the snack table to request their food and drink, greet others by name, say how they were feeling, comment on others around the table, express opinions on the food and drink, signal sensory distress such as excessive noise, indicate they wanted 'something else' and ask 'where is' something/someone.  This is of course not intended to be a definitive or comprehensive recommendation of the vocabulary set that should be provided at snack time, but merely a creative representation of the conversations which might become possible beyond repeated requesting if students were provided with wider vocabulary which was not within their current usage and which was modelled by staff usage of the device in naturally occurring contexts.

In this section I suggested that school leaders might use these findings as a springboard for reflection on the school's communication policy.  However, it is acknowledged that school leaders, like classroom practitioners, are subject to wider levels of influence including legislation and curricular guidance.  The implications for national policy makers in special needs education are therefore explored in Section 10.3.

### 10.3    Implications for policy makers in special needs education

Beyond the immediate school setting, the findings of this study also have implications for the wider community of legislators and policy makers who shape classroom practice in special educational settings.  Firstly, the concept of 'agency' may provide a useful grounding for thinking about the rationale of how and more importantly why we teach disabled children to communicate.  As I noted in Chapter 1, the QCA document *Planning, Teaching and Assessing the Curriculum for Pupils with Learning Difficulties: General Guidance* (QCA, 2009) suggests that special schools take the aims and values of the National Curriculum as a 'starting point for discussion' (p.5) and that they may choose to emphasise core skills such as communication in their timetable whilst 'treating other material with a lighter touch' (p.15).  It was also noted that some alternative curricular frameworks such as Lacey's (2011) framework

of a *pre-formal, semi-formal* and *formal curriculum* take a more developmental approach to the education of children with learning disabilities with an emphasis on communication and cognition rather than discrete curriculum subjects.  From a rights-based perspective, it would seem important that the development of communication and agency are seen as interwoven foundations of special education: for instance, Article 13 of the United Nations Convention on the Rights of the Child refers to the 'freedom to seek, receive and impart information and ideas of all kinds … through any media of the child's choice'.  This points to going significantly further than providing children with symbols and signs to make requests: to recognise and enable the agency of minimally verbal children, it is necessary to ensure that they also have the means to refuse, reject, question and much more.  I would suggest that the concept of agency could usefully underpin a curricular framework for children with learning disabilities and minimal speech which would support classroom practitioners and school leadership in developing a more rights-based approach to communication and AAC (Brady et al., 2016). For instance, it is possible that the enactment of snack time (Chapter 6) might have looked significantly different if practitioners were operating within a curricular and pedagogical framework which stressed children's rights to learn to communicate refusal, to ask for alternatives, to select one's preferred mode of communication for an interaction, and to convey one's views and opinions.  Without such a rights-based framework, the risk is that practitioners simply adopt the pedagogical underpinnings of imported 'packages' such as PECS which can have the effect of positioning disabled children primarily as 'requesters' and staff as gatekeepers to tangible rewards (Brewster, 2006).

The second implication of the current findings for policy makers, I would argue, is the need to critically re-examine the trend towards increasing numbers of children with EHCPs being educated in specialist settings which was detailed in Section 1.2.  Whilst the pedagogical, political and philosophical dimensions of debates around 'inclusion' in education are complex (Miles & Singal, 2010; Cline & Frederickson, 2009) and beyond the remit of this study to unpack, I would argue that the findings of this study do point to certain challenges which arise when minimally verbal children are placed together with limited or no access to non-disabled peers. As Chalaye & Male (2011)

have argued, from a Vygotskian perspective it would be helpful for children in specialist settings to have access to peers who could be considered More Knowledgeable Others (MKOs) and who might scaffold more complex forms of communication, social interaction and play, yet in a setting such as Purple Class this scaffolding role falls almost entirely to adults.  As was the case in Purple Class, minimally verbal children with autism may be in small classes with a high ratio of adults to students, they may be grouped by ability, and there may be a naturally low level of peer interaction due to all students sharing similar difficulties with social interaction which are associated with the autism spectrum.  Literature which considers peers supporting the communication of children with disabilities frequently assumes the presence of non-disabled peers in an inclusive setting (Paden et al., 2012; Simpson & Keen, 2010; Garfinkle, 1996), and this makes it a challenge for classroom practitioners to support and develop peer interaction in such a setting.  As I argued in Section 10.1.3, there may be possibilities to further develop peer interaction between the five children of Purple Class at the level of classroom practice.  However, ultimately classroom practitioners might be better supported to facilitate peer interaction in a more inclusive setting with a broader range of abilities and disabilities.

## 10.4   This Study's Contribution to Knowledge

This thesis offers four distinct contributions to knowledge.

Firstly, the study contributes to existing AAC literature by beginning to unpack the complex relationship between AAC and the child's existing multimodal strategies for communication including eye gaze, facial expression or gesture.  This is an issue which is sometimes framed in clinical literature as a question of identifying idiosyncratic communication with a view to ultimately replacing it with AAC (Wilkinson & Reichle, 2009), but this study points to a more complex relationship.  It provides visual transcriptions depicting how AAC usage and embodied communication are interwoven in complex orchestrations of meaning making, and argues for critical consideration of the affordances and constraints of different ways

of communicating in different contexts which is consistent with the multimodal approach to the study of communication (Jewitt et al., 2016).

Secondly, this study expands the very limited existing literature on the relationship between communication and agency for disabled children (Olli et al., 2012), an important contribution as disabled children have been 'conspicuously absent' (p.655) from considerations of childhood agency both in Childhood Studies and the social model of disability (Nind et al., 2010). By taking a critical realist approach to agency which conceptualises it as *both* a phenomenon situated in relationships and *also* a manifestation of individual cognitive characteristics, it brings a distinctive perspective to literature which often stresses either AAC as a response to a medicalised model of disability or the need for a more responsive communication environment in studies framed by the social model of disability (Olli et al., 2012).

Thirdly, the study is original in that it investigates the roles of AAC and Intensive Interaction within a single classroom using ethnographic methods and the theoretical concept of 'agency'. Whilst it is common for these approaches to co-exist within a classroom in a special needs setting due to the popularity of the respective 'brands' and both approaches have been explored independently in literature, I was not able to find literature which explicitly investigated how they related to each other and to the wider communicative environment. This study argued that AAC, Intensive Interaction and recognition of existing multimodal communication competence all have the potential to make different but complementary contributions to facilitating student agency, as discussed in Chapters 9 and 10.

Finally, the study is methodologically innovative in drawing upon a hybridized framework incorporating elements of ethnography of communication (Hymes, 1972); Multimodal Interaction Analysis (Norris, 2004) and multimodal Conversation Analysis. Whilst previous classroom interaction studies have drawn upon various combinations of ethnography and multimodal analysis (Taylor, 2016; Flewitt, 2011; Heath & Hindmarsh, 2002) and the phenomenon of 'disordered communication' has been investigated with ethnography (Kovarsky, 2016) and Conversation Analysis

(Korkiakangas & Rae, 2014), this is the first time to my knowledge that ethnographic methods, Conversation Analysis and Norris' (2004) Multimodal Interaction Analysis framework have been drawn together in a hybridized framework. The benefits of this hybridized approach are more fully explored in Section 3.5.

## 10.5    Limitations of this Study

The first and perhaps most obvious limitation of this study is that it was conducted in one classroom in one special school with a small group of children, so the practice which was observed is not necessarily representative of classroom practice elsewhere. For example, a study in a school where speech-generating devices were in everyday usage may have yielded quite different findings as such devices often contain quite extensive pre-programmed symbol sets with wide-ranging core and topic-specific vocabulary which permits meaning-making across many or all functions of speech (Farrall, 2013). This in turn might have significantly shifted the parameters of the explorations of the nexus between AAC and agency.

Secondly, the study was time-limited in ethnographic terms as I spent only six weeks (one half-term) in the classroom observing the children. If it had been possible, negotiating a longer period of fieldwork would likely have been instructive in many ways: for instance, given that progress and gains in communication happened in minute steps at a relatively slow pace for the children of Purple Class, a more longitudinal study might have enabled me to better reflect on the acquisition of new Makaton signs, symbol cards or spoken words as the Speechome Project did (Roy et al., 2006). It might also have allowed staff participants to become more relaxed and comfortable with the presence of a video camera in the classroom and to open up more about their reflections on classroom practice, and this need to spend time building familiarity and rapport was perhaps something I underestimated as an inexperienced researcher. However, overall my fieldwork was 'time intensive' rather than 'time extensive' (Knoblauch, 2005) as it generated significant amounts of video data to rewatch and reflect upon long after the period of fieldwork had ended.

Thirdly, the study did not address the role of 'challenging behaviour' as a communicative strategy in the children's classroom multimodal repertoires. Behaviours occurred during fieldwork which included screaming, pinching, lying on the ground and non-compliance with requests or activities, and much could have been written on the functionality of such behaviours through the lenses of agency and communication (Dreyfus, 2006).  That I did not address the implications of these incidents was less through conscious choice of analytical focus and more a product of my brief time in the field, which led to a reluctance to gather video data or fieldnotes or question staff about these incidents for fear of insensitivity or intrusiveness.

Finally, because the study was framed primarily around communication in Purple Class, my research with family members in the home environment was limited to only one visit, where the child was present in some cases but not others due to parental preference for conducting the interview during school hours.  More extensive time spent in the family home observing family interactions *in situ* would have yielded further insights about how the children communicated in familiar and relaxed atmospheres.

## 10.6    Suggested Directions for Future Research

I would suggest that the field of AAC research could benefit from more qualitative, ethnographic studies which seek to unpack the 'black boxes of classrooms' (Skukauskaite et al., 2015, p.15). Clinical studies have documented many times perceived 'problems' such as students and staff disuse of implemented AAC systems, students continuing to prefer embodied communication, and the difficulties of implementing peer interactions involving AAC.  However, to really understand the complexities of how such phenomenon occur much more ethnographic research is needed to interrogate how interactions unfold moment-by-moment rather than attempting to quantify their outcomes.  This study points to the possibility that ethnographic approaches generate findings which are beyond the reach of quantitative efficacy evaluations of individual 'interventions'.  They might highlight, for example, the complexity of multiple 'interventions' co-existing in the classroom and the role of a multitude of factors which are not normally accounted for in

controlled clinical settings such as individual preferences for certain types of interaction and ever-changing constellations of activities, artefacts and available interactional partners.  It would also be useful for qualitative ethnographic studies to examine the use of more 'hi-tech' forms of AAC such speech-generating devices as these constitute a rapidly expanding market in the field of AAC and are soon likely to become widespread in classroom use.

I would suggest also that the field of special needs education could benefit from further research on multimodality and the concept of 'Total Communication Environments' in order to clarify our rationales as practitioners for using multiple modes with minimally verbal children in the classroom.  The findings of this study suggested that staff were caught in a difficult bind between competing theoretical and pedagogical perspectives where 'Total Communication' was sometimes interpreted as requiring the same message to be recast through different modes multiple times, resulting in student frustration and no easily identifiable gain in terms of communication or agency.  Inevitably, multiple modes *will* exist in any classroom, and this was certainly the case in Purple Class where some students appeared to demonstrate preferences for Makaton, some for visual symbols, and some for the more embodied phatic communication seen in Intensive Interaction.  However, further critical analysis is needed about whether the goals of self-advocacy and agency are better served by teaching children to recast the same message through both Makaton *and* PECS (modal breadth) or conversely by teaching a student an extensive vocabulary spanning multiple speech functions within one mode (modal depth).

A further under-researched area in the field of AAC in particular is the emic perspective of parents.  Clinical literature may decry the lack of parental 'buy-in' (Lindsay, 2010) or relative lack of enthusiasm for interventions which are seen as desirable in the educational setting, but genuine dialogue is needed in order to appreciate the variations between the multimodal repertoires of students at home and school.  This study suggested that differences between the two settings may include high levels of parental skill in reading the meaning of idiosyncratic

communication and interpreting multimodal behaviours, and the free availability of artefacts around the family home which support children in making their meaning clear. Attempts to transfer AAC which simply recasts these existing communications through symbols may be less motivating for families than AAC which addresses their own self-identified areas of concern about their children's communication such as the ability to be specific about the source of pain or discomfort. Further qualitative research is needed in this field in order to fully understand how parents feel about the potential role of AAC in family life.

Finally, it is suggested that further research needs to be conducted around the selection of vocabulary for AAC users who do not have the means to self-select their own repertoire. This question goes to the heart of deeper issues around agency, self-advocacy and self-determination of people with learning disabilities who can be particularly vulnerable to institutional control and imbalances of power contained therein. However, with the exception of Brewster (2007) I was able to find very little research considering AAC vocabulary selection from a critical perspective of power relations. Possibilities include the use of environmental inventories or communication diaries to document the individual's specific communication needs (Yorkston et al., 1988); the compilation of standard word lists based on observations of typically developing age-matched children (Fallon et al., 2001); and the consultation of stakeholder focus groups comprised of literate AAC users who are capable of giving feedback on the relative usefulness of the vocabulary provided (Bornman & Bryen, 2013). A further complex dimension to the issue of vocabulary selection is the Vygotskian perspective on the mutual relationship between thought and language: family consultations and environmental inventories and diaries focus on recording existing multimodal behaviours and motivations which might inform AAC. However, a lack of demonstrable orientation to speaking of, for example, past or future events may be a consequence of difficulty conceptualising such temporal frameworks due to the lack of language as a tool rather than a pre-existing cognitive difficulty with the very concept. Further work is needed to explore whether basic and limited AAC provision is an accurate reflection of the person's pre-existing cognitive level taking a more Piagetian developmental perspective, or whether it

contributes it by limiting conceptual possibilities through lack of language from a more Vygotskian sociocultural perspective.

## 10.7  Final Reflections

*Feel a bit sad that tomorrow is my last day in Purple Class.  I feel an extraordinary sense of connection to those five children.  I think I have looked deeply at them, both physically (looking deeply into their eyes during Intensive Interaction) but also figuratively - I have opened my eyes and really seen them, who they are, what they care about, what their world might look like (a little bit).  That creates an amazing connection with another human being which I never experienced as a teacher because I was always busy, running around, meeting objectives and getting work done and following lesson plans and getting results.  This meant that 'misbehaviour' was a problem that caused stress and challenge and needed squashed because it was getting in the way of achieving lesson objectives.  When you're not following a lesson plan and you're just hanging around with a video camera and no particular goal these 'misbehaviours' become just fascinating insights into the child's world, what they value, what they care about, why they're rejecting the activity on offer.* (Reflective Journal, 3 February).

Being able to spend time 'hanging around' with the staff and students of Purple Class was a privilege for which I am deeply grateful.  Making sense of the fleeting moments of interaction which I observed and videorecorded was challenging academically in terms of working with varied theoretical frameworks to interrogate agency, communication and autism, but also personally in terms of reflecting on the complex intersection of my research with my previous experience as a classroom teacher and my ongoing experience of parenting two children with autism. For both my own children and the five child participants in this study, it is my hope that they can continue to develop and discover new ways of shaping and influencing events and relationships and the world which they inhabit; and that this will be supported by the provision of enabling communication environments which both recognise their existing multimodal competence *and* provide well-planned AAC opportunities tailored to their individual aptitudes and preferences.

**WORD COUNT: 87,972**

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# APPENDIX A: RECORD OF VIDEO DATA COLLECTED

**NUMBER OF VIDEOS: 134**
**TOTAL LENGTH OF FOOTAGE: 6 hours 25 minutes**

**Jan 5 Group a.m.(08:57)** - Katherine goes round group (no Thomas) asking them to choose picture of their classmate and give it to them to stick on the board.  There's very nice close up footage of Anna interacting multimodally with her, Albert waves, Dominic gives TA nice eye contact and does leg slapping, Luke is involved sometimes but also has challenging behaviour. The bit with Katherine and Anna (up to 2:45) shows Anna partially resisting attempts to make her repeatedly choose a name from the basket – turned away, pushing Katherine's hand away, but also doing the minimum possible.

**Jan 5 Anna Chocolate (01:18)** - Anna asks Katherine for chocolate in lots of different ways - pushing her towards cupboard, pointing, lifting Katherine's hand, eye contact, verbalising chocolate.

**Jan 5 Snack a.m.(08:46)** - Frances does snack time, there is PECS, verbalising, reaching (Anna) and a little Makaton (Albert, more).  A little bit of subversion – e.g. Anna trying to reach out and get some before it is her turn, Albert requesting crisps just after he has had marshmallows, Dominic reaches out his plate and shakes it in front of Frances to show he wants a turn, Albert reaches inside the folder to try to find the marshmallows PECS card which has been put away because there is none left.

**Jan 5 dinner song (03:25)** - Everyone except Thomas doing dinner song.  There was a point towards the end when Katherine turned Dominic round and he became a bit engaged with her.

**Jan 5 afternoon song (04:00)** - Frances leads afternoon song, they choose pictures of each other, some nice moments where Luke imitates 'oy' with hand in the air at the end.

**Jan 5 music (06:25)**- Katherine leads music session, everyone (except Thomas) invited to choose an instrument and play it along to the music.  The main aim of the session is to familiarise them with new symbols for instruments which they haven't seen before so they're just learning to associate the symbols.  There is also some imitation work playing in a circular movement like Katherine for example.  Frances is gathering evidence and taking photos.  Frances teaches Luke to play the triangle by demonstrating at one stage.  He is pleased when he can play it and glances at her evefry so often.

**Jan 5 music part 2 (04:45)**- in this part students are given a selection of instruments on PECS card to choose from.  Anna can be seen repeatedly tapping the card she has chosen for emphasis.

**Jan 5 snack p.m. (03:28)**- Katherine leads snack time.  Everyone present except Thomas.  Anna can be seen reaching and also verbalises drink clearly.  Albert uses Makaton for biscuit.  Anna reaches for jug and just drinks out of it, Albert signs 'please' to get the folder to come to him.

**Jan 6 dinner song (02:50)**- Lizzie leads dinner song.  There is pointing, taking cards, verbalising, eye contact, movement of arms by Anna.  There is also a nice moment of peer-peer interaction between Albert and Thomas

**Jan 6 Anna Intensive Interaction. (02:53)**  A video with me and Anna doing I.I.  I'm not visible.  The lighting is quite dark unfortunately because she was really responsive giving me lots of eye contact and at one point a hug.

**Jan 6 Afternoon Song (08:41)** Lizzie leads afternoon song.  Some footage isn't great due to bad positioning but some interesting moments: Dominic repeats 'good boy' twice (praise of Albert) but it goes unnoticed; Luke has a dilemma (he takes two cards instead of one but staff insist usual procedure is followed so he has to put one back in the box); Luke also shows enthusiasm by continuing to go 'lalalala' after chorus has finished (he also showed enthusiasm for this song yesterday but raising hand in air).

**Jan 7 Albert Anna Computer (01:03)** Anna came and sat beside Albert at computer (this happened just before filming). Albert is busy fiddling with the computer and accidentally turns Bear Hunt off. Anna looks interested at times and bored at times, twiddling her hair.

**Jan 7 Albert Anna Computer 2 (03:09)** Bear Hunt is put back on by Jacqueline and Anna and Albert watch it closely. Albert interacts physically, pointing at the screen and shaking his hands in excitement. Anna repeats 'uh-oh'.

**Jan 7 Albert I.I. (03:58)** Albert is on one side of the bookcase and I am on the other. He's feeling the textures in 'That's not my fairy' book. I do II with him, joining in his noises and enjoyment of the textures.

**Jan 7 Albert Painting (02:24)** Albert is really engrossed in painting a bear brown and sticking on pieces of paper. He's following Frances's instructions by physically doing what she suggests. At one point he gets up and reaches for the camera and is told it's for grown ups. He sits down again. There are elements of multimodal demonstration of how work should be done by Frances (Makaton, gesture, demonstration, artefact manipulation) and interesting to see how the task is explained to Albert and how he reacts to this.

**Jan 7 Bear Hunt (04:07)** Video of Luke and Albert watching 'Bear Hunt' on interactive whiteboard (later just Albert as Luke is having behavioural moment on the floor). Albert watches intently, shaking his arms at one point (excitement). Not a great video position wise though.

**Jan 7 Anna Book (01:00)** Anna lying down studying a book about mermaids and a fish in the book corner. I try to interact with her through speech and Makaton but don't get a response.

**Jan 7 Anna Guitar (02:07)** Anna is interacting with the guitar, still lying down in book corner. Again I try to interact with her but she is engrossed in the guitar. When I copy a sound she makes it isn't acknowledged.

**Jan 7 Anna I.I. (01:01)** We are waiting for our turn to go into soft play and I do a few moments of II with Anna. She responds really well to having sounds copied and gives me good eye contact. A sequence of sounds are exchanged.

**Jan 7 Anna Thomas Pole (00:47)** Anna is twirling round the pole outside and Thomas wants to join in. There is an exchange of some sort between them (eye contact, embodied) and they twirl together for a few seconds before Anna leaves. She returns to the pole as soon as Thomas is gone.

**Jan 7 Anna painting (02:22)** Anna is painting a picture of a bear and sticking bits of paper on. She does not seem interested in the painting bit (body turned away, hand on head, barely participating but becomes more involved in the gluing bit. There is concern among staff to gather evidence that she is doing it, getting a photo of the moment when she did look down at the page, etc. There is multimodal evidence of Anna's ambivalence about the task – turned away, twiddling with hair, resisting efforts to make her paint, but then gets more involved in gluing, then resists by pinching.

**Jan 7 Group a.m. (20:01)** I chose to focus on Anna. She sat in usual position (sideways, head on one hand, twirling hair, looking bored). She was happy to take part in receiving card and placing it on board and also giving one to someone else but that was it. At around 7:30 Dominic surprises everyone by saying 'morning'. Staff (Lizzie and Jacqueline) react very positively to this. Dominic slaps his hands on his thighs and raises his hand in the air, making a happy vocalisation. Jacqueline says 'that's a wow' referring to the little 'wow' notes that are stuck on the board. When Dominic takes his card he doesn't know who it is until Jacqueline says 'it's Jacqueline' and then he knows who to give it to. Just after this Anna becomes a little more animated, making a row row row your boat movement with Jacqueline and then hugging her. At around 8:58 Anna says 'teacher' twice. There is much excitement about this. When the tape announces it's warm up time Dominic jumps up and shouts - he seems excited by this. During warm-up time Dominic, Albert and Luke show an interest in participating and copying movements at various times which is the first time I've seen this - normally warm-up time isn't well

taken-up.  Anna can be seen cuddling up to Lizzie, smiling and holding her hand.  At one point Dominic has his fingers in his ears.  At 16:05 I change position to focus on Luke.  There is a nice little section where Luke is totally focused on floating the scarf around and is giving Frances great eye contact, following her.  This footage is framed by a simultaneous scene with Anna and Frances (I was filming in between them but both are partly visible) where Anna refuses the scarf by vocalising, pushing it away.  Staff are excited by Dominic singing along to the tune but I didn't get footage of that, nor can he be heard on the video.

**Jan 7 Dominic Bubble Tube (01:03)**  Dominic is by the bubble tube, sometimes looking at it and sometimes pulling faces at himself in the mirror.  I am trying to interact with him but there is not much obvious sign of engagement.  Towards the end he lets out a shriek (happy) and slaps his thighs.

**Jan 7 Dominic Painting (02:03)** Unfortunately camera angle cuts off table so you can't see painting activity.  However the really nice bit is some spontaneous I.I. - he started making noises, Frances copied him and then he put his face up really close to hers at one point.  There is some lovely footage of how engaged he was with her here inc. eye contact and proxemics.

**Jan 7 Thomas and Albert Bubble Tube (03:36)** Thomas and Albert both share the plinth at the bubble tube.  There isn't any obvious interaction (eye contact, vocalisation) but they are sharing and negotiating the space together.  Dominic comes up in the middle and gives me a hug from behind.

**Jan 7 Thomas Computer (03:17)** Side view of Thomas typing at computer.  I copy some of his noises but there is no obvious sign of engagement.  He enjoys running his hands across the computer producing strings of letters.  I show him how to change font size and colour and he starts doing this independently.  He is good at browsing through folders to find files.

**Jan 7 Thomas Luke Chase (00:44)** Thomas and Luke engage in a little game of outdoor chase during outside play. Thomas seems a little unwilling at first, keeping him at a distance although he is smiling, calm and relaxed.  When Luke runs away Thomas follows him over and interacts a little more, suggesting he was up for it.  The next time this type of interaction happened (I wasn't filming) staff moved in to stop it.

**Jan 7 Thomas Luke Trampoline (00:59)** Interesting watching Thomas and Luke negotiate use of the small mini-trampoline.  Thomas appears to gently push Luke off, who in turn takes him by the coat and removes Thomas from it too.  Luke then reclaims the trampoline for himself.  Again Luke is looking at me and aware of my watching them.

**Jan 7 Thomas painting (01:24)** Thomas is painting and gluing his bear.  Frances is interacting with him. He gives her eye contact sometimes, especially during ripping paper.  He seems alarmed at one point, grabbing her hand and vocalising. She interprets this as concern over the humming noise of the bubble tube and reassures him.  Towards the end there is discussion between Frances and Jacqueline about whether a photo was taken as evidence.  Jacqueline says she got one of him using scissors.  Thomas jumps up and runs from the table at the end of the session.  I stopped filming at that point.  There's a bit of multimodal teaching with her getting him to rip and cut with scissors through demonstration.

**Jan 7 Snack a.m. (11:35)** Focus on Albert, with Anna visible too.  Albert requests raisins via PECS and also Makaton when prompted to do so.  Albert finishes his raisins and waits patiently for his turn to come around again.  It is his turn but staff are chatting.  He tries subtly to initiate his turn in two ways - pushing his plate across the table and reaching for the PECS book so he can make a choice.  Albert waits patiently for his turn again.  Jacqueline is gathering evidence of snack-time targets in a folder.  When Albert's turn comes round for the third time he does a lovely multimodal interaction with Lizzie - there is PECS, tapping the PECS card, eye contact, Makaton.  When he gets what he wants he raises both hands in a kind of hurray gesture.  In the background, Anna seems to be cuddling up to Jacqueline but then bites her hard on the arm.  She is told off loudly and this upsets Albert a little, he is holding his ears and rocking.  When Anna does her PECS she is encouraged to vocalise please and does it very clearly.  Lizzie and Jacqueline are both delighted.  There is further discussion of why she bit. When the break tray is taken away to the sink, Anna seems very annoyed, shrieking loudly, turning

around to reach towards it.  In the background Thomas can be heard getting upset about this - he doesn't like Anna making noise.  Albert is upset at this and again holds his ears.  A cup is put in front of Albert ready for juice to be poured in but Anna takes it and puts it in front of herself.  She is told off for this: 'that's Albert's!'  Albert doesn't want to drink juice because he will have to take his hands off his ears so he tries to lift the cup with his mouth only but gets told off for that.  There is further discussion over why Anna bit.  Frances thinks maybe it is frustration that she is starting to talk and can sometimes have her needs met that way and sometimes can't but Jacqueline disagrees, saying she was just eating her apple.

**Jan 12 Thomas Anna Tent**: **(00:52)** Anna and Thomas are lying together in the tent looking relaxed. Luke is at the entrance, not sure whether to go in or not.  He engages in some interesting self-talk, the intonation sounds conversational.

**Jan 12 Anna Luke Tent (00:38)** It is group time (you can hear music playing in background) and Jane is trying to persuade Anna and Luke to come out of the tent and join group time.  They don't want to. Luke signals no with Makaton at one stage.  They move around each other.  There is a sense that they are playing a joint game of resisting Jane's request and enjoying it although they don't actually interact in any obvious way.

**Jan 12 Albert Jane Drawing (03:04)** Albert and Jane are opposite each other at a desk where Albert has chosen to do mark-making during 'choose time'.  Albert adds a bit and then Jane.  He is possibly encouraging her turn taking through pausing his own turns and sometimes establishing eye contact. Sometimes he looks right at her and smiles.

**Jan 12 Albert Jane Drawing 2 (02:09)** Similar to above.  There is a lovely moment of looking right at her and smiling.  Luke can be seen joining in in the background.  There is a bit towards the end of the clip (1:30-2:00 approx.) where the interaction now becomes more complex: putting dots, then putting dots in the corner of each page (Jane mirrors), then drawing circles.  It kind of shows progression from the first clip.

**Jan 12 Snack a.m. (01:46)** Anna verbalises apple and thank-you.  Luke reaches for orange but Jane puts her hand on it and makes him ask with PECS.

**Jan 12 Snack a.m. part 2 (00:26)** Dominic requests pear and Frances correctly protests that he's not going to eat it (he had previously asked for apple and after playing with it a bit it went in the bin. However he's given the pear anyway (same thing happens to it).

**Jan 12 Snack a.m. part 3 (00:30)** Luke is asked whether he wants juice and is expected to answer with Makaton.  He points to PECS book and seems to want to use it but staff don't understand and he becomes a bit upset.  He ends up Makaton signing 'no'.

**Jan 12 Snack a.m. part 4 (00:50)** Dominic asks for crisps using PECS.

**Jan 12 Snack a.m. part 5 (01:58)**  It is nearing the end of snack time and Jane and Lizzie are chatting. Luke opens the PECS folder and starts to take out items such as chocolate, popcorn, yoghurt, etc. and places them on the front cover of the PECS folder. There is also interaction between Luke and Dominic - Dominic is holding Luke's wrist as he does it, not quite sure what's going on here.  Luke does persevere with 'yoghurt' on and off throughout the clip, and it ends with Lizzie saying 'we could buy some yoghurt actually if we go snack shopping'.

**Jan 12 Luke now next board (00:42)** Luke is rearranging the now/ next board.  He creates 'playtime/ dinnertime' then 'playtime/reflection time'.  He can be heard getting told off right at the end.

**Jan 12 Albert Thomas hold hands (01:16)** In outside area, Thomas takes Albert's hand.  They walk across the outside area together.  Although Thomas seems to be pulling Albert, both seem happy with the contact.

**Jan 12 Frances Albert interaction (04:18)** Frances and Albert have a lovely interaction including him hugging her, taking his hat off and putting it on her head, and initiating a game of chase with her.

**Jan 12 Frances Dominic I.I. in tent (00:58)** Frances is doing vocal imitation of Dominic's loud noises. They seem very close and have a cuddle.

**Jan 12 Frances Dominic I.I. in tent part 2 (01:34)** Frances is giving Dominic squeezes and encouraging him to verbalise 'squeeze'

**Jan 12 Luke put them back (00:23)** Luke is told 'put them back or there will be no dinner'.  (He has been rearranging the symbol cards on the now next board again).

**Jan 12 Anna jump (00:17)** Jane trying to encourage Anna to jump in P.E. but she doesn't.

**Jan 13 Group a.m. (01:12)** Thomas takes Dominic's card, understands and gives it to Dominic who puts it on board.

**Jan 13 Luke Cave (00:39)** Luke climbs up the cave a bit and can't get down.  Frances encourages him to say 'help' before helping him down.

**Jan 13 The Basket Swing (14:19)** for first two and a half minutes Thomas and Anna are sitting on the swing together.  She is vocalising sometimes and I'm interacting with her.  Thomas leaves so Anna has the swing to herself and she lies down.  I push her and when I ask is that nice she laughs and shakes her legs up and down, smiling and vocalising.  Dominic comes over and climbs into the basket for a while.   He leaves and Thomas comes and gives Anna a push.  At one point when he stops she lets out a high-pitched squeal but he doesn't go for her as he usually would.  I ask her does she want more and she approximates the word 'more'.  Thomas climbs in beside her for a while.  Then he climbs out and Luke climbs in - she bursts out laughing.  After he gets out there is some final footage of Thomas pushing her again.

**Jan 13 Thomas I.I. Blowing Raspberries (02:36)** Thomas enjoys Frances imitating his raspberry sounds at snack time.  Thomas looks very animated and smiley.  He is giving her eye contact and trying out different sounds.  Frances encourages Thomas to Makaton sign more.

**Jan 13 Thomas Dominic Bubble Tube (00:51)** just before I started filming Thomas and Dominic appeared to be working together at the plug behind the drawers, trying to get the bubble tube plugged in again (Lizzie had just unplugged it before leaving the room).  As the filming starts Dominic moves to the bubble tube in anticipation, Thomas continues to work at the plug.  Then he succeeds and joins Dominic at the tube.

**Jan 13 Albert Photos (03:10)** Frances and Albert are sitting side by side.  Frances is cutting out photos of the horseriding day last Thursday.  Albert is extremely interested and interacts with Frances to show he wants more photos to look at.

**Jan 13 Luke Helicopter (02:09)** Luke and I interact with some wooden shapes, making noises.  Some nice eye contact and hitting objects together.

**Jan 13 Snack pm (03:31)** Anna verbalises water and chocolate.  Luke wants to skip the initial choice (water or juice) and go straight to chocolate but he hasn't been provided with any way to indicate this. He uses 'please' (Makaton) several and looks at Frances which is effective as she guesses his intent but tries to insist he makes the first choice (water or juice) to which he responds 'no' in Makaton.

**Jan 13 Goodbye (02:57)**  goodbye song.  Anna verbalises 'goodbye' quite forcefully!  Albert interacts well with Frances with proxemics, eye contact, waving goodbye.  Dominic verbalises 'bye bye' I think.

**Jan 14 Group a.m. (14:31)** I shot this with a static camera for a change.  It focuses mainly on Anna and Dominic.  At around 8 minutes Luke stands up and gives Anna her card which is quite nice.  At just

before 10 minutes Dominic interacts with Jacqueline a bit.  Thomas and Luke are holding hands at one point but unfortunately not within view of the camera.

**Jan 14 Thomas work (02:47)** Lizzie does work time with Thomas in the water tray.  He's supposed to be colour sorting the teddys putting all the yellow ones into his fishing net, but he resists this and does general fishing and sensory water play instead.

**Jan 14 Luke work (02:05)** Lizzie does work time with Luke in the water tray.  Again he's supposed to be colour sorting teddys but is more interested in general water play.  However they have a few moments of splashing water at each other towards the end which he enjoys and responds to by laughing/ eye contact/ movement.

**Jan 14 gluing (01:59)** Anna and Luke are gluing sticks onto a piece of paper.  (Bear Hunt)

**Jan 14 gluing 2 (00:45)** Jacqueline interacts with Thomas in the foreground.  Luke and Anna can be seen in the background.  They are gluing sticks (Bear Hunt).

**Jan 14 Thomas gluing (01:49)** Some nice interaction between Jacqueline and Thomas in the foreground.  He is smiling and giving eye contact.

**Jan 14 Luke gluing (02:13)** the others have gone out to soft play but Luke has been kept behind to do more gluing.  It is just him and Jacqueline in the room.  He is engaged and co-operating at times but also a little restless and standing up sometimes (aware of where the others are?)  This is a maybe.  There's kind of two things going on at the same time – Jacqueline engaging him in the sticking, Luke also partially protesting about wanting to go to soft play.  The footage is very good quality, the question is where it fits theme-wise.

**Jan 14 Thomas chasing (01:50)** Jacqueline chases Thomas around the soft play area.  He's loving it, laughing and encouraging Jacqueline to continue.  Could analyse how he achieves continuation of the game - e.g. by running right past her to entice chasing, stopping and checking where she is, etc.

**Jan 14 Thomas chasing 2 (00:48)** Jacqueline continues to chase Thomas around soft play.

**Jan 14 snack p.m. (03:32)** first time around it is a choice of orange or blackcurrant.  Thomas doesn't choose with PECS but when Jacqueline gives him the two bottles to choose from he chooses orange.  Albert Makaton signs orange and please.  Second time around it is chocolate buttons. Thomas is excited when he sees this and is willing to use PECS.  Jacqueline physically prompts him to sign please.  Albert points to the PECS card but Jacqueline requires him to Makaton sign chocolate as well.

**Jan 14 snack p.m. 2 (00:47)** camera focuses on Thomas only as he gets more juice.  He is happy and smiling.

**Jan 19 Luke dinner song (00:45)** Luke spontaneously gets dinner song card (not group time) and sits singing the song by himself.  He then produces Albert's now/next book and examines it.

**Jan 19 Thomas reading (03:16)** Thomas is reading the Bear Hunt book with Frances (a literacy event to gather evidence for literacy folder).  He doesn't do the matching activity she had planned but still enjoys sharing the book

**Jan 19 Snack a.m. (02:19)** Luke is asked what he wants.  He says 'raisins' but Frances doesn't seem to notice (focused on him doing it through PECS?)  So he is interpreted as saying 'no thank-you' because he doesn't PECS it and she moves on.  When she comes back to him he does do PECS for raisins and gets some.  Contrast with other video where he was encouraged to do Makaton but wanted PECS book.

**Jan 19 Thomas Albert Chase (01:12)** Thomas encourages Albert to chase him. They are both having fun. Lizzie intervenes, encouraging Albert to calm down. Thomas is disappointed and comes back later to restart the game.

**Jan 19 The Green Table (04:13)** Just before I started filming Anna had been on table when Luke came up and joined her. She said something that sounded like 'no no no' and got down shortly after that. The clip begins with Luke alone on the table. Thomas comes and interacts with Luke for a bit, looking like he wants to bring him down off the table (but not in aggressive way). Anna comes and stands watching Luke jumping on the table for some time but doesn't do anything. Then Dominic comes up and Luke jumps down on top of him (this seems to be a mutually agreed action as Dominic puts out an arm to catch him). Dominic climbs onto Luke' back and sits on top of him. Thomas comes along and pushes Luke' head to the ground (gently). Dominic slaps Luke gently on the back, similar to his thigh-slapping motion. I shift the camera around to check Luke' reaction, he is lying there smiling and enjoying the pressure on his back. Then he indicates he wants Dominic to get up (which he does) by starting to shift onto his hands and knees. Next, Luke climbs onto the table alongside Anna. Anna almost immediately gets down and Luke starts to turn around on top of the table. Luke looks down and sees Dominic nearby. He wants to jump down on top of him again (?) but Dominic doesn't seem interested, continuing to twirl around the pole. Luke demonstrates his annoyance by stamping his foot and crying. Luke resumes jumping on the table and then jumps off. Luke approaches Dominic and lies down in front of him, which seems like an invitation to sit on his back again. Dominic doesn't want to and so Luke climbs back onto the table.

**Jan 19 Albert reading (07:03)** Albert is reading Bear Hunt with Frances. (Literacy event to gather evidence for literacy folder). He wants to play with a yellow microphone. At times this is distracting and he loses interest in the story, at times it is incorporated into the story (e.g. where Frances does some of the sound effects through the microphone).

J**an 19 Anna somersaults (00:50)** Anna does somersaults in soft play.

**Jan 19 Snack p.n. (01:11)** Dominic says 'juice' but then PECS requests water so that's what he gets. Luke appears to ask for water but Frances seems to change mind and give him blackcurrant - was this because he then started handling blackcurrant card instead?

**Jan 19 group p.m. (02:21)** Luke chooses Anna card, gives it to her and says 'Anna'. Dominic taps me on the leg and I tap him back. Camera focused mainly on Dominic and Albert.

**Jan 20 Anna drawing (01:08)** Anna is colouring in an outline man with Jane. Jane is naming body parts and encouraging her to draw in the right places. She seems happy and engaged with the task. She puts her pen down and push paper away emphatically at the end.

**Jan 20 dinner song (02:48)** Anna chooses chips. Albert chooses burger. I noticed in playback Lizzie prompted him to choose burger. Why was that? Dominic also chooses burger. There is a moment of lovely interaction between Dominic and Jane. Luke chooses chocolate cake. He seems very interested in the dinner song choice board. Thomas chooses ice-cream. He seems slightly distressed (holding ears) and not very engaged during the singing. The little bit with Jane and Dominic is very nice, she copies his pronunciation of 'burger' and he laughs, looking closely in her face.

**Jan 20** Gathering Drum Thomas (04:38) nice interaction with Julian (Music Therapist) and Thomas over the gathering drum. Thomas is engaged and gives occasional eye contact. When Julian experiments with rubbing the surface of the drum Thomas starts hitting it again enthusiastically (to make Julian resume hitting?) When Julian finishes his song Thomas perks up and starts beating the drum (to make him resume?) When he brings the drum over to Anna and Dominic, Anna is immediately engaged and starts to bang it. There is a lovely moment when Dominic starts to beat the drum and smiles right at Julian. When Julian leaves to go back to the piano Jane is holding the gathering drum for Anna and Dominic to play. There are some nice moments with Dominic and Jane looking into each others eyes as he plays. When it comes to Albert he seems to be smiling as though pleased it is his turn, yet he keeps his fingers in his ears and plays the drum with his elbows instead.

**Jan 20 Sensory Room Albert (03:01)** Albert and Jane are interacting around the interactive flooring.  At times it seems as though he is inviting her to join him by looking at her and the way he is positioning his body.

**Jan 26 Luke Thomas Chasing (01:01)** Luke chases Thomas around soft play area.

**Jan 26 Thomas Lizzie Chasing (00:32)** Lizzie chases Thomas around soft play area.

**Jan 26 Anna Luke Soft play (00:36)** Luke joins Anna in her somersault place on the climbing frame.  She seems annoyed and possibly verbalises 'no no no' before letting out a loud shriek.  Luke climbs down again.  Lizzie had commented that he wanted to learn to do somersaults like her (not on video, see fieldnotes).

**Jan 26 Anna gestural II. (00:33)** Anna and Jane are sitting side by side just after afternoon group time.  Anna wants Jane to copy her movements (a kind of 'what' questioning gesture with a hand out to each side mainly).  Jane does so for a bit and Anna really likes this - eye contact - but Jane has to stop for a minute to talk to Lizzie.  Anna is annoyed and prompts her to restart by prodding her arm.

**Jan 26 Afternoon group time (06:07)** Luke sings along really well to hello song.  He selects the Anna card and gives it to her.  Anna chooses Thomas.  She is prompted to say Thomas which she does and also repeats the instruction 'give to Thomas'.  She eventually gives it to him but he attacks her as she returns to her seat.  Lizzie chooses 'Luke' and he is very engaged at taking his card and putting it on the board.  He seems to like people singing the song to him.  When he chooses 'Dominic' he says his name and everybody is very pleased.  Dominic chooses Jane and eventually gives it to her after some difficulty.  Luke is now looking around at the range of now/next symbols behind him.  He is particularly focusing on 'reflection' card.  Anna looks bored throughout.

**Jan 26 Luke Helicopter Game (02:59)** I play the 'chugga-chugga' game with the wooden helicopter on the floor with Luke.  There is great eye contact, vocalisation, smiling, etc. but video quality isn't great.

**Jan 26 reading corner (01:46)** Dominic is in the reading corner.  Anna keeps repeatedly crawling over and sitting her him, waiting a few moments, then crawling away and doing it again.  It may possibly be that she wants to claim the space but Dominic doesn't move (after I finish filming she goes to her second favourite place, the cave.

**Jan 26 Albert likes burger (00:41)** Albert chooses burger on the dinner song board.  He then points at it again when Jane gets distracted.  He gives eye contact, seems engaged, points at it a final time and Makaton signs burger at the end.

**Jan 26 Thomas Albert chasing (00:58)** Thomas and Albert are the only two outside.  Thomas wants to engage with Albert and keeps approaching him while he is on the trampoline but Albert is a bit hyper and just wants to bounce.  Later however there is a short game of chasing (Thomas chasing).

**Jan 26 Albert & Horse (04:05)** Albert is looking over Frances's shoulder at a picture of himself on a horse.  Frances asks 'who is it' and he points at himself.  He then wants to take the photo but Frances is reluctant.  There is a fleeting Makaton sign for please and then he takes it.  There is also a fleeting Makaton sign for horse as he sits down.  He takes the pen from Frances and traces round the picture of the horse.  He then starts tracing around his hands.  He wants Frances to trace around his hand so she asks him to sign help which he does (I think).  She does it once and then he Makaton signs 'more'.  She does it again and once more he signs 'more'.  When he is finished with this he starts colouring in the teddy bear's face on the other side of the page.  She directs him to draw eyes, nose and mouth on the bear.  When she says 'nose' he looks at her and points to his own nose.

**Jan 26 Albert Horse or Cow (00:53)** Albert brings a toy cow over to show Frances.  He Makaton signs horse (maybe thinks it's a horse?).  Frances explains that it's a cow and Makaton signs cow.  He copies the sign.

**Jan 26 Dominic Luke outside (00:52)** Dominic is sitting on Frances's knee facing her. They do a bit of I.I. Meanwhile in the background Luke is being picked up and cuddled by Lizzie. Luke comes running over and Makaton signs 'more'. Lizzie and Frances are impressed. Lizzie gives him more cuddles.

**Jan 26 Afternoon snack (10:02)** Dominic taps on 'apple' and says it too. Luke chooses banana and is encouraged to say it (he tries). Albert chooses apple, taps on it and then signs please. On his second turn Luke chooses banana again and is encouraged to sign more and say it - he does both. He is then encouraged to say 'more banana' and also to sign please. Later Luke is pointing and reaching for PECS folder although it is Thomas' turn - he is told to wait. Luke makes another selection of banana and is encouraged to say it and sign please, which he does. Thomas is often holding his ears throughout snack time because Anna is shrieking sometimes in the background. Dominic chooses marshmallows and tries to say it I think. Anna wants rid of what is on her plate, she first of all tries to put it on Thomas' plate but Lizzie sees this and puts it back, she then tries to hand it to Lizzie but is told she must eat it. Albert requests biscuit and Makaton signs please. Anna points over to the sink, possibly because she wants a drink. Anna and Albert ask for yoghurt.

**Jan 27 Anna II. (04:11)** I do I.I. (vocal imitation) with Anna. Quite a long extended 'conversation' which made me think of one of the staff interviews when they said it was like a 'real girly chat'.

**Jan 27 Luke Bear Hunt (02:59)** The camera focuses on Luke as they sit in a circle watching Bear Hunt on the interactive whiteboard. He is very engaged, joining in with the actions and watching carefully.

**Jan 27 Dominic fractions (01:41)** Jane is working with Dominic on matching up halves (semicircles) to make a whole. He is engaged at first helping with the sticking down but loses interest.

**Jan 27 Anna Bear Hunt (01:22)** Anna is working with Helen on colouring in a bear. Shortly before I started filming she was really engaged, repeating eyes, nose, mouth but she seemed to be losing interest in the colouring when I started to film. However the Bear Hunt was playing in the background on the Interactive Whiteboard and Helen started to recite along with it. Anna became very interested in her at this stage, putting her arm around her and gazing at her.

**Jan 27 Albert fractions (00:45)** Albert is doing the fraction matching thing with Jane. He complies but doesn't seem to be hugely interested. At the end he lifts one of the textured toys with the tweezer and places it on top of the whole he has made.

**Jan 27 Snack time (01:35)** Tried to film from a side angle to get Thomas and Luke for a change. Thomas has hand-over-hand prompting to hand over the carrot card, he wants to stroke Lizzie's hand and also has to be prompted to point at it. Luke chooses orange and tries to vocalise orange and please with a moment of eye contact with Lizzie. Albert reaches initially for the apple, then corrects himself and hands over the apple card. He rapidly establishes eye contact and Makaton signs please. Lizzie says 'please, good boy' and gives him the apple.

**Jan 27 Drink time (01:45)** Luke is invited to choose 'orange or blackcurrant' (on the front cover of PECS folder) but he wants something else and tries to reach inside folder. Lizzie blocks his access to inside and insists water or blackcurrant. He lets out an angry vocalisation and holds his head, goes to leave the snack table, establishes eye contact with Lizzie for a moment to check reaction, and then leaves. After filming had ended the result of this is that he wasn't allowed to come back to the table for more food.

**Jan 27 Albert and Helen (02:30)** Outside during breaktime Helen is playing 'If you're happy and you know it' with Albert. He is really loving it - eye contact, smiles, coping actions, engagement. When she finishes he Makaton signs more and pushes her backwards slightly - I don't think this is rejection but rather she is stooped over and he wants her to stand up straighter so the actions can resume. On the second rendition she invites him to choose the action, he claps hands to demonstrate that's what he wants. He has a brief spin around the pole and then comes back to Helen. He comes back - not clear what he wants - trying to reinitiate game? He claps three times and she copies his action. Then he

Makaton signs (I think it's 'know' from the song) but Helen asks 'sing?' with Makaton.  He Makaton signs more.  She asks 'what shall we do?  something different?' he is stamping his feet and looking at her.  He makes clucking noise with his tongue and she copies.  Then he Makaton signs 'more' again and she starts to sing.  She incorporates his previous action 'if you're happy and you know it click your tongue'.  She pauses after this verse and he Makaton signs 'more' to make her continue.

**Jan 27 Albert, Helen, Thomas (01:30)** Albert and Helen are marching.  He initiates a game of 'follow my leader' where Helen has to march after him.  Thomas comes up and touches him - I think it is friendly and he wants to interact - but Thomas is more focused on Helen.  Thomas reaches up and puts his arms around Albert's neck - it's so hard to tell what is intention is, his face does seem to be the grimace rather than the smile but the actions don't feel aggressive - and Helen intervenes to stop him.  Thomas continues to push Albert.  I start to think it is now aggressive, maybe he wants Helen to himself.  Thomas goes and spins around the pole a couple of times with Anna which makes her leave.  Thomas goes over and approaches Albert now, he is smiling and I think he does want to play but Albert runs away.

**Jan 27 Albert and Thomas (00:32)** some interaction between the two which I think is friendly, Thomas is smiling.

**Jan 27 Thomas Lizzie card (00:32)** Thomas hands over card to Lizzie during afternoon song.

**Jan 27 Anna Group time (01:32)** Camera focuses on Anna.  Unusually she is sitting straight facing the front.  She looks more animated than usual, smiling, laughing and bouncing up and down on her chair.  I wouldn't say she is focused on grouptime either though.  She glances briefly at Albert at one stage.

**Jan 27 Dough Disco (04:06)** Camera focuses on Luke and Dominic during Dough Disco.  It then pans out to include Anna.  Anna is vocalising, Luke looks at Jane.  Dominic and Luke are both putting bits of dough in their mouths.  Dominic is squishing the dough with the palm of his hand, Anna looks bored.  Lizzie gesturally indicates she wants Anna to return the dough to the tub by pointing at it and then pushing the tub towards her.  Anna says 'OK' and puts it back in, giving Lizzie eye contact.  Then Lizzie gets up.  Jane takes her seat, explaining with Makaton now we have finished dough disco Lizzie is going to help you brush your teeth.  However Luke has noticed that Lizzie is over in the corner rearranging the n/n board and he is transfixed by this.  He then turns back and pays attention to Jane.  She says slowly brush your teeth, he looks right at her and thinks and then he bares his teeth to show her.  She says 'good boy'. Lizzie calls Anna, saying 'Anna brush your teeth' and she says 'OK' and gets up and goes over.  Meanwhile Jane is asking Luke 'where's your teeth' and he is looking right at her and pointing to them.  Jane asks Dominic and he vocalises 'tee-' a few times.

**Jan 27 Pizza (04:42)** Each student is encouraged to spread tomato on their pizza and add grated cheese.  When Anna is given hand over hand prompting to spread the sauce she says 'nye-nye-nye' and Jane says 'yes-yes-yes' in the same rhythm.  They are helped to add pepperoni, tomato to their pizzas.

**Jan 27 Soft play (02:20)** Dominic comes down slide.  Jane is clapping and cheering.  He looks at her and smiles. He then goes running up the slide.  Luke notices and follows him.  Luke comes down the slide alone.  Again Jane claps and cheers.  Luke looks right at her and smiles to acknowledge.  Luke climbs back into the slide but Dominic is about to come down.  Someone upstairs says 'watch out Luke' and immediately he jumps up and stands to the side, waiting for Dominic to come down.  Dominic lies down on the bottom of the slide, smiling.  There is physical negotiation between him and Luke - Luke wants to get past him to climb up.  Thomas seems to be watching them both, jumping up and down.  Luke comes down the slide and Dominic seems to be holding onto him.  It's not clear if Luke wants this - Jane says 'Dominic!' in warning tone but then it becomes apparent that Luke is smiling. Luke appears to squeal with laughter?  Thomas comes and holds Luke head briefly.  Luke starts climbing up the netting and Thomas grabs hold of him (intention unclear to me) but Jane intervenes and tells him not to.  Luke climbs into slide and peers up it - Thomas starts doing this too but without climbing into slide.

**Jan 28 Morning Group (01:39)** Camera focuses on Albert and Anna. Anna is sitting sideways and does not give any signs of interest although she accepts the scarf she is given. Albert joins in with a few actions from 'if you're happy and you know it' (although not all) and examines the texture of the scarf, putting it over his face at one point.

**Jan 28 Thomas outside (03:42)** Camera follows Thomas around the enclosed area. Thomas is very happy and smiley looking. He tries to interact with Albert a few times (possibly he wants to gain control of the red tunnel that Albert is playing with) but isn't successful because Albert is very focused on the tunnel. He then turns his attention to Luke, touching him on the arms but doesn't quite know how to establish contact.

**Jan 28 Albert and Thomas (01:20)** Thomas tries three times during this video to establish interaction with Albert by grabbing him. Albert still has the red tunnel from the previous clip. I now don't think that Thomas wants the tunnel - there was one point where he could easily have snatched it but he persevered trying to grab Albert's hand instead.

**Jan 28 Albert Luke and Thomas (01:02)** still outside. Albert and Thomas establish quite gentle contact (clasping hands) and then there is a bit of running about. Luke comes up and grabs Thomas from behind and kind of pushes him across the space (but Thomas is smiling, it all seems good-natured). Thomas and Albert strike up contact again but Helen is concerned and breaks it up, telling Albert he needs to calm down.

**Jan 28 Albert and Thomas 2 (00:21)** Thomas still trying to establish contact with Albert who seems moderately interested (smiling at him at one point) but Albert is still distracted by playing with the tunnel.

**Jan 28 Luke dinner song (01:12)** Camera focuses on Luke. He makes his choice (chips) by pointing, looking at teacher and vocalising. He then rocks back and forth (with pleasure?) whilst everyone sings the chips song. Thomas chooses ice-cream by pointing but there isn't much sign of a response to the song.

**Jan 28 painting (00:20)** Dominic, Albert and Luke are really engrossed with painting. However Anna is making loud noises (off-screen), Thomas is holding his ears and starts shaking the table and I stop filming.

**Feb 2 snack time (06:07)** Jane is leading snack time. For a change I sit amongst the student which is much better for footage, Jane's face and theirs can be seen clearly. There is an interesting point with Luke where he wants raisins but the raisins card has been taken away because there are none left. He tries to go through the folder to find raisins and Jane blocks that. When his turn comes round again he points at the empty space on the tray where the raisins where, looks at Jane and vocalises.

**Feb 2 Snack Time 2 (06:56)** More of the same.

**Feb 2 Dinner Song (01:38)** I have good footage because I'm sitting in the circle.

**Feb 2 Thomas Soft Play (01:28)** Thomas is being chased by Helen.

**Feb 3 Luke Bear Hunt (03:29)** Luke is watching Bear Hunt and joining in with some actions.

**Feb 3 Snack Time (06:32)** Jane does snack. Anna gets annoyed because Jane wants her to say orange and then thank-you and she's not in the mood to do it.

**Feb 3 Snack Time 2 (03:39)** More snack time with Jane.

**Feb 3 Julian Flute (06:25)** Julian goes around the circle playing the flute for each individual child. There is lovely interaction between him and Anna/ Dominic/ Luke, with them stroking his head.

**Feb 3 Music Therapy (06:18)** Later on the gathering drum section there is a nice section with Lizzie, Luke and Albert interacting around the drum, with clapping, banging the drum and gentle tapping. When it is Dominic's turn he enjoys it but Anna isn't happy. Helen tries to get her to drum but she resists, looking across her eyes at Helen and trying to pinch her arm (?)

**Feb 3 Afternoon Song (01:15)** Anna reaches out to Lizzie's hand and says 'hello' very clearly. Everyone is happy about this. Luke can be heard singing the dinner song in the background. Dominic taps Lizzie's leg and smiles when people sing to him. He gives Lizzie really lovely eye contact.

**Feb 4 Morning Song (05:05)** Focus on Luke who is having really nice interaction with Jacqueline, smiling and looking at her and copying the movements to 'wind the bobbin up' very well. He protests vocally and also physically (tugging at box) when he isn't allowed the large floaty scarf from the box.

**Feb 4 Snack Time (02:42)** With Jacqueline. Anna picks up PECS card which says banana but then puts it back on the board instead of handing it over. Jacqueline starts trying to get her to say or Makaton sign banana as well. She gets frustrated and lunges for Jacqueline's arm. Jacqueline is distracted and Albert is tired of waiting so he gets his plate and thrusts it towards the tray with the snack on it.

**Feb 4 Snack Time 2 (02:59)** Luke wants to get straight to the crisps but he has to have a drink first. He tries to get the crisps by pointing past the PECS folder but eventually gives in and has a drink. I think Albert is banging his cup on the table to get Jacqueline's attention (camera not on him at this point).

**Feb 4 Snack Time 3 (03:39)** Luke wants more crisps. He spontaneously grabs the PECS folder (even though it hasn't been offered to him) and takes off crisps card, saying crisps and then doing 'please' with Makaton. Jacqueline gives him crisps for this. It happens twice. Then this prompts Jacqueline to tell the story of him spontaneously making 'I want cake' with Makaton (see fieldnotes).

**Feb 4 Luke Ball (00:39)** Luke has put the big expanding ball around my head. The video is filmed from inside the ball. Luke is laughing his head off. Anna tries to take it off because she wants to cuddle me and he vocalises in protest.

**Feb 4 Jacqueline Dominic Dancing (00:20)** Jacqueline and Dominic have a little dance outdoors. He's laughing and looking up into her face.

**Feb 4 Outside (04:07)** Jacqueline plays with Luke (the red wheel thing), chasing him around. He is having lots of fun. He also indicates to her that he wants to stop (by returning the toy to her and saying 'no') but later comes to her and says please because he wants to restart it. Later in the clip Jacqueline has a nice interaction with Dominic who is sitting on her knee, singing 'horsey horsey'.

**Feb 4 Jacqueline Luke (03:07)** Luke is riding on Jacqueline's knee. There is lovely eye contact and he communicates with her e.g. that he wants to go fast. It's a really good video with a lot of interaction.

**Feb 4 Luke Reading (00:40)** Luke is reading a book with Jacqueline. Towards the end she offers him a choice of two books but he reaches around them to choose another one off the floor.

**Feb 4 Dinner Time Song (01:51):** Choosing from symbol board.

# APPENDIX B: SAMPLE FIELDNOTES (2 FEBRUARY)

Present: Lizzie, Helen, Jane, all five children

9:30 - We go to assembly.

*Assembly*
Microphone is very loud. Dominic and Thomas have their hands in their ears. Anna and Luke are sitting quietly. Albert is in the front row with Lizzie, seems happy. Before assembly starts Thomas tries to attack Anna. They are separated by Helen. It's not clear why he does this, she's not making noise. Albert is hugging Lizzie, smelling her hair, smiling and looking at her. We discuss this later at lunchtime when he's doing it again - she says she doesn't understand it as she used the same shampoo as usual.

Thomas goes for Anna again. Jane and I discuss this. Possibility is noise levels in assembly - he's disturbed by this so lashing out at Anna out of habit (she is the usual source of loud noise). Dominic has his hands over his ears. Thomas still has fingers in ears, so does Dominic. Albert is rocking - starting to 'bubble'? A lot of intensive looking into Lizzie's face. He is told to calm down. Luke leans over into Dominic's chair. They have a cuddle together. Jane gently separates them. Dominic starts to tap Luke' leg (lightly) but is stopped. Thomas looks a bit happier now, he is smiling a bit and joining in with the birthday claps. Luke leans on Dominic's leg again. Dominic strokes his head gently. Luke gets a sticker for 'good student'.

Albert is carrying his now/next book - it says assembly now, snack next. Dominic is turned around to face Luke with his knees bent towards him. They are looking at each other every so often. Luke puts his leg up on Dominic and Dominic strokes it. Luke is smiling. He tries to climb right into Dominic's lap but is stopped by Jane who puts him back in his own chair. Dominic still has his fingers in his ears.

10:10 - We return to the classroom after assembly. Albert goes straight to the now/next board, removes assembly and moves 'snack' to now (which is correct). Anna is in the cave, fiddling with the black bin liner which is hanging down from it. She is reluctant to come to the snack table but eventually does. Luke also wants to continue playing with magnetic blocks, needs persuaded. Thomas goes to hit Helen as she walks past. Not clear why.

10:30 (V) Snack time. I got good footage by sitting in the middle of table with the kids. Luke is not accepting the choice which has been offered in two ways: firstly tries to open up the PECS folder to get access to the other items (prevented by Jane); secondly he points repeatedly at the empty tray where the raisins were (they are now gone), indicating to Jane that she should fetch more (?)

Play time outside: ended abruptly when Albert got over-excited and started pushing people over. He was left outside, everyone else brought inside. Then there was fire alarm. Felt stressful for the children: the alarm was really loud and we had to rush to get coats on and go outside. Anna was screaming and not wanting to walk, Thomas was hitting her, Albert was over-excited. Jane told me that the injury on Thomas head was caused by Albert last year. Today Albert's issues with self-regulation of arousal levels are very evident.

We return to the classroom. Thomas is licking the mirror tile, looking out of the window at Albert running around on his own, laughing and smiling. Thomas is loving 'Bear Hunt' on IWB, he is over at the screen interacting with it. Dominic and Luke are sitting on the floor (quite close together) sharing the blocks. Anna is in the cave with a large plastic box on top of her.

Dominic and Anna go with Helen to the sensory room. I stay with Albert, Thomas and Luke. They try to play drawing game on purplemash.com but keep accidentally magnifying it when they try to manipulate screen with their hands. When Lizzie is trying to fix it Thomas comes up and grabs her hand - wants to bring her back to activity.

11:20 - Albert is still outside.  Luke is trying to make a toy laptop work.  Thomas has been taken off by Jane on an errand.  I wonder what is happening to I.I. - this is supposed to be the designated half hour.  Luke keeps looking at Lizzie to see what she is doing on whiteboard.

Jane lets Albert back in.  He is running around the room with a soft toy (monkey).  Now playing with the sand.  Luke goes to join him.  They engage in parallel play in the sand.  Albert is eating some of the sand.  Thomas is playing with teacher's computer - doing typing which is being projected on the IWB.

Luke is playing with a box of PECS symbols.  When I say 'choose' (in response to him picking up choose card) he likes the sound of this word and repeats it in a squeaky voice a few times.  Then he points at me before he gets up and leaves.  I'm not sure what the point means.

11:35: Luke is running around excitedly with a PECS card but won't show anyone what it is.  He goes to the now/next board and chooses reflection followed by 'interaction'.  Thomas takes Lizzie by the hand and pushes it up to the top of the door.  She goes through the symbols and thinks he means 'minibus'.  He wanders off.

11:40: Albert successfully puts a puzzle piece into the right place.  He looks to me (for praise?).  We do some drumming with our fingers on the wooden puzzle.  He brings over 'That's not my fairy' and Helen starts reading it with her (I am distracted with taking notes) but he comes and pulls me up to the table and pushes Helen away.  I think she was reading and naming textures and didn't realise that he likes to drum on the book, I.I. style.

Anna is lying in cave with box on top of her, smiling.  She looks v. happy.

11:45  Group time.  I think I hear Anna say 'yes' in Polish ('tak').  They are doing some reading because they are too early. Anna is doing good repetition of some of the words from the book that Lizzie is reading.  She is holding the pre-dinner card.  I get her to repeat a few items from it like 'pizza'.  Then she indicates that she's bored with it by handing the card back to me.  I persevere with trying to engage her and she emphatically pushes it away.  Lizzie tries to engage her with a farm book but again she pushes it away.  She seems distracted by my presence behind her so I move away.

(V) Singing dinner song.  Albert asked if he wanted the toilet and he Makaton signed it.

*Lunchtime:*
Albert wants a drink.  He holds up his empty cup towards lunch assistant who is closest to the water jug.  She waits.  You can see he is thinking about what he should do next to communicate.  He Makaton signs drink.  She asks 'more'?  and he Makaton signs 'drink' again.  Then she gives it to him.

Luke uses 'finished' to indicate he doesn't want any more of his main course.  He requests spoon by pointing at spoon icon, and when Helen doesn't respond quickly enough he vocalises and gestures towards the spoon box.  Albert doesn't want his dinner and pushes it emphatically away, but is told he must keep it there.

1:05 They return from lunch.  Luke goes straight over to now/next board.  He chooses group time then reflection.  Luke says 'toilet' but it is uncertain if he really wants to go because he starts to put his shoes on.  Thomas is on the toy laptop which is now working.  Dominic is in a plastic box near the cave with a block in his mouth.

Luke is interacting with Helen.  She is waving a little fluffy monster at him, he is laughing.  Anna is behind Helen in the book corner.  She vocalises and reaches out to take the monster.  Luke comes over and tries to take it off her.  Helen says that they should share.  Anna loses interest in it so it is Luke's again.

1:15 Anna is studying a book in the reading corner.  Albert is still outside.  Luke is now playing with the tray of PECS resources.  Dominic finds PECS folder from snack time and places it neatly in the cupboard with other PECS resources.  I didn't know he could do this.

1:25 Luke spontaneously sings 'dinner song' during afternoon song.  He chooses Jane which is a dilemma because she is working over at snack table.  He hesitates, not sure if he should leave the group circle to go and give it to her or not.  Eventually he does.  There is an altercation between Thomas and Anna.  Thomas is now wearing ear defenders. He seems to be very sensitive to noise today.

1:35 Dough disco. Brushing teeth.

1:45 Choosing time.  Dominic is hanging around the coat rack.  Thomas is running water at the sink.  Anna is crawling on the floor.  Thomas pushes Helen's hand up to the door to get it unlocked.  Anna does some wooden inset puzzles with me - she's good at them and completes them quickly.

2:00 Soft play.  Thomas goes to grab Luke.  It seems possibly aggressive to me because I can't see his face.  I go to separate them.  It seems that he just wanted to initiate a chasing game.  A hard call to make - I can see why staff err on the side of caution.  Helen has a great chasing game with Thomas and Luke (V) but Luke later gets taken out for climbing the wrong way.  Albert wants Helen to follow him into the ball pool and glances behind him to check if she is following.

When we got back, Anna is lying in the cave.  Dominic went and lay very close beside her with their heads almost touching.  They stayed like that for a minute or so and then Dominic went away.

2:30 Reflection time.  Luke is very interested and engaged.  He goes up to the screen and tries to interact with it - it is a picture of himself at dough disco and he tries to press the dough showing on the screen.  When another picture of Luke comes on he jumps up and smiles but is told off.  On another screen which shows Luke outside he gets up and points at the plastic truck.  Again stands up and points when he sees another picture of himself.  Albert is still outside, gazing in the window watching the IWB from out there.  I feel sorry for him.  Anna is smiling at the pictures of the horseriding (reflection time).  Luke and Thomas are engaging with the sideways photos that haven't been turning round by bending their necks so they can see them.  Dominic sees a picture of himself stomping in mud and gets up to investigate.  One photo shows half of Luke' body but his head is not visible.  He jumps up, points, says 'Luke' and then looks at Jane to check she has seen him.

Drink time before home: Thomas gets up from drink time because he could see the children from the neighbouring primary school.  When Lizzie sang goodbye Thomas did the hand-joining gesture.

# APPENDIX C: SAMPLE PHOTOGRAPHS

**APPENDIX D: SAMPLE DOCUMENT (CLASS TIMETABLE)**

**TIMETABLE – 2014/2015**

| | 9:00–9:15 | 9:15–9:30 | 9:30–9:45 / 9:45–10:00 | 10–10:30 | 10:30–11AM | 11–11:30 | 11:30–12 | 12–12:30 | 12:30–1 | 1–1:15 | 1:15–1:55PM | 1:55–2:15 | 2:15–2:30 | 2:30–2:45 | 2:50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M | Hall | Settle in | Assembly | Core/Topic Activities | Play Outside & Snack/Staff Breaks | Intensive Interaction focus | Reading / Toilets Wash hands | Lunch | Play out | Sing Group time | P.E. Activities leading to Gymnastics | Soft play | Reflect | Sing coats and bags | Home |
| Tu | Hall | Settle in | Group hello Input Off to activities | Play Outside & Snack/Staff Breaks | 10:25–10:55 Music Therapy | Intensive Interaction focus | Reading / Toilets Wash hands | Lunch | Play out | Sing Group time | Cooking | Soft play | Reflect | Sing coats and bags | Home |
| W | Hall | Settle in | Group hello Input Off to activities | Core/Topic Activities | Play Outside & Snack/Staff Breaks | Intensive Interaction focus | Reading / Toilets Wash hands | Lunch | Play out | Sing Group time | Science | Soft play | Reflect | Sing coats and bags | Home |
| Th | Hall | Settle in | Horse Riding | | | | | Lunch | Play out | Sing Group time | Music | Soft play | Reflect | Sing coats and bags | Home |
| Fr | Hall | Settle in | Group hello Input Off to activities | Core/Topic Activities | Play Outside & Snack/Staff Breaks | Intensive Interaction focus | Reading / Toilets Wash hands | Lunch | Play out | Sing Group time / Parachute games | Assembly | Reflect | Reflect | Sing coats and bags | Home |

# APPENDIX E: CARD-SORTING EXERCISE (STAFF)

Play.
Gesture, vocalisation,
eye contact,
spatial aware

'Choose'
Gesture, Makaton
vocalisation
proximity

Soft play.
eye contact, gesture
spatial aware
body orientation

Work
Gesture, eye
contact

Group time
Gesture, eye
contact, speech

Dinner
PECs, makaton
vocalisation

Intensive Int.
Body orientation, eye
contact, gesture, vocalisation,
spatial proximity

Community
Makaton,
gesture
vocalisation

Snack time
PECs, Makaton
Gesture, Speech

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Grouptime
- photos
- now/next
- gesture
- makaton

P.E.
- now/next
- makaton
- body language

snacktime
- vocalising
- pecs
- makaton
- gesture

Intensive Int
- body language
- gesture

Work
- now/next
- symbols
- vocalising
- makaton

Softplay
- body language
- gesture
- eye contact
- makaton

dinner
- pecs
- now/next
- makaton

COMMUNITY
VISITS
- makaton
- now/next
- body language

playtime
makaton
gesture
body language

# APPENDIX F: STAFF INTERVIEW SCHEDULE

1. **Card-sorting exercise.**

   Staff to be given unlimited number of blank cards and pen. The concept of a 'communicative situation' is explained – a situation where there are certain identifiable ways of communicating during the school day. Staff asked to think of what they regard as 'communicative situations' in the life of Purple Class and write one per card. Staff then asked to arrange the cards on the desk, with similar situations indicated by proximity and dissimilar situations by distance.

2. **Discussion of card sorting exercise.**

   Eliciting discussion of the arrangement of cards on the desk using open-ended questions such as:

   - So you've placed these two quite close together/ far apart, can you tell me about that …
   - This card seems to be out on its own, can you tell me more about that …
   - Can you tell me more about these cards which have been grouped together …

3. **The following additional questions.**

   - What are the advantages of teaching students to use a form of AAC?
   - Are there any problems, limitations or difficulties with implementing AAC in the classroom?
   - If students are using their own existing multimodal strategies to communicate, do you feel should they be encouraged to use AAC instead or should their way of communicating be respected?
   - What do you feel is the role of Intensive Interaction in the teaching of communication skills?
   - If you were 100% in charge of Purple Class with no accountability to senior management, OFSTED or anyone else and no requirement to collect evidence of progress … what would you do differently (if anything)?

4. **Sharing of a transvisual (work-in-progress) and invitation to comment.**

**APPENDIX G: PARENT INTERVIEW SCHEDULE**

1. Use IPCA as framework for asking about multimodal communication across a range of speech functions, but in semi-structured way – can invite elaboration, examples, anecdotes on identified communication practices.

2. Invite discussion of the following:
   - How does he communicate with different members of the family?
   - How do you feel about his communication at present?
   - Are you familiar with communication strategies which are used in school such as Makaton, PECS, Intensive Interaction?  What are your thoughts on them?
   - What are your hopes for his communication in the future?
   - Is there anything else you would like to discuss about his/her communication?

# APPENDIX H: SAMPLE PAGE OF TRANSCRIPTION (INTERVIEW WITH LIZZIE, CLASS TEACHER)

**I:** **Ok so tell me about work and group time why did they go together?**

**L:** I tend to find the children communicate in a similar sort of way at group time and when you are working with them. So we often work as a whole class which is probably why it's a similar sort of thing. So they will use gesture, particularly at group time they use eye contact when we are seeing to them in the morning routine, the afternoon routine, at the dinner time routine as well when you say their name or it is their turn they make eye contact with staff erm… they will gesture that pictures belong to other children, so if they have got a picture of another child's faces they will gesture towards the other child and then with work you tend to get a lot of eye contact if you are on a one-to-one basis as well with them, they will be if you praise them you get a lot of eye contact or when you are trying to show them what to do when you are modelling what to do there is, there is the eye contact side of it as well. So I put those together for that reason.

**I:** **Yes, yes great and then what about dinner and snack time, tell me about those.**

**L:** We use PECS more formally at those times. Erm… and we also use Makaton probably more formally at those times as well. We encourage the children to sign, particularly Albert and Luke will be encouraged to sign for the things that they want. Erm… at dinner and at snack time. They, the children all tend to vocalise more at those times, so there is more natural desire to vocalise erm… Anna is a prime example of that, she will she will there is a lot of words that she can say. The first word we ever heard her say was chocolate.

**I:** **Yes I remember ((laughs))**

**L:** so she will, she tends to use speech more at that time. Erm… dinner time we have changed the routine slightly so really what I have talked about there probably isn't quite so much what we do because we have actually, we almost discourage the children from communicating with us at dinner time because we are trying to encourage their independence. So, trying to get them to get their own cutlery so rather than PECSing for the cutlery to get their own cutlery. Rather than PECSing that they have finished with their dinner just take their plate away so rather than using the symbols and the Makaton actually trying to encourage the independence more but, but for this purpose if you like, this is how we have been doing it, until very recently. It is only the week before half term and this week that we have started that more independent getting them to actually do it for themselves because obviously whilst the communication is important, actually being an independent person is also important. So that is quite a nice time, erm… and they do all take, yesterday, everybody took their plate away, got their pudding, sat down, and took their pudding away without me prompting them to put their own dishes away they just did it. Erm… sort of sat at the table like that, wow what is going on, oh my goodness. They will wait for reassurance because they are used to not being allowed to do things until you have told them that they will do it so they will sometimes, a sort of Luke is a prime example of that, he will hold his yoghurt pot and he is looking at you waiting for you to say yes it is ok you can take it, erm… although yesterday he was the one who initiated going on his own I think because the others saw him go they got up and followed him and he hadn't waited for that reassurance. I was rather unprofessionally talking to another colleague, erm… and I sort of look round and suddenly realised he had taken his yoghurt pot away. Which whilst I shouldn't have been talking it was quite nice if I am busy he knows what I have got to do. Which is what we are trying to promote.

**I:** What about choosing what he wants to do. Like maybe at the weekends when he has free time?

R: Same thing he would show pictures, or I would just choose for him because I know which places he would be the calmest or he doesn't really mind where you are taking him, as long as it is not too crowded where he can't cope that is why I try  is there park going to be busy now, because I am worried as well I would kind of want for him to run around with other kids but, at the park I am thinking what if something happens within seconds if he pushed someone off, and…

**I:** Yes

R: Do you know what I mean?

**I:** Yes, yes I do.

R: but usually no it is not really a problem.

**I:** Ok what about if he wants to stop an activity that he is doing.

R: He will just walk away.

**I:** He will just walk away then you know. Ok.  If somebody talks to him what does he do?

R: Erm… I guess it depends on the situation. Usually he loves when people interact with him, whatever it is, even if they are just saying Albert hi, high five he will get, oh probably he wants to play with me, so he gets all excited and playful. He loves attention.

**I:** So how would he show somebody that he wants to interact?

R: Just trying to jump on them, smelling them. Wouldn't leave them alone.

**I:** Yes.  Does he ever answer yes if you ask him a question? Not the word yes but nodding or a Makaton.

R: He does that, he does that. He knows that, he knows that but sometimes he mixes it up and for example if I say do you want more cereal in the morning, so I move the bowl here and I am like do you want more cereal, do you want this more and I will say yes, or no. So he will be no so I am taking it as no he doesn't but I think it is still a bit, confusing at times. Hmm.

**I:** In class they do no, like that for Makaton have you ever seen him doing that?

R: No

**I:** No he doesn't do that one. Yes, nodding and shaking head.  That is that one.  Does he ever copy anything that you say?

R: Yes, he copies sometimes because I copy what he says sometimes when we walk from school, da, da, da, da, so I am following him doing the same, he looks at me and then I swap to Mamma I want him to say Mamma so badly I am like Mamma, Mamma, and he looks at the lips and he kind of like, but without any sound.  I am like come on do it.  Say something but yes he constantly if you are in that mood, playful mood with him tickling or whatever and you keep repeating some sounds, he is interested he is yes.

## APPENDIX J: SAMPLE QUESTION FROM IPCA (INVENTORY OF POTENTIAL COMMUNICATIVE ACTS) (Sigafoos et al., 2000)

## Social Convention

Please describe how the individual . . .

| Items | Behaviors | Examples |
|-------|-----------|----------|
| For Example:<br>1. greets you/others | * smiles<br>* eye contact<br>* extending arms | When I walk up to Jenny in the morning and say hello she always looks at me, smiles, and reaches out her arms. |
| 1. greets you/others | | |
| 2. indicates farewell to you or others | | |
| 3. responds to their own name | | |
| 4. other | | |

# APPENDIX K: SAMPLE PAGE OF INTERVIEW NOTES (INTERVIEW WITH LUKE'S FAMILY)

**Meeting with Luke's family**
**Monday 2nd March 2015 at 1p.m.**

I was able to meet with Luke's mum and aunt at the family home to learn about Luke's communication patterns at home as part of my research. I learned that Luke uses the following communication strategies at home.

<u>Sayin Hello and Goodbye</u>
Luke repeats 'hi' or 'hello' as a greeting when someone says it to him first. He sometimes looks up when someone enters the room. When someone says 'bye' with a wave of the hand he will sometimes copy both the word and the wave. If someone calls his name he will sometimes ignore, sometimes looks around and sometimes repeat his name.

<u>Getting Attention</u>
The family report that Luke sometimes shouts or screams (high-pitched) to get attention. He sometimes points to the cupboard where he knows the snacks are kept when he wants one. He nudges mum on the arm which can mean he wants a drink or his hungry. He sometimes initiates tickles by tickling mum first to show what he wants. When someone is visiting, he sometimes 'shows off' by running around, climbing on sofa, spinning around, and brings objects like cars over to show the person. Luke's aunt reports that he can say all of the following words which are often repeated (someone else said them just before) but sometimes are spontaneous:

- Toilet
- Drink
- Banana
- Chips
- Chicken
- No (he does Makaton sign along with word)
- Ice-cream (pronunciation approximate)
- Aw, broken (pronunciation approximate)
- Bath (pronunciation approximate)
- Peas
- Beef

<u>Reject/ Protest</u>
Luke doesn't mind if his usual routine is disrupted so will not protest about this. If he is asked to do something he doesn't want to do he will sometimes make a frustrated grunting noise, walk off, or in extreme cases have a meltdown (throwing himself on floor, kicking, screaming, throwing objects).

If he is given something he doesn't like to eat, he will simply not eat it. If he doesn't like what is on TV, he will try to fetch a DVD or if it is on a high shelf will point up to it. He sometimes also fetches the remote control.

If an adult was playing with him and then stopped, he might follow them with the toy or else just go to play by himself. Usually he likes playing on his own.

At the doctors – Luke remembers an upsetting time when he had to be physically restrained to have blood tests. He will now pull back from going into the doctors.

<u>Requesting an Object</u>
If Luke wants an object that is out of reach, he will go to where it is and point, making an 'uh' noise.  If he wants dinner, he will say 'dinner' and go to the freezer.  If he wants more of something, he does the Makaton sign for '*more*' which is recognised by the family.  He can also Makaton sign *please, thank-you, stop* and *no.*  If there is a menu of different choices on the screen (children's TV programmes or movies) he will point to the one he wants saying 'that' repeatedly.

<u>Requesting an Action</u>
Luke says the word 'toilet' clearly when he wants the toilet.  For getting dressed he would either do it himself or comply with someone else dressing him.  For help with a game, the family would tend to anticipate when he needs help in advance (e.g. with constructing a train track) because if they don't help quickly he could get frustrated.  If he wants a cuddle or to be close to someone he would physically approach them.

<u>Commenting</u>
When Luke is happy his family describe him as hyper, running around and laughing.  When he is unhappy he is quiet, frustrated and may have a meltdown.  When he is bored he addresses this himself by going to his room and getting his toys out.  He will laugh when he finds something funny and will approach an adult when frightened.  When he is in pain or sick he will be pale and quiet, and will fetch his favourite bear and blanket and lie down.  When Luke is angry or frustrated he will throw things around and shout a lot.  When he is tired he will lean on mum with his bear, and his eyes will be droopy.

<u>Choice-making</u>
If Luke was offered a choice of two items he could reach out for one.  He has some PECS cards from school and will sometimes use 'dinner', 'drink' or 'toilet' card.  (Sometimes he also plays with the PECS cards and rearranges them on the velcro strip). He doesn't currently choose items which are not within the immediate environment (e.g. to go somewhere such as the park).  If he wants to stop an activity he will walk off.

<u>Answer</u>
If someone is talking to Luke, he may look at them and then look away.  This depends on who it is and the circumstances.  He can reply 'no' verbally with Makaton but does not say 'yes'.

<u>Imitation</u>
Luke does copy single words quite frequently.  He copies 'wave' with bye bye and nodding and shaking head.  He can also imitate family routines he remembers: for example his aunt described how he remembers that when he has the biscuit tin his siblings and cousin should get two biscuits each and will distribute them.

<u>General Info.</u>
The family have not noticed any differences in the way Luke communicates with different family members.  Mum says that she feels OK about his current communication skills.  She would like it to be better (for him to learn to say what he wants or when he is in pain) but says she understands that it is hard for him to learn things.

**APPENDIX L: ETHICS APPROVAL, SHEFFIELD HALLAM UNIVERSITY**

# Sheffield Hallam University

Our Ref   AM/SW/1-2014

31st January 2014

Lauran Doak
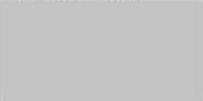
Dear Ms Doak

**Request for Ethical Approval of Research Project**

Your research project entitled "Environmental effects on the multimodal communicative capabilities of preverbal children with autism" has been submitted for ethical approval to the Faculty's reviewers and I am pleased to confirm that they have approved your project.

I wish you every success with your research project.

Yours sincerely

Professor A Macaskill
Chair
Faculty Research Ethics Committee

Office address :
Business Support Team
Faculty of Development & Society
Sheffield Hallam University
Unit 4, Sheffield Science Park
Howard Street, Sheffield, S1 1WB
Tel: 0114-225 3308
E-mail: DS-ResearchEthics@shu.ac.uk

# APPENDIX M: INFORMATION SHEET & CONSENT FORM (HEADTEACHER)

<div align="right">
Lauran Doak<br>
XXXXXXXX<br>
XXXXXXXX<br>
XXXXXXXX<br>
<br>
Tel. XXXXX XXXXXX<br>
Email: Lauran.E.Doak@student.shu.ac.uk
</div>

The Headteacher
XXXXXXXXXXXX
XXXXXXXXXXXX

Dear XXXXXXXX

## Re. PhD Research at XXXXXX School

My name is Lauran Doak and I am conducting a three-year funded PhD research study into the communication skills of pre-verbal children with autism. I am based at Sheffield Hallam University and the study is entitled '*Everyday AAC Usage by Preverbal Children with Autism: A Multimodal Ethnographic Perspective*'. The study is supervised by Professor Cathy Burnett. I am writing to ask if it would be possible to undertake fieldwork in your school.

### What does the study involve?

I propose to undertake the fieldwork during the half-term after Christmas. During this time I would be based in an autism classroom, observing the communication skills of students and taking fieldnotes. I would also be undertaking a limited amount of videorecording of classroom activities. I am interested in studying the full range of communicative behaviours that a preverbal child with autism might have in their repertoire. This might include limited speech, non-speech vocalisations, Makaton or PECS usage, idiosyncratic gestures or behaviours which are unique to that child, withdrawal/ withholding of self, physical manipulation of objects or people, or presentation of challenging behaviour.
The video material will then be transcribed and analysed using Multimodal Analysis. Confidentiality will be protected by giving pseudonyms to all participants and referring to the school only as 'a Special School in the Midlands of England'. I hope to be able to use annotated video stills from the footage in my thesis: see attached example of this type of work.

### How will the students and the school benefit from participation?

I intend to write a non-academic, layperson-friendly summary of the communicative patterns demonstrated by each child in different settings. Each child's summary will be presented to the school with the opportunity to discuss it with me in detail and ask questions. It will also be provided to parents who will have the opportunity to meet with me. It is hoped that this summary will be useful for both staff and parents as it will clarify the different modes of communication being used by the child. This could contribute to the future planning of communication targets for the child and the sharing of good practice.

If you require any further detail or information about the study before making your decision please do not hesitate to contact me at L.Doak@shu.ac.uk

Many thanks for considering my request.

Yours sincerely


**Lauran Doak**

**Participant Consent Form [Senior Management]**

TITLE OF RESEARCH STUDY: *'Everyday AAC Usage by Preverbal Children with Autism:  a Multimodal Ethnographic Perspective'.*

**Please answer the following questions by ticking the response that applies.**

|  | YES | NO |
|---|---|---|
| I have read and understood the Information Sheet for this study |  |  |
| My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point by emailing L.Doak@shu.ac.uk |  |  |
| I consent to the school's participation in the project |  |  |

Participant's Signature: _____ Date: _____

Participant's Name (Printed): _____

Contact details:

_____

_____

_____

Researcher's Signature: _____ Date: _____

Researcher's Name (Printed): Lauran Doak


Researcher's contact details:
Email: L.Doak@shu.ac.uk
Phone: XXXXXXXXXXXXXXXXX
**Please return one signed copy of the consent form.  Keep the other copy of the consent form and the information sheet together.**

# APPENDIX N: INFORMATION SHEET & CONSENT FORM (CLASSROOM STAFF)

Dear **[Staff member]**

My name is Lauran Doak and I am doing a PhD research project at Sheffield Hallam University looking at the communication skills of preverbal children with autism. The project's title is *'Everyday AAC Usage by Preverbal Children with Autism: a Multimodal Ethnographic Perspective'.*

During the project I will be based in your classroom at XXXXXX School and I am writing to ask if you are willing to be included in the study. Here is some more information about the research.

**What will you do during the research?**
I will be in your classroom during the half-term after Christmas. During that time I will be observing the different ways students communicate, and taking lots of notes. I am interested in ALL forms of communication – this might include spoken words, noises, gestures, actions, PECS, Makaton or various other behaviours. I will also be videorecording some examples of their communication and turning this into a multimodal transcript to include in my research project. I have attached a sample multimodal transcript so you can see how staff and students might appear in my research. As a parent of two children with autism (and a former teacher), I am very aware of the need to be sensitive and will always stop filming immediately if there is any sign that it is disturbing the student or the progress of the lesson.

**What will I be expected to do?**
Just your normal classroom activities! I'm interested in seeing their normal, everyday communication so I don't need to see anything special or different from usual. I'm looking at all the different strategies children use to communicate with others – I'm not analysing or evaluating teaching!

**Who will read the research and could they identify my child?**
The research will initially be printed in my PhD thesis which will be submitted in 2016. It is also possible that data from the thesis will be used in academic journal articles or conference presentations. The name of the school will not be used and the names of all children and staff will be changed.

**Will I get any feedback on the research?**
I would like the study to be useful to you and the students. For this reason, I will write a summary of what I found out about the communication patterns of students throughout the day and send you (and the school) a copy. This might be helpful in understanding how your students communicate and setting targets for the future. You will have a chance to talk to me about the summary and to ask me questions about it if you wish. If you would like a copy of the entire PhD thesis in 2016 you are also entitled to request this.

**What if I do not wish to be part of the study?**
You can indicate that you do not wish to participate on the consent form (attached).

**What if I wish to withdraw my participation during the study?**
If you change your mind about taking part during the period that I am collecting data in school you can tell me. I will then ensure that your face is obscured in any video stills or extracts which form part of the research.

If you change your mind AFTER data collection has finished you will have a period of one month to notify me that you wish to be withdrawn from the study.

**Will the data collected be handled carefully?**
Yes – I will be following Sheffield Hallam University protocols and guidelines for handling data. This includes storing videorecorded footage and transcriptions on secure encrypted IronKey flash drives. Only myself and a limited number of Sheffield Hallam University staff who are directly involved in the project will have access to the data. When the project is over the data will be stored securely in Sheffield Hallam University Research Data archives.

**Who can I contact about the study if I have questions or concerns?**
I can be contacted at Lauran.E.Doak@student.ac.uk  The project supervisor, Professor Cathy Burnett, can be contacted at c.burnett@shu.ac.uk

Very many thanks for taking the time to read this information sheet.

Yours sincerely,
**Lauran Doak**

**Participant Consent Form [Classroom Staff]**

TITLE OF RESEARCH STUDY: *'Everyday AAC Usage by Preverbal Children with Autism:  a Multimodal Ethnographic Perspective'.*

**Please answer the following questions by ticking the response that applies.**

|  | YES | NO |
|---|---|---|
| I have read and understood the Information Sheet for this study |  |  |
| My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point by emailing Lauran.E.Doak@student.ac.uk |  |  |
| I understand that I am free to withdraw from the study during the period of data collection or up to one month afterwards, without giving a reason for my withdrawal or to decline to answer any particular questions in the study without any consequences to my future treatment by the researcher. |  |  |
| I agree to provide information to the researchers under the conditions of confidentiality set out in the Information Sheet. |  |  |
| I wish to participate in the study under the conditions set out in the Information Sheet. |  |  |
| I consent to my image appearing in video stills used in multimodal transcripts (see example transcript provided).  Your name and the name of school will be altered. |  |  |
| I consent to the information collected for the purposes of this research study, once anonymised to be used for any other research purposes. |  |  |

Participant's Signature: _____ Date: _____

Participant's Name (Printed): _____

Contact details:

_____

_____

Researcher's Signature: _____  Date: _____

Researcher's Name (Printed): Lauran Doak

Researcher's contact details:

Email: L.E.Doak@student.shu.ac.uk

Phone: XXXXXXXXXXXXXXX

**Please return one signed copy of this consent form to the class teacher.  Keep the other copy of this consent form with the information sheet.**

# APPENDIX O: INFORMATION SHEET AND CONSENT FORM (PARENTS)

Dear **[Parent/Carer]**

My name is Lauran Doak and I am doing a PhD research project at Sheffield Hallam University looking at the communication skills of preverbal children with autism. I am also the mother of two children with autism, which is why I am interested in the topic! The project's title is *'Everyday AAC Usage by Preverbal Children with Autism: a Multimodal Ethnographic Perspective'.*

During the project I will be based in the classroom of your child _____ and I am writing to ask your permission to include your child in the study. Here is some more information about the research.

**What will you do during the research?**
I will be in your child's classroom during the half-term after Christmas. During that time I will be observing the different ways students communicate, and taking lots of notes. I am interested in ALL forms of communication – this might include spoken words, noises, gestures, actions, PECS, Makaton or various other behaviours. I will also be videorecording some examples of their communication and turning this into a multimodal transcript to include in my research project. I have attached a sample multimodal transcript so you can see how your child might appear in my research. As a parent of two children with autism, I am very aware of the need to be sensitive and will always stop filming immediately if there is any sign that it disturbs the student.

**What will my child be expected to do?**
Absolutely nothing except their normal classroom activities. I'm interested in seeing their normal, everyday communication so I won't be asking them to do anything different from usual.

**Who will read the research and could they identify my child?**
The research will initially be printed in my PhD thesis which will be submitted in 2016. It is also possible that data from the thesis will be used in academic journal articles or conference presentations. The name of the school will not be used and the names of all children and staff will be changed.

**Will I get any feedback on the research?**
I would like the study to be useful to you and your child as well as to the school. For this reason, I will write a summary of what I found out about your child's communication patterns throughout the day and provide you (and the school) a copy. This might be helpful in understanding how your child communicates and setting targets for the future. You will have a chance to meet with me to talk about the summary and to ask me questions if you wish. If you would like a copy of the entire PhD thesis in 2016 you are also entitled to request this.

**What if I do not wish my child to be part of the study?**
You can indicate that you do not wish your child to participate on the consent form (attached).

**What if I wish to withdraw my child during the study?**
If you change your mind about your child taking part during the period that I am collecting data in school you can tell me. I will stop recording your child, delete any data already collected and his/her participation will come to an end.

If you change your mind AFTER data collection has finished you will have a period of one month to notify me that you wish your child to be withdrawn from the study.

**Will the data collected be handled carefully?**
Yes – I will be following Sheffield Hallam University protocols and guidelines for handling data. This includes storing videorecorded footage and transcriptions on secure encrypted IronKey flash drives. Only myself and a limited number of Sheffield Hallam University staff who are directly involved in the project will have access to the data. When the project is over the data will be stored securely in Sheffield Hallam University Research Data archives.

**Who can I contact about the study if I have questions or concerns?**
I can be contacted at Lauran.E.Doak@student.ac.uk The project supervisor, Professor Cathy Burnett, can be contacted at c.burnett@shu.ac.uk

Very many thanks for taking the time to read this information sheet.


Yours sincerely,


**Lauran Doak**

**Participant Consent Form [Parents]**

TITLE OF RESEARCH STUDY: *'Everyday AAC Usage by Preverbal Children with Autism: a Multimodal Ethnographic Perspective'.*

**Please answer the following questions by ticking the response that applies.**

|  | YES | NO |
|---|---|---|
| I have read and understood the Information Sheet for this study |  |  |
| My questions about the study have been answered to my satisfaction and I understand that I may ask further questions at any point by emailing Lauran.E.Doak@student.ac.uk |  |  |
| I understand that I am free to withdraw my child from the study during the period of data collection or up to one month afterwards, without giving a reason for my withdrawal or to decline to answer any particular questions in the study without any consequences to my future treatment by the researcher. |  |  |
| I agree to provide information to the researchers under the conditions of confidentiality set out in the Information Sheet. |  |  |
| I wish to participate in the study under the conditions set out in the Information Sheet. |  |  |
| I consent to my child's image appearing in video stills used in multimodal transcripts (see example transcript provided). Their name and name of school will be altered. |  |  |
| I consent to the information collected for the purposes of this research study, once anonymised to be used for any other research purposes. |  |  |

Participant's Signature: _____ Date: _____

Participant's Name (Printed): _____

Contact details:

_____

_____

Researcher's Signature: _____ Date: _____

Researcher's Name (Printed): Lauran Doak

Researcher's contact details:

Email: L.E.Doak@student.shu.ac.uk

Phone: XXXXXXXXXXXXXXXX

**Please return one signed copy of this consent form to the class teacher.  Keep the other copy of this consent form at home with the information sheet.**

## Transcript 1: Annotated Video Stills



1. Child uses eye contact to orient to verbal/ gestural prompt.

2. Child vocalises and changes facial expression (half-smile?)

3. Child presses 'on' button on iPad and draws it towards herself.

4. Child scrolls through options (swiping with index finger) and presses 'ball'.

5. Therapist acknowledges choice vocally/ facially. Child gives eye contact.

6. Student transfers iPad to therapist who extends hands to receive.

7. Therapist moves head in towards child, eyebrows raised, mouths 'b-'. Child says 'ball'.

8. Therapist smiles and hands child the ball, she extends hands to receive.

**APPENDIX Q: CONSENT FORM (PARENTAL INTERVIEW)**


Name of student: _____

Home visit: [Insert date/time]


Please tick YES or NO to each question.  You are free to say NO to any aspect of the research.

|  | YES | NO |
|---|---|---|
| I wish to take part in a home visit to discuss my child's communication strategies.  I understand that the researcher will take notes during the interview. The notes will be stored securely as detailed in the original consent form. |  |  |
| In addition to note-taking, I also give consent for the interview to be audio-recorded.  The audio-recording will be typed up as a transcript and sent to me for checking.  The audio-recording and transcripts will be stored securely as detailed in the original consent form. |  |  |
| I give consent for things I say during the interview to be directly quoted in published academic research and/or conference presentations.  This would be done in a fully anonymised way (names of all parties, school and city being altered). |  |  |


*Please return this form in the stamped addressed envelope as soon as possible – thank-you.*

Albert and Thomas are chasing.



Anna is reading.