***Doctorate in Professional Educational, Child and Adolescent Psychology***

*Programme Director: Vivian Hill*


**Institute of Education, University College London**

**Doctorate in Professional Educational Child and Adolescent Psychology**

# The Friendships and Social Relationships of Students with Complex Communication Needs in and Outside of Special School Settings

**Hui Jun Ho**

## Declaration

I, Hui Jun Ho, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Word count (exclusive of declaration, abstract, impact statement, references and appendices): 34,728

**Acknowledgements**

Thank you to the students, parents and teachers for sharing your stories with me - it was such an immense privilege to hear your stories. Special thanks to my schools and key liaisons in school, for all your coordination efforts and for being so enthusiastic about my research.

Thank you to my two research supervisors, Dr. Leda Kamenopoulou and Dr. Cynthia Pinto, for the constant encouragement, unwavering support and unconditional guidance. I could not have asked for better supervisors!

Thank you to my TEP friends, it's been such an amazing three years with all of you. Special thanks to Imi for the many thesis writing coffee dates all over London.

Thank you to my family and friends, for your endless love and support. Special thanks to Delle for proofreading my work. Special thanks to Mario the Pomeranian for always being there for me. Last but not least, to Gerald, for your love and patience, and for journeying with me every step of the way.

## Abstract

Friendships and social relationships are central to our wellbeing, where those with wider and closer networks have better mental and physical health. However, the friendships of those with the most complex needs are often ignored. This study explored the friendships and social relationships of students with complex communication needs (CCN) in and outside of special school settings, to understand how they view and experience them and how to facilitate them.

20 participants – six students, eight of their parents and six of their teachers/teaching assistants took part in the research. The research was carried out in two stages – stage 1 included semi-structured interviews with parents and teachers and unstructured observations of students in class and at breaktimes. Stage 2 included direct work with students through a Mosaic approach, using six participatory tools – pyramid ranking activity, preferred activity with friends cards, best friends activity, school tours, collections from home and book-making. A reflexive thematic analysis approach was employed to analyse the data.

The findings included eight themes – three student themes, three themes across parent and teacher data, one parent theme and one teacher theme. Findings suggested 1) students with CCN know their friends best, 2) friendships are maintained through a connection that goes beyond words, where meaningful social contact is enacted through aspects of the human experience located outside of language, 3) reciprocity in friendships means no distinction between ‘helper’ and ‘needing help’, 4) barriers include communication limitations and the protectiveness of parents 5) parents facilitate friendships through dedication to their students’ social lives and sticking within their communities, and 6) teachers facilitate friendships

through structured and incidental friendship opportunities alongside an inclusive school ethos.

Strengths and limitations are highlighted. Implications for practice for Educational Psychologists, schools and curriculum developers and policy planners, including directions for future research, are discussed.

## Impact Statement

This study provides a unique contribution to the field of friendships and social relationships of students with CCN, by focusing solely on students with CCN in the context of special schools in the following areas – to examine the friendships and social relationships of students with CCN in special school settings through the views of the students themselves, to examine their friendships both in and outside of special school settings, and to consider how parents and teachers facilitate these friendships. This study has made an impact in the following ways:

- Contributing to the Educational Psychology profession by highlighting that students themselves have the most accurate views of their social lives. EPs need to find creative ways to elicit their views.
- Contributing to the field of friendship research by suggesting friendship models that view friendships as being on a continuum can be used to explain the friendships of students with CCN, and by demonstrating that dimensions of friendship quality such as helping and conflict are present within these students' friendships.
- Contributing to the field of Augmentative and Alternative Communication (AAC) research by moving beyond the focus on communication, to argue that building meaningful friendships and social relationships lie at the heart of 'functionality' for students with CCN.
- Contributing to research design, using a Mosaic Approach to focus on the students' voices. This study suggests it is crucial to elicit voices from the students themselves to paint a complete picture of their friendships.

This study highlights several implications for key stakeholders.

*Educational Psychologists (EPs):* EPs should gather an accurate picture of the friendships of students with CCN from the students themselves, such as through the pyramid ranking activity alongside a communication partner, or by collaborating with school staff to come up with individualised possibilities for assessing each student. Such assessments are an important aspect of planning for school transitions, where EPs should consider who the students' friends are and who they want to keep in touch with when they graduate.

*Schools and Curriculum Developers:* Schools should facilitate parent networking opportunities for parents to get to know if they can become friends with one another. Schools should also consider both structured activities (such as structuring environments through sitting arrangements that facilitate group work, structuring time within the timetable to build friendships, and explicitly teach friendships skills) as well as incidental friendship opportunities (such as playground sessions and lunchtimes to allow students to meet with friends from previous classes). Within the curriculum, students should have opportunities to connect through physical activities, music, art and collaborative learning opportunities, which are as equally important as building literacy and numeracy skills.

*Speech and Language Therapists (SLTs):* SLTs should support friendship goals, identify structured and incidental friendship development opportunities, and provide tools to support communication within these opportunities.

*Policy Planners:* Policy planners should provide resourcing for community spaces and programmes, ensure they cater to students with a variety of needs and age groups, and ensure staff are trained to support those with the most complex needs.

## Table of Contents

## Glossary of Acronyms

| | |
|---|---|
| AAC | Augmentative and/or Alternative Communication |
| CCN | Complex Communication Needs |
| COVID-19 | Coronavirus Disease 2019 |
| EP | Educational Psychologist |
| IOE | Institute of Education |
| PECS | Picture Exchange Communication System |
| PMLD | Profound and Multiple Learning Difficulties |
| SEN | Special Educational Needs |
| SEND CoP | Special Educational Needs and Disability Code of Practice |
| SLD | Severe Learning Difficulties |
| SGDs | Speech Generating Devices |
| SLTs | Speech and Language Therapists |
| TEP | Trainee Educational Psychologist |
| TV | Television |
| UCL | University College London |

# Chapter 1: Introduction

## Rationale for Study

Friendships and social relationships are central to our wellbeing and quality of life. Those with wider and closer networks have better mental and physical health (Demir & Davidson, 2013; World Health Organisation, 2015). There are many advantages to having friends – they increase social status, reduce vulnerability to social aggression, promote emotional well-being, provide companionship and social support, and help with school transitions (Coplan & Arbeau 2009; Pellegrini & Blatchford, 2000; Vitaro et al., 2009). However, the friendships and social relationships of those with the most complex needs are often ignored (Rossetti & Keenan, 2018).

Many adults with disabilities have infrequent contact with their families and friends (Emerson et al., 2005, as cited in Imray & Colley, 2017). This can lead to social isolation and exclusion, which puts these adults at risk of mental and physical health difficulties (Imray & Colley, 2017). Adults with complex communication needs (CCN) find making and keeping friends ‘one of the greatest challenges of their lives’ (Therrien, 2019).

Students with CCN have fewer friends and interactions than those without disabilities due to lack of proximity and meaningful contact (Østvik et al., 2017; Ware et al., 1992). For wellbeing, learning to make friends is a key developmental task (Rubin et al., 2009). Thus, this study aims to explore the friendships of students with CCN and how to facilitate them.

# Chapter 2: Literature Review

A literature review was conducted to analyse and summarise relevant literature, situate the research and present an argument on why the research is important. UCL Explore, a single search tool for finding journals, books, full-text articles, archie material, and Google Scholar were searched. The search terms included, “CCN”, “Complex Communication Needs”, “Complex Needs”, “AAC”, “Augmentative and Alternative Communication”, “Communication”, “SEN”, “Special Educational Needs”, “Friendships”, “Social Relationships”, “Interactions”. The date range was initially limited to studies from 2010 onwards and subsequently from 2000 onwards as there were few studies that focused on this population. The initial search led to a variety of resources such as articles, books, and dissertations that were published across several databases: Education Resources Information Center, PsychInfo, SAGE, Taylor and Francis. The literature was selected based on the following criteria – the resource has been published, is in English, and peer-reviewed journal articles were preferred. The literature was documented on Excel using the following headings – author, year, title, source, research questions, method, findings, quotes, why the study is important and limitations. The literature was grouped into different categories – friendship literature overview, methods to study friendships and elicit voice, special schools and friendships, disability and friendships, AAC and friendships and observation schedule methods. Throughout the research, a search was conducted every three months to keep up to date with the newest literature.

## 2.1 Definitions and The Importance of Communication

### *2.1.1 Definitions of CCN and AAC*

Students with CCN are a heterogeneous group – with a range of motor, sensory and cognitive skills, and a range of developmental disabilities such as

cerebral palsy, autism spectrum disorder, Down's syndrome as well as acquired disabilities such as speech and motor impairment as a result of an accident (Drager et al., 2010). They have limited, unintelligible or no functional spoken language to meet daily communication needs (Beukelman & Mirenda, 2013). The terms minimally verbal or non-verbal are sometimes used to describe how they have extremely limited vocabulary. According to the Special Educational Needs and Disability Code of Practice (SEND CoP), students with CCN would be considered to have special educational needs (SEN), where, "A child or young person has SEN if they have a learning difficulty or disability which calls for special educational provision to be made for him or her".

Students with CCN may require augmentative and/or alternative communication (AAC) to express themselves (Beukelman & Mirenda, 2013). AAC is a range of communication systems aimed at promoting meaningful participation across settings (Beukelman & Mirenda, 2013). Aided systems use external equipment including speech-generating devices and picture exchange boards (Sigafoos et al., 2016). In recent years, technological improvements have proliferated the use of aided systems (Ganz et al., 2017). Unaided systems involve using bodily cues, including gestures and sign language (Sigafoos et al., 2016). AAC is used to support natural speech and writing (Clarke et al., 2012). It is also used as part of a total communication approach – using the right combination of communication methods for a student to ensure the most successful interactions (Clarke et al., 2012). Although AAC supports communication, AAC users still experience challenges interacting with others and have difficulties developing friendships (Therrien et al., 2016).

### *2.1.2 Importance of Communication in Developing Friendships*

Communication is central to the development of friendships. Those who use language, be it spoken or signed, rely heavily on it to build friendships (Wickenden, 2011). For those with CCN, everyday conversations are different – they are significantly slower, changing topics and repairing misunderstandings are different and the sharing of experiences and stories can be difficult (Higginbotham et al., 2007; Hynan et al., 2014; Murray & Goldbart, 2009). Even with the use of AAC, communication difficulties are not eliminated (Therrien et al., 2023). Such reduced communicative effectiveness and emotional responsiveness may negatively impact friendship initiation and maintenance (Anderson et al., 2011; Therrien, 2019).

In fact, friendships have been identified by adults who use AAC as one of six research priorities, where they wanted research to focus on preparing them for situations like making friends, dating, and finding jobs, rather than merely for communication purposes (O'Keefe et al., 2007). The importance of friendships and social participation of students in schools is echoed by Iacono et al. (2022), who conducted a systematic literature review of AAC research done in segregated school settings and found that most studies focused on functional communication. AAC research needs to extend beyond communication to how AAC can promote access to other areas of school life such as social participation and academic skills (Iacono et al., 2022).

## 2.2 What is Friendship?

### *2.2.1 Definitions of Friendship*

There is no agreed definition of friendship. One definition is a 'close, mutual and voluntary dyadic relationship' (Rubin et al., 2011). Adults with CCN also define friendship similarly – as a reciprocal dyadic relationship of mutual choosing (Therrien, 2019). Others define it as a continuum, from strangers, acquaintances,

just friends, good friends, close friends to the best of friends (Berndt & McCandless, 2009). Friendships are often described as ‘horizontal’, making them different from other dyadic relationships, such as parent-student relationships, which are ‘vertical’, where parties differ in age and developmental stage (Bagwell & Schmidt, 2011).

There is no single unified theory of friendship. Hartup’s theory of friendship emphasises the significance of having friends and the quality of friendships in relation to developmental outcomes, and conceptualises friendship as multidimensional – distinguishing between having a friend, friendship quality and characteristics of the friend (Hartup & Stevens, 1997). This focus on multiple dimensions of friendship has been influential in guiding research over the past 30 years (Bagwell & Schmidt, 2011).

Meyer (2001) proposes another theory of friendship that includes six frames of friendship: a) Best Friend, (b) Regular Friend, (c) Just Another Student, (d) I’ll Help, (e) Inclusion Student, and (f) Ghost or Guest. These frames are experienced at different times, with different people, based on circumstances. Difficulties arise when one only experiences certain frames, such as always being helped but never being a best friend (Meyer, 2001).

### *2.2.2 Characteristics of Friendship*

There is some consensus on the core characteristics of friendships and how they develop across the life span, which include reciprocity, companionship, proximity, similarity, intimacy and conflict.

**Reciprocity.** Reciprocity refers to friendships involving mutual liking, having fun together and providing each other with support (Bagwell & Schmidt, 2011). Students choose to play or work together and the friendship persists over time (Lodder et al., 2015; Rose & Asher, 2000) Reciprocity can be challenging between

students with and without SEN (Demetriou, 2021). Students without SEN may view those with SEN as needing help due to differences in appearance or needing assistive equipment, leading to unbalanced relationships and perceptions of those with SEN as unequal (Demetriou, 2021). Reciprocity can also be challenging for adult AAC users (Therrien, 2019). These adults appreciated help from friends, but for a friendship to develop, both parties must contribute equally, albeit differently, such as AAC users also being helpers (Therrien, 2019). Moreover, only one-third of students with CCN reported being in a reciprocal friendship (Østvik et al., 2018b). Thus, reciprocity with those with CCN may manifest differently from friendships of those without SEN.

**Companionship and Proximity*.*** Companionship, where each party enjoys spending time together, is an early manifestation of friendship and features at nearly every age (Bagwell & Schmidt, 2011). For children, it involves sharing interests, spending hours playing and talking, having lunch and initiating time together across a variety of settings (Bagwell & Schmidt, 2011). Those who are effective at suggesting and initiating activities, giving and taking, and recognizing activities that would be fun for others, are likely to make and keep friends (Bagwell & Schmidt, 2011). For those with CCN, companionship can be difficult as it requires proximity to peers, but the need to rely on caregivers for transportation can be a barrier to proximity (Therrien, 2019).

**Similarity.** Proximity provides befriending opportunities, but similarity is what matters in becoming close friends (Juvonen, 2018). Similarity refers to befriending those alike in race, gender, behaviour, popularity, attitudes, academic performance, mental health and development (Altermatt & Pomerantz, 2003; Güroğlu et al., 2007). Those who are similar understand each other better, communicate easily, and find

each other more predictable and trustworthy, leading to more stable friendships with less conflict (McPherson et al., 2001). Similarity is important in making friends but becomes less crucial as the friendship progresses, as friendship maintenance depends on friendship quality (Majors, 2012). School settings increase the likelihood of friendships with similar others, where the student body tends to have more in common than do individuals in society at large (Veenstra et al., 2018). Furthermore, students in special schools may have difficulties making friends with others outside school if they do not have outside-school opportunities. Similarity with friends may be the unintended result of the greater or lesser opportunities to meet similar others in one's daily life (Lomi & Stadtfeld, 2014, as cited in Veenstra et al., 2018).

**Intimacy.** Intimacy refers to friends trusting and confiding in each other and providing mutual support. During adolescence, self-disclosure and mutual support become frequent, where the sharing of ideas and feelings with friends become increasingly important (Bagwell & Schmidt, 2011). Little is known about the intimacy dimension in friendships of those with CCN.

**Conflict.** Conflict is part and parcel of friendships. Children and adolescents have to navigate the complex emotions that come with these, and they learn to resolve conflicts through negotiation and compromise (Bukowski et al., 1996). Little is known about conflicts in friendships of those with CCN.

### *2.2.3 Developmental Aspects of Friendship*

Doll & Brehm (2010) described friendship characteristics as demonstrating varying levels of importance during different developmental periods – during toddlerhood and preschool years, friendships are based on having fun, being available and liking the same things; during early primary school years, a good friend holds up their end of the bargain, and there are exchanges of favours and

assistance. To maintain friendships, children learn to recognise and track reciprocity (Doll & Brehm, 2010). By late primary school years, friendships become more loyal and stable, and friends are committed to help each other socially, emotionally, and personally (Doll & Brehm, 2010). Reciprocity comes in the form of a sympathetic ear or help with problem solving. When conflicts arise, friends will compromise and negotiate (Doll & Brehm, 2010).

By adolescence, friendships become more intimate and committed, and are characterised by self-disclosure, emotional closeness, trust, authenticity and the ability to place other's needs ahead of one's own (Doll & Brehm, 2010). The level of intimacy is an indicator of friendship quality and predicts self-esteem and well-being (Buhrmester, 1990, as cited in Majors, 2012). Intimate friends expect the friendship to persist through conflict and be able to repair almost all slights (Doll & Brehm, 2010). Such friendships provide acceptance and emotional support just as adolescents become less reliant on parents (Majors, 2012). Friendships that are emotionally supportive, trusting and intimate can survive for many years (Majors, 2012).

Peer group structures also change to become more multi-levelled (Bagwell & Schmidt, 2011). Adolescents differentiate between best, close and "just" friends and others in their larger peer networks (Adler & Adler, 1998). Friends at various levels satisfy different needs – best friends may satisfy intimacy needs while others may satisfy companionship needs (Adler & Adler, 1998). To understand adolescent friendships, there is value in considering these levels of friendship (Bagwell & Schmidt, 2011).

Adolescents continue to develop many interconnected friendship groups that are part of a larger peer crowd outside of school (Cotterell, 2007, as cited in Majors,

2012). While most adolescents enjoy spending time with same-sex friendship groups, they start to explore larger networks outside of school such as at parties and connect with mixed-sex friendship groups (Majors, 2012). Therefore, research needs to consider the community spaces and resourcing to meet adolescents' social needs (Majors, 2012).

## 2.3 Studying Friendship and Peer Relations

### *2.3.1 Friendship as Part of Peer Relations*

Friendship is one aspect of the peer relations literature. Peer relations research is usually divided into three levels of analysis: (a) individual level which includes peer status, (b) dyadic level which include friendships, and (c) group level which include peer networks such as cliques and crowds (Cillessen & Bukowski, 2018). These distinctions of levels are made in research but in the everyday lives of children and adolescents, they are intertwined (Cillessen & Bukowski, 2018).

**Friendships and Peer Status.** Peer status, also known as sociometric status, has received the most attention in the study of peer relations (Bagwell & Schmidt, 2011). It is the measure of how accepted or rejected a person is in the context of a peer group by using a round robin design that allows each member in a group to evaluate all others on one or more criteria, such as naming who one considers as a friend (Cillessen & Bukowski, 2018).

Peer acceptance precedes friendship formation – it predicts the number of reciprocal friends a student has (Erdley et al., 2001). Although better accepted students have more friendship prospects, some rejected students are also able to form friendships though these friendships could have negative qualities, such as higher conflict levels (Ladd, 2005).

**Friendship and Peer Networks.** Friendships often exist within a larger peer network, which is a set of individuals and the friendships that connect them in a social structure, such as a classroom (Veenstra et al., 2018). Within peer networks, some students have a hierarchy for their friends, while others prefer having groups of friends rather than designated best friends (Majors, 2012). Thus, a complete representation of a student's experience requires understanding both the student's peer status in groups and their friendships.

### *2.3.2 Studying Friendship*

What should we assess in friendship and how do we assess it? There are six potential domains of study – the presence of friendship, friendship quality, a student's interaction with friends, context of friendship, student's characteristics, and friend's characteristics. The first three will be described in further detail. To gain a comprehensive and nuanced understanding of friendships, data needs to be gathered through students' views, what parents and teachers report, and what is observed in social interactions (Bukowski, et al., 1996; Kamenopoulou, 2012).

**The Presence of Friendship.** The presence of a friendship is identified through friendship nominations – researchers have to decide who will be naming the student's friends, how the naming of those friends is done and whether the student named as a friend needs to name the student in return (Berndt & McCandless, 2009). For students with disabilities, some researchers ask parents and teachers to individually identify friendships, while others ask teachers to identify a friend and parents to confirm the friendship (Hollingsworth & Buysse, 2009; Odom et al., 2006). Such reports have their drawbacks, such as parents not being in school to observe interactions and teachers basing their friendship reports on peer interactions in class rather than breaktimes (Bagwell & Schmidt, 2011).

Other researchers emphasise the importance of reciprocal peer nominations as unreciprocated nominations may suggest peer acceptance rather than friendship (Webster & Carter, 2013). However, both friends must participate in the research so nominations are limited to students in classrooms (Bagwell & Schmidt, 2011). Those with close friends in the community may be classified as 'friendless' when they have a reciprocal best friend (Bagwell & Schmidt, 2011).

In a previous study, Parker & Asher (1993) asked students to name three friends, did not restrict them to peers at school and found that on average, students named just under one peer outside school as a friend.

**Friendship Quality.** Friendship quality is determined by the number of positive and negative characteristics and varies significantly from friendship to friendship (Bagwell & Bukowski, 2018). High friendship quality helps with school transitions and is correlated with high self-worth and social competence, low levels of depression, loneliness and challenging behaviours (Bagwell & Bukowski, 2018). For students with autism, friendship quality can be qualitatively different compared with that of non-autistic classmates – one in which there is less emphasis on emotional connectedness (Calder et al., 2013). Little is known about the friendship quality of students with CCN, and it is possible that their friendship quality is different from others.

**Students' Interactions with Friends.** The interactions between dyads of friends and dyads of non-friends have been studied through various strategies, such as structured observations in naturalistic settings, and interviewing students, their peers, parents, and teachers (Bagwell & Schmidt, 2011). Bagwell & Schmidt (2011) noted the need for smaller scale studies to explore processes that occur within moment-to moment interactions, such as understanding how friends talk together,

what they talk about, and how they engage with and solve problems together. Such insights will offer a richer, more nuanced understanding of the importance of friendships (Bagwell & Schmidt, 2011).

## 2.4 Friendships of Students with SEN

### *2.4.1 Friendships Between Students With and Without SEN*

Meaningful friendships can form between students with and without severe disabilities, regardless of functioning levels, although such friendships have characteristics that make them different from friendships between those without disabilities (Rossetti & Keenan, 2018). Being friends with those with disabilities would mean engaging in different types of activities, and students with severe disabilities often received help from friends but did not play a helping role themselves (Rosetti & Keenan, 2018). The researchers highlighted the importance of addressing the nature of friendships between students with and without severe disabilities – why students become friends, how they interact, what they think about their friendships and what is needed for friendships to transcend beyond school contexts to provide guidance for future intervention.

### *2.4.2 Friendships and Peer Acceptance in Mainstream Settings*

Much of the research on the friendships of students with SEN has been in mainstream settings. Cuckle & Wilson (2002) studied the friendships of 14 adolescents with Down's Syndrome between 12 and 18 years who attended mainstream settings. Through interviews, most of the adolescents had a strong sense of what friendships entailed, and perceived friendships as important. However, although they had some friends in school, only in a small number of cases did the friendships extend to home, due to the adolescents living in different areas and being dependent on parents for transport. More reciprocal friendships existed between

them and others with SEN as there were more similarities in terms of communication skills, interests, social life and emotional maturity. Friendships with non-SEN students were largely confined to school. Cuckle and Wilson (2002) highlighted the need for opportunities for friendship development in and out of school, in activities that are the same as those enjoyed by mainstream peers. Furthermore, adults need to give adolescents freedom to develop friendships and not support them too closely (Cuckle & Wilson, 2002).

Kamenopoulou (2012) studied the peer interactions and relationships of four deafblind students in mainstream schools, and the barriers to social inclusion, through interviews with students, parents, teachers and observations of peer interactions. Barriers identified were person-related, such as dependence on adults for transportation, and context-related, such as being in a previous special school resulting in poor social skills, and current organisation of provision, where adults accompanying students in lessons could hinder peer interaction. Facilitators were peer-related, where peers were found to be a key facilitator when made aware of implications of deafblindness for communication. Kamenopoulou (2012) suggested that future research could explore the impact of classroom practices on socialisation, and to include young people's views regarding the support they receive and to adapt instruments to match closely to each participant's specific needs.

In recent years, researchers have also focused on including students with SEN into peer groups of students without SEN in mainstream settings. Spence (2018) found pupils with SEN engaged in fewer peer interactions in classrooms and playgrounds than those without and had worse scores on a range of relationship measures. High levels of peer interactions and fewer interactions with teaching assistants were associated with more positive peer relations (Spence, 2018).

Pinto et al., (2019) examined pupils with differing levels of SEN support in mainstream primary schools through sociometric questionnaires to understand peer relation measures and the extent of meaningful contact with peers. Pupils with a statement of SEN were less accepted by peers, were less central within peer groups and had fewer reciprocated friendships. Pupils with a statement of SEN had more contact with each other compared with pupils without SEN. This suggested that meaningful social contact may improve social and academic outcomes if collaborative approaches to learning which include both pupils with and without SEN, are used.

### *2.4.3 Friendships in Different School Settings*

Some researchers have compared the friendships of students with and without SEN in different school settings. Heiman (2000) investigated the friendship quality of 575 students with and without disability between 12 to 15 years, who were in special schools, self-contained classes in mainstream schools and those without disability in mainstream schools. An open-ended friendship quality questionnaire covering six topics was administered – (a) the definition of a good friend, (b) where the student meets with friends, (c) how the student feels when alone, (d) reaction to loneliness, (e) frequencies of feeling lonely and (f) advice on how to make friends. Students differed in their perceptions of friendships: those with disabilities stressed helpfulness, fun and entertainment, while those without stressed intimacy. Students in special schools felt lonelier than those in other settings. One explanation was that special schools were further from home, which complicated afternoon activities (Heiman, 2000). One limitation was that differences in student characteristics and environmental factors were not considered.

This is corroborated by Holt et al. (2017) who examined the friendships of young people aged 11 to 17 with SEN in four different school settings in the UK (two mainstream schools with special units and two special schools). In all settings, most young people had friends within the schools, but those who spent time in both mainstream and special units were mostly friends with others in the special units who also had SEN, and those who attended special schools had friends mostly within these schools. The importance of having opportunities for 'encounter' to forge friendships was highlighted. It is unclear what participant characteristics were and how data was collected and analysed.

### *2.4.4 Meaningful Social Contact*

The importance of meaningful social contact for students with SEN to form friendships is echoed by Ware et al. (1992), who found that interaction activities between students with SLD and mainstream peers had to be carefully selected and deliberately planned. This is emphasised by Matheson et al. (2007), who conducted an ethnography and interviews with adolescents with developmental disabilities, using a sample drawn from a cohort of 102 families who were part of a longitudinal study. Matheson et al. (2007) asked them about three aspects regarding friendships – tell me about your friends, do you have a best friend and if so, please tell me why this person is your best friend. Their findings echoed research on those without disabilities – adolescents wanted to engage in activities with peers in a variety of contexts, share similarities with them and wanted friends with long-term availability. They also found those in the same special education classes formed the most enduring friendships which aligned with the adolescents' emphasis on proximity and stability in their friendships.

Based on the above studies, much of the research in this area has been about friendship and peer acceptance within mainstream settings. Thus, there is a need to study friendships in special school settings, where students are part of a different kind of peer group. Furthermore, meaningful social contact is important for friendship development but is lacking in students with SEN. Parents of students with SEN go to great lengths to create situations for friendships, such as by accompanying students to birthday parties outside of school (Higley, 2017). It will be important to study what meaningful social contact entails, and the transcendence of friendships beyond the special school context.

## 2.5 Friendships of Students with CCN

### *2.5.1 Meaningful Social Contact for Friendship Development*

Students with CCN also need to have meaningful social contact with peers. Yet for these students in mainstream classrooms, 89% of their interactions were with adults, 6% were with both adults and another student and only 5% was exclusively between peers (Chung et al., 2012). Students with CCN rarely interacted with classmates outside of school and even when they invited others to their homes, ‘nobody comes’ (Batorowicz et al., 2014). How can they learn the skills needed to develop successful friendships when so little of their interactions are with peers?

These findings are echoed by Raghavendra et al. (2012), who compared the school participation and social networks of students between 10 to 15 years with physical disabilities and CCN, students with physical disabilities only, and students without. The students were from both mainstream and special schools. Students with CCN had fewer friends, were given fewer opportunities for communication in school and rarely used their AACs. Students with CCN engaged in fewer activities compared to those with physical disabilities and those without, staff chose to do

different activities with them, and they also required more time for essential daily activities. The researchers concluded there is a need to extend the social networks of students with CCN, support friendships outside of school and provide access to activities in and out of school to create opportunities for meaningful interaction with peers.

This need to explore the friendships of students with CCN is supported by some researchers. Østvik et al. (2017) conducted a systematic literature review on the friendships of students who use AAC and called for greater understanding of how these students initiate and develop friendships, and how AAC use affects opportunities to enter close relationships. There is also room to evaluate how appropriate it is to use existing models of friendship development to explain the friendship of students with CCN (Østvik et al., 2017).

Syversen (2020) also conducted a systematic literature review to examine methods used in current research on friendships of children and adolescents with limited verbal language and how these have impacted understandings of friendships. Their friendships had similar characteristics to typically developing children and adolescents, where friendships were reciprocal and built on proximity, companionship, similarity and transcendence of context. The opportunity to spend time together and engage in shared activities was one of the most important factors in friendships (Syversen, 2020). Adolescents also shared intimacy, trust, loyalty, and support to be important. Conflict was also present. They enjoyed helping their friends with disabilities and this was important for friendship maintenance (Syversen, 2020). As most studies reviewed did not include direct data collection from those with limited verbal language, the suggestion was for future research to focus on this method.

### *2.5.2 Understanding Friendships Through the Perspectives of Friends of Students with CCN*

Some researchers have studied friendships from the perspectives of friends of children with CCN. Anderson et al. (2011) interviewed children aged 7 to 14. Several features influenced friendship initiation and maintenance, including children's views and attitudes towards disability, and socio-emotional needs such as feeling lonely. Other motivators included the personal qualities of children who use AAC, such as having a sense of humour and being fun to play with. The children interviewed shared that there were differences between interactions with friends who use AAC and those without – activities with low communicative demands such as chess enabled social contact but there were fewer discussions regarding intimate relationships. Barriers to friendship quality included physical access barriers such as inaccessible areas, policy barriers such as segregated break times, and attitude barriers such as adults limiting activities in which children who use AAC could otherwise participate, and expectations placed on friends of children who use AAC, where the high support needs of children who use AAC often pushed boundaries between friend and carer.

Biggs & Snodgrass (2020) conducted semi-structured interviews with 16 children who were friends of students who use aided AAC and found that friendship experiences intersected with how children described and made sense of their friend's disability. The researchers concluded that interventions needed to focus on multiple aspects of friendship (proximity, communication, interaction) and their environments. These included instruction within settings such as teaching assistant support and learning arrangements, and peer and adult expectations and behaviours that may influence friendships. One limitation of both the above studies is that they

did not obtain views from students who use AAC, which might have contributed to a better understanding of friendships between students with and without CCN.

### *2.5.3 Understanding Friendships Through the Perspectives of Students with CCN*

One study that included the voice of students with CCN is by Østvik et al., (2018a). They interviewed 41 participants from first to fourth grade in mainstream schools, across four groups – students using AAC, fellow students, parents and staff. The key questions included the preferences for friendships, preferred activities, characteristics of friends and how friendships were established. They found that AAC users exerted agency – they liked being with specific students and most preferred students of the same age. Play was an important gateway to friendships. Organisation of social structures by adults for making friends was also key, emphasising the importance of meaningful interactions to support friendship development between students with CCN and their peers.

The same researchers also published another article on the same population which described the friendships between students using AAC and fellow students in mainstream schools (Østvik et al., 2018b). All students using AAC had friends although they provided diverse views about them. While some students using AAC were nominated as best friends, many of the nominations between students using AAC and fellow students were unilateral. Parents and staff described friendships to be superficial and students who use AAC were rarely viewed as playmates. The researchers concluded that obtaining the views of students with CCN on how they experience friendships may be the ‘most valid way of understanding the phenomenon.’

The above studies are in mainstream settings. Few studies have been conducted in special school settings, which is an area this study seeks to explore.

### *2.5.4 Understanding Friendships Through the Perspectives of Adults with CCN*

As there are few studies eliciting views from the students with CCN themselves, it is possible to take reference from adult populations. Therrien (2019) explored the experiences of eight adults aged 19 to 45 who use AAC on making and keeping friends. Some factors reflected the unique experiences of AAC users, such as peer competence in using AAC and acceptance of it, and environmental accessibility. AAC users described characteristics of friends that differentiated them from acquaintances – those who became friends were patient in waiting for a message to be composed during conversations, suggesting that peer attitudes and the behaviours that reflect those attitudes are key to successful friendships. Therrien (2019) suggested the need to extend understandings of friendship across the lifespan by studying adolescents who use AAC and their perspectives on making and keeping friends, and to consider the efficacy of interventions developed for home, school and community contexts to facilitate friendships.

Dada et al., (2020) conducted semi-structured interviews with 10 adults aged 19 and 32 who use AAC, which were co-constructed between participant, carer and interviewer. Participants were asked about their best friend, how and when the friendship began, how it was maintained and the qualities of their friend. AAC users described friendships to provide companionship and support and enjoyed activities that took place at home rather than in public, which had access barriers. The study also illuminated the impact of social media on friendships – participants found connecting on Facebook made forming new friendships easier and used mobile technologies to keep in touch with long-distance friends. Nevertheless, participants

expressed the desire to join in more activities with friends which were currently inaccessible, suggesting the need to examine friendships within community settings and the accessibility of such settings.

## 2.6 The Influence of Teachers and Parents in Facilitating Friendships of Students with CCN

### *2.6.1 The Importance of Teachers in Facilitating Friendships*

Teachers have a key role in facilitating friendships and influencing classroom environments – there are some students in classes who regard everyone in class as friends (Bagwell & Schmidt, 2011). Do these teachers' efforts translate into more reciprocal or higher quality friendships among students in their classes? What are they doing to create an environment where positive friendships flourish? (Bagwell & Schmidt, 2011). Some teachers may have instructional and organisational practices that facilitate friendships while others have practices that constrain them, but such classroom practices are rarely considered in research (Juvonen, 2018).

Interventions that have been successfully implemented by teachers include peer-pairing techniques, such as buddy systems to build relationships between two students, Circle of Friends, to help those with SEN connect better with their peer group, and social skills training (Bagwell & Schmidt, 2011; Frederickson et al., 2005). Teachers know the classroom peer dynamics well and can effectively identify friendships and peer groups, and teach friendship skills (Bagwell & Schmidt, 2011). However, little is known about how to teach friendship skills as much of the literature on interventions has focused on peer acceptance rather than friendships (Bagwell & Schmidt, 2011).

This is also the case for research on students with CCN, which has focused on promoting peer interactions. Therrien et al. (2016), in a systematic review,

highlighted the most frequently used interventions were teaching students with CCN how to use AAC within social interactions and teaching peers' skills and strategies to promote interactions. When teachers provided interventions to support peer interaction for their students with CCN, the percentage of time interacting with peers increased, and the percentage of time interacting with adults decreased. Peer interventions included peers modelling facilitation strategies and appropriate social skills, engaging in shared activities, helping peers navigate AACs to provide on-topic responses, and learning how to interact with students with CCN. This included providing extra time for responses and learning more about disabilities to reduce negative stereotypes that can be barriers to friendships (Biggs et al., 2018; Herbert et al. 2020; Therrien et al., 2023). However, these studies were largely focused on social interactions in mainstream settings, so it is important to explore what teachers in special schools do to facilitate friendships.

### *2.6.2 The Importance of Parents in Facilitating Friendships*

Parents have a key role in facilitating friendships. When parents were involved in friendship interventions, such as training to be their child's friendship coach, children showed positive changes in social skills, peer acceptance and friendship quality compared with a control group (Mikami et al., 2010, as cited in Bagwell & Schmidt, 2011). For students with disabilities, living near peers did not guarantee friendships (Geisthardt et al., 2002). Instead, parents needed to initiate and supervise friendships, provide others with information about their child's disability and adapt physical environments (such as play equipment) to influence friendships (Geisthardt et al., 2002). Nevertheless, most research has been conducted on wider populations and little is known about how parents facilitate friendships of students with CCN specifically.

## 2.7 Eliciting Voice of Students with CCN

### *2.7.1 Methods to Elicit Voice*

Obtaining views from students with CCN can be difficult. One possibility is to use a Mosaic Approach, which combines traditional methods of interviewing and observing with participatory methods (Clark & Moss, 2017). Participatory methods include student interviews, use of photographs, student-led tours and map-making (Clark & Moss, 2017). The methods chosen are not prescriptive but are open to improvisation, bringing together different pieces to create a 'mosaic' of students' experiences (Gallacher & Gallagher, 2008). This approach relies on methods to co-construct meanings rather than extract one 'truth' (Clark & Moss, 2017).

Although this approach was originally developed for younger students, it can be adapted and used with older populations as long as the principles of the approach are considered – the student is an expert in their own lives, the tools play to the students' instead of the researchers' strengths, and there must be a willingness to create a communication platform where students can discuss meanings (Clark & Moss, 2017). Working with students with additional needs requires researchers to be methodologically imaginative and inventive and to adapt to circumstances that may call for new methods (Clark & Moss, 2017). This is concurred by Lydiatt (2015), who evaluated the Mosaic Approach and found although students responded differently to different tools, using multiple tools in more than one instance enabled a wide range of views to be elicited.

Part of the approach is the use of observations. Clark and Moss (2017) used narrative observations and highlighted the importance of not abandoning established practices in research that can provide understandings of students' lives. As such, this study incorporated observations as a piece of 'mosaic'. Then there is the use of

other narrative methods to understand students' lives through the elicitation of personal stories (Niemi et al., 2015). One such narrative method is through ranking tasks such as the diamond ranking activity, where students rank statements, photographs or images and it is the explanations behind the decisions that provide valuable information (Clark & Moss, 2017). Other narrative methods include life storybooks and memory books (Fargas-Malet et al., 2010). However, such methods require good language and communication skills so these tools require adaptation for students with CCN to ensure they play to their strengths.

Participatory visual methods are also part of the approach. These include the use of visual aids, such as images of faces with various emotions, or images with thumb up/thumb down signs to indicate likes and dislikes (Hill et al., 2016). Another category of visual methods is the use of photography. Photography captures students' everyday lives and takes the researcher into environments beyond those directly observable (Barker & Smith, 2012). It places the student at the centre of research, offers genuine communication between student and researcher and does not require the ability to speak or write, which is crucial for students with CCN (Barker & Smith, 2012).

Photography is also useful as part of photo-elicitation interviews. There are various forms of photo-elicitation – photos can be selected by the researcher or the participant, or the participant can generate photos (Lapenta, 2011). Such interviews give participants greater agency by allowing them to have control over what is discussed, such that the interview can be structured in a way that is relevant to their interests (Fawns, 2020). Both participant and researcher can mutually determine the direction and topics of conversation, rather than merely using photography to augment narratives (Fawns, 2020). Photo-elicitation interviews fit nicely into the

principles of the Mosaic Approach and will be useful for students with CCN as it encourages co-construction of meaning (Carroll et al., 2018).

However, visual approaches to psychology research have low uptake, as there is a lack of clear guidance and consensus as to how to conduct such research (Bates et al., 2017). Fawns (2020) shared that one possibility would be to use a reflexive methodology – to accept subjective interpretations by participants and not direct meanings from images, and each project needs its own unique method (Fawns, 2020). The effective use of visual methods requires the development of a sensibility, rather than a systematic approach, because it is complexity rather than consistency that is important (Fawns, 2020). Thus, this will also be the approach to this study – one that is reflexive, unique, and sensible to capture the complexities of working with students with CCN.

### 2.8 Summary of Literature Review

Friendships have been identified by adults with CCN as one of six research priorities, where they find making and keeping friends ‘one of the greatest challenges of their lives’ (Therrien, 2019). However, there has been limited research in this area.

Much of the research on friendships and peer acceptance of students with SEN, including those with CCN, has been in mainstream settings. Much of the research on friendships of students with CCN has gathered data through observations and views from adults and friends, rather than the students themselves. The few studies that have gathered views from those with CCN themselves have been conducted on adult populations and students in mainstream settings. In terms of how friendships are facilitated, current research is also in mainstream settings and is focused on social interactions rather than friendships. There is also little research on how parents facilitate friendships for students with CCN.

Taken together, these studies have highlighted the need to examine the friendships of students with CCN in and outside of special school settings, who are part of a different kind of peer group, through their own perspectives. These studies have also highlighted the need to understand how teachers and parents facilitate friendships, which can subsequently inform policy and practice.

Existing friendship theories (Berndt & McCandless, 2009; Bagwell & Schmidt, 2011; Hartup & Stevens, 2011; Meyer, 2001) were held in mind while conducting the study. Theories, which are tentative explanations used for explaining real-world events, can help researchers decide what and how to research, but care needs to be taken in the use of theory as they can become obstacles to what or how research is conducted – not every research needs a grand theoretical framework (Gorard, 2004). As such, the current study drew upon ideas from existing friendship theories, with a conscious lens that they have not been based on the current population studied, so as not to assume that these existing theories apply to them without sufficient research evidence.

# Chapter 3: Methodology

## 3.1 Aims of the Study and Research Questions

This study aimed to understand the friendships and social relationships of students with CCN in and outside of special school settings. The research questions were –

1) According to student, parent, and teacher views, how do students with CCN view and experience their friendships and social relationships at home, in school and in the community?
    - 1.1 To what extent are students' views about their friendships similar to parents and teachers' views?
    - 1.2 How are those friendships and social relationships established and maintained?
    - 1.3 What are the barriers to friendship development?
2) How do parents and teachers facilitate the friendships and social relationships of students with CCN at home, in school and in the community?

## 3.2 Ontological and Epistemological Perspectives

This study adopted a pragmatist research paradigm, focusing on real-world phenomena while acknowledging different realities and subjective interpretations (Weaver, 2018). Rather than discovering 'truth', pragmatic inquiry answers the questions being studied, emphasising answers that make a difference to a practical or intellectual problem, since true theories are those that work best at solving problems (Allmark & Machaczek, 2018; Tashakkori & Teddlie, 2003). Pragmatists recognise individuals have unique interpretations of the world, and research is never completely objective (Mertens, 2010). Researchers and participants influence each

other, and this guides researchers to choose methods based on their specific research questions (Johnson & Onwuegbuzie, 2004; Johnson et al., 2007).

This study also drew on the transformative-emancipatory perspective, which pays attention to power, privilege and voice, with the intentional collaboration with those whose voices are not typically heard (Mertens, 2010; Shannon-Baker, 2016). The researcher should be integrated with the community and have a strong understanding of its history (Mertens, 2010). In my former role as a policy and curriculum developer for special education, I sought to understand those with the most complex needs through frequent consultations with special school staff. I was most concerned with 'what works' and how these could be implemented. My research outlook therefore aligned with both transformative-emancipatory and pragmatist perspectives.

Both perspectives guided the qualitative approach through which my research was framed. During data collection, I ensured that the data would be used to benefit the special education community, while being culturally sensitive and credible (Shannon-Baker, 2016). In my findings, I ensured that the voices of the students were explicit, in line with a transformative-emancipatory perspective.

## 3.3 Participants and Recruitment Procedure

### *3.3.1 Participants*

There were 20 participants – six students, eight of their parents and six of their teachers/teaching assistants. They were recruited through purposive sampling from three London special schools. Purposive sampling was chosen as the students needed to meet the following inclusion criteria:

a) Be between 11 and 19 years old
b) Have limited speech and communicate using AAC

c) Understand the concept of friendship

d) Recognize and select a small number of familiar words or symbols.

Students aged between 11 and 19 years were selected as it was hoped that they would be more able to share their views on friendships using AAC. The students needed to understand the concept of friendship and select some words and symbols, ensuring that the co-construction of their views with a communication partner was possible. These criteria were discussed with teachers/teaching assistants who knew the students well before inviting them to be part of the study. Table 1 sets out participant characteristics. All names referred to are pseudonyms. Class teacher J and Class teacher C both taught Carter and Saphira and discussed friendships of both children in their interviews.

**Table 1**
*Participant Characteristics*

| Student with CCN | | | | | | Parents of Student with CCN | Staff at School |
|---|---|---|---|---|---|---|---|
| **Name** | **Age** | **Gender** | **Types of Aided AAC** | **Types of SEN** | **Literacy Levels** | | |
| Adina | 16 | F | Grid 3<br>Makaton | Cerebral palsy, visual impairment in one eye, auditory neuropathy, enteral fed | One of the highest literacy levels in class, good reading comprehension and vocabulary, beginning to spell | Mother | Teaching Assistant |
| Carter | 13 | M | TouchChat<br>Makaton | Autism | Can read and spell well | Mother<br>Father | Class Teacher J |
| Frank | 19 | M | Makaton | Down's Syndrome, autism, and ADHD, underwent tracheoplasty | Reads relatively clearly although speech is difficult for unfamiliar communication partners to understand | Father | Class Teacher |
| Mark | 14 | M | Compass TD Snap<br>Makaton | Paralysis but recovered considerable motor function, enteral fed, wheelchair user | Can read some high-frequency words and can type short phrases on YouTube to find videos | Mother<br>Father | Class Teacher |
| Oscar | 11 | M | Grid 3<br>Makaton | Beaulieu-Boycott-Innes Syndrome | Can recognise letters and read more words than others give him credit for | Father | Teaching Assistant |
| Saphira | 15 | F | Symbol Talker C on Grid<br>Makaton | Cerebral palsy | Knows all the letters and can spell some words | Mother | Class Teacher C |

### *3.3.2 Recruitment Procedure*

Recruitment of six students and their parents and teachers took 10 months as it meant clearing different levels of authority to gain access into schools. First, I emailed 11 headteachers of special schools, of which five agreed to have an exploratory discussion virtually. After their consent, I met with school staff to explain my research, identified students who met inclusion criteria, and distributed consent forms to teachers and parents of identified students. These meetings helped gain buy-in from staff, who became my key liaison in school to help with logistics and scheduling. Parents from three out of the five schools agreed to participate in the research, following which I sought oral assent from each student.

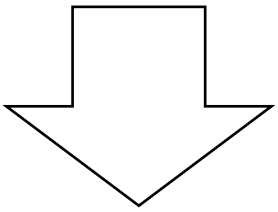
## 3.4 Research Design and Procedure

The research was carried out in two stages as shown in Figure 1. The interviews, observations and participatory methods were all piloted with one student with CCN, his parents and class teacher, and the aim was to ensure that the questions flowed well, the observations added value to the analysis, and the student with CCN could understand and access the tools. This student's data was included in the findings as the degree of modifications made to the research design was minimal. In this section, I will explain the choice of methods and procedures.

**Figure 1**

*Stages in Research*

| Stage 1: Semi-structured Interviews and Observations | |
|---|---|
| *Interviews*<br><br>Semi-structured interviews were conducted with parents and teachers to establish their views of the students' friendships. | *Observations*<br><br>Unstructured observations were conducted. Each student was observed for two intervals of 30 minutes each – one in class and one at breaktime. |



| Stage 2: Direct Work with Student through Participatory Methods | | | | | |
|---|---|---|---|---|---|
| Pyramid Ranking Activity | Preferred Activities with Friends Cards | Best Friends Activity | School Tours | Collections From Home | Book Making |

### *3.4.1 Stage 1: Semi-structured Interviews and Observations*

**Interviews.** Semi-structured interviews were conducted with parents and teachers to establish their views of the students' friendships and social relationships, barriers to friendship development and how they facilitated friendships. Semi-structured interviews have specific focus areas with broad questions and prompts to guide the conversation while allowing for follow-up questions (Robson & McCartan, 2016). This format was chosen as it allowed exploration of friendships in a structured

manner that answered research questions yet was flexible in allowing the clarifying and rephrasing of questions, resulting in the gathering of rich information (Robson & McCartan, 2016). Interview questions were predetermined but the order depended on participants' responses.

Interview questions were adapted from the literature and from my own experiences with students with CCN. They included questions about the friendships in and out of school, shared activities, friendship quality, barriers, and adult input (see Appendix A for interview questions for parents and Appendix B for interview questions for teachers). Although some researchers have emphasised the importance of reciprocal peer nominations, both peers must participate in the research so nominations would be limited to students in classrooms. As my research explored views of friendship at home, in school and in the community, I asked teachers and parents to name three friends each, and they were not restricted to peers at school.

The feedback during the pilot was that the questions flowed well and made sense. After making minor changes to emphasise how schools could support friendships and the role of AAC in promoting friendships, the interview questions were finalised. The interviews were audio-recorded and transcribed.

**Observations.** Observations were conducted in class and during breaktime to gain a snapshot of the actual interaction patterns of students with CCN and how staff facilitated friendships. They supplemented the data from interviews and participatory data from students (Robson & McCartan, 2016). Observations also provided opportunities to learn more about each student's unique communication methods which were crucial for planning how to gather their views.

Observations were conducted based on the 3 C's approach – context, content, and concepts (Fetters and Rubinstein, 2019). Keeping my research questions in mind, my focus for observations using the approach is illustrated in the table below:

**Table 2**

*Observations using the 3 C's approach (Fetters and Rubinstein, 2019)*

| Category | Definition | Focus |
|---|---|---|
| Context | The setting for the observations | What subject?<br>Where is it?<br>Who is teaching?<br>How many students are there?<br>How many adults are there?<br>What is the classroom arrangement like?<br>How is the context contributing to friendships development? |
| Content | What happens during the observation period | What is target student doing?<br>How are the students interacting and communicating?<br>What actions/events are occurring?<br>What is the timing/sequence of events?<br>How are the staff facilitating friendships? |
| Concepts | Reflections of observations in relation to what I have observed previously, prior literature and theories, and my research questions | What have I learnt that I did not know before?<br>How does the observation relate to prior observations or literature?<br>What are some potential implications of my observations? |

Each student was observed twice (30 minutes each) – once in class and once at breaktime. Breaktimes (in the playground or at lunch) were chosen as these are when students freely interact. The two observations were usually conducted on different days to reduce the risk of observing the student on an atypical day.

Qualitative notes were taken and used alongside other data in the analysis phase. I also double checked the observations with other staff present to aid in my reflections and preliminary ideas about what was observed (see Appendix C for observation schedule template).

A qualitative approach was chosen after I piloted a structured observations approach with a coding framework (see Appendix D for initial structured observation schedule). Initially, structured observations were chosen as this would allow for observations to be more focused and avoid problems of selective attention, selective encoding and selective memory (Robson & McCartan, 2016). The plan was to use a time-sampling approach, where for each 30 minutes of observation, I would code interactions every 30 seconds. For every 30 seconds, there would be 15 seconds of observation and 15 seconds of recording, where I would code and write qualitative notes.

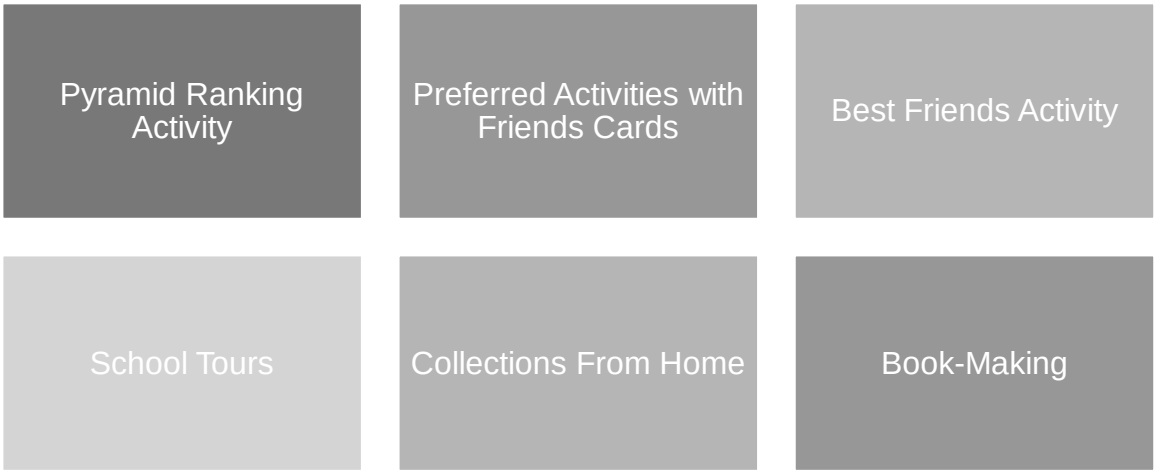
However, during the pilot, it was difficult to observe for 15 seconds and code for 15 seconds while simultaneously taking notes. The writing of qualitative notes was more important than the coded categories as data that was relevant to my research questions was lost without it. For example, my pilot observation was a communication class, where all the students from different classes who used high-tech AACs came together to communicate online with another school with students who also used high-tech AACs. The context, as well as the interesting ways that teachers were facilitating helping behaviours, could not be captured through the structured observation schedule. Thus, a structured observation schedule alone would reduce the data that was crucial for answering my research questions.

### *3.4.2 Stage 2: Direct Work with Student Through Participatory Methods*

In stage 2, I examined students' views and experiences of friendships and social relationships through a Mosaic Approach (Clark & Moss, 2017), with participatory tools adapted from various literature (eg. Hill et al. 2016). A set of guiding questions accompanied the tools (Biggs et al., 2020; Dada et al., 2020; Webster & Carter, 2010) (see Appendix E for student interview prompt sheet). Participatory tools were chosen to creatively elicit views from students with CCN, who often have idiosyncratic methods of communication (Dowden, 1997). The six tools, as shown in figure 2, were:

**Figure 2**

*Participatory Tools*




I piloted all tools with one student and decided that they were suitable, but I found the first three tools (in the first row above) more useful in eliciting views. Thus, I used these three tools with all the students while the other three tools were optionally deployed, where students were given a choice as to whether they wanted to take part in them.

As students with CCN have differing needs, I held a pre-session discussion with each student's communication partner, and adapted the tools based on the discussions. To ensure effective communication, I used the same symbol systems

as the schools. Boardmaker and WidgetOnline were the most commonly used in schools (see Appendix F for visual aids used in students' interviews and other materials).

Another key consideration was the possibility of communication breakdown, which is common in conversations with persons with CCN (Sellwood et al., 2022). A communication partner, either the student's teacher or teaching assistant, was present to co-construct meanings, as they were best placed to understand the student's communication methods, including body movements and eye gaze (Dowden, 1997; Solomon-Rice & Soto, 2011). The communication partner helped to prompt, rephrase questions, revoice responses and verify my interpretations. At times, they would help elaborate, which I checked with the student for concurrence, to prevent our beliefs and biases from influencing the interpretations.

**Tool A: Pyramid Ranking Activity.** Students were presented with a pyramid and both photographs and names of their friends in and out of school. They were asked to rank their friends and describe what they liked doing with them. The photographs and names of their friends were collected based on interviews with teachers and parents, and included friends from their previous class, current class and friends outside of school.

***Background.*** The pyramid ranking activity was adapted from the diamond ranking activity, a tool used to facilitate discussions in previous participatory research (Hill et al., 2016; Rao, 2020). This activity was completed in pairs or small groups to rank nine photographs or statements in order of importance. In decreasing order of importance, there would be one statement at the top, two in the second layer, three in the third layer, two in the fourth layer and one in the fifth layer. There were no right or wrong answers.

***Adaptation.*** Instead of having a diamond, I used a pyramid based on models of friendships suggesting friendships exist on a continuum, ranging from best of friends to best/close friends, good friends, just friends, acquaintances and strangers. After my pilot, to aid communication, I created a communication board of possible activities that the students liked doing with their friends, which they could point to. This board was created based on the interviews with teachers and parents.

**Tool B: Preferred Activities with Friends Cards.** To understand the activities that the students liked doing with friends, they were presented with photographs of school labelled with activities such as having lunch and playing on the slide, and photographs of classmates and other students that parents and teachers listed as friends in school.

***Background.*** This technique, known as school preference cards, was developed by Hill et al. (2016) to work with students with communication challenges and learning difficulties. Hill et al. (2016) adapted the approach based on the Kingswood Sensory Preferences system (Brand et al., 2012 as cited in Hill et al., 2016). This system consisted of 75 photographic cards and each card illustrated a sensory experience and had a phrase label. Participants were asked to sort the cards into positive, negative and neutral categories.

***Adaptation.*** For each student, I prepared 35 photo cards of activities in school. The student was asked about the things they liked to do in school with their friends. They picked photo cards of their favourite activities and matched them with photographs of who they enjoyed those activities with, or communicated through their AAC device about who they liked doing the activity with. This tool worked well during the pilot and no further adaptations were made.

**Tool C: Best Friends Activity.** I asked the students about the quality of their relationship with their best friends.

***Background.*** Questionnaires have been used to understand students' friendships. One example is the Friendship Quality Scale, a self-report measure where the student nominates his/her best friend and is asked various questions about the friendship (Bukowski et al., 1994). With 23 items rated on a five-point Likert scale, the questionnaire provides a measure of friendship based on five central components of friendship – companionship, conflict, help, security and closeness (Bukowski et al., 1994). Scaled scores are calculated by taking the mean of the ratings the student gives on each item within the scale.

***Adaptation.*** I piloted the 23 items by reading the questions to the student to support understanding and provided an enlarged version of the scale with five different faces for the student to point to. Some questions that covered the same components of friendship were confusing for the student as he wondered why I asked similar questions, so I reduced the number of questions to 15 by removing similar questions (see Appendix G for adapted friendship quality questionnaire for students). Some questions were also too difficult, so I limited the available responses to 'Yes/No' with visuals to aid communication. During the pilot, the student used a variety of adjectives, both positive and negative, to describe his best friend, and how his best friend made him feel. To ensure that I would be able to engage the rest of the students in this discussion, I prepared a list of positive and negative adjectives and also symbols of different emotions.

**Tool D: School Tours.** Students who were more mobile were asked to take me on a tour of the school to show me places that were meaningful to them and their friends.

***Background.*** This approach is based on photo tours that use a forward-facing camera to listen to students' views about their environments (Clark & Moss, 2017; Lydiatt, 2015). It is 'a student-led way of talking which is far more alive than the sterile environment of a traditional interview room' (Clark & Moss, 2017).

***Adaptation.*** I piloted the use of a school tablet with a front-facing camera for the student to take photographs of places where he enjoyed spending time with friends, but it was deemed unnecessary as he was more interested in showing me the places rather than using a camera to capture those places. As such, this activity was carried out without the use of a camera, but with an audio recording of our trip that was subsequently transcribed and analysed. This adaptation is in line with the Mosaic approach – tools should be chosen to fit the student's needs and not the other way round.

**Tool E: Collections from Home.** To understand friendships at home and in the community, parents were asked to provide five photographs and/or objects that represented friends and/or activities that the student did outside of school with friends, and discussions were based on the items.

***Background.*** Ibrahim (2016) adapted the Mosaic Approach to incorporate symbolic objects, making the mosaic three-dimensional (Clark & Moss, 2017). Furthermore, allowing participants to choose which photographs and objects to talk about gives them more agency in the research process and helps structure the interview in a way that is relevant to their interests (Fawns, 2020).

***Adaptation.*** No adaptations were necessary. However, only two of the parents provided photographs which were used during discussions.

**Tool F: Book-Making.** Using photographs and materials from the other tools, I made a book about friendships with the students.

***Background.*** Clark and Moss (2017) suggested that book-making facilitates further reflection on what students feel their photographs are about. Revisiting material with students provides opportunities for them to 'think what they think' and engage in metacognition where they can reflect on their everyday experiences (Clark & Moss, 2017).

***Adaptation.*** This activity was meant to be used in conjunction with tool E, where students would make a book using photographs about their friendships, with suggested captions. The captions were sentence starters to help students think of their friendships (e.g. My friend and I enjoy _____. A good friend _____.) However, due to motor constraints and time limitations, only two students drew some drawings of their friends. Nevertheless, all the students took part in conversations using the sentence starters.

The interviews with the students were video-recorded and transcribed, to capture their non-verbal responses, as many AAC methods such as gestures were not speech-generating.

### 3.5 Data Analysis

A reflexive thematic analysis approach was chosen to analyse all the data – the interviews from parents and teachers, the observations and the interviews from students. Reflexive thematic analysis was chosen because it sees the subjectivity of the researcher as integral to the process of analysis, where the analysis is an interpretative, reflexive process of meaning-making, of telling 'stories' rather than discovering 'truth' (Terry et al., 2017; Braun & Clarke, 2019). Meaning is not inherent but 'resides in the intersection of the data and the researcher's contextual and theoretically embedded interpretative practices' (Braun & Clarke, 2021a). This fitted with my data collection process. Collecting data from students with CCN required the

students, their communication partners and me to co-construct meanings based on what the students shared.

Such an organic, fluid process to analysis where new meanings could be generated through reflexivity meant that data saturation was questionable – there is no predetermined sample size and the more information a sample holds, the fewer the participants needed (Braun & Clarke, 2021a). This was a good fit for my research timeline, where having 20 participants was manageable within the scope and purpose of this study and generated adequate data to tell a rich and multi-faceted story about the friendships of students with CCN.

Additionally, reflexive thematic analysis involves later theme development, where themes are developed from codes and 'conceptualised as patterns of shared meaning underpinned by a central organising concept' (Braun & Clarke, 2020). Themes are developed from coding and working with the data rather than pre-existing codes (Braun & Clarke, 2019), which is suitable as there is little known about the friendships of students with CCN. Nevertheless, prior literature on friendships of other populations was kept in mind as I conducted my analysis.

Reflexive thematic analysis involved a six-phase process. Each stage was distinct yet recursive, and I moved between the different phases as needed (Braun & Clarke, 2021b).

***Phase 1: Data Familiarisation and Writing Familiarisation Notes***

Familiarisation and engagement with data began at the interview stage, where the students, their communication partners and I co-constructed meanings together. The data was recorded on Otter.Ai, a transcription software, and on Microsoft Teams, and I replayed recordings to transcribe the interviews to familiarise myself with the data. All interviews were transcribed verbatim and included non-verbal

communication gestures such as smiling and laughter, and other forms of AAC used by the students. I also took notes on my first impressions of the data, such as noticing differences in student and adult views, and reflections on how my previous role working in special education influenced my reading of the data.

***Phase 2: Systematic Data Coding***

As the process of co-construction and engagement with the data started at the interview stage, it meant that only I could code the data. This fits with a reflexive thematic approach, where quality of research is viewed as depth of engagement with data that is situated in reflexive interpretation rather than consensus between coders (Braun & Clarke, 2021b). Coding reliability does not align with reflexive thematic analysis (Braun & Clarke, 2021b). I coded both electronically on Microsoft Word and on hard copies of the data. Moving between both encouraged new reflections and interpretations.

Codes were more semantic than latent, where semantic codes were identified from explicit meaning and latent codes were identified from implied meaning. This was to ensure I was not overinterpreting and misrepresenting the data, as during the interviews with the students, there was already a high degree of interpretation taking place between the student, the communication partner and me.

Codes were written in a manner that allow them to work independently from the data. A more inductive than deductive approach was taken – where an inductive approach takes the dataset as the starting point for engaging with meaning, while a deductive approach uses more existing theory and concepts to provide a lens through which data is interpreted (Braun & Clarke, 2021b). Bearing in mind that "what is common… is not necessarily in and of itself meaningful or important" (Braun & Clarke, 2012), codes that were infrequent were not automatically discounted as

unimportant. The coded transcripts were then uploaded onto Nvivo12 (see Appendix J for example of coded interview transcript).

***Phase 3: Generating Initial Themes from Coded and Collated Data***

On Nvivo12, within each participant group, I started constructing tentative categories based on the codes. Each participant group had several tentative categories. These categories were then compared across all participant groups. I noticed there were some themes that could be formed from student, parent and teacher views. I also noticed there were similarities between parent and teacher views that could form themes, and there were some views that were unique to parents and to teachers.

Throughout this process, I was mindful not to have topic summaries as themes, such as a list of reasons surrounding a particular topic, but rather aimed to have themes that were rich in meaning that had a central organising concept, which was more compatible with reflexive thematic analysis (Braun & Clarke, 2019).

***Phase 4: Developing and Reviewing Themes***

This phase involved reviewing and revising themes. I reviewed my initial themes by thinking about four aspects for each theme – the central organising concept (what the theme was about), what the boundary of the theme was, what was unique and specific to the theme and what the theme contributed to the overall analysis (Braun & Clarke, 2022). For each theme, I thought about subthemes, example codes and example excerpts, and cross-checked that my codes and excerpts properly illustrated the themes. Then, I shared my initial themes with TEPs and EP colleagues to check if my themes were relevant and practical, and refined the analysis based on those discussions (see Appendix K for example table of codes and extracts for thematic analysis).

***Phase 5: Refining, Defining and Naming Themes***

This phase involved the sharing of themes with my supervisors. Based on the discussion, I decided that instead of combining student, parent and teacher views into one theme, I would pull out the student's voices to form student themes. Separating student themes helped emphasise the students' voices which is unique to this research, and they could be compared with views from parents and teachers. I also noticed there were similarities between parent and teacher views that could form themes, and there were some views that were unique to parents and to teachers. This analysis resulted in eight themes – three student themes, three parent and teacher themes, one parent theme and one teacher theme.

These themes were discussed with my ex-colleagues who work in special education, who gave insights into the renaming of themes and ideas around implications for practice.

***Phase 6: Writing the Report***

Phases 4 and 5 carried on into phase 6, where I wrote my discussion and literature review before going back to review my themes. I tried to ensure overall coherence by ensuring that the narrative from the start till the end of my thesis told a meaningful story. As I wrote my discussion, I ensured that I answered my research questions using my findings.

## 3.6 Ethical Considerations

Ethical approval was sought from the Institute of Education Ethics Board Committee, with considerations for informed consent, confidentiality/anonymity, and data management (see Appendix H for full ethics form).

## 3.7 Trustworthiness of My Research

Research is trustworthy and valid when other researchers, policy makers and practitioners view it as sound, legitimate and authoritative (Yardley, 2008). My view of qualitative research aligns with Yardley (2008), who shared that qualitative researchers believe the researcher influences the production of knowledge – by choosing research questions, methods and analyses that fit with their beliefs and prior experiences. Rather than eliminating influence, qualitative researchers should maximise benefits of engaging actively with participants, and it is this influence that can produce insightful analysis (Yardley, 2008). Thus, Yardley's (2008) framework will be used as a basis for confirming the trustworthiness of my research.

### *3.7.1 Sensitivity to Context*

Sensitivity to context has been shown in two ways. First, this study is sensitive to the context of existing theory and research, where I have reviewed previous research through my literature review and formulated research questions based on what has not been addressed. My literature review is not meant to be all encompassing of all the evidence to date. Instead, according to Braun & Clarke (2022), it provides a story about my chosen topic that situates what I have done and convinces readers that my research is important.

Second, it is sensitive to socio-cultural context of participants, which is reflected through the research design. I used innovative ways to draw out student's views, and the tools used were discussed with communication partners to ensure they were appropriate for each student. This process acknowledged the communication partners as those who know the student's communication best, viewing research as a process of co-construction between the student, communication partner and me, of doing something with my participants rather than something that is done "on" them.

### *3.7.2 Commitment and Rigour*

Commitment and rigour has been shown in three ways. First, through triangulation – both data triangulation, where I gathered student, parent, teacher views and conducted observations and methodological triangulation, where I used different ways of collecting data to gain an enriched understanding of the students' friendships. Second, through the interview process, where a form of member checking was done where information was confirmed repeatedly by me and the communication partner. Third, through the transcription and analysis process, where three transcripts with codes were sent to parents and teachers to ensure I represented their views and the views of the students accurately. I also ensured that I planned enough time for the analysis, where I had four months to analyse my data and reflect on it to ensure my analysis was rigorous.

### *3.7.3 Coherence and Transparency*

Coherence and transparency has been shown in four ways. First, I discussed my research with others throughout the research process, which was useful for clarifying analytic insights and deepening engagement with the data (Braun & Clarke, 2022). I was part of a TEP peer research group that convened regularly and had a TEP research buddy who met with me every two weeks to review our research together. I also presented my research informally to qualified EPs and ex-colleagues who work in special education to ensure my research has implications that are relevant and practical. Second, I used research supervision to further develop my thinking around my research questions, and to review my initial coding, analytic insights, and writing. Third, I engaged in reflexive journaling – an ongoing process of documenting assumptions, thoughts, developing analysis and conversations with others (Braun & Clarke, 2022). Such reflexivity is an important part of transparency,

where I reflected on how my background and interests influenced the research, such as how prior knowledge and assumptions shaped my interpretations of my data. As I analysed my data, I went through my journal to check key ideas that I thought were important and ensured they were captured in my analysis. These various avenues ensured there was rigour and depth in engagement with my data. Fourth, I wrote detailed methods and in the findings section, chose enough quotes to show the reader what my interpretations are based on, in the hope of making my research as transparent as possible. I also acknowledged that there are different perspectives provided by various participant groups, and each group's views are not necessarily "right" or "wrong".

### *3.7.4 Impact and Importance*

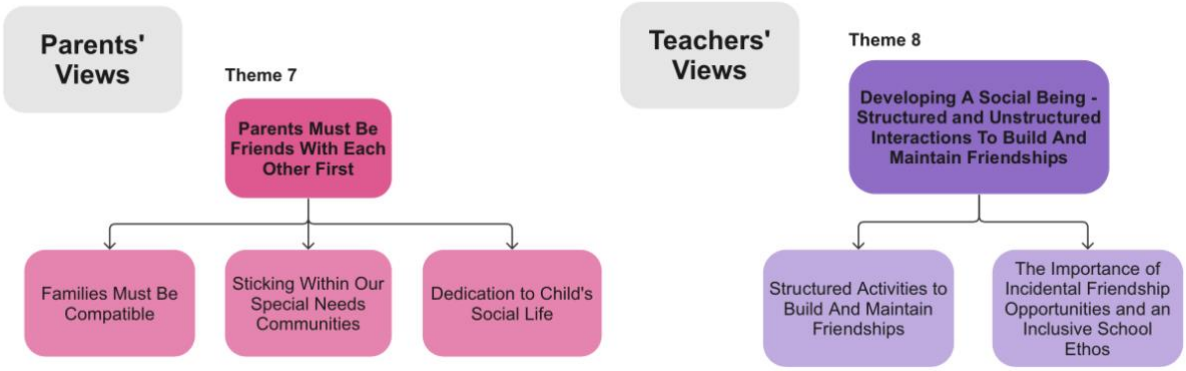
My research has direct implications that are useful for educational psychologists, schools and policy developers, which will be discussed in the discussion. It is hoped that through my research, I can challenge some aspects of the deficit discourse around students with CCN, by using their voices to reshape how we think about them, their friendships and their social relationships.

## Chapter 4: Findings

This chapter sets out the study's findings, which consists of eight themes as seen in Figure 3 – three student themes, three themes across parent and teacher data, one parent theme and one teacher theme. All names are pseudonyms.

**Figure 3**

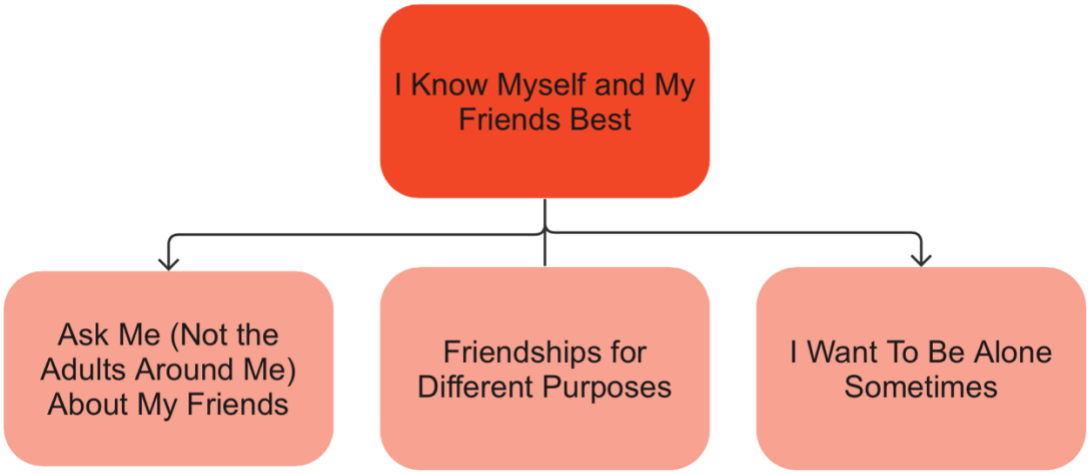
*Overall Thematic Map*


Parents' Views
Theme 7
Parents Must Be Friends With Each Other First
Families Must Be Compatible
Sticking Within Our Special Needs Communities
Dedication to Child's Social Life
Teachers' Views
Theme 8
Developing A Social Being - Structured and Unstructured Interactions To Build And Maintain Friendships
Structured Activities to Build And Maintain Friendships
The Importance of Incidental Friendship Opportunities and an Inclusive School Ethos

## 4.1 Student Theme 1: I Know Myself and My Friends Best

**Figure 4**

*Student Theme 1 Thematic Map*




This theme, as shown in figure 4, encompasses students' views on who their friends are and how the friendships serve different purposes. Subthemes included – "Ask Me (Not the Adults Around Me) About My Friends", "Friendships for Different Purposes" and "I Want To Be Alone Sometimes". Students' views will be compared with parent and teachers' views.

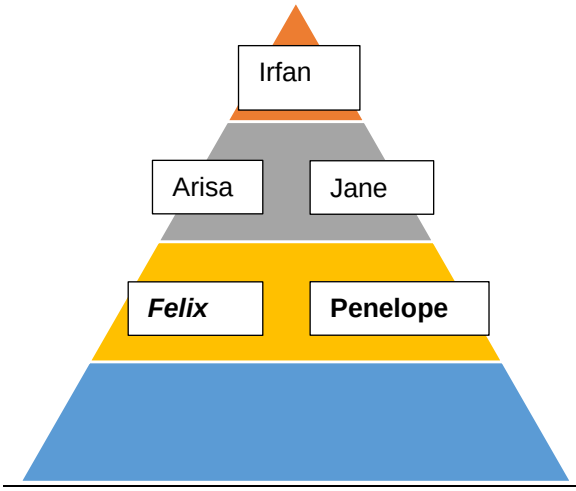
### *4.1.1 Ask Me (Not the Adults Around Me) About My Friends*

During the pyramid ranking activity, all the students could name five or more friends without difficulty. They had clarity in naming and ranking who was a best friend, a very good friend or a good friend. All but three of the 42 friends named were from school. Many of the friends named were either classmates or ex-classmates. Some students also shared that they had new friends join their classes whom they had known for three months or less, and whom they had quickly built new friendships with. The pyramids are presented in figure 5 below –

**Figure 5**

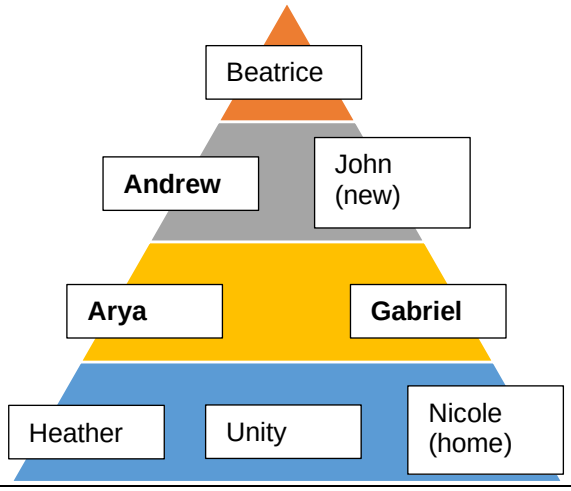
*Friendship Pyramids of Each Student*

Carter's Friends



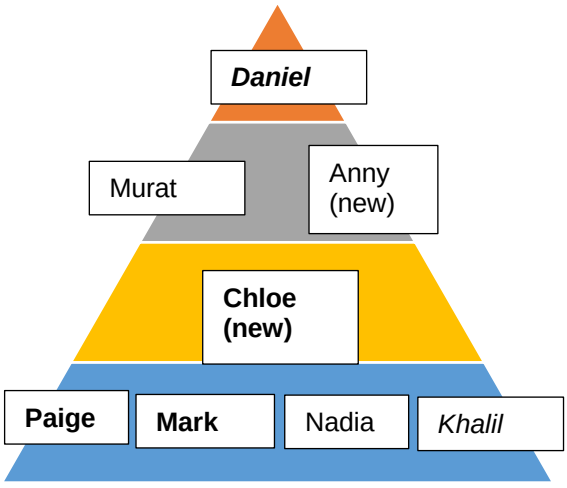

Teacher: **Felix**, Zuri, **Penelope**, friends with the whole class
Parents: *Felix*, C's cousins

Adina' Friends



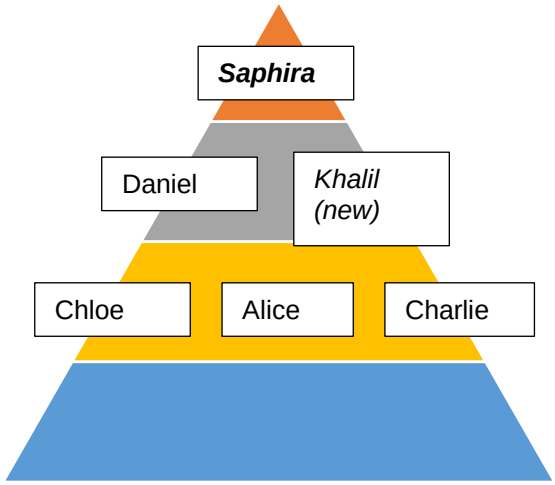

Teacher: **Andrew, Arya, Gabriel**; but not Beatrice
Mother: Don't know, parent's friend's students are friends, cartoon characters are friends

Saphira's Friends



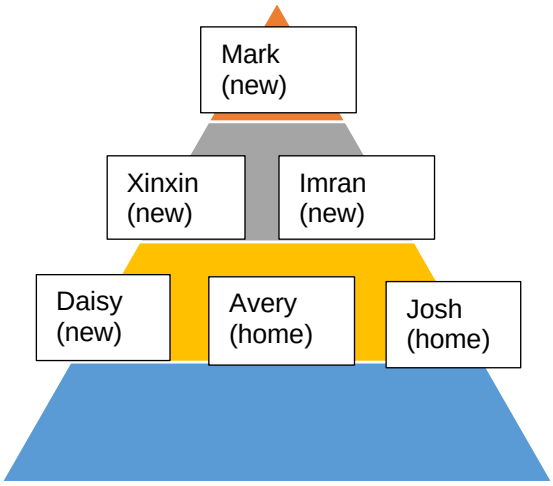

Teacher 1: **Daniel, Chloe, Paige**
Teacher 2: **Mark, Chloe, Daniel**
Mother: Henry; *Daniel*, *Khalil*

Mark's Friends



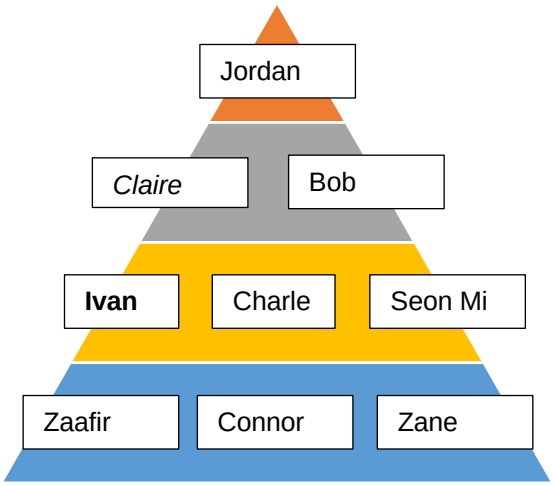

Teacher: **Saphira**, Nadiah, Murat
Parents: *Saphira*, Nadiah, *Khalil,* Mary (home); cartoon characters are friends

Oscar's Friends




Teacher: Not sure, student is new to school
Father: Not sure, student prefers adults

Frank's Friends




Teacher: **Ivan**, Aurora, Irene
Father: *Claire*, otherwise, unclear as student is friendly to everyone

Students' views contrast with adults' views. Adults were asked to name each student's three closest friends. Teachers' selection of friends (in bold) did not match very closely to who the students selected as friends. Teachers could name some friends that the students also identified as friends, but most were surprised at students' selection of best friends. For example, Adina's teacher, who had known her for three years, believed Andrew was Adina's best friend -

> *"Beatrice, who's been in her class as well… They are not as good friends. They get on. But Beatrice likes the bossy ones. And Adina will stand back. So even though they've gone to class together and being together for four years, they don't hold the friendship like she does with Andrew. So she can tell the difference. Yeah, she's chosen… And Andrew is more her level. And Beatrice, she's much lower." (Adina's teacher)*

However, Adina named Beatrice as her best friend. This was also the case for Frank, who named Jordan as his best friend. However, Frank's teacher believed Jordan was not one of Frank's friends -

*“But Jordan doesn't talk. Jordan is very, very on the spectrum and not friendly. And doesn't like being touched… well he does like being touched but not in the same way as Frank. He seeks sensory stimulation in another way… Jordan has echolalia, so he repeats what you say so he's hopeless for a conversation. Because he'll just repeat everything you say, though Frank tries to be friends with him, but it doesn't work.” (Frank’s teacher)*

This difficulty in identifying the students’ friends was a common feature across teachers’ responses – Oscar’s teacher shared it was difficult to know who his friends were as he had just joined the school, two teachers thought they were students’ friends although none of the students named adults as friends, and Carter’s teacher thought he might not understand the concept of friendship although Carter was very clear who was and was not a friend during the pyramid ranking activity.

Parents found it even more difficult to name their children’s friends, as many friendships were within the school context. Saphira’s mother shared, *“I don’t know what they’re like in school, to be honest.”* Parents of two of the six students could not name any friends and another two named only one friend each. Frank’s father shared, “*I think he has enough acquaintances… I really can't tell who's a friend and who's an acquaintance.”* In fact, some parents included imaginary friends and cartoon characters as their student’s friends, although none of the students named any -

*“… she will tell you her friends are some of the cartoon characters. You know, she thinks characters from Frozen like Elsa and Pokémon characters… are her friends.” (Adina’s mother)*

### *4.1.2 Friendships for Different Purposes*

The theme of students knowing themselves and their friends best is also illustrated by how they chose different friends for different purposes. Adina shared that she likes painting with her best friend Beatrice but when given a choice to choose who to sit with, she prefers to sit with Andrew -

*"Adina's teacher: Who do you like to sit with the most?*

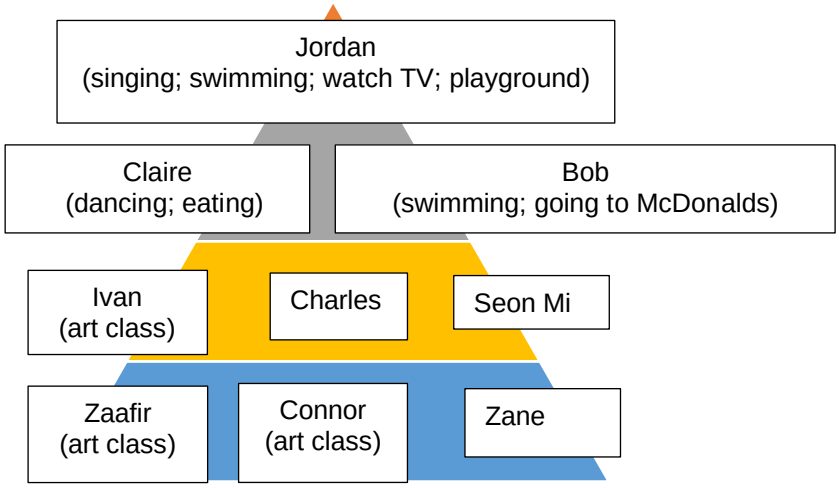
*Adina: [navigates AAC] Andrew.*

*Adina teacher: Yea I thought so. She chooses to sit next to Andrew all the time."*

The following pyramid in figure 6 illustrates how Frank preferred to do certain activities with certain friends, suggesting that each friendship served a different purpose –

**Figure 6**

*What Frank Does with Different Friends*




Frank shared that he enjoyed singing, swimming, watching TV and going to the playground with his best friend Jordan. He enjoyed other activities with Claire and Bob at his special needs clubs outside of school, and enjoyed art classes with classmates Ivan, Zaafir and Connor.

Teachers also recognised that the students sought different things from each friendship. Saphira's teacher shared –

*"… If she wants girly time, she's going to hang out with Chloe and just do her little gossipy bits. For Mark, she wants to watch things together or discuss a particular interest that they share. So it could be talking about animals or it could be watching the same kind of videos that Mark will show her and then with Daniel, I think some of that typical teenage behaviour. They like being sassy together. They like saying no, they like lumping around on the beanbags and be like no we are not moving, we need time to relax."*

*(Saphira's teacher J)*

### *4.1.3 I Want to Be Alone Sometimes*

While the students enjoyed being with their friends, they also valued alone time. On a school tour, Carter first showed me the swimming pool and shared he enjoyed swimming with friends. However, when asked what else he enjoyed doing with friends, he showed me the playground and shared he enjoyed going on the roundabout by himself -

*"Me: You like the roundabout? Which friend do you go on the roundabout with?*

*Carter: [points to self]*

*Carter's teacher: Carter. And who else?*

*Carter: [points to self again]*

*Carter's teacher: Just Carter. Who pushes you? You push yourself? Ok."*

Similarly, on a school tour, Oscar showed me the music room and art room, and shared he enjoyed making music and art by himself, to which Oscar's teacher commented, *"Just Oscar? There's a time for friends and a time for work (laughter)".*

Parents and teachers also noticed that at times, the students preferred to watch friends do things or do things alone. Examples included inviting students over

when Frank was younger but *“Frank tends to go and do things and leave his friends hanging around” (Frank’s father)*, and Mark watching his friend play, *“She runs around, she plays… all of those things. Mark likes to watch. Yeah, Mark doesn't join in much. Mark watch with her cartoons every now and again” (Mark’s father).*

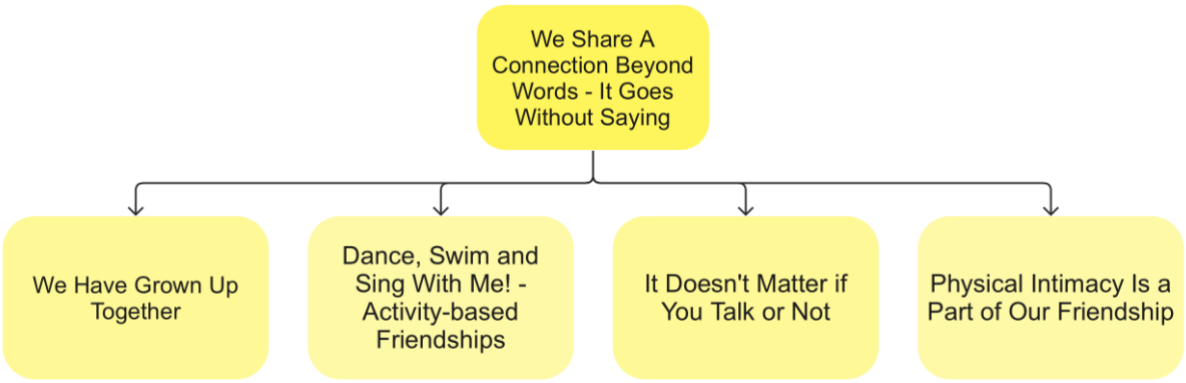
Although the students expressed wanting to be alone sometimes, some parents and teachers viewed this desire to be alone as a barrier to friendship development, as the students not wanting to interact with others –

> *“His preference is a barrier because he knows he doesn't want to interact with people he just wants to sit... by himself. If he could go and lay in the side room on a mat on his own for like half an hour rather than play game he would do that.” (Carter’s teacher)*

## 4.2 Student Theme 2: We Share a Connection Beyond Words – It Goes Without Saying

**Figure 7**

*Student Theme 2 Thematic Map*




This theme, as shown in figure 7, encompasses students' views on how they connect and maintain their friendships with their friends through means that go beyond words. Subthemes included – "We Have Grown Up Together", "Dance, Swim and Sing With Me! – Activity-based Friendships", "It Doesn't Matter if You Talk or Not", and "Physical Intimacy Is a Part of Our Friendship". Students' views are similar to adults' views and thus will be supported by the latter.

### *4.2.1 We Have Grown Up Together*

The students have known each other for a long time. Many of them met in nursery or primary school and moved on to secondary school together –

*"Me: You pointed at Arisa…*

*Carter: [smiles] [navigates AAC] Gum…*

*Carter's teacher: Gum…*

*Carter: [navigates AAC] Tree...*

*Carter's teacher: Ohhh so Arisa is from Gum Tree Primary as well, so that was Carter's primary school, wasn't it? So you've been friends for a long time too."*

The students had years to build that connection, so even when they did not see one other, the closeness was not lost. Many of the students named ex-classmates as friends on their pyramids –

*"Carter's teacher: Who do you like to spend time with?*

*Carter: [points to Jane's name and looks at teacher]*

*Me: Jane.*

*Carter's teacher: Jane's gone to a different class now, hasn't she? And she's still your friend."*

In fact, many of the students shared they would miss their friends who were in different classes. One student preferred the friends from his previous class –

*"Mark's teacher: Do you like to walk with Xinxin?*

*Mark: [signs] Yes*

*Mark's teacher: Do you like to walk with Daisy? Henry? Charlie?*

*Mark: [signs] Yes to all!*

*Me: Ahh still yes. But you still prefer your previous class, yes?*

*Mark: [signs] Yes*

*[laughter]*

*Mark's teacher: Interesting, that's interesting."*

To maintain the friendships with the friends from previous classes, the playground is an important context –

*"Me: So how did you and Andrew become friends?*

*Adina's teacher: When did you meet Andrew?*

*Adina: [navigates AAC] Playground*

*Me: At the playground? Did Andrew go to Gum Tree Primary?*

*Adina: [signs] Yes*

*Me: Yes, Andrew went there as well. And were you in the same class as Andrew?*

*Adina: [signs] Yes*

*Me: Yes, ok I see. But when you are in school now you play with Andrew in the playground [as he is not in your class anymore]*

*Adina: [signs] Yes"*

Parents and teachers also acknowledged that the students missed their friends from previous classes. Adina's teacher shared Adina was "*a bit upset that he's [Gabriel] not in her class. She's been in his class all the way through, just stopped last year. So and then they don't see each other outside school."* Some parents suggested that it was important to transition with friends from primary to secondary school, *"When you move to a new school, you're feeling like shy because you don't know anybody. So it was good. That he really knew somebody from his previous school" (Carter's mother).*

### *4.2.2 Dance, Swim and Sing With Me! – Activity-based Friendships*

Students shared they enjoyed doing a variety of activities with their friends, many of which did not require speech. All six of the students enjoyed doing physical activities with their friends, with swimming and dancing being the most popular. Other pastimes included going to the gym, going for walks, and playing basketball. Mark shared about his love for walking outdoors –

*"Mark: [points to] Walking outdoors*

*Me: So you really enjoy walking outdoors.*

*Mark's teacher: We've done that a few times.*

*Me: So who would you like to walk outdoors with? [takes out photo list of classmates] Any of these… your current classmates? Or your previous classmates?*

*Mark: [points to] Murat (friend from previous class)"*

Oscar shared that he became friends with Mark through dancing –

*"Me: You like to watch YouTube with Mark! How did you and Mark become friends?*

*Oscar: [points to] Dancing*

*Me: Dancing. You dance with Mark, and then you became friends with Mark. Am I interpreting it right? If it's wrong you can…*

*Oscar's Teacher: Yeah yeah, that's how he interpreted it."*

Parents and teachers also shared that dancing with friends was a very popular activity, and that the students "*connect through dance"* (Frank's teacher). Frank's father described Frank as *"he dances from the moment he wakes up to night-time. He just loves dancing"*. Mark, who is a wheelchair user, also enjoyed dancing –

*"Mark likes very much to do when there is some kind of physical element to a singalong. Like heads and shoulders, knees and toes… He likes to do that together with other people or to show him doing it to other people. He actually very much likes to show off his dancing skills... He's wheelchair bound but he likes to do dancing." (Mark's mother)*

In addition to physical activities, five of the students also enjoyed connecting with friends through music and art. For music, they liked playing musical instruments

such as drums, watching their friends play on the keyboard and singing or humming along with their friends.

*“Carter’s teacher: What does Felix like to do?*

*Carter: [points at play music symbol]*

*Carter’s teacher: He did, didn’t he?*

*Carter: [smiles brightly]*

*Carter’s teacher: He did! … He was very good, he used to play on the keyboard, didn’t he?*

*Carter: [smiles]*

*Carter’s teacher: And then Carter used to like sitting and watching, didn't you? Yeah.*

*Me: Ohhh so you like to watch Felix play on the keyboard.”*

For art, the students liked painting with their friends –

*“Me: Painting, you like to paint in The Art Room. Do you like to do it by yourself or with a friend?*

*Adina: [signs] friend*

*Me: With a friend. And who do you like to paint with? Can you tell me?*

*Adina: [navigates AAC] Beatrice.”*

The students also enjoyed playing together, eating together, having a chat, watching TV/iPad together, and going to after school social clubs together. For playing together, the students enjoy playing at the playground, such as by going on slides, swings, and the climbing frame with their friends. One student liked to play with puzzles and another enjoyed computer games. For eating together, the students liked to sit and eat with friends, and one student shared he liked going to after-school clubs with friends to eat at McDonald’s.

### *4.2.3 It Doesn't Matter if You Talk or Not*

The students enjoyed chatting with their friends. Adina shared that she liked to talk to her best friend, Beatrice, about playing with the boys, and Oscar shared that he and his friend, Xin Xin, would chat about what they wanted to watch together –

> *"Me: He's trying to show the vehicles [on his iPad]?*
>
> *Oscar's teacher: [laughs] Oscar, when we are in class, and we are watching the screen, what do you and Xin Xin watch?*
>
> *Oscar: [navigates AAC] Train.*
>
> *Oscar's teacher: You watch the train. So I put the train on, or the buses…*
>
> *Oscar: [nods, seems to be happy that we understood]*
>
> *Me: And how do you talk to Xin Xin? Do you point or use the iPad?*
>
> *Oscar: [points to] iPad*
>
> *Oscar's teacher: So I've seen Oscar bring the iPad to Xin Xin, and point, and both of them ask me to put it on the screen [the videos]. So they both get excited..."*

The students enjoyed such chats despite not having verbal speech. Not only were they familiar with their friend's modes of communication, but they were also familiar with multimodal communication environments, having grown up in special schools where everyone communicates in different ways. Thus, they displayed flexibility and comfort in their use of multimodal communication. For example, Saphira shared she enjoyed chatting with her friend, Murat, through signing, verbal speech and Murat writing things down for her –

> *"Saphira: Talking. [signs talk]*

*Saphira's teacher: But Murat writes down what he wants to say, he doesn't talk. So he writes things down, doesn't he?*

*Me: So Murat will write for you… and then you talk.*

*Saphira's teacher: He also uses his hands to sign.*

*Saphira: [gestures and signs for] signing. We talk [through sign].*

*Me: Is it Makaton signs?*

*Saphira: Yeah.*

*Me: And you sign with Murat?*

*Saphira: [nods and smiles] Yeah.*

*Saphira's teacher: You like to talk, don't you, with Murat.*

*Saphira: Mm hmm [and smiles]"*

In fact, during a chat with friends, reciprocity in responses might not necessarily need to be verbal or signed. Showing that the initiation of communication has been received, such as through laughter or a smile, is also important in building the experience of a shared moment, which is a sign of reciprocity that helps to maintain friendships –

*"Mark: [points again to chat]*

*Me: Chat, chat. Interesting. You like to chat with Daniel. Is it? Do they chat in class?*

*Mark's teacher: Daniel chats. [laughter]. Daniel is very talkative. [laughter]*

*Me: So you like to hear Daniel talk.*

*Mark's teacher: And you will hear… Mark will chuckle. [laughter] Daniel's funny, isn't it? Is he funny? Yeah, he makes us laugh. Does he make you laugh?*

*Mark: [Nods]"*

From the above, Mark is not just a passive receiver of communication, but actively engages in the shared moment through laughter.

The students' views about how it did not matter whether their friends had verbal speech or not was echoed by parents and teachers. For example, teachers shared that by being in a special school, the students were more used to making accommodations than students in mainstream schools –

> *"Because we're in a special setting, they're so used to everyone being different and having that communication that's really different. So I think they're just like, oh, you have your iPad, I have my whiteboard, we'll make it work. And if we need, we'll get an adult to sort it." (Mark's teacher J)*

Showing that an initiation of communication has been received to build the experience of a shared moment was also highlighted by Mark's teacher, who shared that the presence of a friend itself was enough to maintain friendships –

> *"Even if they have to hang out in silence, or if they're just doing it on facial expressions, or watching something and sharing things, they're perfectly happy to communicate in that way and not rely on speech. I think for some of them, the presence is just as important that someone wants to sit there and be with them." (Mark's teacher J)*

### *4.2.4 Physical Intimacy Is a Part of Our Friendship*

Physical intimacy is essential to maintaining friendships. I observed physical intimacy during multiple observations. Oscar, for example, would run into class and give all the adults a hug and hi-fives first thing in the morning. Carter held his friend's hand when they first met outside the classroom and again when they were seated together in class. Saphira laid on her best friend's shoulder as they lazed around on the beanbags in class. During breaktime observations, I witnessed friends running

up to Adina and Frank at the playground to give them hugs, and Frank trying to hug another peer.

Parents and teachers acknowledged the importance of physical intimacy. One example is Frank being with his good friend Claire on her graduation day, where *"they had a hug then they just walked around holding hands looking at photographs..." (Frank's father).* Another example is where Mark's friend *"takes care of M, she strokes his hair, she holds his hand" (Mark's mother).* Mark's teacher echoed similar views, where she shared –

> *"Most people like to get really physically close to him and he draws them in then they have a chat and he doesn't mind hand holding, he likes smiling…" (Mark's teacher J)*

One teacher shared that physical contact was so important to the student that as long as someone would accept physical contact, they would be friends –

> *"[if you go]… Don't touch me. Don't touch me. I don't think he'd be friends with them. But if you do, let him touch you, I think then you're a friend, you're in. He's not fussy. Physical contact. Yeah, if you accept physical contact, he'll be your friend." (Frank's teacher)*

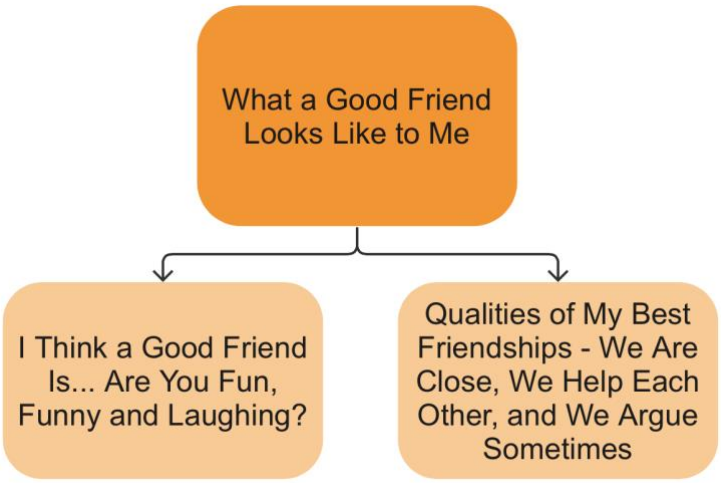
In spite of the acknowledgement that physical intimacy was an important part of the students' friendships and social relationships, the adults shared worries around developmentally appropriate touch and that the students needed guidance on when physical intimacy was appropriate and when it was not. One teacher shared concerns around the students being teenagers and holding hands often, and needing to teach what is age-appropriate, while another shared about guidance around personal space –

*"…knowledge of personal space because Saphira would hug everyone if she could. And she's very caring and I think she just needs a bit more guidance on when that's a good time and when it's not." (Saphira teacher J)*

## 4.3 Student Theme 3: What A Good Friend Looks Like to Me

**Figure 8**

*Student Theme 3 Thematic Map*




This theme, as shown in figure 8, captures students' views on what they look for in a friend and the quality of those friendships. Subthemes included – "I Think a Good Friend Is… Are You Fun, Funny and Laughing?", and "Qualities of My Best Friendships – We Are Close, We Help Each Other and We Argue Sometimes". Some aspects of students' views are similar to adults' views and thus will be supported by adults' views.

### *4.3.1 I Think a Good Friend Is… Are You Fun, Funny and Laughing?*

Students described their good friends as having many positive traits, such as being kind, caring, loving, physically affectionate and easy to be around. All of them described their friends as happy and many of them shared that a sense of fun, playfulness and humour were important aspects of their relationships. Many of them described their friends as fun, funny and laughing –

> *"Me: Can you tell me which words describe Jordan? I'm going to read you and you tell me ok. [reads out the words] How would you describe Jordan? Can you point to a word?*

*Frank: Jordan is happy!*

*Me: Jordan is a really happy person, right. That's really nice.*

*Frank: He's laughing.*

*Me: He's laughing and he's a really fun person.*

*Frank's teacher: That's true. He's very funny you mentioned that right?*

*Me: Jordan is very funny as well?*

*Frank: He's funny. Hahahahahahah.*

*Me: Yeah, he likes to do that, and he likes to give high-fives as well right?*

*Frank: Laughing fun. Happy, laughing, fun and funny.*

*Me: That's a really nice way to describe Jordan.*

*Frank's teacher: You are right, really."*

This sense of fun, playfulness and humour within the friendships had also been observed by parents and teachers – *"He loves humour now, like, he accepts people wanting to interact with him, whereas he didn't... say he was so closed off" (Carter's teacher).* The students particularly enjoyed amusement and slapstick humour –

*"Whereas, if the others are running around the room, causing chaos, disruption, he does find that quite amusing. And… that is where his interest is, in people. Yeah. Of what they're doing and what they're causing, as opposed to what might they be playing." (Carter's teacher)*

Oscar's father echoed the above views –

*"He loves, kind of slapstick play where someone falls over or, you know, tumbles around, he thinks that's hilarious. If he sees someone like that, he usually gravitates towards them. But he watches them do stuff." (Oscar's father)*

In fact, this sense of humour extends to the sharing of little private jokes amongst the students, with teachers sometimes the butt of jokes –

> *"Sometimes she's just making fun of like, you know, you (the teacher). Yes. And also, when I've worked with them, they have that their little private jokes? They don't make any sense to me but they think it's really funny that someone goes to the moon... like Kathy (me) lives on the moon... I'd say no it's time for work now. And then she'd say but Gabriel laughing. [both laugh]" (Adina's teacher)*

### *4.3.2 Qualities of My Best Friendships – We Are Close, We Help Each Other And We Argue Sometimes*

**Companionship and Closeness.** This sense of fun, playfulness and humour contributes to the closeness and companionship within their best friendships. The students shared they felt a sense of closeness and had a strong bond with their best friends, and would feel sad if their friend moved to a different school –

> *"Me: If Irfan (best friend) had to move school, I will miss him.*
>
> *Carter's teacher: If Irfan had to go to a different school, how would you feel?*
>
> *Carter: [navigates AAC] sad.*
>
> *Carter's teacher: You would feel sad?*
>
> *Carter: [nods]"*

The students also acknowledged that their best friends would be happy for them when they did a good job and sometimes, their best friends made them feel special, showing that they feel they are important to their best friends –

> *"Me: Jordan is happy for me if I do a good job at something. Is Jordan happy for Frank when Frank does something good?*
>
> *Frank: It's Jordan. Happy for Frank."*

This sense of companionship and closeness was also described by parents and teachers, who shared that the students would miss their friends when they were not there. For example, Oscar's father shared when Oscar and his friend Avery went for outside school dance classes, when *"either is not there, they're not happy to take part because the other one's not there."* Similarly, when Adina's friend, Gabriel, is not in class, Adina would get upset and ask, *"Is Gabriel okay? Is Gabriel coming back to school? So she's obviously thinking about him" (Adina's teacher).* When Mark transitioned to secondary school and met his primary school friend, whom he had not seen for a year, he was so happy and *"not only they had remembered each other. They were sitting together and they were holding hands. [laughs]" (Mark's mother)*

**Conflict and Security – My Friends Can Be Mean.** Despite being close, several students also shared negative traits of their best friends. Some even took the opportunity to share negative traits first before positive traits. Carter shared that his best friend Irfan could be mean and rude and he would get frustrated when Irfan was mean. Adina too had a best friend who was sometimes mean –

*"Adina: [points to] Mean.*

*Me: When is Beatrice mean?*

*Adina: [navigates AAC] playground*

*Me: When she's at the playground, Beatrice is sometimes mean.*

*Adina's teacher: Who is Beatrice mean to? Tell us.*

*Adina: [navigates AAC]. Beatrice is… Arya.*

*Me: Beatrice is mean to Arya sometimes."*

However, one student, Saphira, shared she did not have conflict with her best friend but had conflicts with other friends instead, where she often fought with her very good friend –

*"Me: Seems like you fight with Murat.*

*Saphira: Yeah fight with Murat! (Gestures to imply all the time)"*

In contrast, one student, Oscar, shared he did not have conflict with his friends. This might be because Oscar had just moved to a new secondary school and he had only known most of the friends he listed for two months. There might not yet have been enough time or depth of friendship to have conflicts yet.

Despite acknowledging that their friends could be mean and rude, and they could get into conflicts, the students accepted their friends for who they were and still considered them as best friends –

*"Me: So Beatrice is sometimes rude to Adina too.*

*Adina's teacher: Yea, she can be rude, can't she? What does Beatrice do?*

*Does she shout?*

*Adina: [signs] Yes.*

*Adina's teacher: Beatrice is loud.*

*Adina: [signs] Yes.*

*Me: OK, Beatrice is loud and she shouts, and she's still your best friend.*

*Adina's teacher: Is she still your best friend?*

*Adina: [signs] Yes. [laughter]"*

In fact, all the students shared that they could make up with their friends easily by saying sorry, showing that their best friendships were secure and could withstand conflicts and transcend problems. However, when asked about whether

they can rely on their best friends, two of the students felt they would rather approach an adult instead of their friend when faced with problems –

*"Me: I can talk to Daniel about a problem.*

*Saphira: [shakes head]*

*Me: Not really, no. Ok."*

**Helping - We Help Each Other.** Although some students preferred to approach adults when faced with problems, they shared that help is an important part of their friendships. They helped their friends in a multitude of ways. One student shared she was a pair of eyes for her friend who could not see –

*"Me: I help Daniel by… do you ever help Daniel?*

*Saphira: Yeah.*

*Me: What do you help him with?*

*Saphira: He can't see.*

*Saphira's teacher: You help him with guidance.*

*Me: Daniel can't see so you help to guide Daniel sometimes.*

*Saphira: [nods]"*

Another student helped his friend regulate his emotions when his friend got angry, by acting cute and having a chat with his friend –

*"Carter: [navigates AAC] Angry.*

*Carter's teacher: You help Felix when he is angry. What do you do to help him?*

*Carter: [navigates AAC] Cute.*

*Carter's teacher: You can be cute when Felix is angry.*

*Carter: [navigates AAC] What did you do at the weekend?*

*Carter's teacher: And you ask him some questions and does that help Felix to stop being angry?*

*Carter: [presses] What did you do at the weekend?*

*Carter's teacher: That's really nice to know, good for you, that's a really nice way to help your friend."*

These helping behaviours were mutual, where their best friends would help them in return –

*"Adina's teacher: What does Beatrice help Adina with?*

*Adina: [navigates AAC] the iPad.*

*Adina's teacher: When they got the iPad, so they show… talk… through them. That's what she said to help. Does she set up your laptop for you sometimes?*

*Adina: [signs Yes]*

*Adina's teacher: Put the earphones in…*

*Adina: [signs Yes]"*

Such mutual helping behaviours were observed by both parents and teachers. For example, Oscar's father shared that during after-school dance and hockey clubs, Oscar and his friend, Avery, would help each other by making sure each other stayed on task and would tell each other what to do. Frank's teacher shared –

*"Frank… helps him [Ivan] do stuff even if he doesn't need it, and tell him what to do. Because we're always telling Ivan what to do because he pretends not to hear… so he'll act more like a teacher or a conduit. Yeah, like a go between that's what he does with Ivan."*

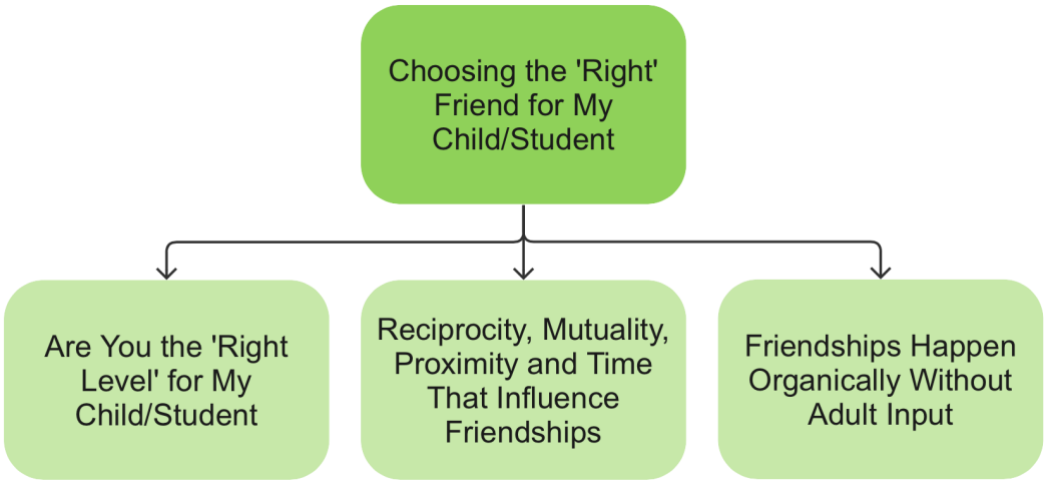
However, one student, Oscar, shared his friends would not help him if he needed it, which might be due to him being new to the secondary school and not having developed quality relationships yet. Another student, Frank, shared his best

friend, Jordan, who is non-verbal and has autism, would not help him if someone was bothering him. Instead, he preferred to turn to his parents.

## 4.4 Parent and Teacher Theme 1: Choosing the 'Right' Friend for My Child/Student

**Figure 9**

*Parent and Teacher Theme 1 Thematic Map*




This theme, as shown in figure 9, captures parent and teachers' views on what makes a good friend for their child/student, how friendships can be influenced by a variety of factors, and about the ease in which many of the students make and keep friends. Subthemes included – "Are You the 'Right Level' for My Student/Student", "Reciprocity, Mutuality, Proximity and Time That Influence Friendships" and "Friendships Happen Organically Without Adult Input".

### *4.4.1 Are You the 'Right Level' for My Child/Student*

The adults, like the students, identified broadly similar qualities that made a good friend for the students. They too wanted their students' friends to be kind, caring, loving, *"the more caring, the better" (Mark's mother).* Saphira's teacher J shared –

> *"Good friend means that people care about her and know when she's happy and when she's sad and will try and give her affection when she's sad. And keep building her up and say nice things because she will be sad if someone*

*said something mean or had a little bit of fallout, she takes it personally and she does really kind of withdraw and get quite reserved…"*

Different to the students, the adults sought friends for the students who were patient, good listeners and understanding, "*Patience… Someone who understands her, don't judge her. Someone who's going to look out, look after [her]". (Saphira's mother)*

Although there were some similarities as to what makes a good friend between the students and the adults, the adults had different criteria and were concerned about whether other students met a certain criteria to be the students' friends. Not every student was deemed a suitable friend for their child/student. Both parents and teachers were concerned about differences in cognition levels, where some friends of their students were 'higher level', cleverer and brighter, *"Claire is slightly brighter than Frank" (Frank's father),* and the students made friends with those of their 'level', "*and Andrew is more her level… Beatrice, she's much lower [so not a friend although Beatrice turned out to be best friend]" (Adina's teacher).* Some parents shared their children were more developmentally in line with younger children so had interests and preferred activities that were younger.

However, parents compared to teachers, mentioned many more concerns around differences when describing their children's friends. They described differences in age, communication levels and physical development, which were all important aspects to be considered when it came to being friends with their children. For example, Oscar's father shared some friends and activities in outside school clubs were too old for eleven-year-old Oscar, *"Most of the friends at those activities are considerably older than him. So we're talking 17,18,19,20-year-olds. So what they want to do... What they're doing with those activities, sometimes it's just not for Oscar." (Oscar's father)*

Another example is Frank's father sharing that Frank's friend, Claire, was a better communicator than Frank, where *"she's more verbal than Frank, certainly communicates much better than Frank." (Frank's father).* Oscar's father also shared Oscar was more friendly with friends with better communication levels, *"The people that he's more friendly with, the communication level is a lot better than Oscar's. So if he's with someone similar or has got less ability, I think he just doesn't find that as engaging, which is understandable." (Oscar's father)*

These comparisons led some parents to want opportunities for their children to be friends with mainstream students as they believed that they would interact better with those in mainstream –

> *"She likes to have people who are normal, let's say not special needs because they interact with her better. She likes, she likes a lot of copying, so she does very well around students who are erm… better able than her?" (Adina's mother)*

These perceived differences between the students and their friends led some parents and teachers to describe some friendships as equal while others were unequal. Equal friendships were those where "*they equally contribute, and I think they're all as invested as each other… in the friendships" (Mark's teacher* J). Unequal friendships were due to a variety of factors, such as one student being more dominant or capable than the other –

> *"Saphira is a lot more capable than Mark. And she can give a lot more obviously and she does in terms of emotional support. I think Mark is on the receiving end of care and empathy and he is... what he's given… he's given his love. He's given his adoration. Yeah, he's given his attention, but Saphira is so much more capable than Mark." (Mark's mother)*

### *4.4.2 Reciprocity, Mutuality, Proximity and Time That Influence Friendships*

**Reciprocity And Mutuality.** Despite some friendships being unequal, there is still reciprocity and mutuality within the friendships. Parents and teachers shared friends are respectful of each other, find each other funny, give each other gifts, are mutually nice to each other, *"because when he knows that you open your arms for him, ready to be nice, he will be nice to you." (Oscar's teacher),* and will look out for each other, *"she can be friends with somebody who will make her laugh and who will look out for her well-being the way she does for others means it's reciprocated." (Saphira's Teacher J).*

**Proximity and Time.** Proximity and time also influence friendships as regular activities promote familiarity which helps maintain friendships. Frank's father shared, *"I think it's just being somewhere with people for an extended period of time. He gets to know who they are, and they get to know him."* The importance of proximity and time was echoed by Oscar's teacher, *"So as time going on, they stay in the same class, he would definitely got someone who he would like so much. But it's time, you know they are not like me and you, they attend... slowly gradually".*

These activities *"need to be regular repetitive. It can't be like one time you go to one activity and that's it. Her interactions…she warms up and understands other people…week after week after week...The same small, controlled, not very busy environment" (Adina's mother).* The importance of regular and repetitive activities are echoed by Oscar's father –

> *"Stuff like the dance and the hockey it's more come from being a regular attender. So if someone's always there, you know, recognizes their face and then he sees because they are regular and always there then that's now a friend of mine because I see them all the time." (Oscar's father)*

Friendships are maintained when some of these students see each other both in school and in outside school clubs, *“they see him at play time. They see him at lunchtime. They see him around the school. They see him out of school, probably at clubs, and just they're just so used to having him around” (Frank’s teacher).*

These friendships would start to fade gradually if the students stopped seeing each other –

> *“When there's a lot of people he sees regularly, he kind of attaches to the regular people around him, so that when he doesn't see you for a long time, and it's kind of like he kind of steps away because he doesn't see that person… as long as they are regular…” (Carter’s father)*

Nonetheless, as previously mentioned, the students do still remember and miss their friends who are in different classes. Furthermore, proximity and time did not necessarily mean a friendship would be formed. The students had clear preferences of some peers over others –

> *'I ask who's your friends at hockey and he’ll name them or point or use his signs… so he classes them as friends. But I was like, so what about Avery or there’s another boy, Alan. What about them? Oh, right they’re my proper friends.” (Oscar’s father)*

### *4.4.3 Friendships Happen Organically Without Adult Input*

Most of the teachers (five out of six) and some of the parents (two out of six sets) shared the students had enough friends. The students could make and keep friends due to their many positive traits, where they were nice, happy, contented and loved being with people. Oscar’s teacher shared, *“He's nice with everybody in the class. And even in the school, He's new in the school but Oscar’s got friends all over.”* Frank was described as “*a really contented, happy person” (Frank’s teacher),*

*and "…he loves people. He wants to hug people. He just loves being with people." (Frank's father).* Carter's father described Carter's happiness to be refreshing –

> *"Yeah, sometimes we wonder what is going on in your mind. [smiles] He is always happy, I've never known a student to be so happy that is such... really refreshing, you know. Yeah, he's smiling in your face every day." (Carter's father)*

Some of the students were also described as loving to be actively involved, such as Mark, who enjoyed getting himself involved in conversations, *"and if people are having a conversation that's close to him, but he's not quite involved, he will sort of lean that way to kind of get into it." (Mark's teacher J)*

In fact, Saphira's mother shared Saphira had more friends than her, *"She's got more friends than me, and we're very lucky and have a lot of friends" (Saphira's mother).* Nevertheless, there were other parents who wanted more friends for their children, especially outside of school as *"he doesn't have someone to come over and have a play date in the house or to go to theirs…" (Frank's father).* Carter's mother shared, *"I do believe that it would be nice for him to have more friends. And we want him to have some more friends outside school, especially separate school from outside."*

Nevertheless, some of the students can make and keep their own friends, and do not necessarily need adults to facilitate friendships, "*he's able to facilitate his own friendships. He doesn't need me to happen." (Frank's teacher).* These views are echoed by Saphira's teacher, ***"****I guess they maintain it themselves. Just for how they treat each other with kindness and respect, which is really lovely to see."* (Saphira's teacher C). Although teachers did facilitate friendships in a variety of ways which will

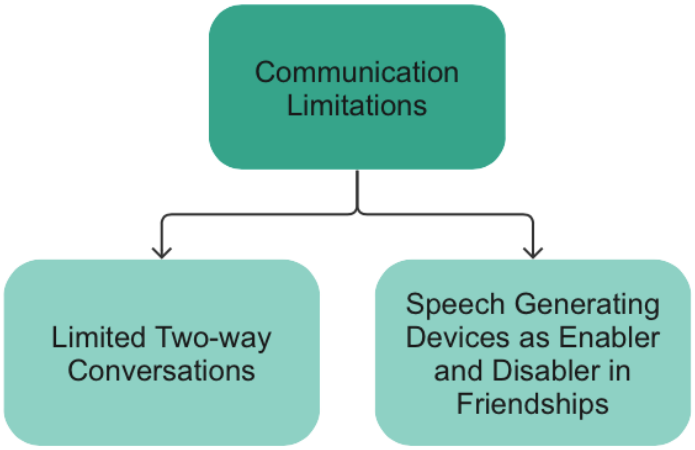
be discussed subsequently, teachers acknowledged that even without that support, the students could make and keep friends without adult input –

> *“But I think even without that support, Mark will continue to draw people in. He's so nice, so full of life and he's always drawing you in and he's really fun to be around and I don't know if you've gotten to hear him laugh yet, but when you do, he really knows how to light up a room.” (Mark’s teacher J)*

## 4.5 Parent and Teacher Theme 2: Communication Limitations

**Figure 10**

*Parent and Teacher Theme 2 Thematic Map*




This theme, as shown in figure 10, encapsulates parent and teachers' views on communication limitations, one of the barriers to making and keeping friends. Subthemes included – "Limited Two-Way Conversations" and "Speech Generating Devices as Enabler and Disabler in Friendships".

### *4.5.1 Limited Two-way Conversations*

Parents and teachers acknowledged that having limited speech was a barrier to friendships, as students could only have limited two-way conversations, where reciprocal turn taking was difficult – they cannot say *"hi, my name is… fine, how are you?" (Saphira's mother)* and conversations were "*very structured, she can't have an open communication" (Adina's mother).* Such limited two-way conversations meant every new potential friend had to get used to the students' communication first, "*the initial interactions with Saphira would be somebody getting used to what Saphira is trying to verbalize or what she's trying to say." (Saphira's Teacher C).* Limited two-way conversations also restricted students from sharing who their friends were with

parents and teachers. Carter's mother shared, *"Just want him to be able to... just tell me. Mom, my friend… I just want him to have a conversation with me about a friend."*

Such limits to their communication could result in them being side-lined in the classroom –

> *"Because she doesn't communicate [through verbal speech], she gets... with the students sort of side-lined? They think that she doesn't really understand what they're talking about, or that she can't do these things. And she's very eager to show them that, I can." (Adina's teacher)*

Interestingly, such side-lining was only mentioned by teachers who taught in classrooms where there were other students with verbal speech; In classes where almost all the students were non-verbal, the students seemed less likely to have such exclusionary experiences.

These limited two-way conversations led parents and teachers to highlight the importance of building literacy and AAC skills to build communicative competence, and the importance of raising awareness amongst verbal peers, which impact on the students' friendships. Mark's mother shared the importance of learning to spell and type independently, *"…[if] Mark learns to type big words big phrases independently, that would greatly add to his communication potential because almost in any software, you can put it to speak."* Within lessons, teachers also taught picture communication symbols as part of lessons, where they would point to picture symbols and words throughout the lesson. Parents also played a role in helping to facilitate two-way conversations within the classroom –

> *"When she goes out, she'll show you photos. Mom will write at the back of the photos what she's done. And then we say to her… that she went to the zoo*

*that weekend? What animals did you see? She would really talk about if you bring up the subject and enjoys that…" (Adina's teacher)*

### *4.5.2 Speech Generating Devices as Enabler and Disabler in Friendships*

To build communicative competence, parents and teachers also shared that the use of speech generating devices (SGDs) as students' voices opened communication for them –

*"Before he got his tablet, he used to get very frustrated because there was no way that we could understand what he needed or what he wanted. And so it would just be a lot of frustration for him and once he got his tablet, it kind of opened up a lot of what he needed to say. It seemed like he had a lot to say [laughs]" (Carter's mother)*

Other students also became more interested in communicating with the students, *"[they] will listen and sometimes get excited about what he's speaking about on his tablet." (Carter's mother).*

Hence, some parents were keen for their children to become more proficient users of SGDs and shared how they could help their children do so by adding symbols and teaching them how to add symbols, as *"I'm pretty sure he can be taught to do that because he's actually very good at technology." (Mark's mother),* and by adding their interests onto the SGD –

*"I'm sure if I put a page on his grid that had X wings, tie fighters [Starwars vehicles], you know… And he could do that on his iPad. He would be straight on. He would use it." (Oscar's father)*

As SGDs enable communication and in turn could be an enabler for friendships, parents and teachers were frustrated that some of the students were not using their SGDs enough. One parent shared how not using SGDs meant their child

could not communicate with family members who came to visit. Another parent shared getting his child to use the iPad purely as his voice and not for other purposes had been a tricky process –

> *"What we did have to say with the teachers at his previous school was don't try to do too much learning on the iPad, because the iPad… [Oscar will start to think] … It's not for forming sentences… but that's not what we want for Oscar. We don't want him to go… that's for English or it's for Math. It's not for that. It's for him to be able to speak." (Oscar's father)*

However, one teacher identified parental unfamiliarity with the SGDs as a barrier to SGD use –

> *"… with her AAC, I don't think Mum finds it easy to use. And I think she finds it difficult to supervise Saphira's use of an iPad… so I think that's probably a bit more of a barrier for her is actually getting her to use the AAC as much as she should." (Saphira's teacher J)*

Conversely, the use of SGDs could be a disabler to friendships. Some parents and teachers shared responses on SGDs were slow, impacted on the spontaneous back-and-forth communication, and reduced eye contact –

> *"Communication iPad is good, but it's very slow to interact? It's not… Because other thing is you can't have eye contact when you are having communication iPad." (Adina's mother)*

Such slowness in response contributes to the barrier of having limited two-way conversations –

> *"It's not spontaneous... although these devices are meant to be spontaneous, … because he then has to type through it all, it delays it. And I think then with ASD, my class particularly... it's lost, the moment's gone. And… because the*

> *others haven't got that attention span... you've asked me a question, because I'm trying to think of the answer and then I've got to type it out... Carter's got to find it on his device... They've moved on to six new questions." (Carter's teacher)*

Furthermore, some of the students did not want to use the SGDs as they did not want to be seen as different, where "*she tries to blend and camouflage by not having it." (Saphira's teacher J)*

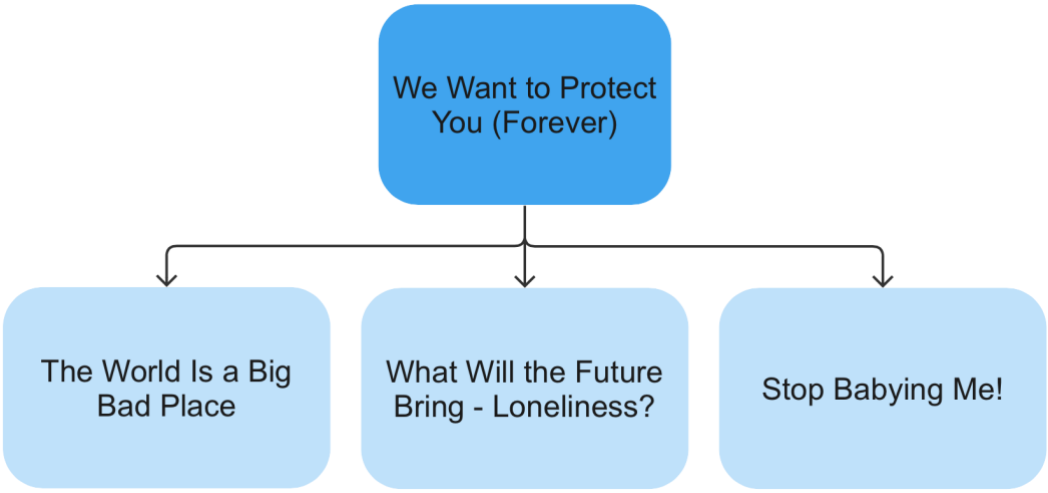
Nevertheless, the use of SGDs, a form of high-tech AAC was still better than low-tech AACs, such as PECS, where *"he was filing through those pictures… the book was getting so big and cumbersome because he had a lot of vocabulary he could access" (Oscar's father).* Additionally, SGDs required less fine motor skills –

> *"Then the physical part of it is the fine motor skills as well as physically… the Velcro… moving up a tab and then putting it across onto his sentence board. He was finding it quite fiddly, so that's why we went with the iPad because it would be easier for him… most students' quite quick at picking up tech so he was quite happy on iPads..." (Oscar's father)*

## 4.6 Parent and Teacher Theme 3: We Want to Protect You (Forever)

**Figure 11**

*Parent and Teacher Theme 3 Thematic Map*




This theme, as shown in figure 11, encompasses parents and teachers' views about their protectiveness, worries about the future and the students' growing independence. Subthemes included – "The World Is a Big Bad Place", "What Will the Future Bring – Loneliness?" and "Stop Babying Me!"

### *4.6.1 The World Is a Big Bad Place*

Parents and teachers shared they worried about the world being a big bad place for the students. Parents worried more than teachers about a multitude of factors, as supported by the many quotes in this section, while teachers worried about the students being taken advantage of. Parents found it difficult to trust others outside the school community –

> *"…the world is going to another extreme. Because you don't trust anyone… Because in normal situations the students would say, oh, this is my friend, you know, can you call her mom and… But because Adina cannot initiate that, everything comes from us and there are so many barriers..." (Adina's mother)*

Difficulties trusting others outside the school community stemmed from worries around others being unkind, bullying the students, and not understanding them. Saphira's mother shared –

> *"It's [the world] a horrible place. There's some people that are not very kind, isn't it, outside? Like there's some people that are kind, they're nice. It's just the world we live in, I suppose. You see things you hear things. Everything social media now you see some horrible things and you know, it's scary to have a student and to feel that to be your student like bullying is one thing I'm just oh my, I just don't like it."*

Parents were also worried that students outside the school community would tease their child –

> *"And the world we live in now, some of the students are very ignorant. So because Carter... the way his autism is... it'd be very difficult for us to trust new people that's outside the school. And that wouldn't kind of... I wouldn't say bully him or anything like that. But would take a mickey out of him and we would just we... just in our mind, we're just very worried about that. We'd have to get someone that's on the same page as him. And I think that's where the barrier is." (Carter's father)*

Such views about the world being a big bad place might be due to prior experiences of rejection from the wider community, where even clubs for students with special needs rejected them due to their complex needs –

> *"She hasn't been able to access… a lot of special needs clubs because she needs one-to-one… people who are trained staff for such, for enteral feeding and who know BSL, that's too much to ask… Any other service? They can't accept her because of her complex medical needs." (Adina's mother)*

These views are echoed by teachers, who trusted those within the school community. Frank's teacher shared about Frank's birthday party and parents dropped off their students at the party, *"with [Frank's] parents that they didn't know at all, but because they came from the school, it was okay."* Teachers also worried about the students being taken advantage of *"and I hope that she would only meet people that would not, you know, take advantage of her kindness." (Saphira's teacher C).* As such, the friendships and social relationships that the students built were kept within their school communities and outside of school, they were kept within their special needs clubs' communities.

This big bad place became a worse place for the students due to COVID-19, which had a negative impact on friendships. COVID-19 resulted in the loss of connection with others. Within school, there were less opportunities for friendship across classes. The students were *"in COVID bubbles, and not really being able to move across classes very much" (Saphira's teacher C).* Parents also lamented the reduced opportunities for social events in school that brought families together, *"and because of COVID… there haven't been any school fairs… school events, where you could meet up together… so there's nothing like… you would have a class get-together… All things like that, there's hardly been anything like that" (Adina's mother).* Outside of school, parents shared they were isolated and that affected their social lives –

> *"During pandemic we were quite isolated. Before we used to go out a lot more and before he used to see a lot more of our family friends. We used to meet up somewhere but during pandemic we stuck ourselves at home. School was shut a few times. So, at the moment that does probably need building up and*

*by now we're not afraid of COVID because we just had it so might as well start again going out and seeing people." (Mark's mother)*

### *4.6.2 What Will the Future Bring – Loneliness?*

The big bad world out there led parents and teachers to worry about the students' social lives in future. Their greatest worry was the students being lonely when they grew up and left school, as without friends from school, *"she could end up quite isolated with just her family" (Saphira's teacher J),* and even with family friends, *"all the other students are now going to grow up and go away… I will have to find more opportunities to… otherwise she's going to have a very lonely life" (Adina's mother).* Mark's father feared that isolation may be so great that it was akin to being institutionalised, "*Biggest fear for everyone is you guys seem to be institutionalized. Stuck in a corner, fighting for meals, fighting for entertainment, fighting for everything."*

Hence, parents and teachers hoped the students would keep in contact with friends from school –

"*My hopes are to maintain existing ones and add new ones. Particularly, I am a little anxious about when he does finish school because I know he has great relationships here, but what happens when he finishes school? Will he be able to keep any of those relationships?" (Mark's mother)*

This desire to maintain friendships from school was also shared by teachers, "*It would be nice if they stayed... in their little community that they have where they've gone to school together" (Adina's teacher).*

Nevertheless, making new friends when they leave school was also important. One parent hoped her child would continue to make friends and not be bullied in college. Another teacher acknowledged it may not always be possible to maintain

previous school friendships, but hoped for the student to continue making new friends –

> *"He's made a lot of friends at school and I do think they're important. But as he goes on in life, he might not be able to maintain those friendships because these were school friends and they might not all be with him through college. So he'll make new friends… and he'll keep continuing his social network. He needs to interact with people and the world. He really enjoys it…" (Frank's teacher)*

However, parents and teachers also shared there were barriers to friendships once the students leave school. Adina's mother shared there were fewer avenues that catered to those with special needs as they grew older, *"there are no soft place centres… most of the places, they cater to only till 12 or 14…"* These views were echoed by Adina's teacher –

> *"I do worry that at the age of 25... where the services stopped, she's not going... she needs to go to a day centre. Lots of activities where she could chat to people. Because I think she would become quite lonely if she didn't have that."*

These worries led parents to seek opportunities to learn from other parents with children with special needs about what the future may hold –

> *"Avery's mom and dad we see them quite a lot. Mainly the activities. But because we're not allowed… [laughs] they tell us to get out, we're sitting together. That in a way about certain stuff and things and school, how transport's going, and where you go next? Is it college or… Because they're a bit older than Oscar, you're finding out other things that are coming up that we got and to help Oscar…" (Oscar's father)*

Overall, parents and teachers wanted the students to be loved, supported and happy, to "*be surrounded by people who he does love who love him that he can interact with and that he can feel involved" (Mark's mother*), to have healthy friendships with new people and to trust others to be around them –

> *"We just hope for him to have a healthy friendship with new people and know that they can understand him more and that he can actually go to people's houses and… have sleepovers… and just have that kind of independence and know that… you can be trusted to be around Carter. We don't mind you've been with him for three hours." (Carter's father)*

### *4.6.3 Stop Babying Me!*

Despite multiple worries around the students navigating a big bad world, parents and teachers also acknowledged that the students were growing up, and with that came an assertiveness of independence and autonomy that they were struggling to come to terms with. Adina's teacher shared –

> *"… she's been on the roundabout, and some boy from another class, big boy, comes and spins the roundabout [with action] [laughs] And I panic and say, Oh no, no, no. And she's like, I love it! She's really like... she'll tell you stop... stop babying me really. I love it, I love it!"*

As part of adolescent friendships, the students have started testing boundaries together with their friends –

> *"With just authority and things like that… Saying like we don't want to do that, so we're not going to. And Chloe's quite strong in that respect, and you could see Saphira kind of going, oh, is this okay for me to join this? Should I try this too? And kind of testing those boundaries? So I think they found a little friendship." (Saphira's teacher C)*

This growing independence was observed outside of school as well, where the students have started to assert that they wanted to do things with friends without adult interference. Oscar's father shared Oscar wanted to do his dance classes with friends without him –

> *"Well, there was adults in to help to begin with… And then as they've got older and more independent, they've just told [points to self] like, out you go. [laughter] Yeah, they want… it's their time… they don't want adult interference. You just sit in the corridor, around in another room while they go and do dance."*

This growing independence and testing of boundaries with friends were worrying for parents, who described difficulties letting go. One parent shared about being uncomfortable with her child travelling on her own once she turned 16, *"If I have to give up my work and travel with her then so be it... It's all about independence and she's still my baby... But I do try and let her be a bit independent." (Saphira's mother)*

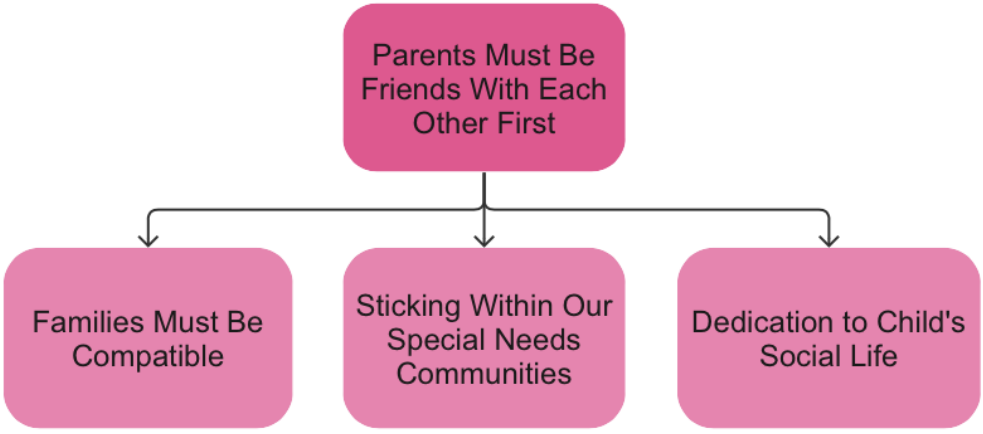
The students' desires to be independent contrasted with parents and teachers' views on how they have difficulties socialising independently. Parents shared the students could not go anywhere by themselves, "*it's limited because he can't go anywhere by himself. So he has to go with a group so we've got his sister who's also got special needs so we are a bit limited in what we can do" (Frank's father).* Such difficulties socialising independently also meant friendships were maintained only within certain social environments, such as school –

> *"He will just maintain friends within the social environment, so social clubs and stuff. I can't see him suddenly latching on to one or two people that regularly visits and comes to our house and goes out with, I can't see that happening." (Frank's father)*

## 4.7 Parent Theme 1: Parents Must Be Friends With Each Other First

**Figure 12**

*Parent Theme 1 Thematic Map*




This theme, as shown in figure 12, reflects parents' views about the role they play in their children's friendships and social relationships. Subthemes included – "Families Must Be Compatible", "Sticking Within Our Special Needs Communities" and "Dedication to Child's Social Life".

### *4.7.1 Families Must Be Compatible*

For the students to be friends, families need to be compatible first, *"the barrier becomes that because the children aren't...driving it, families need to be compatible, isn't it?" (Adina's mother),* where parents must get on with one another, *"so we've gotta get on with the parents initially and then we've got to kind of just, you know fit in with everything else."* (Oscar's father). Without getting on and being friends, there is no trust or common ground, "*but unless we meet them few times, even they wouldn't trust us or we can't find common ground… so many opportunities to actually befriend, because for our students, the carers have to be friendly [laughter]." (Adina's mother)*

However, families need to live near each other to be friends. In school, the students come from different boroughs, "*so parents would have to rely on being able*

*to travel quite far to have those meet ups unless somebody was more local" (Saphira's teacher C).* Some parents shared that their friends, and in turn some of their children's friends, were neighbours, "*We are neighbours basically and we do see them occasionally on weekends. Mary is eight, and she's absolutely normal student. She's not disabled in any way."* (Mark's mother)

### *4.7.2 Sticking Within Our Special Needs Communities*

To be compatible, parents preferred connecting with those whose children had special needs. Carter's mother wanted to connect with parents of non-verbal children, but she did not know of any such families, *"I'm not sure how common it is, for erm... to see nonverbals, as far as I know, Carter so the only nonverbal I know". (Carter's mother)*

Parents also wanted to connect with parents from school as many of their students' friendships were from school, making school an important context for friendships, "*It's maintained just from school really. Yeah, they mostly just see each other at school every day. They're in a set routine every single day" (Carter's mother).* Another parent shared how school was all about being with friends, "*She loves her friends, I think it makes it good as well, because she's willing to go to school". (Saphira's mother)*

Parents felt that school played an important role in connecting parents. They suggested for school to have social activities for them to connect with other parents –

> *"I think having social activities at school. Even parents or carers can meet, because then you understand your student better… Because she's spending 7-8 hours at school. And sometimes I don't know what she's doing at school… so I know what she's doing in Maths and English, but I'm not talking about*

*that. I don't know her interactions, how she's behaving with others. And any social activities… residential trips for example… funding cuts have been major, so all that, those things have been taken away from special needs school." (Adina's mother)*

One parent wanted to connect with parents from their child's class instead of only with the wider school community, as their child's class was where existing friendships could be maintained –

*"If school can organize class outings with parents that would link parents up … because they have some things organised through the app, which is like a whole school sense. So there could be parents from all over so the kids don't know each other. And the kids could be really, really different. Whereas with it organized on the class base, that would mean that parents would meet each other, that kids will be together outside of the school setting, and that might improve existing friendships." (Mark's mother)*

With knowledge of who their children's friends were, parents were keen to organise social activities outside school for them to maintain friendships, "*if I knew Saphira's family, I don't know if the two of them would like to go to the movies together. We would be happy to facilitate that" (Mark's mother).*

However, parents felt that connecting with other parents from school had been difficult, due to little home-school communication about their children's friends, and privacy reasons, where schools had become more careful about sharing information of other parents –

*"In the previous school, because of certain issues around safeguarding and the other pupils in his class, we never had a class list. We never got told who everyone was in his class. We found out, but that was just by talking to most*

*of the parents in class. But school would never give out a list of his class to say these are the people in his class, these are the parents you could speak to them about this… because some of the parents had ticked boxes where they didn't want that information going out" (Oscar's father).*

Outside of school, parents tried to share information of clubs and activities with other parents with children with special needs, such that the children always went to the same activities and can maintain their friendships –

*"We look out and… circulate all that kind of info around most others. That's why there's three or four children that will be at most of these activities. So you'll always see them. So that that's kind of Oscar's familiar group of people that he always knows and sees." (Oscar's father)*

### *4.7.3 Dedication to Child's Social Life*

Parents were dedicated to their children's social lives, where they created multiple opportunities for them to build and maintain friendships. Such opportunities included getting their children onto waitlists for special needs clubs since their child was little, "*He went to a playgroup when they were quite small. And as they come up to an age when they should leave, we were recommended to contact Mencap, got on the waiting list" (Frank's father),* and being a hockey coach for their children's special needs hockey club, *"He does field hockey. I do the coaching with that and help out" (Oscar's father).* Some parents threw birthday parties for their children, *"We have the occasional birthday party. We invite people to come round. But we don't have play dates at home or anything" (Frank's father).*

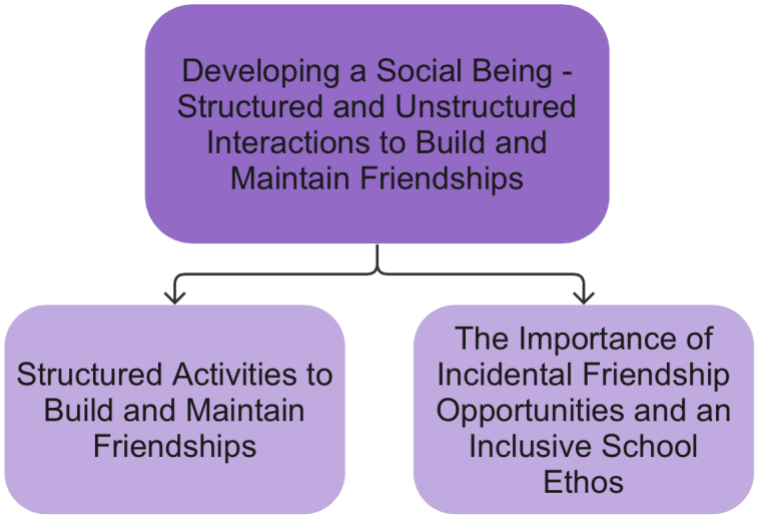
Parents also act as conduits for their children's communication, where they prepared structured communication for their children, acted as communication partners and explained to others about their children's special needs. Adina's mother

shared about preparing structured communication, *“Prepare Adina. That you have to go and tell everyone that you did this this this this, go over a few times so that it becomes a structured communication and she's able to cope” (Adina’s mother).* They explained to strangers about their children’s special needs, “*So they don't look at her like what she's doing. I've gone to the park and I've sat and explained to strangers and they wonder is she deaf?” (Saphira’s Mother) and* emphasised the importance of sharing the truth with other children about their children’s special needs, *“She [friend] has asked questions and rather than say he was unwell or the tooth fairy came or whatever... he had cancer” (Mark’s mother).* Parents described such explanations to be important, as their children’s friends could then understand their child better and helped to advocate for and explain their child’s needs to others.

## 4.8 Teacher Theme 1: Developing a Social Being – Structured and Unstructured Interactions to Build and Maintain Friendships

**Figure 13**

*Teacher Theme 1 Thematic Map*




This theme, as shown in figure 13, reflects teachers' views about the role they play in the students' friendships and social relationships. Subthemes included - "Structured Activities to Build and Maintain Friendships" and "The Importance of Incidental Friendship Opportunities and an Inclusive School Ethos".

### *4.8.1 Structured Activities to Build and Maintain Friendships*

Teachers shared similar views to parents about how parent connections were the key to building the students' friendships, and school was an important context for building and maintaining friendships, "*She does like school... And school is about meeting friends. I don't know if she's interested in the learning. [laughter]" (Adina's teacher)* Teachers also viewed themselves to play a key role in connecting parents and facilitating get-togethers outside of school –

> *"Their friendships are maintained basically at school. I know Mark's parents were saying they'd really like us to help facilitate more of them being able to*

*get together outside of school and I think that's probably a good suggestion for next year to look at." (Mark's teacher J)*

Other than structured parent activities, teachers also emphasized a variety of structured activities to build friendships. These included structuring the classroom environment, structuring time, explicit instructional strategies and explicit teaching of friendship skills. Teachers structured the classroom environment by considering sitting arrangements and classroom formations to facilitate groupwork, *"Paige is new to the class, and they were sat on the first table that we made before. So, Chloe, Saphira, Paige and Shane… because they had that table, that group, that group work, they became friends that way" (Saphira's teacher C).* Group work was viewed as helpful in building friendships, *"So I'm really hoping next year, the way that my class will be structured will be a lot more being able to do some more group work and really developing that... [friendship]" (Carter's teacher).*

Teachers also structured time within the school day to build friendships, "*It's got to be built into our timetable, this is what we're doing. So this will be much more structured activities to build their friendships" (Carter's teacher).* Such structured times were used for AAC communication training, tea making sessions where students had facilitated conversations with one another, and turn-taking games, "*we will teach turn taking like… It's your turn, It's my turn. Look what did so-and-so have and things like that" (Carter's teacher)*.

Explicit instructional strategies included giving students opportunities to pick who they wanted to work with in class, where one student preferred working with her friend rather than an adult, "*We were doing dance and you had to pick a partner to copy them. So automatically I went over to Adina, she said no... and she wanted to*

*partner with Andrew… And they did the thing together, she loves it." (Adina's teacher)* and ensuring that student's voice was heard –

> "*If I notice that the class is leaving her out, not in a nasty way… I will say Adina has got something to say. They will stop and listen. So we don't force it. But we remind all the students, even her friends, Adina is a part of this group, Adina can understand what you're saying. She just needs a little bit more time." (Adina's teacher)*

Such reminders and modelling of how best to interact with the students were important to ensure the students were included in class.

Teachers also highlighted the importance of explicitly teaching friendship skills, which comprised learning about what a friend was, what made a good friend, how to keep friends, boundaries of a friendship, understanding emotions in self and others, conflict resolution skills, perspective taking, self-advocacy, communication skills, comprehension skills, and to develop a wider repertoire of activities such that there are more similarities with their peers. Some of these skills are taught within the curriculum, *"We've been doing lessons focusing on how to be a good friend, what qualities make a good friend what to do if we're not happy with our friends?" (Mark's teacher J).*

The boundaries of friendship were important as students needed to learn appropriate behaviours around personal space –

> *"Explain the boundaries of friendship… what behaviour in school needs to look like and personal space needs to look like and things like that. So that's been a real challenge, to try and explain that to both of them." (Saphira's teacher C)*

Conflict resolution was also an important skill to learn to improve friendships during adolescence –

> *"As far as improving them goes, it would probably be focusing on a bit of conflict resolution. As a teenage girl, she does have some moments… her and Chloe can have a good fallout every so often. And then they're both very sad and they always come back together… but I think for her it is that, that emotion she spends in that." (Saphira's teacher J)*

The importance of perspective taking was also highlighted by the teachers –

> *"How to be nice to someone and know how to treat someone else because I think sometimes a lot of the kids have learned that it's them focused and having to take that time and consideration of how someone else would feel when something happens." (Mark's teacher J)*

Some teachers also highlighted important communication skills to be taught as part of interactions within friendships, such as teaching a student to say no, "*I'm not in the mood to chat and so that's what I'm trying to teach him is to say, I don't want to talk at the moment because everyone's got the right to say no, I don't want to talk…" (Carter's teacher),* and teaching that there was no need to have the right answer to every response –

> *"Now he understands that sometimes he doesn't have an answer, and he can say, I don't know. So it's about teaching him those skills, but then the hidden skills like I don't know, I don't have an answer and that's still work in progress." (Carter's teacher)*

Outside of the classroom, one teacher described the importance of structured activities between different classes in the school to build friendships. Such activities included having a mentorship system with the classes next door, *"this is our hope…*

*that they're paired up and one member of the class will mentor a member of [junior] class and go and oversee like reading sessions, play sessions…" (Saphira's teacher C)*

### *4.8.2 The Importance of Incidental Friendship Opportunities and an Inclusive School Ethos*

However, not everything had to be structured. Teachers shared the importance of incidental friendship opportunities, such as giving opportunities for the students to move around the classroom and interact and work with different people –

> *"The same TA shouldn't always work with the same student, that should be changing as much as possible... So that you can take what you need from each person, learn different styles and things like that. I think it's important." (Saphira's teacher C)*

Outside the classroom, teachers highlighted playground and lunchtimes as important spaces for maintaining friendships, *"I'd say just like playing together in the playground, just being around each other and eating lunch together. So playground and lunchtime" (Frank's teacher).* Such spaces are important to maintain friendships with friends from previous classes, *"It [the playground] will give her those opportunities to branch out and have even more because she does have friends across the school, but maybe not the time to see them or the opportunities to see them so much" (Saphira's teacher C).* These views were previously echoed by the students, such as Mark, who shared that he missed his friends from his previous class whom he had grown up with. Another student, Adina, also shared that playground time was when she could meet her friend Andrew, her ex-classmate.

Overall, teachers highlighted the need for a school climate of warmth to promote friendships, where students did things together –

> *“Some of them they can't walk. They're in the wheelchair. But we all walk together. We go everywhere together. We do things in common. If you don't know, you may say... these students can't talk, these students can't do this. But how God have created all of us. It's so amazing. And we love them and they also love us.” (Oscar’s teacher)*

Friendships were promoted when students felt safe and part of the class community, “*makes her feel safe, part of the group. That's what she craves for, to be part of the group not to be overlooked” (Adina’s teacher),* whereby “*we don't separate them. Let one of them feel that oh, me, I'm not part of the class” (Oscar’s teacher).*

Such inclusive ethos needed to be embedded not just within the classroom, but also as part of the school community, to help promote friendships. One example was during a school party –

> *“Mark needed a bit more space because no one can get into contact with his legs. But actually everyone wants to come over and still come and have a chat. And they were really interested in saying hi, so he wasn't socially excluded from anything. Everyone actually made the effort to go there.” (Mark’s teacher J)*

# Chapter 5: Discussion

## 5.1 Review of Research Aims

This study explored the friendships and social relationships of students with CCN in and outside of special school settings, to understand how they view and experience friendships and social relationships and how adults facilitate friendships. This chapter will discuss the findings in relation to research questions, followed by reflections, implications for practice, strengths and limitations and future research.

## 5.2 RQ1 According to Student, Parent, and Teacher Views, How Do Students with CCN View and Experience Their Friendships and Social Relationships at Home, in School and in the Community?

### *5.2.1 To What Extent Are Students' Views About Their Friendships Similar to Parents and Teachers' Views?*

Students with CCN had different views about who their friends were compared to their parents and teachers. They had no difficulty naming five or more friends and could rank them accordingly. This finding contrasts with previous research that suggested students with CCN have few friends (Eg. Rossetti et al., 2016; Syversen, 2020). This could be due to preconceived notions about the students' communicative abilities and their impact on friendships, assumptions around their desires to be alone being viewed as not wanting or having fewer friends, and due to views being collected from adults instead of the students themselves (Rossetti et al, 2016).

In fact, parents and teachers had limited insight into the students' friendships. Many of them could not accurately identify the students' friends. Some teachers thought the students did not understand the concept of friends, and some parents believed cartoon characters were their children's friends. These findings are

surprising as students with CCN in special schools are in close proximity to key adults all the time, who have known them for years – in school, they have key teaching assistants and at home, their parents often act as their communication partners. Previous research suggested that adults find it difficult to assess students' friendships in mainstream settings (Østvik et al., 2018b; Bagwell & Schmidt, 2011). This study extends previous research by emphasizing that even for students with CCN in special school settings, who spend a large part of their days in close proximity to key adults, it is not possible to know what they are thinking. Future researchers may therefore need to find creative ways to elicit views from the students directly.

This study also extends previous research by supporting two friendship models that can be suitably used to find out about the friendships of students with CCN in special school settings. The ease at which students ranked their friends on a pyramid supports Berndt & McCandless (2009)'s idea of friendship as being on a continuum – from strangers, acquaintances, just friends, good friends, close friends to the best of friends. This ability to differentiate between friends of different levels is similar to adolescents without special needs (Adler & Adler, 1998). Second, the students listed only peers and not adults, supporting the idea that friendships are 'horizontal' and different from teacher/parent-student relationships, which are 'vertical' (Bagwell & Schmidt, 2011). Thus, the friendships of students with CCN can be explained using friendship models, using the pyramid ranking activity as a key method to learn more about their friendships.

**Qualities of a Good Friend According to Students vs Adults.** Students, parents, and teachers wanted friends that were kind, caring and loving. Students also described their friends as happy, fun, funny, laughing, physically affectionate

and easy to be around. These descriptions echo previous research on mainstream primary school students who use AAC, who described friends as kind, helpful and whom they could do things with (Østvik et al., 2018a).

However, adults had a different criterion about what makes a good friend. Parents and teachers highlighted patience to be important, which echoes previous research on adults who use AAC, who indicated patience to be a key characteristic that differentiated friends from acquaintances, suggesting that peer attitudes and behaviours that reflect those attitudes were key to successful friendships (Therrien, 2019). In this study, being in special schools meant the students were used to making accommodations for one another, as students communicate in a multitude of ways, so patience might not be an important criterion to them.

Parents and teachers were also most concerned if the students' friends were the right level for the students, in terms of cognition levels, age, communication levels and physical development. These comparisons led some parents to prefer the students to interact with mainstream students. Parents and teachers appeared to consider the students' needs when thinking of what makes a good friend for the students, whereas the students thought of a good friend as being fun and easy going.

This difference in views may be because adults viewed the world as a 'big bad place' for the students, triggering strong protective instincts. This presents an interesting contradiction: parents want their students to 'fit' in with mainstream students and the world out there, yet desire to shield them from that same world. It is possible that the students' views of what makes a good friend may evolve as they grow older. Nevertheless, the differences in perceptions between students and

adults reinforce that it is important to ask the students, not the adults, about their friendships and what they look for in a friendship.

### *5.2.2 How are Those Friendships and Social Relationships Established and Maintained?*

**Establishment of Friendships.** Students with CCN have longevity in their friendships, where many friendships had been established since nursery or primary school and they moved to secondary school together. These findings are consistent with Matheson et al. (2007) who suggested students in special education classes form the most enduring friendships, and with Holt et al. (2017), who suggested that students in special schools had mostly friends within these schools.

However, their friendships may face attrition after school-going age, as adults do not know who their friends are and who they want to maintain friendships with. It would be a shame to lose friendships that have been built over many years because nobody knew who they wanted to continue being friends with. Thus, it is vital that as part of the post-school transition process, there is a process of finding out who the students want to continue keeping in touch with.

Findings also highlight the importance of proximity and time in friendship establishment – friendships are formed by being in proximity over time in school, by being in the same class, playground, lunch, and school activities, and outside of school, by being a regular in activities that promote familiarity with the same students. These findings are consistent with previous research which emphasised proximity as the foundation for friendships of students with CCN. Two individuals are more likely to interact, get to know each other and form friendships if they are in the same space (Matheson et al., 2007; Biggs et al., 2020). This is especially the case in

school environments, which are the main sources of friendship because the students are in extended proximity to peers (Therrien et al., 2023).

However, proximity does not mean a friendship will be formed. Findings suggest students with CCN prefer some friends over others and prefer doing different activities with different friends, implying the students prefer those who have more similarities to them. This is consistent with previous research that suggested proximity provides befriending opportunities, but similarity is what matters in becoming close friends (Juvonen, 2018).

In fact, proximity could be a double-edged sword. In special school settings with small class sizes, the students have a small pool to find similarities with, navigate differences and learn to get along every day. This is reflected in my findings where students showed a great acceptance of their friends yet tended to describe negative traits of their best friends before positive traits. Thus, the social dynamics within special schools could be more challenging to navigate compared to mainstream settings.

**Maintenance of Friendships.** Friendships are maintained through a connection that goes beyond words – it goes without saying. The students enjoy doing a variety of activities with their friends, especially physical activities such as dancing and swimming. These findings contrast with Anderson et al. (2011), who suggested friends of students who use AAC in mainstream settings enjoyed quiet activities like board games and activities that required few communicative interactions, like craft, while finding it more difficult to participate in physical activities like sports. This study suggests that students prefer activities that create meaningful social contact with friends, including physical activities.

**Meaningful Social Contact.** This study gives us a glimpse of what constitutes meaningful social contact for students with CCN, whereby they communicate through dancing, swimming, playing music and painting together. Other researchers described students who use AAC as having less communicative participation at school compared to those without disability and to participate in lower numbers of activities (Raghavendra et al, 2012; Thirumanickam et al., 2011). This study suggests by communicating through different means instead of verbal speech and connecting with friends through a variety of other ways, others might view them as having less communicative participation.

Moreover, these students enjoy chatting with their friends. Such chats are not sustained by verbal speech – not only are the students familiar with their friend's modes of communication, but they are masters of multimodal communication, having grown up in special schools where everyone communicates in different ways. Furthermore, conversational reciprocity does not need to be verbal. If the initiation of communication is received, such as through laughter or a smile, that helps to build the experience of a shared moment that signals reciprocity and helps to maintain friendships, as one teacher shared, "Your presence is enough".

These findings contrast with Østvik, J. (2017), who suggested that students using AAC in mainstream settings were vulnerable in establishing friendships compared to fellow students who could speak due to limited access to interactional qualifiers (the ability to talk, ask to play together, ask about peer's names, or age, and ask to be friends). While students with CCN do have communication limitations (which will be discussed in the barriers section below), they find different ways to enact meaningful social contact to maintain friendships. It is possible that it is in

settings with mostly verbal students that these students with CCN find it difficult to maintain friendships with those with speech.

***Physical Intimacy as Part of Meaningful Social Contact.*** One way that meaningful social contact is enacted is through physical intimacy, which is part of the communication repertoire for students with CCN to maintain friendships. A touch, a hug or holding hands, is a much faster way to acknowledge a friend's presence than pressing an AAC and navigating many pages to say, "Hello, how are you?", which has been identified as a barrier to friendship development. Furthermore, adolescent friendships are more intimate and committed, where self-disclosure, emotional closeness, trust, and mutual support become increasingly important (Doll & Brehm, 2010; Bagwell & Schmidt, 2011). Students with CCN may have closeness in their relationships, but they may find it difficult to self-disclose or to share emotional closeness through speech. Thus, they create that intimate connection through physicalness, the sense of touch, within the friendships.

In fact, development of a sense of touch is essential and should be a priority for those with complex needs (Kamenopoulou, 2023). Much of learning for those with complex needs takes place through touch, such as using hand-over-hand technique where an adult guides a student by putting their hands over those of a student to assist them in word signing (Kamenopoulou, 2023). Yet, some students may dislike such experiences which can make them feel less empowered, and can also raise safeguarding concerns (Kamenopoulou, 2023). Such concerns have also been raised by adults in the current study who worry about developmentally appropriate touch, where teenagers of different genders holding hands was seen as inappropriate. This conundrum is presented – if physical intimacy is a large part of

what constitutes meaningful social contact for students with CCN, are we limiting their connection with others when we limit physical intimacy?

Previous researchers shared that young people with cerebral palsy had fewer opportunities to have intimate relationships than their able-bodied peers (Schmidt et al., 2020 as cited in Sellwood, et al., 2022). Furthermore, adults who use AAC have shared that they received a lack of relationship and sexual education as adolescents, and researchers called for such education to specifically address the impact of disabilities on relationships and sex lives (Sellwood et al., 2022). Thus, Educational Psychologists can support by reviewing and developing relationship and sexual education programmes with schools that specifically address the impact of disabilities on relationships.

***Playfulness and Humour as Part of Meaningful Social Contact.*** Meaningful social contact is also enacted through playfulness and humour. The students described friends as happy, fun, funny and laughing, and enjoyed playing with friends. Consistent with previous research that play is important in maintaining friendships of mainstream students with CCN (Østvik et al., 2018a), this study suggests that play is equally important to friendships of adolescents with CCN.

Humour, through the sharing of private jokes and watching friends engage in silliness and mischief, also fosters a sense of closeness within their friendships. The role of humour in friendships of students with CCN has not been studied widely. In a systematic literature review of humour in social interaction in people with intellectual disabilities, Chadwick and Platt (2018) found few studies that focused on humour. From these studies, humorous exchanges such as banter were identified as significant components in the development and maintenance of social relationships. Humour enhances social closeness and facilitates intimate shared connection

between people with intellectual disabilities and those supporting them. Studies on people with profound and multiple learning difficulties (PMLD) described humour as an indicator of attunement, with jokes helping with the attunement between people with PMLD and their carers (Griffiths & Smith, 2016). Another study on people with severe intellectual disabilities and non-linguistic communication skills suggested visual humour, such as slapstick humour, may be enjoyed more as it relies less on verbal skills (Johnson et al., 2012).

This study contributes to the literature by suggesting that humour also plays an important role in the friendships of students with CCN, where these students use humour to foster a sense of closeness and attunement with others. Students with CCN also seem to prefer more visual forms of humour such as slapstick humour. Overall, this study highlights the importance of humour, and the need to create and engage in moments of funniness and absurdity, as meaningful social contact with students with CCN and a way that they maintain connection with others.

Overall, meaningful social contact, through a connection beyond words, highlights the important aspects of the human experience that are located outside of language, through dance, swimming, music, art, physical touch and humour, but yet in our world, the focus on speech renders experience to be legitimate only when it is spoken (Burr, 1999). This in turn privileges the eloquent, and undermines these students with CCN, making them seem like the ‘other’ who need help.

These findings have practical implications. Within the school curriculum, students need opportunities for meaningful social contact through physical activities as well as music and art. These subjects should therefore be as important as the traditional 'core' subjects such as building literacy and numeracy skills. The curriculum should also not just focus on developing functional skills but should

rethink what ‘functionality’ entails. This study argues that building meaningful friendships and social relationships lie at the heart of ‘functionality’ for students with CCN.

**Friendship Quality.** Friendship maintenance is also dependent on friendship quality (Majors, 2012), namely – companionship and closeness, helping, conflict and security.

***Companionship and Closeness.*** The students’ friendships are maintained by growing up together, sharing a connection beyond words and the many ways that they bond through meaningful social contact, which aligns with previous research stating that companionship characterizes all friendships (Bukowski et al., 1994). Just like young adults with CCN, the students enjoy engaging in joint activities and communicating with each other. These joint activities create opportunities for building shared memories and a shared history over time (Dada et al., 2020). Having grown up together, there is a shared history, and a long-standing companionship that contributes to the closeness of their friendships.

***Helping.*** Students with CCN help each other reciprocally - by being a pair of eyes for their friends who cannot see, helping friends co-regulate emotions when friends are angry, and helping friends stay on task. These findings challenge previous views of those with CCN as purely recipients of help within a friendship, where their high support needs often test the boundaries between “friend” and “carer” for their friends (Anderson et al., 2011; Meyer, 2001; Østvik, et al., 2017; Therrien, 2019). Previous research suggested students without SEN may view those with SEN as “needing help” due to differences in appearance or needing assistive equipment, leading to unequal relationships (Demetriou, 2021). Anderson (2011) suggested such helping roles to be uncomfortable or arduous for friends, impacting

on friendship quality. Thus, previous studies suggested reciprocity can be challenging for those with CCN.

This study suggests that students with CCN in special school settings are not relegated solely to “being helped”, but play an active, reciprocal, and mutual helping role within their friendships. In fact, students with CCN are themselves, friends of other students with CCN, and they did not describe helping their friends with CCN to be uncomfortable or arduous. It is possible that in a special school, where there is a great degree of acceptance of differences, accommodating others is second nature. Thus, in special schools, reciprocity is a common feature in the students’ friendships, and there is no distinction between ‘helper’ and ‘needing help’.

***Conflict and Security.*** Although conflicts can threaten friendship security, all the students shared their best friendships were secure and could withstand conflicts. Previous research suggested friends of students who use AAC in mainstream settings only described fights and forgiveness in relationships with friend who use verbal speech and not with those who use AAC (Biggs & Snodgrass, 2020). Hence, the researchers did not include conflict as a key dimension in their model of friendship development for relationships with friends with and without CCN (Biggs & Snodgrass, 2020). This study extends previous research by suggesting that conflict is part and parcel of friendships of students with CCN – it is not necessary to have verbal speech to fight and get into conflicts with friends. Thus, there is a need to teach students with CCN to manage conflict through negotiation and compromise and navigate the complex emotions that come with them.

**Friendships Happen Organically Without Adult Input.** Some of the students could make and keep their own friends and did not necessarily need adults to facilitate friendships. One student had more friends than her parent. The students

had many positive traits and made friends easily, which is aligned with prior research suggesting personal qualities of students who used AAC influenced their ability to attract and make friends with non-disabled peers (Anderson et al., 2011). These findings further support the view that the students are not viewed as 'needing help' within special school settings, further refuting the deficit discourse surrounding them. It is possible that their friendships are not that different in form and substance, but alternatives are sought, such as replacing emotional intimacy with physical intimacy, and replacing verbal forms of humour with slapstick humour, that result in some of them being capable to make and keep their own friends.

### *5.2.3 What Are the Barriers to Friendship Development?*

There are three barriers to friendship development.

#### *Limited Two-way Conversations*

The first barrier is limited two-way conversations where reciprocal turn taking is affected. With old friends, this is less of a barrier as the students find ways to connect such as through physical intimacy and humour. For potential friends, they must get used to the students' communication first, which might limit the pool of eventual friends. This highlights the importance of familiarising peers with the students' communication methods. This is in line with previous research that suggested informing peers about the needs of their classmates with disabilities eliminate barriers to effective communication (DeCaluwe et al., 1999; Möller and Danermark 2007). Communicative preferences and complex needs can be explained to potential friends in accessible ways, such as through a communication passport detailing how a student communicates.

Students with CCN could also end up getting side-lined in the classroom. Interestingly, only teachers who taught classes with other students with verbal

speech raised this concern. It is possible that students with CCN experience less exclusionary experiences within classes of students who were mostly non-verbal. Extending previous literature that suggested students with AAC in mainstream settings were passive communicators who made few attempts at initiating communication (Chung et al., 2012; Østvik et al., 2018), this study suggests that students who use AAC may be viewed as passive only in contexts with verbal communicators. In settings where most students are non-verbal, the ability to connect with others through multimodal communication becomes a strength. As one teacher puts it - these students have limited speech, but they communicate a lot. In fact, some of these students have more friends than their parents. Thus, limited two-way conversation is only a barrier to friendships development in new friendships, and in settings with peers who are verbal.

The real barrier to friendship development is possibly attitudinal barriers in the ways that these students are perceived, as passive communicators, as “needing help”. Previous researchers described how typically developing peers may perceive individuals who use AAC as less communicatively competent and emotionally responsive than peers without disabilities, presenting a barrier to meaningful relationship development (Light et al., 2003, as cited in Anderson et al., 2011). Thus, there is a need to consider how to reduce such attitudinal barriers. This study supports previous studies that suggested social skills training for peers without disabilities should include learning more about disability and diversity to reduce negative stereotypes that act as barriers to friendship (Bottema-Beutel et al., 2018, as cited in Therrien et al., 2023).

***Speech Generating Devices (SGDs) as Enabler and Disabler in Friendships***

The second barrier is the use of SGDs that can be both an enabler and disabler in friendships. One key finding is that the students tended not to use SGDs as their “voice”, and this limited their ability to communicate with others who were less familiar with their communication. The importance of SGDs as student’s voice builds on previous research, which suggested that competence in using a generative form of AAC helped AAC users develop friendships (Therrien, 2019).

Other barriers to the use of SGDs included them being slow, impacting on the spontaneous back-and-forth with others and limiting eye contact. These findings are aligned with previous research that suggested messages with redundancies that were delivered quickly were preferred over messages without redundancies that were composed slowly (McCoy et al., 2007, as cited in Therrien, 2019). Previous studies have also suggested that communication between students using AAC and their friends can be challenging due to the delayed nature of aided communication, relevant vocabulary missing on devices and poor output volume (Anderson et al., 2011). Thus, programming messages into AAC systems to speed up conversations, and teaching students to type quickly while maintaining eye contact, can help students with CCN have more positive interactions with peers and develop friendships.

Interestingly, attitudes towards the use of SGDs can also be a barrier to friendships. Some students did not use their SGDs as they did not want to be seen as different. This finding builds on previous research that suggested when “talking” with friends, students who use AAC emphasized different forms of AAC such as gestures and body movements more than aided AAC, although high-tech AAC with speech generating functions seemed to have a certain appeal (Biggs et al., 2020). This study suggests some students use other forms of AAC rather than their SGDs

as they want to blend in. Overall, it is important to consider how the use of SGDs is viewed within school settings, to “normalize” their everyday use through adult modelling, such that SGDs would be viewed as student’s voice.

***We Want to Protect You (Forever)***

The third barrier is the lack of trust of others outside the school community. In a world that is a ‘big bad place’, adults were keen for the students to maintain friendships from school. These findings highlight the importance of post-school transition planning – to find out who students’ friends are, who they wish to keep in touch with, and what activities they would want to do with friends to maintain friendships once they leave school. The importance of school transitions has also been highlighted by previous research, stating that students with autism could be placed with an existing friend to aid in successful transition (Fox et al., 2022).

Furthermore, there are barriers to making new friends once the students leave school. Parents and teachers worried there are few avenues that cater to those with special needs as the students grew older. Educating the wider community about how best to support students with CCN is therefore an essential step in ensuring they have opportunities to build successful relationships after leaving special schools. A first step could be to ensure schemes and clubs that cater to those with special needs also cater to students with CCN, such as having qualified staff who understand their needs and interests.

This lack of trust of the outside world meant parents preferred to stick within their special needs communities, becoming gatekeepers to the students’ relationships. There are both positives and negatives to this ‘stickiness’. In terms of positives, some of the students go to the same outside school activities with friends from school and have a close-knit circle of friends whom they have known since they

were little. Such proximity over time led to maintenance of friendships, where there is longevity in the friendships unique to special school settings, compared to other settings where friendship dynamics might change more frequently. In terms of negatives, this ‘stickiness’ also limits the students’ friendship opportunities, where there is a lack of breadth of opportunities for encountering different people. This ‘stickiness’ acts as a shield yet excludes the students from social participation in the wider community, further resulting in the ‘othering’ of these students. Nevertheless, it is unknown as to whether the students prefer to maintain friendships within their own communities or whether they want to make friends with those outside the school community, which future research can consider exploring.

Despite the many worries, parents acknowledged that their children were growing up, and with that came an assertiveness of independence and autonomy that they were struggling to come to terms with. Their children want to do things with friends without adult interference, implying that adult presence can be a barrier to friendships. This finding is aligned with previous research around how adults can hinder peer interactions by working too closely with individuals with disabilities (Evans & Meyers, 2001; Fisher, 2001 as cited in Syversen, 2020; Kamenopoulou, 2012).

However, adults shared that true independence was a barrier to friendships – the students would always need to be chaperoned when they socialize with friends. Previous research has suggested that activities for participants with CCN needed to be mediated by a carer and this was a barrier to friendship development (Dada et al., 2020), and the presence of support staff, who could be invaluable for solving communicative issues, also restricted opportunities for students with CCN to develop social relationships independently (Østvik, 2017). These findings extend previous

research by showing that the students with CCN themselves want independence from the adults around them, to be able to be with their friends without adult interference. Thus, there is a need to consider how such independence can be facilitated.

This ‘stickiness’ also meant students’ friendships outside of school were dependent on whether their parents were friends, but it was difficult for the parents to be friends as they did not live near one another. Such geographical limitations have been highlighted by previous research to be a barrier to friendship, where young people with Down’s syndrome may need to be encouraged to derive as much pleasure as possible from their friendships within school settings (Cuckle & Wilson, 2002), and adults with CCN found reliance on caregivers for transport to be in proximity to peers a barrier to friendship (Therrien, 2019). Thus, school is an important context for friendships and for friendships outside of school, parents play a role in organising the social lives of students with CCN.

## 5.3 RQ2 How Do Parents and Teachers Facilitate the Friendships and Social Relationships of Students with CCN at Home, in School and in the Community?

### *5.3.1 How Parents Facilitate Friendships*

Parents facilitate friendships and social relationships in multiple ways. Findings suggest they are very dedicated to the students’ social lives, and actively seek opportunities for them to build and maintain friendships – by getting their student onto waitlists for special needs clubs since they were little, being a hockey coach for their student’s special needs hockey club and throwing birthday parties. These findings are aligned with previous research which suggested parents of students with SEN go to great lengths to create situations for friendships, such as by

exposing them to a wide range of potential friends (Higley, 2017; Turnbull et al., 1999). This study extends previous literature by suggesting that these lengths include becoming friends with other parents, being conduits for their children's communication, and shaping attitudinal barriers to promote friendships.

This study has made a unique contribution by suggesting that friendships of students with CCN outside of school are dependent on whether parents are friends with other parents. As shared previously, parents facilitate friendships by desiring to connect with similar others – with other parents of students who are non-verbal or with similar needs. By being friends with other parents, especially within the school community, they could organise social activities outside of school to maintain friendships. These findings are aligned to previous research that suggested when parents of typically developing students had more friends, although not necessarily with other parents from school, their students had more close reciprocated friendships with others (Uhlendorff, 2000). Taken together, it would suggest that parents' friendships and their views about friendships, do invariably directly or indirectly impact on their students' friendships and social relationships.

Nevertheless, connecting with other parents from school had been difficult due to privacy reasons where schools no longer share parents' information. Parents have sought opportunities during special needs clubs to connect with other parents such that their students went to the same outside school activities to maintain friendships. These findings highlight the importance of creating opportunities for parental connection, especially within school communities.

Second, parents facilitate friendships by being conduits for their student's communication, such as preparing structured communication and acting as communication partners. These actions help to build communicative competence,

enhancing interactions with peers and impact on their friendships. These findings are aligned with previous research on adults, where AAC skills influenced successful interaction with friends (Therrien, 2019). This study aligns with findings by Raghavendra et al. (2012), who suggested an increased number of opportunities for communication combined with the development of AAC competencies for both partners in interactions can lead to positive participation. Thus, to facilitate friendships, parents have to gain expertise in different types of AAC, such that they can act as conduits for communication.

Third, parents facilitate friendships by shaping attitudinal barriers to promote inclusion, by sharing about their child's special needs with others. Such explanations are important as their child's friends could then become advocates for their child. This finding is similar to previous studies that suggested peers can be a key facilitator in peer interactions when they are made aware of the implications of deafblindness for communication (Kamenopoulou, 2012), and such heightened disability awareness mean students can demonstrate early advocacy skills to socially include those with disabilities (Anderson et al., 2011). Providing others with information about their child's disability can reduce fears about their child who may look and/or act differently from others (Geisthardt et al., 2002). Thus, peers should be encouraged to ask questions about students with CCN, which will engender greater respect for them, and in turn foster understandings that may promote friendships and social relationships. Peers also need to be prepared and trained about the student's preferred communication methods, such as using communication passports as previously mentioned.

Overall, this study has made a unique contribution by suggesting that parents facilitate friendships by showing a huge dedication to their children's social lives, but

there is an undercurrent of anxieties that result in them becoming gatekeepers to their children's friendships. Thus, there is a need to train parents to learn how to strike the right balance between supporting friendships and overprotecting their children.

### *5.3.2 How Teachers Facilitate Friendships*

Teachers facilitate friendships and social relationships in multiple ways – through structured activities, such as structuring parent activities, structuring the classroom environment, structuring time, explicit instructional strategies, and explicit teaching of friendship skills. In terms of structuring the environment, teachers emphasised sitting arrangements and classroom formations to facilitate groupwork. This finding supports previous research that being seated next to each other increased the probability of a friendship, and seat assignment changes were associated with the formation of new friendships (Faur & Laursen, 2022; Rohrer et al., 2021). In terms of structuring time, teachers facilitated friendships by having AAC communication training, tea making sessions, turn taking games, and mentoring systems between different classes in school. These activities provided opportunities for companionship and allowed the students to interact and find similarities with each other, such as during AAC communication training where they had classes with other students who used SGDs. Such trainings were deemed important in facilitating communication, giving support to previous research that increased social competence, of which social communication is one aspect, can promote friendship development (Therrien, 2016).

Teachers also facilitate friendships through a variety of instructional strategies within the classroom – getting students with CCN to pick partners and ensuring they have a chance to speak in class, such as in group discussions. These findings

support previous research suggesting providing opportunities for students who use AAC to select communication partners may strengthen friendship development (Østvik, 2017). Furthermore, teachers also explicitly taught friendship skills, which included learning about what a friend was, what made a good friend, how to keep friends, boundaries of a friendship, understanding emotions in self and others, conflict resolution skills, perspective taking, self-advocacy, communication skills, comprehension skills, and to develop a wider repertoire of activities such that there are more similarities with their peers. Thus, the explicit teaching of friendship skills for students with CCN is important. Such teaching should be all encompassing, and include aspects of friendship related topics, communication related skills and literacy skills. Overall, the above findings support literature on complex needs that argue it is not enough to place students together for friendships to develop and structured activities are necessary (Mar & Sall, 1995; Romer & Haring, 1994).

**The Importance of Incidental Friendship Opportunities and an Inclusive School Ethos.** However, incidental friendship opportunities are just as important as structured activities. Findings suggest the students need opportunities to experience interactions with a variety of people, such as working with different teaching assistants. Playground and lunchtimes are important spaces for maintaining friendships, where they get to choose who they want to interact with.

These findings are consistent with research on how engaging in playful activity at the playground contributes to friendship development. Breaktimes are particularly valuable as students today have less opportunity for unsupervised activities and contact with others outside of school (Blatchford et al., 2003; Blatchford et al., 2015). Findings also support previous research that value informal mealtimes as time to spend with friends, and rather than impose formal adult structures, it may

be more appropriate to address them in informal ways that maximizes students' freedom (Babad, 2009; Baines & Maclyntre, 2019). For students with CCN in special school settings, such unstructured break times are even more important for socializing with friends from outside their classes, such as friends whom they have grown up with together but are no longer in the same classes. Furthermore, special school class sizes are usually small in size, having less than ten students per class, so unstructured playground time would allow the students to expand their friendship circles.

Such incidental friendship opportunities, taken together with findings that highlight how some students can facilitate their own friendships, contrast with previous research that suggested without staff efforts to facilitate interactive activities between students using AAC and fellow students, students using AAC would have limited means to create interactional spaces with fellow students, resulting in limited friendships (Østvik, 2017). This study suggests that unstructured, unsupervised times, where students can mingle on their own, are just as important as structured activities to build and maintain friendships.

Teachers also highlighted the need for a school climate of warmth and the role of an inclusive school ethos to promote friendships, where students did things together and felt safe and part of the school community. Such inclusive ethos needed to be embedded not just within the classroom but also within the school community to promote friendships. These findings suggest that teachers that worked to establish welcoming environments, where all students are valued, create the foundations for friendship development. The teacher's role is an invisible hand, wielding much influence over the interpersonal lives of students.

This study has made a unique contribution by examining how teachers facilitate friendships for students with CCN in special school settings. This study supports previous researchers' call to pay attention to how inclusive education is experienced by those with the most complex needs and what quality educational provision might mean for them (Kamenopoulou, 2023; Imray & Colley, 2017). Previous research has focused on communication outcomes (Therrien et al., 2016), which is important, but quality educational provision requires schools to adopt a friendship mindset and focus on both structured and incidental friendship opportunities throughout the school day, moving beyond formal structures with explicit interventions to considerations such as giving students time to choose and interact with whomever they want. Individualised interventions between students with CCN and their classmates may be useful (Rossetti, 2014), but friendship facilitation should not be a one-off intervention, but an accumulation of little, everyday strategies that teachers do to facilitate friendships.

This element of choice, coupled with the need to listen to the voices of students with CCN, aligns with the Capabilities Approach to the education of students with complex needs (Imray & Colley, 2017; Nussbaum, 2011). This is an approach to comparative quality-of-life assessment to support each individual by i) taking each person as an end, asking not about average well-being but the opportunities available to each person, ii) focusing on choice or freedom, and iii) respecting the individual's power of self-definition (Nussbaum, 2011). In my research, taking each person as an end meant asking the students themselves about their friendships rather than asking others in society what they think those friendships should entail, in turn, respecting their individual power of self-definition. For choice or freedom, Imray & Colley (2017) suggested there is a limit for this

population as there are certain things they may not be able to do, but my research suggests friendship choices fall within the realm of choices or freedom that students with CCN can make on their own. Thus, each student's power of self-definition when it comes to friendships and social relationships should be respected. Overall, my research shifts the focus away from what society thinks the friendships and social relationships of students with CCN are like to what the students themselves think they are like, ad suggests improvements for quality-of-life for them by continuing to listen to their voices.

### 5.4 Reflections on Recruitment and Data Collection

For recruitment, there are two key takeaways. First, it was important to meet school leaders early to gauge interest, which accords with previous researchers that it takes several months to gain access and approval in school-based research (Bartlett et al., 2017). Second, it was important to convince school staff that the research was meaningful, as their enthusiasm was key to helping with recruitment of potential parents. Cultivating good relationships with school staff also improved my access to the school, which previous researchers had highlighted as crucial to the recruitment process (Bartlett et al., 2017). One aspect I would have done differently was to send out more emails to different schools at the start rather than to wait for replies from just two schools.

The use of the Mosaic approach was helpful in triangulating multiple tools and perspectives to paint an overall picture of the friendships of students with CCN in special school settings. This approach, as suggested by Clark & Moss (2017), played to the students' strengths, allowing them to communicate through a variety of ways and viewed them as experts in their own lives. One heart-warming moment was when one student said thanks at the end of the interview, and his teacher said it

was the first time he had used his voice, indicating that he had appreciated the opportunity to share about his friendships. Thus, this approach, though originally developed for younger students, is suitable for collecting data from adolescents with CCN.

Out of all the tools, the pyramid ranking activity and the preferred activities with friends cards were the most useful. The ranking decisions provided valuable insights into the students' friendships. Photographs of the students' schools made it relatable to them, allowing them to determine the direction for the interviews. These tools gave students agency in telling their stories.

The best friends activity and school tours activity were also useful. The best friends activity provided insights into quality of friendships, and school tours were useful for triangulating responses. For example, a student picked a swimming photo and took me to the pool to share he enjoyed swimming with friends. Objects of reference and bookmaking were less useful. Only two students shared objects from home. Bookmaking was difficult as many of the students had fine motor difficulties. The use of various visual aids, such as communication boards, were helpful in facilitating conversations.

Overall, the Mosaic Approach privileged students' voices, placing them at the centre of research. The data collection process was most successful through the constant listening, observing and reflecting, where I sought to enter the students' worlds, at least for a moment in time.

## 5.5 implications for Educational Psychologists, Schools and Curriculum Developers, and Policy Planners

This research highlights implications for several key stakeholders.

### *5.5.1 Educational Psychologists*

Educational Psychologists (EPs) play a key role in shaping the dominant discourse of SEND, in all aspects of our work. For students with CCN, there is a need to continue to challenge the deficit discourse around them as “needing help”, and to continue to elicit their views. This study highlighted the students themselves have the most accurate views of their social lives, and this probably extends to other aspects of their lives as well. Hence, EPs need to find creative ways to elicit views from them, rather than to write about the students through adults’ lens. This study also has implications for how EPs can play a role in facilitating the friendships of students with CCN. Some practical implications include –

- During consultation with special schools, EPs should consider discussing with schools about parent networking opportunities for parents to become friends with one another, especially within the students’ classes.
- During the assessment process, EPs need to gather an accurate picture of the friendships of these students through the students themselves, such as through the pyramid ranking activity and with a communication partner.
- To elicit views from students with CCN, one way would be to collaborate with school staff, share tools and collectively come up with individualised possibilities for assessing each student.
- When planning for school transitions, EPs need to carefully consider who the students’ friends are and who they want to keep in touch with once they graduate.
- To facilitate communication with potential friends, EPs can create communication passports for each student such that new people can quickly learn how best to communicate with them.

### *5.5.2 Schools and Curriculum Developers*

Schools also play a key role in facilitating the friendships of students with CCN. This can be achieved in several ways –

- Schools should have parent networking opportunities that build friendships between parents within the students' classes and within the school community, and between parents of students with CCN.
- Structured activities to build friendships, such as structuring environments through sitting arrangements that facilitate group work, structuring time within the timetable to build friendships, and explicit teaching of friendship skills are needed. One possibility would be for schools to curate small groups of students to go out of school for social activities, such that by the time the students transit out of school, they can continue to maintain friendships in these small groups.
- Unstructured, incidental opportunities for friendships are just as important as structured activities. Playground and lunchtime facilities need to be optimally used, where students must be given opportunities to meet friends from previous classes, for them to continue to build and maintain friendships.
- Within the curriculum, students need to have opportunities to connect beyond words. Physical activities such as dancing and swimming, alongside music and art, are key to friendship maintenance and should be viewed as equally important as building literacy and numeracy skills.

### *5.5.3 Policy Planners*

- Policy planners should provide resourcing for community spaces and programmes and ensure they cater to students with a variety of needs and age groups, and ensure staff are trained in strategies to support those with the most complex needs.

### *5.5.4 Speech and Language Therapists*

- Speech and language therapists (SLTs) should support friendship goals, identify structured and incidental friendship development opportunities, and provide tools to support communication within these opportunities. For example, SLTs can hold AAC communication training and tea making sessions for students to interact and find similarities with others, pre-programme sentence starters and teach students how to type quickly while maintaining eye contact to facilitate interactions. They can also consider how to reduce attitudinal barriers to the use of SGDs by normalising their use in school settings.

### 5.6 Strengths and Unique Contributions of the Research

This study provides a unique contribution to the field of friendships and social relationships of students with CCN, by focusing solely on students with CCN in the context of special schools in the following areas - to examine the friendships and social relationships of students with CCN in special school settings through the views of the students themselves, to examine their friendships both in and outside of special school settings, and to consider how parents and teachers facilitate these friendships.

This study provides new thinking in relation to: (i) students with CCN's views of their friendships in and outside of special school settings, and how their views compare with that of parents and teachers (ii) how friendships for students with CCN are established and maintained, where there is longevity in friendships, where meaningful social contact entails a connection beyond words, highlighting the importance of physical intimacy and humour in their friendships, where reciprocity meant no distinction between 'helper' and 'needing help', (iii) barriers included communication limitations and lack of trust of others outside the school community and (iv) the dedication of parents and teachers in facilitating friendships, highlighting

the importance of both structured and incidental friendship opportunities alongside an inclusive school ethos.

This study has contributed to different fields in the following ways –

- A contribution to the Educational Psychology profession, by highlighting that students themselves have the most accurate views of their social lives, and this probably extends to other aspects of their lives. EPs need to find creative ways to elicit their views.
- A contribution to the field of friendship research, by suggesting friendship models that view friendships as being on a continuum, can be used to explain the friendships of students with CCN, and dimensions of friendship quality such as helping and conflict are present within these students' friendships.
- A contribution to the field of AAC research by moving beyond the focus on communication, to argue that building meaningful friendships and social relationships lie at the heart of 'functionality' for students with CCN.
- A contribution to research design, using a Mosaic Approach to focus on the students' voices. While previous researchers have shared it was difficult to envision how best to elicit views from those who use AAC and called for the need for future innovation and research (Biggs et al., 2020), this study suggests that it is possible and in fact crucial to elicit voices from the students themselves to paint a complete picture of their friendships. Thus, this study calls for researchers of students with CCN to not leave them out of research.

## 5.7 Limitations and Future Research

### *5.7.1 Limitations*

**The Interpretation of an Interpretation.** The first limitation is the possibility of misinterpretation of students' views. This interpretation started from the interview

process, where the student, communication partner and I co-constructed knowledge, and constant interpretation took place. There is the possibility of both me and the communication partners bringing biases and imposing our beliefs on the students. Furthermore, there is a second layer of interpretation during data analysis, when I coded and made sense of the interviews. Nevertheless, I employed multiple strategies to enhance the trustworthiness of my research, such as using communication partners who knew the student well and using a variety of tools to elicit views (Refer to 3.7 Trustworthiness of My Research).

**Friendship Nominations.** It is difficult to know whether friendships were reciprocal – whether named friends would also name the students as friends. However, named friends would have to be part of the research, so they would have been limited to students in school settings. As I wished to explore friendships in and outside of school settings, such reciprocal nominations were not designed into the research. Nevertheless, the named friends were cross checked with teacher, parent, and observation data to establish if the students were friends.

**Choice of Communication Partner.** Communication partners were all familiar adults from school. However, it was difficult to learn more about friends from home, even when the students mentioned those friends, as the adults from school did not know them and could not offer elaborations or extend on the students' responses. Future research could explore the possibility of having communication partners from home to better understand friendships outside the school setting.

**Asking School Staff to Choose Students Who Understand Friendship.** Staff were asked to choose students who understand friendship to participate in this study, so participants chosen were dependent on staffs' understandings of the

students. Nevertheless, many of the staff have known the students for years, so they were in the best position to do so.

### *5.7.2 Future Research*

Future research may consider coming up with more creative approaches to elicit students' views, to learn more about whether students consider themselves to have enough friends, their perceptions of making friends with those in mainstream schools, and whether they required support with their friendships. Future research may also consider using communication partners from home to explore friendships at home. Some topics for future research include humour and intimacy and the role they play in friendships of students with CCN, and stability of friendships, whether the students would name the same friends at a future time point. It would also be interesting to gather views about friendships from speech and language therapists, who have an important role to play in the social relationships of these students, and from friends in home and community settings, to gain a more complex understanding of these students' friendships.

## 5.8 Overall Reflections

I have viewed this research through the lens of being a previous classroom teacher, policy and curriculum developer, a current trainee educational psychologist, and as someone who has only known what friendships are like for people without CCN. These experiences have influenced all aspects of my research. As I reread my literature review, it struck me that I had assumed, much like the rest of the literature, that students with CCN need help with their friendships, alongside a whole host of other needs. My lens then led to research questions that were pragmatic in nature, and the analysis is from the point of view of someone who has only experienced what 'normal' friendships look like, leading to inevitable comparisons with what

‘normal’ looks like. It was a revelation to me when some of the parents shared the students had more friends than them, and many of the students presented as being perfectly happy with their friendships. Care needs to be taken to ensure that we do not do research ‘on’ populations, but ‘with’ them, such that we do not make assumptions about how they need to fit into our worlds, as they are just as much a part of ours as we are theirs.

**5.9 Conclusion**

Friendships and social relationships are central to our wellbeing and quality of life, but little is known about the friendships of students with CCN in special school settings. This study has contributed to new understandings of their friendships by gathering views from the students themselves, through the Mosaic Approach which privileged their voices, placing them at the centre of research. This study has provided new thinking around how the students know their friendships best, how their friendships are established and maintained, highlighting the importance of meaningful social contact and what it entails, barriers to friendships and how adults facilitate friendships. This study supports the call to pay attention to how inclusive education is experienced by these students and what quality education provision means for them, where schools should adopt a friendship mindset, moving beyond explicit interventions to consider if the students have time to choose and interact with whomever they want, as such friendship choices fall within the realm of choices that students with CCN can make on their own.

Overall, this study shifts the focus away from what society thinks students with CCN’s friendships are like, to what the students themselves think they are like, and suggests improvements for quality of life by continuing to listen to their voices, to ensure research is not done ‘on’ but ‘with’ them. As Educational Psychologists and

researchers, we need to continue to consider ways in which the politics of special educational needs are constructed in different school, family and academic contexts, to find ways to include these students by listening to their voices and shaping goals of education that are meaningful to them, and not compound society's failure to include them. At the end of the day, they are very much a part of our worlds, as we are theirs.

## References

Adler, P. A., & Adler, P. (1998). *Peer power: Preadolescent culture and identity* (pp. xii, 255). Rutgers University Press.

Allmark, P., & Machaczek, K. (2018). Realism and Pragmatism in a mixed methods study. *Journal of Advanced Nursing*, *74*(6), 1301–1309. https://doi.org/10.1111/jan.13523

Altermatt, E. R., & Pomerantz, .M. (2003). The development of competence related and motivational beliefs: An investigation of similarity and influence among friends. *Journal of Educational Psychology*, *95*(1), 111–123. https://doi.org/10.1037/0022-0663.95.1.111.

Anderson, K., Balandin, S., & Clendon, S. (2011). “He cares about me and I care about him.” Children's experiences of friendship with peers who use AAC. *Augmentative and Alternative Communication*, *27*(2), 77–90. https://doi.org/10.3109/07434618.2011.577449

Babad, E. (2009). *The social psychology of the classroom* (1st ed.). Routledge. https://doi.org/10.4324/9780203872475

Baines, E., & MacIntyre, H. (2019). Children's social experiences with peers and friends during primary school mealtimes. *Educational Review*, 1–23. https://doi.org/10.1080/00131911.2019.1680534

Bagwell, C. L., & Bukowski, W. M. (2018). Friendship in childhood and adolescence: Features, effects, and processes. In *Handbook of peer interactions, relationships, and groups, 2nd ed* (pp. 371–390). The Guilford Press.

Bagwell, C., & Schmidt, M. (2011). *Friendships in childhood & adolescence*. New York : Guilford Press. http://archive.org/details/friendshipsinchi0000bagw

Barker, J., & Smith, F. (2012). What's in focus? A critical discussion of photography, children and young people. *International Journal of Social Research Methodology*, *15*(2), 91–103. https://doi.org/10.1080/13645579.2012.649406

Bartlett, R., Wright, T., Olarinde, T., Holmes, T., Beamon, E. R., & Wallace, D. (2017). Schools as sites for recruiting participants and implementing research. *Journal of Community Health Nursing*, *34*(2), 80–88. https://doi.org/10.1080/07370016.2017.1304146

Batorowicz, B., Campbell, F., von Tetzchner, S., King, G., & Missiuna, C. (2014). Social participation of school-aged children who use communication aids: The views of children and parents. *Augmentative and Alternative Communication*, *30*(3), 237–251. https://doi.org/10.3109/07434618.2014.940464

Bates, E. A., McCann, J. J., Kaye, L. K., & Taylor, J. C. (2017). "Beyond words": A researcher's guide to using photo elicitation in psychology. *Qualitative Research in Psychology*, *14*(4), 459–481. https://doi.org/10.1080/14780887.2017.1359352

Berndt, T. J., & McCandless, M. A. (2009). Methods for investigating children's relationships with friends. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 63–81). The Guilford Press.

Beukelman, D. R., & Mirenda, P. (2013). *Augmentative and alternative communication: Supporting children and adults with complex communication needs*. Paul H. Brookes Pub.

Biggs, E. E., Carter, E. W., Bumble, J. L., Barnes, K., & Mazur, E. L. (2018). Enhancing peer network interventions for students with complex

communication needs. *Exceptional Students*, *85*(1), 66–85. https://doi.org/10.1177/0014402918792899

Biggs, E. E., & Snodgrass, M. R. (2020). Children's perspectives on their relationships with friends with and without complex communication needs. *Research and Practice for Persons with Severe Disabilities*, *45*(2), 81–97. https://doi.org/10.1177/1540796919901271

Blatchford, P., Baines, E., & Pellegrini, A. (2003). The social context of school playground games: Sex and ethnic differences, and changes over time after entry to junior school. *British Journal of Developmental Psychology*, *21*(4), 481–505. https://doi.org/10.1348/026151003322535183

Blatchford, P., Pellegrini, A. D., & Baines, E. (2015). *The child at school: Interactions with Peers and Teachers* (2nd ed.). Routledge. https://doi.org/10.4324/9781315726953

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, *11*(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2020). Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research*, *21*(1), 37–47. https://doi.org/10.1002/capr.12360

Braun, V., & Clarke, V. (2021a). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health*, *13*(2), 201–216. https://doi.org/10.1080/2159676X.2019.1704846

Braun, V., & Clarke, V. (2021b). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, *18*(3), 328–352. https://doi.org/10.1080/14780887.2020.1769238

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE.

Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring Friendship Quality During Pre- and Early Adolescence: The Development and Psychometric Properties of the Friendship Qualities Scale. *Journal of Social and Personal Relationships*, *11*(3), 471–484. https://doi.org/10.1177/0265407594113011

Bukowski, W. M., Hartup, W. W., & Newcomb, A. F. (1996). *The company they keep: Friendship in childhood and adolescence / edited by William M. Bukowski, Andrew F. Newcomb, Willard W. Hartup.* UP.

Burr, V. (1999). The extra-discursive in social constructionism. In D. J. Nightingale & J. Cromby (Eds.), *Social Constructionist Psychology: A Critical Analysis of Theory and Practice*. Open University Press.

Calder, L., Hill, V., & Pellicano, E. (2013). 'Sometimes I want to play by myself': Understanding what friendship means to children with autism in mainstream primary schools. *Autism*, *17*(3), 296–316. https://doi.org/10.1177/1362361312467866

Carroll, C., Guinan, N., Kinneen, L., Mulheir, D., Loughnane, H., Joyce, O., Higgins, E., Boyle, E., Mullarney, M., & Lyons, R. (2018). Social participation for people with communication disability in coffee shops and restaurants is a

human right. *International Journal of Speech-Language Pathology*, *20*(1), 59–62. https://doi.org/10.1080/17549507.2018.1397748

Chadwick, D. D., & Platt, T. (2018). Investigating humor in social interaction in people with intellectual disabilities: A systematic review of the literature. *Frontiers in Psychology*, *9*, 1745. https://doi.org/10.3389/fpsyg.2018.01745

Chung, Y.-C., Carter, E. W., & Sisco, L. G. (2012). Social interactions of students with disabilities who use augmentative and alternative communication in inclusive classrooms. *American Journal on Intellectual and Developmental Disabilities*, *117*(5), 349–367.

Cillessen, A. H. N., & Bukowski, W. M. (2018). Sociometric perspectives. In W. M. Bukowski, B. Laursen, & K. H. Rubin (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 64–83). The Guilford Press.

Clark, A., & Moss, P. (2017). *Listening to young children, expanded third edition: A guide to understanding and using the mosaic approach*. Jessica Kingsley Publishers. http://ebookcentral.proquest.com/lib/ucl/detail.action?docID=4784949

Clarke, M., Newton, C., Petrides, K., Griffiths, T., Lysley, A., & Price, K. (2012). An examination of relations between participation, communication and age in children with complex communication needs. *Augmentative and Alternative Communication*, *28*(1), 44–51. https://doi.org/10.3109/07434618.2011.653605

Coplan, R. J., & Arbeau, K. A. (2009). Peer interactions and play in early childhood. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 143–161). The Guilford Press.

Cuckle, P., & Wilson, J. (2002). Social relationships and friendships among young people with Down's syndrome in secondary schools. *British Journal of Special Education*, *29*(2), 66–71. https://doi.org/10.1111/1467-8527.00242

Dada, S., Tonsing, K., & Goldbart, J. (2020). Friendship experiences of young adults who use augmentative and alternative communication. *International Journal of Disability, Development and Education*, *69*(3), 951–975. https://doi.org/10.1080/1034912X.2020.1746246

DeCaluwe, S., McLetchie, B., Luiselli, T.E., Mason, B. and Peters, H. (1999). Communication Portfolio: A tool to increase the competence of communication partners of learners who are deaf-blind, *Deaf-Blind Perspectives, 11*(3): 5–8.

Demetriou, K. (2021). Intentions of children without disabilities to form friendship with peers with physical disability: A small scale study. *Early Student Development and Care*, *191*(13), 2141–2157. https://doi.org/10.1080/03004430.2019.1697246

Demir, M., & Davidson, I. (2013). Toward a better understanding of the relationship between friendship and happiness: Perceived responses to capitalization attempts, feelings of mattering, and satisfaction of basic psychological needs in same-sex best friendships as predictors of happiness. *Journal of Happiness Studies*, *14*(2), 525–550. http://dx.doi.org/10.1007/s10902-012-9341-7

Doll, B., & Brehm, K. (2010). *Resilient playgrounds*. Brunner-Routledge.

Dowden, P. (1997). Augmentative and alternative communication decision making for children with severely unintelligible speech. *Augmentative and Alternative Communication*, *13*(1), 48–58.

Drager, K., Light, J., & McNaughton, D. (2010). Effects of AAC interventions on communication and language for young children with complex communication needs. *Journal of Pediatric Rehabilitation Medicine*, *3*(4), 303–310. https://doi.org/10.3233/PRM-2010-0141

Erdley, C. A., Nangle, D. W., Newman, J. E., & Carpenter, E. M. (2001). Children's friendship experiences and psychological adjustment: Theory and research. *New Directions for Child and Adolescent Development*, *2001*(91), 5–24. https://doi.org/10.1002/cd.3

Evans, I. M., & Meyer, L. H. (2001). Having friends and Rett syndrome: How social relationships create meaningful contexts for limited skills. *Disability and Rehabilitation*, *23*(3–4), 167–176. https://doi.org/10.1080/09638280150504243

Fargas-Malet, M., McSherry, D., Larkin, E., & Robinson, C. (2010). Research with children: Methodological issues and innovative techniques. *Journal of Early Childhood Research*, *8*(2), 175–192. https://doi.org/10.1177/1476718X09345412

Faur, S., & Laursen, B. (2022). Classroom seat proximity predicts friendship formation. *Frontiers in Psychology*, *13*, 796002. https://doi.org/10.3389/fpsyg.2022.796002

Fawns, T. (2020). The photo-elicitation interview as a multimodal site for reflexivity. In P. Reavey (Ed.), *A Handbook of Visual Methods in Psychology* (1st ed., pp. 487–501). Routledge. https://doi.org/10.4324/9781351032063-3328

Fetters, M. D., & Rubinstein, E. B. (2019). The 3 Cs of content, context, and concepts: A practical approach to recording unstructured field observations. *The Annals of Family Medicine*, *17*(6), 554–560. https://doi.org/10.1370/afm.2453

Fox, L., Asbury, K., Code, A., & Toseeb, U. (2022). Parents' perceptions of the impact of COVID-19 and school transition on autistic children's friendships. *Autism*, 13623613221123734. https://doi.org/10.1177/13623613221123734

Frederickson, N., Warren, L., & Turner, J. (2005). 'Circle of Friends'—An exploration of impact over time. *Educational Psychology in Practice*, *21*(3), 197–217. https://doi.org/10.1080/02667360500205883

Gallacher, L.-A., & Gallagher, M. (2008). Methodological immaturity in childhood research?: Thinking through `participatory methods'. *Studenthood*, *15*(4), 499–516. https://doi.org/10.1177/0907568208091672

Ganz, J. B., Morin, K. L., Foster, M. J., Vannest, K. J., Genç Tosun, D., Gregori, E. V., & Gerow, S. L. (2017). High-technology augmentative and alternative communication for individuals with intellectual and developmental disabilities and complex communication needs: A meta-analysis. *Augmentative and Alternative Communication*, *33*(4), 224–238. https://doi.org/10.1080/07434618.2017.1373855

Geisthardt, C. L., Brotherson, M. J., & Cook, C. C. (2002). Friendships of children with disabilities in the home environment. *Education and Training in Mental Retardation and Developmental Disabilities*, *37*(3), 235–252.

Griffiths, C., & Smith, M. (2016). Attuning: A Communication Process between People with Severe and Profound Intellectual Disability and Their Interaction Partners. *Journal of Applied Research in Intellectual Disabilities: JARID*, *29*(2), 124–138. https://doi.org/10.1111/jar.12162

Gorard, S. (2004). Sceptical or clerical? Theory as a barrier to the combination of research methods. *Journal of Educational Enquiry*, *5* (1).

Güroğlu, B., Van Lieshout, C. F. M., Haselager, G. J. T., & Scholte, R. H. J. (2007). Similarity and complementarity of behavioral profiles of friendship types and types of friends: Friendships and psychosocial adjustment. *Journal of Research on Adolescence*, *17*(2), 357–386. https://doi.org/10.1111/j.1532-7795.2007.00526.x

Hartup, W. W., & Stevens, N. (1997). Friendship and adaptation in the life course. *Psychological Bulletin*, *121*, 355–370. https://doi.org/10.1037/0033-2909.121.3.355

Heiman, T. (2000). Friendship quality among children in three educational settings. *Journal of Intellectual & Developmental Disability*, *25*(1), 1–12. https://doi.org/10.1080/132697800112749

Herbert, M. E., Brock, M. E., Barczak, M. A., & Anderson, E. J. (2020). Efficacy of peer-network interventions for high school students with severe disabilities and complex communication needs. *Research and Practice for Persons with Severe Disabilities*, *45*(2), 98–114. https://doi.org/10.1177/1540796920904179

Higginbotham, D. J., Shane, H., Russell, S., & Caves, K. (2007). Access to AAC: past, present and future. *Augmentative and Alternative Communication*, *23*, 243–257.

Higley, S. E. (2017). The social lives and friendships of children with special educational needs outside of school: Parent perspectives [Doctoral, UCL (University College London)]. In *Doctoral thesis, UCL (University College London).* (pp. 0–160). https://discovery.ucl.ac.uk/id/eprint/1527580/

Hill, V., Croydon, A., Greathead, S., Kenny, L., Yates, R., & Pellicano, E. (2016). Research methods for children with multiple needs: Developing techniques to

facilitate all students and young people to have ‘a voice’. *Educational and Child Psychology*, *33*(3), 26–43.

Hollingsworth, H. L., & Buysse, V. (2009). Establishing friendships in early childhood inclusive settings: What roles do parents and teachers play? *Journal of Early Intervention*, *31*(4), 287–307. https://doi.org/10.1177/1053815109352659

Holt, L., Bowlby, S., & Lea, J. (2017). “Everyone knows me …. I sort of like move about”: The friendships and encounters of young people with Special Educational Needs in different school settings. *Environment and Planning A: Economy and Space*, *49*(6), 1361–1378. https://doi.org/10.1177/0308518X17696317

Hynan, A., Murray, J., & Goldbart, J. (2014). ‘Happy and excited’: Perceptions of using digital technology and social media by young people who use augmentative and alternative communication. *Child Language Teaching and Therapy*, *30*(2), 175–186. http://dx.doi.org/10.1177/0265659013519258

Iacono, T., Douglas, S. N., Garcia-Melgar, A., & Goldbart, J. (2022). A scoping review of AAC research conducted in segregated school settings. *Research in Developmental Disabilities*, *120*, 104141. https://doi.org/10.1016/j.ridd.2021.104141

Ibrahim, N. (2016). Enacting identities: Children’s narratives on person, place and experience in fixed and hybrid spaces. *Education Inquiry*, *7*(1), 27595. https://doi.org/10.3402/edui.v7.27595

Imray, P., & Colley, A. (2017). *Inclusion is dead: Long live inclusion* (1st ed.). Routledge. https://doi.org/10.4324/9781315280059

Johnson, H., Douglas, J., Bigby, C., & Iacono, T. (2012). Social interaction with adults with severe intellectual disability: Having fun and hanging out. *Journal of*

*Applied Research in Intellectual Disabilities*, *25*(4), 329–341. https://doi.org/10.1111/j.1468-3148.2011.00669.x

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, *33*(7), 14–26. https://doi.org/10.3102/0013189X033007014

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a Definition of Mixed Methods Research. *Journal of Mixed Methods Research*, *1*(2), 112–133. https://doi.org/10.1177/1558689806298224

Juvonen, J. (2018). The potential of schools to facilitate and constrain peer relationships. In *Handbook of peer interactions, relationships, and groups, 2nd ed* (pp. 491–509). The Guilford Press.

Kamenopoulou, L. (2012). A study on the inclusion of deafblind young people in mainstream schools: Key findings and implications for research and practice. *British Journal of Special Education*, *39*(3), 137–145. https://doi.org/10.1111/j.1467-8578.2012.00546.x

Kamenopoulou, L. (2023). *Inclusive education for learners with multisensory impairment: Best practices and research priorities*. Open University Press.

Ladd, G. (2005). *Children's peer relations and social competence: A century of progress*. Yale University Press. http://www.scopus.com/inward/record.url?scp=84902737629&partnerID=8YFLogxK

Lapenta, F. (2011). Some theoretical and methodological views on photo-elicitation. In E. Margolis & L. Pauwels, *The SAGE Handbook of Visual Research Methods* (pp. 201–213). SAGE Publications Ltd. https://doi.org/10.4135/9781446268278.n11

Lloyd, V., Gatherer, A., & Kalsy, S. (2006). Conducting qualitative interview research with people with expressive language difficulties. *Qualitative Health Research*, *16*(10), 1386–1404. https://doi.org/10.1177/1049732306293846

Lodder, G. M., Scholte, R. H., Goossens, L., & Verhagen, M. (2015). Loneliness in early adolescence: Friendship quantity, friendship quality, and dyadic processes. *Journal of Clinical Child & Adolescent Psychology*, 1–12. https://doi.org/10.1080/15374416.2015.1070352.

Lydiatt, K. (2015). *The participation of young children with special educational needs in decision-making about their education, health and care* [Doctoral]. Institute of Education, University College London.

Majors, K. (2012). Friendships: The power of positive alliance. In *Positive relationships: Evidence based practice across the world* (pp. 127–143). Springer Science + Business Media. https://doi.org/10.1007/978-94-007-2147-0_8

Mar, H.H. and Sall, N. (1995). Enhancing social opportunities and relationships of children who are deaf-blind, *Journal of Visual Impairment & Blindness, 89*(3): 280–6

Matheson, C., Olsen, R. J., & Weisner, T. (2007). A good friend is hard to find: Friendship among adolescents with disabilities. *American Journal on Mental Retardation*, *112*(5), 319. https://doi.org/10.1352/0895-8017(2007)112[0319:AGFIHT]2.0.CO;2

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, *27*, 415–444.

Mertens, D. M. (2010). Transformative mixed methods research. *Qualitative Inquiry*, *16*(6), 469–474. https://doi.org/10.1177/1077800410364612

Meyer, L. H. (2001). The impact of inclusion on children's lives: Multiple outcomes, and friendship in particular. *International Journal of Disability, Development and Education*, *48*(1), 9–31. https://doi.org/10.1080/10349120120036288

Möller, K. and Danermark, B. (2007). Social recognition, participation, and the dynamic between the environment and personal factors of students with deafblindness, *American Annals of the Deaf, 152*(1): 42–55. Available at: www.jstor.org/stable/26234422.

Murray, J., & Goldbart, J. (2009). Augmentative and alternative communication: A review of current issues. *Paediatrics and Child Health*, *19*, 464–468.

Niemi, R., Kumpulainen, K., & Lipponen, L. (2015). Pupils as active participants: Diamond ranking as a tool to investigate pupils' experiences of classroom practices. *European Educational Research Journal*, *14*(2), 138–150. https://doi.org/10.1177/1474904115571797

Nussbaum, M. (2011). *Creating Capabilities: The Human Development Approach*. Belknap Press.

Odom, S. L., Zercher, C., Li, S., Marquart, J. M., Sandall, S., & Brown, W. H. (2006). Social acceptance and rejection of preschool children with disabilities: A mixed-method analysis. *Journal of Educational Psychology*, *98*(4), 807–823. https://doi.org/10.1037/0022-0663.98.4.807

O'Keefe, B. M., Kozak, N. B., O'Keefe, B. M., Kozak, N. B., Schuller, R., O'Keefe, B. M., Kozak, N. B., & Schuller, R. (2007). Research priorities in augmentative and alternative communication as identified by people who use AAC and their facilitators. *Augmentative and Alternative Communication*, *23*(1), 89–96. https://doi.org/10.1080/07434610601116517

Østvik, J. (2017). *Friendships among students using AAC in Norwegian public mainstream primary schools* [Doctoral. thesis]. Norwegian University of Science and Technology.

Østvik, J., Ytterhus, B., & Balandin, S. (2017). Friendship between children using augmentative and alternative communication and peers: A systematic literature review. *Journal of Intellectual & Developmental Disability*, *42*(4), 403–415. https://doi.org/10.3109/13668250.2016.1247949

Østvik, J., Ytterhus, B., & Balandin, S. (2018a). Gateways to friendships among students who use AAC in mainstream primary school. *Scandinavian Journal of Disability Research*, *20*(1), 92–101. https://doi.org/10.16993/sjdr.51

Østvik, J., Ytterhus, B., & Balandin, S. (2018b). 'So, how does one define a friendship?': Identifying friendship among students using AAC in inclusive education settings. *European Journal of Special Needs Education*, *33*(3), 334–348. https://doi.org/10.1080/08856257.2017.1312799

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology*, *29*(4), 611–621. https://doi.org/10.1037/0012-1649.29.4.611

Pellegrini, A. D., & Blatchford, P. (2000). *The child at school: Interactions with peers and teachers*. Oxford University Press.

Pinto, C., Baines, E., & Bakopoulou, I. (2019). The peer relations of pupils with special educational needs in mainstream primary schools: The importance of meaningful contact and interaction with peers. *British Journal of Educational Psychology*, *89*(4), 818–837. https://doi.org/10.1111/bjep.12262

Raghavendra, P., Olsson, C., Sampson, J., Mcinerney, R., & Connell, T. (2012). School participation and social networks of children with complex communication needs, physical disabilities, and typically developing peers. *Augmentative and Alternative Communication*, *28*(1), 33–43. https://doi.org/10.3109/07434618.2011.653604

Rao, A. (2020). *Exploring children's and education professionals' views on children's involvement in the education, health, and care process.* [Doctoral]. Institute of Education, University College London.

Robson, C., & McCartan, K. (2016). *Real world research, 4th Edition*. Wiley.

Rohrer, J. M., Keller, T., & Elwert, F. (2021). Proximity can induce diverse friendships: A large randomized classroom experiment. *PLOS ONE*, *16*(8), e0255097. https://doi.org/10.1371/journal.pone.0255097

Romer, L.T. and Haring, N.G. (1994). The social participation of students with deaf-blindness in educational settings. *Education and Training in Mental Retardation and Developmental Disabilities, 29*(2): 134-44.

Rose, A. J., & Asher, S. R. (2000). Children's friendships. In C. Hendrick & S. S. Hendrick (Eds.), *Close relationships: A sourcebook* (pp. 46–57). Sage.

Rossetti, Z. (2014). Peer Interactions and friendship opportunities between elementary students with and without autism or developmental disability. *Inclusion*, *2*(4), 301–315. https://doi.org/10.1352/2326-6988-2.4.301

Rossetti, Z., Lehr, D., Huang, S., Ghai, J., & Harayama, N. (2016). Parent and teacher perspectives on friendships and social interactions of secondary students with intellectual and developmental disabilities. *Inclusion*, *4*(4), 239–256. https://doi.org/10.1352/2326-6988-4.4.239

Rossetti, Z., & Keenan, J. (2018). The nature of friendship between students with and without severe disabilities. *Remedial and Special Education*, *39*(4), 195–210. https://doi.org/10.1177/0741932517703713

Rubin, K. H., Bukowski, W. M., & Laursen, B. P. (Eds.). (2009). *Handbook of peer interactions, relationships, and groups*. Guilford Press.

Rubin, K. H., Coplan, R., Chen, X., & McDonald, K. L. (2011). Peer relationships in childhood. In M. E. Lamb & M. H. Bornstein (Eds.), *Social and personality development: An advanced textbook* (pp. 309–360). Psychology Press.

Sedgewick, F., Hill, V., & Pellicano, E. (2018). Parent perspectives on autistic girls' friendships and futures. *Autism & Developmental Language Impairments*, *3*, 239694151879449. https://doi.org/10.1177/2396941518794497

Sellwood, D., Raghavendra, P., & Walker, R. (2022). Facilitators and barriers to developing romantic and sexual relationships: Lived experiences of people with complex communication needs. *Augmentative and Alternative Communication*, *0*(0), 1–14. https://doi.org/10.1080/07434618.2022.2046852

Shannon-Baker, P. (2016). Making paradigms meaningful in mixed methods research. *Journal of Mixed Methods Research*, *10*(4), 319–334. https://doi.org/10.1177/1558689815575861

Sigafoos, J., van der Meer, L., Schlosser, R. W., Lancioni, G. E., O'Reilly, M. F., & Green, V. A. (2016). Augmentative and alternative communication (AAC) in intellectual and developmental disabilities. In J. K. Luiselli & A. J. Fischer (Eds.), *Computer-Assisted and Web-Based Innovations in Psychology, Special Education, and Health* (pp. 255–285). Academic Press. https://doi.org/10.1016/B978-0-12-802075-3.00010-3

Solomon-Rice, P., & Soto, G. (2011). Co-construction as a facilitative factor in supporting the personal narratives of children who use augmentative and alternative communication. *Communication Disorders Quarterly*, *32*(2), 70–82. https://doi.org/10.1177/1525740109354776

Spence, J. (2018). The peer relations of pupils with and without special educational needs in mainstream primary schools: Interactions on the playground and in class [Doctoral, UCL (University College London)]. In *Doctoral thesis, UCL (University College London).* (pp. 1–183). https://discovery.ucl.ac.uk/id/eprint/10055621/

Syversen, K. B. (2020). *School-aged children with severe disabilities and limited verbal language: Exploring the importance of social interactions and friendship, and its application In practice* [Doctoral].

Tashakkori, A., & Teddlie, C. (2003). Major issues and controversies in the use of mixed methods in the social and behavioural sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioural research*. Sage Publications.

Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig & W. S. Rogers, *The SAGE Handbook of Qualitative Research in Psychology* (pp. 17–36). SAGE Publications Ltd. https://doi.org/10.4135/9781526405555.n2

Therrien, M. C. S., Light, J., & Pope, L. (2016). Systematic review of the effects of interventions to promote peer interactions for children who use aided AAC. *Augmentative and Alternative Communication*, *32*(2), 81–93. https://doi.org/10.3109/07434618.2016.1146331

Therrien, M. C. S. (2019). Perspectives and experiences of adults who use AAC on making and keeping friends. *Augmentative and Alternative Communication*, *35*(3), 205–216. https://doi.org/10.1080/07434618.2019.1599065

Therrien, M., Rossetti, Z., & Østvik, J. (2023). Augmentative and alternative communication and friendships: Considerations for speech-language pathologists. *Perspectives of the ASHA Special Interest Groups*, *8*(1), 151–163. https://doi.org/10.1044/2022_PERSP-22-00105

Thirumanickam, A., Raghavendra, P., & Olsson, C. (2011). Participation and social networks of school-age children with complex communication needs: A descriptive study. *Augmentative and Alternative Communication*, *27*(3), 195–204. https://doi.org/10.3109/07434618.2011.610818

Turnbull, A. P., Pereira, L., & Blue-Banning, M. J. (1999). Parents' facilitation of friendships between their children with a disability and friends without a disability. *Journal of the Association for Persons with Severe Handicaps*, *24*(2), 85–99. https://doi.org/10.2511/rpsd.24.2.85

Uhlendorff, H. (2000). Parents' and children's friendship networks. *Journal of Family Issues*, *21*(2), 191–204. https://doi.org/10.1177/019251300021002003

Veenstra, R., Dijkstra, J. K., & Kreager, D. A. (2018). Pathways, networks, and norms: A sociological perspective on peer research. In W. M. Bukowski, B. Laursen, & K. H. Rubin (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 45–63). The Guilford Press.

Vitaro, F, Boivin, M & Bukowski, W.M. (2009). The role of friendship in child and adolescent psychosocial development. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 143–161). The Guilford Press.

Ware, J., Sharman, M., O'Connor, S., & Anderson, M. (1992). Interactions between pupils with severe learning difficulties and their mainstream peers. *British Journal of Special Education*, *19*(4), 153–158. https://doi.org/10.1111/j.1467-8578.1992.tb01392.x

Weaver, K. (2018). Pragmatic paradigm. In B. Frey (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation*. Sage Publications.

Webster, A. A., & Carter, M. (2010). Adaptation of an interview-based protocol to examine close relationships between children with developmental disabilities and peers. *Australasian Journal of Special Education*, *34*(1), 79–94. https://doi.org/10.1375/ajse.34.1.79

Webster, A. A., & Carter, M. (2013). A descriptive examination of the types of relationships formed between children with developmental disability and their closest peers in inclusive school settings. *Journal of Intellectual & Developmental Disability*, *38*(1), 1–11. https://doi.org/10.3109/13668250.2012.743650

Wickenden, M. (2011). Talking to teenagers: Using anthropological methods to explore identity and the lifeworlds of young people who use AAC. *Communication Disorders Quarterly*, *32*(3), 151–163. https://doi.org/10.1177/1525740109348792

World Health Organisation. (2015). *Mental health: A state of well-being*. http://www.who.int/features/factfiles/mental_health/en/

Yardley, L. (2008). Demonstrating validity in qualitative psychology. In J. A. Smith (Ed.) *Qualitative Psychology: A Practical Guide to Research Methods: Vol. 2* (2nd ed, pp. 235–251). London: Sage.

# Appendices

## Appendix A: Interview Questions for Parents

1) Demographics (age, communication profile, description of child's needs, list of in and out of school activities/activities in the community)
   - Parents/carers – name, gender, ethnicity, communication methods used (types of AAC used)
   - Child – name, gender, age, ethnicity, year group, communication methods(types of AAC used), literacy levels and type of SEND.

2) Can you tell me about ____'s three closest friends in school/outside of school/in the community? (This can include family and/or children of family friends)
   - How often does he/she see his/her friends?
   - How did they become friends?
   - What do they do together?
   - What do their interactions look like?
     - How do they engage with and communicate with their friends?
     - What is the role of AAC in promoting their friendships?
   - How is the friendship maintained?
     - Does your child use social media to keep in touch? Tell me more.
   - Do you consider the friendship between _____ and ____ to be equal? Tell me more.

3) What are the characteristics of friendships between your child and his/her friends?
   - What makes a good friend for your child?
   - What do you think being a friend means to him/her?
   - How important is having friends to your child?

4) What are some barriers to friendship development?
   - Do you think your child's CCN has any impact on the friendship? Tell me more.
   - Do you think the use of AAC has any impact on the friendship? Tell me more.

5) How do you facilitate friendships for your child?
   - What are some contexts that promote friendships? (at home, in school, in the community)
   - Are there friendships that transcend the school context? Tell me more.
   - How were you able to overcome barriers to help your child make and keep friends?

6) Does your child have enough friends? Why/Why not?

7) How do you think your child's friendships can be improved?

8) What are your hopes regarding friendships for your child in future?

9) Is there anything else you think will be interesting for me to know about his/her friendships and how he/she gets on with other people?

## Appendix B: Interview Questions for Teachers

1) Demographics (age, communication profile, description of child's needs)
    - Teachers – name, age, years of teaching practice, number of students in class
    - Child – name, gender, age, ethnicity, year group, communication methods(types of AAC used), literacy levels and type of SEND.

2) Can you tell me about ____'s three closest friends in school?
    - How did they become friends?
    - What do they do together?
    - What do their interactions look like?
        - How do they engage with and communicate with their friends?
        - What is the role of AAC in promoting their friendships?
    - How is the friendship maintained?
        - Does this child use social media to keep in touch? Tell me more.
    - Do you consider the friendship between _____ and ____ to be equal? Tell me more.

3) What are the characteristics of friendships between this child and his/her friends?
    - What makes a good friend for him/her?
    - What do you think being a friend means to him/her?
    - How important is having friends to him/her?

4) What are some barriers to friendship development?
    - Do you think the child's CCN has any impact on the friendship? Tell me more.
    - Do you think the use of AAC has any impact on the friendship? Tell me more.

5) How do you facilitate friendships for him/her?
    - How do you organize your classroom for meaningful interactions and friendships to take place?
    - How do you facilitate friendships between children who use different AACs?
    - What is the support/learning arrangements that allow the formation and maintenance of friendships?
    - What are the strategies involved/recommended protocol/stages of building friendships?
    - Do you explicitly teach friendship skills? If so, how?
    - What are some contexts that promote friendships? (at home, in school, in the community)
    - Are there friendships that transcend the school context? Tell me more.
    - How were you able to overcome barriers to help this child make and keep friends?

6) Does _____ have enough friends? Why/Why not?

7) How do you think this child's friendships can be improved?

8) What are your hopes regarding friendships for this child in future?

9) Is there anything else you think will be interesting for me to know about his/her friendships and how he/she gets on with other people?

## Appendix C: Observation Schedule Template

Template for unstructured field observations based on Fetters and Rubinstein (2019) three C's approach [Context, Content, and Concepts].

| | |
|---|---|
| **Project Title:** The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings | |
| **Document Type:** Unstructured Field Observations | |
| **Observer:** HJ | |
| **Date:** | **Time:** |
| **Observation Session Number:** | |
| **Location:** | |
| **Research Questions:**<br>3) According to child, parent, and teacher views, how do children with CCN view and experience their friendships and social relationships at home, in school and in the community?<br>3.7 How are those friendships and social relationships established and maintained?<br>3.8 What are the barriers to friendship development?<br>4) How do parents and teachers facilitate the friendships and social relationships of children with CCN at home, in school and in the community? | |
| **Context** *(researcher observations about factors or circumstances under which observation is taking place, eg. What class, no of children, teachers, thick description of what the space is like)* | |
| **Content:** *(to observe both peer and adult interactions – what happened during the interaction? Who was involved? What form of communication was used? Was AAC used and how did that aid the interaction and facilitate the friendship?* | |
| **Concepts:** *(Preliminary ideas, observations, what have I learned that I didn't know before? Potential implications of what I've observed. Reflect on observations and compare theory with practice)* | |

## Appendix D: Initial Structured Observation Schedule

*Initial Breaktime Observation Coding Framework*

| Categories | Sub-categories | Description |
|---|---|---|
| Types of Interaction | No interactions | The target is not interacting with others |
| | Adult-target | An adult is initiating interaction with target |
| | Target-adult | Target is initiating interaction with an adult |
| | Peer-target | A peer is initiating interaction with target |
| | Target-peer | Target is initiating interaction with another peer |
| Level of social interaction | Social | Target is engaged in interaction with another peer (includes children engaged in parallel activities but also talking) |
| | Parallel | Target is situated in close proximity (within 1 m) of another student and they are both engaged in the same activity but are not. verbally or physically interacting |
| | Solitary | Target is not interacting with another peer |
| Type of Activity | Conversation | Target is involved in conversation |
| | Vigorous Play | Target is engaged in vigorous activity e.g. running |
| | Sedentary Play | Target is engaged in quiet activity e.g. playing in sand, with cars |
| | Fantasy Play | Target is engaged in imaginative/role-play – e.g. cops and robbers etc. |
| Target's mode of communication | With AAC | Target is interacting using AAC |
| | Verbally | Target is interacting using language |
| | With Gestures | Target is interacting using gestures |
| Behaviour in Interaction | No response | Target ignores initiation |
| | Onlooker | Target watches others engaged in an activity/game/interaction |
| | Unoccupied | Target is not doing anything and not watching others |
| | Disputing | Target is involved in/ part of group arguing about 'things' |
| | Tease/taunt | Target is involved in verbal teasing and taunting of others |
| | Aggression | Target is involved in giving an aggressive act (verbal or physical) |
| | Positive/affection | Target is continuously touching a peer in some affectionate way (e.g. arm around shoulders, arms linked etc.) |

| | | |
|---|---|---|
| | Distress/crying | Target is crying or is upset for some reason |
| | Disciplined | Target is either being told off by the teacher or is being sanctioned |
| | Actively involved | Target is fully focused and included in the activity (superseded if other behaviours observed in the same 10 seconds) |
| | Leader | Target is telling/showing others what to do (non-aggressive) |
| Level of Adult Support | Present | Adult is within 2 m. of target, not actively involved (i.e. target does not talk to or listen to adult) but maybe watching |
| | Involved | Target talks to or listens to adult |
| | No Adult | The target is not within 6 feet of an adult |

*Initial Structured Observation Schedule for Breaktime*

| | **Types of interaction** | | | | | **Level of interaction** | | | **Types of Activity** | | | | **Target's mode of communication** | | | **Behaviour in Interaction** | | | | | | | | | | **Level of Adult support** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 |
| | no | a-t | t-a | p-t | t-p | social | parallel | solitary | conversation | Vigorous play | Sedentary play | Fantasy play | With A AC | verbally | With gestures Off-task | onlooker | unoccupied | disputing | Tease/taunt | aggression | Positive/affection | Distress/crying | disciplined | Actively involved | leader | Present | Involved | No support |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*Initial Classroom Observation Coding Framework*

| Categories | Sub-categories | Description |
|---|---|---|
| Types of Interaction | No interactions | The target is not interacting with others (includes whole class teaching) |
| | Adult-target | An adult is initiating interaction with target |
| | Target-adult | Target is initiating interaction with an adult |
| | Peer-target | A peer is initiating interaction with target |
| | Target-peer | Target is initiating interaction with another peer |

| | | |
|---|---|---|
| Nature of Interaction | Informative | There is an exchange of information related to the task or activity (not in direct response to help-seeking) |
| | Help-giving | A person is providing information to another person in a direct response to a request for help |
| | Help-seeking | A person is asking another person for help |
| | Social/conversational | There is an exchange of information from one person to the next that is not related to the task or activity and not in direct response to help-seeking |
| | Distracting | A person initiates an interaction that prevents another person from concentrating on their work/activity |
| Target's mode of communication | With AAC | Target is interacting using AAC |
| | Verbally | Target is interacting using language |
| | With Gestures | Target is interacting using gestures |
| Context of interaction | Whole class | The whole class have the same, shared focus, e.g. attending to the board or teacher as a group |
| | Group work | The class are working on a task as part of small groups |
| | Paired work | Target is working with another peer on the task/activity |
| | Individual work | Target is not working with any other peers on the task/activity (may be supported by a TA or teacher) |
| Level of adult support | Teacher support | The teacher is present (accompanying the target) during the activity and may or may not be actively interacting with the target |
| | TA support | The TA is present (accompanying the target) during the activity and may or may not be actively interacting with the target |
| | No support | The target is working independently without the TA or teacher present |

*Structured Observation Schedule for Classroom*

| | **Types of interaction** | | | | | **Nature of interaction** | | | | | **Target's mode of communication** | | | **Context of Interaction** | | | | **Support level of interaction** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 1 | 2 | 3 | 4 | 1 | 2 | 3 |
| | no | a-t | t-a | p-t | t-p | inf or m ati ve | Hel p- givi ng | Hel p- see kin g | So cial /co nve rsat ion al | distr acti ng | With AAC | verba lly | With gestur es Off- task | Wh ole cla ss | Gr ou p wor k | Pai red wor k | Indi vid ual wor k | Teac her supp ort | TA supp ort | No supp ort |
| 1 | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |

## Appendix E: Student Interview Prompt Sheet

**Before the interview:**

- Email teacher to get photos (class and teacher/TA) and tablet
- Email parents about objects from home, photographs and whether they can be used to make a small book

1. **Introduce self and check consent again**
2. **Pyramid Ranking Activity**

Materials: Pyramid, Friend's photos

Instructions: I want to learn more about your friends. Here is a pyramid. I want you to choose one friend to put in each square. The top is your best friend. The second row are your good friends. The bottom are your other friends.

Questions:

- Who is your best friend? Point to your best friend.
- Who are your close friends?
- Who are your good friends?
- What do you like doing with _____?
- How did you become friends?
- How do you communicate with ____?

3. **Preferred Activity with Friends**

Materials: 35 Activities with Friends Cards labelled, photos of friends, yes-no-maybe board

Instructions: Here are some photos and pictures of activities and people in school. What do you like to do in school with your friends?

Questions:

- Do you like to…?
- Who do you like to do … with?

4. **Best Friend Activity**

Material: Best Friend Questionnaire,  page with yes-maybe-no

Instructions: I want to ask you about your best friend. I will ask you some questions and you can tell me yes or no or maybe. This means yes, this means no, and this means maybe.

Questions:

- Sample question first

**5. School Tours**

Materials: Tablet with camera

Instructions: We are going on a school tour! Can you take me around the school to show me places you enjoy spending time with your friends? We will take photos of the places together.

Follow-up: Print photos and use them for discussion.

**6. Collections from Home**

Materials: Five photographs and/or objects that represent friends and/or activities they do outside of school with friends

Instructions: You have brought some things to share about your friends. Can you tell me more?

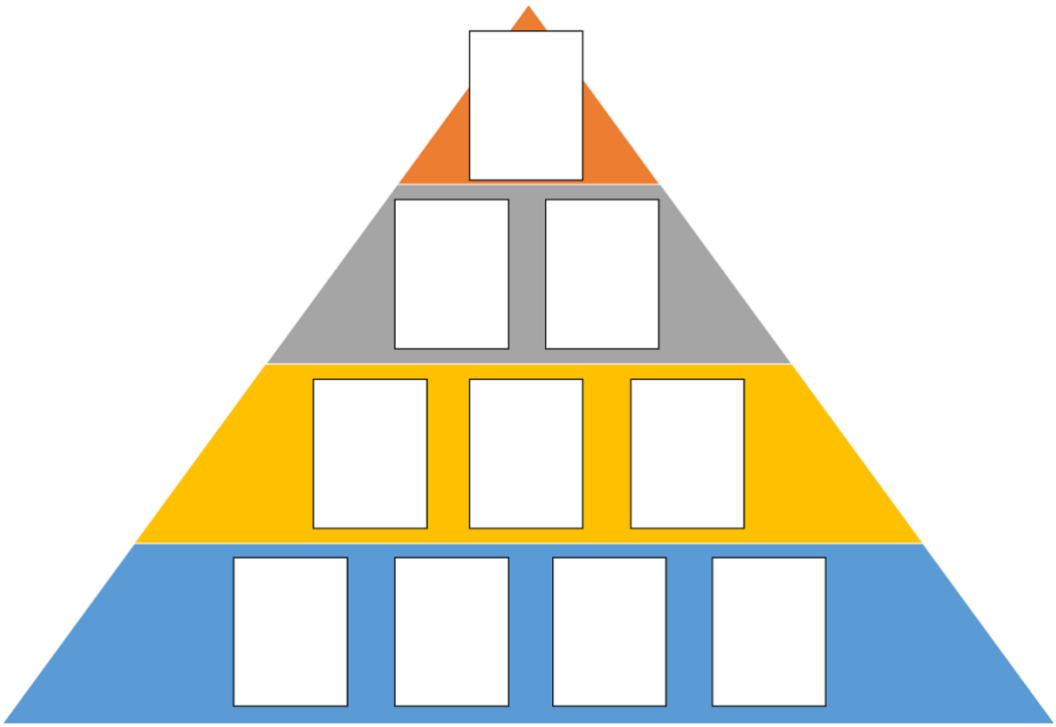
**7. Book Making**

Materials: photographs of friends, colour paper, sentence starters (My friend and I enjoy _____. A good friend _____.), glue

Instructions: We are going to make a book about friends!

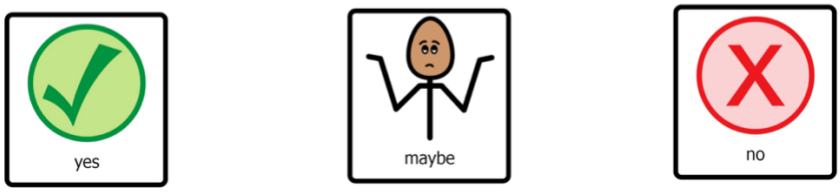
## Appendix F: Visual Aids Used in Students' Interviews and Other Materials

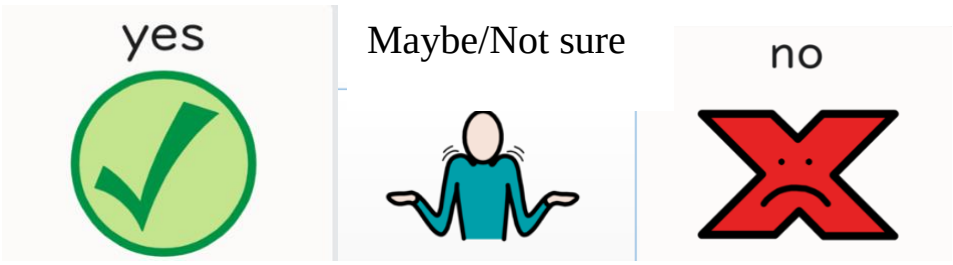
*Pyramid ranking activity*



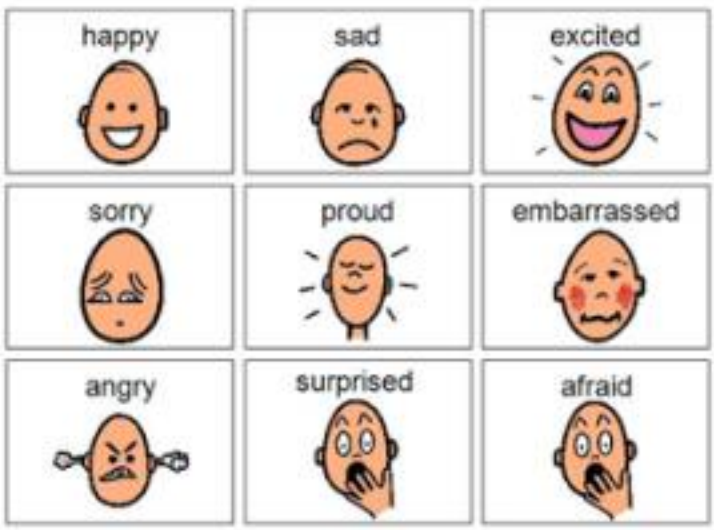
*Activities with friends*

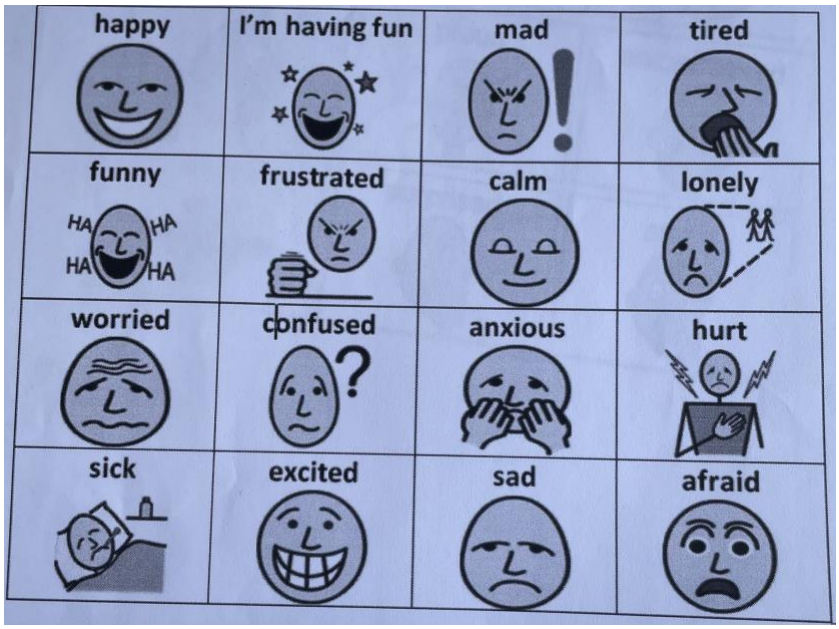
*Yee No Responses*


*Emotions Visual Aids*




happy
I'm having fun
mad
tired
funny
HA
HA
HA
HA
frustrated
calm
lonely
worried
confused
anxious
hurt
sick
excited
sad
afraid

*Sentence Starters as part of Book Making Activity*

My friend and I enjoy _____.

When we are together, we like to _____.

I help my friend by _____.

We know each other because _____.

I like my friend because _____.

My friend likes me because _____.

A good friend is _____.

Friends are important because _____.

My mummy can help me make friends by _____.

My daddy can help me make friends by _____.

My teacher can help me make friends by _____.

In the future, I want to do _____ with my friend.

## Appendix G: Adapted Friendship Quality Questionnaire for Students

1. My friend and I spend all our free time together.

2. My friend thinks of fun things for us to do together.

3. My friend and I go to each other's houses after school.

4. Sometimes my friend and I just sit around and talk.

5. I can get into fights with my friend.

6. My friend and I can argue.

7. My friend would help me if I needed it.

8. My friend would help me if someone else was bothering me.

9. I can talk to my friend about a problem at school or at home.

10. If my friend and I have a fight, we can say 'I'm sorry' and everything will be alright.

11. I will miss my friend if my friend had to move away.

12. I feel happy when I am with my friend.

13. I think about my friend even when my friend is not around.

14. My friend is happy for me if I do a good job at something.

15. Sometimes, my friend does things for me, or makes me feel special.

## Appendix H: Full Ethics Form

Ethical approval was sought from the Institute of Education Ethics Board Committee, with these considerations –

- Informed consent: I sought permission from headteachers and then sought consent from teachers to interview them and observe their lessons. I also asked some staff to act as the students' communication partners. I sought consent from parents to interview them and their child. I sought consent from the students by introducing myself and the study. Participants were informed of the study through different sets of information sheets. At the beginning of each interview, I explained that the data would remain confidential and that they had the right to withdraw consent at any point. The nature of the research may be sensitive at times. When interviewing vulnerable students about their friendships, sensitive issues may arise, such as a student who has no friends coming to that realisation because of the research. I was conscious of whether participants appeared anxious, uncomfortable or embarrassed, and checked in at different times during the interviews about whether they wanted to continue, as consent is viewed as a 'continuous process' (Lloyd et al., 2006). I attempted to build rapport prior to each interview to put participants at ease and presented them with opportunities to take breaks before continuing.
- Confidentiality/Anonymity: All data has been anonymised and participants were given pseudonyms that are not identifiable throughout this thesis.
- Data Management: Transcripts and audio recordings have been stored securely in line with the GDPR and Data Protection Act 2018 guidelines.

Institute of Education

UCL

**Doctoral Student Ethics Application Form**

Anyone conducting research under the auspices of the Institute of Education (staff, students or visitors) where the research involves human participants or the use of data collected from human participants, is required to gain ethical approval before starting. This includes preliminary and pilot studies. Please answer all relevant questions in simple terms that can be understood by a lay person and note that your form may be returned if incomplete.

**Registering your study with the UCL Data Protection Officer as part of the UCL Research Ethics Review Process**

If you are proposing to collect personal data i.e. data from which a living individual can be identified **you must be registered with the UCL Data Protection Office before you submit your ethics application for review**. To do this, email the complete ethics form to the UCL Data Protection Office. Once your registration number is received, add it to the form* and submit it to your supervisor for approval. If the Data Protection Office advises you to make changes to the way in which you propose to collect and store the data this should be reflected in your ethics application form.

***Please note that the completion of the UCL GDPR online training is mandatory for all PhD students.***

**Section 1 – Project details**

a. Project title: The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings
b. Student name and ID number (e.g. ABC12345678): Hui Jun Ho 910225
c. ***UCL Data Protection Registration Number:** Z6364106/2022/03/79 social research
    a. Date Issued: 11th Mar 2022
d. Supervisor/Personal Tutor: Leda Kamenopoulou & Cynthia Pinto
e. Department: IOE Psychology and Human Development
f. Course category (Tick one):

| | |
|---|---|
| PhD | ☐ |
| EdD | ☐ |
| DEdPsy | ☒ |

g. **If applicable**, state who the funder is and if funding has been confirmed.
h. Intended research start date: 30th May 2022
i. Intended research end date: Friday 19th May 2023
j. Country fieldwork will be conducted in: United Kingdom. This is a Category 1(A) application confirmed by the link (https://www.gov.uk/guidance/covid-19-

coronavirus-restrictions-what-you-can-and-cannot-do#england-has-moved-to-step-4), indicating that restrictions have been lifted in the research country context at the time of the ethics application

k. If research to be conducted abroad please check the Foreign and Commonwealth Office (FCO) and submit a completed travel risk assessment form (see guidelines). If the FCO advice is against travel this will be required before ethical approval can be granted: *UCL travel advice webpage*

l. Has this project been considered by another (external) Research Ethics Committee?

Yes ☐
External Committee Name: Enter text
Date of Approval: Enter text

No ☒ ***go to Section 2***

***If yes:***

- Submit a copy of the approval letter with this application.
- Proceed to Section 10 Attachments.

**Note**: Ensure that you check the guidelines carefully as research with some participants will require ethical approval from a different ethics committee such as the National Research Ethics Service (NRES) or Social Care Research Ethics Committee (SCREC). In addition, if your research is based in another institution then you may be required to apply to their research ethics committee.

**Section 2 - Research methods summary (tick all that apply)**

☒ Interviews
☐ Focus Groups
☒ Questionnaires
☐ Action Research
☒ Observation
☐ Literature Review
☐ Controlled trial/other intervention study
☐ Use of personal records
☐ Systematic review – **if only method used go to Section 5**
☐ Secondary data analysis – ***if secondary analysis used go to Section 6***
☐ Advisory/consultation/collaborative groups
☒ Other, give details: participatory methods – through a Mosaic Approach, with participatory tools adapted from various literature. The tools are chosen to creatively elicit views from children with CCN, who often have idiosyncratic methods of communication. The six possible tools are as follows – pyramid ranking activity, preferred activities with friends cards, school tours, best friends activity, collections from home and book making.

Please provide an overview of the project, focusing on your methodology. This should include some or all of the following: purpose of the research, aims, main research questions, research design, participants, sampling, data collection (including justifications for methods chosen and description of topics/questions to be asked), reporting and dissemination. Please focus on your methodology; the theory, policy, or literary background of your work can be provided in an attached document (i.e. a full research proposal or case for support document). *Minimum 150 words required.*

**Aims of Study**

This study aims to understand the friendships and social relationships of children with complex communication needs in and outside of special school settings. It is hoped that the data will contribute to an understanding of how children with complex communication needs view and experience friendships and social relationships, and potentially support schools and families in the initiation and maintenance of such friendships. The research questions addressed are –

5) According to child, parent and teacher's views, how do children with complex communication needs view and experience their friendships and social relationships at home, in school and in the community?
   - How are those friendships and social relationships established and maintained?
   - What are the barriers to friendship development?
6) How do parents and teachers facilitate the friendships and social relationships of children with complex communication needs at home, in school and in the community?

**Method**

Please refer to attached document for full research proposal.

**Dissemination**

The study's results will be shared with the participating schools in a research briefing. It is important that participants are anonymized and not identifiable in the study.

**Section 3 – research Participants (tick all that apply)**

☐ Early years/pre-school
☐ Ages 5-11
☒ Ages 12-16
☒ Young people aged 17-18
☒ Adults please specify below
☐ Unknown – specify below
☐ No participants

Adults refer to teachers and parents/carers of children with complex communication needs. They will be interviewed and will be part of interviews of children with complex communication needs. The age ranges of children in the study will ideally be between 12 to 18 years but it will be dependent on discussions with the schools. This is because many of these children do not conform to typical developmental stages and instead present with a spiky profile of development (i.e. developmental and chronological ages can defer).

**Note**: Ensure that you check the guidelines carefully as research with some participants will require ethical approval from a different ethics committee such as the National Research Ethics Service (NRES) or Social Care Research Ethics Committee (SCREC).

**Section 4 - Security-sensitive material (only complete if applicable)**

Security sensitive research includes: commissioned by the military; commissioned under an EU security call; involves the acquisition of security clearances; concerns terrorist or extreme groups.

a. Will your project consider or encounter security-sensitive material?
   Yes* ☐ No ☒
b. Will you be visiting websites associated with extreme or terrorist organisations?
   Yes* ☐ No ☒
c. Will you be storing or transmitting any materials that could be interpreted as promoting or endorsing terrorist acts?
   Yes* ☐ No ☒

* *Give further details in* ***Section 8 Ethical Issues***

**Section 5 – Systematic reviews of research (only complete if applicable)**

a. Will you be collecting any new data from participants?
   Yes* ☐ No ☐
b. Will you be analysing any secondary data?
   Yes* ☐ No ☐

* *Give further details in* ***Section 8 Ethical Issues***

*If your methods do not involve engagement with participants (e.g. systematic review, literature review)* ***and*** *if you have answered* ***No*** *to both questions, please go to* ***Section 8 Attachments.***

**Section 6 - Secondary data analysis (only complete if applicable)**

a. Name of dataset/s: Enter text
b. Owner of dataset/s: Enter text
c. Are the data in the public domain?
   Yes ☐ No ☐
   ***If no,*** *do you have the owner's permission/license?*
   Yes ☐ No* ☐

d. Are the data special category personal data (i.e. personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation)?
   Yes* ☐ No ☐

e. Will you be conducting analysis within the remit it was originally collected for?
   Yes ☐ No* ☐
f. **If no**, was consent gained from participants for subsequent/future analysis?
   Yes ☐ No* ☐
g. **If no,** was data collected prior to ethics approval process?

Yes ☐ No* ☐

* *Give further details in* ***Section 8 Ethical Issues***

*If secondary analysis is only method used* ***and*** *no answers with asterisks are ticked, go to* ***Section 9 Attachments.***

## Section 7 – Data Storage and Security

**Please ensure that you include all hard and electronic data when completing this section.**

a. Data subjects - Who will the data be collected from?
Teachers, parents/carers and children with complex communication needs

b. What data will be collected? Please provide details of the type of personal data to be collected

The following personal data will be collected –
Teachers – name, age, years of teaching practice, number of students in class
Parents/carers – name, gender, ethnicity, communication methods used (types of AAC used)
Child – name, gender, age, ethnicity, year group, communication methods(types of AAC used), literacy levels and type of SEND.

**Is the data anonymised?** Yes ☐ No* ☒
Do you plan to anonymise the data? Yes* ☐ No ☒
Do you plan to use individual level data? Yes* ☒ No ☐
Do you plan to pseudonymise the data? Yes* ☒ No ☐

** Give further details in* ***Section 8 Ethical Issues***

c. **Disclosure –** Who will the results of your project be disclosed to?
The results, findings and report will be disclosed to my supervisors.

**Disclosure –** Will personal data be disclosed as part of your project?
No

d. Data storage – Please provide details on how and where the data will be stored i.e. UCL network, encrypted USB stick**, encrypted laptop** etc.
The data will be stored on my Apple Macbook, OneDrive Folder, and UCL OneDrive Folder. The documents will be password protected and encrypted.

Hardcopy data will be stored in a folder at home that is solely for the purposes of the current research. This folder will be confidential and I will be the only one within the home who has access to it.

*** Advanced Encryption Standard 256 bit encryption which has been made a security standard within the NHS*

*e.* **Data Safe Haven (Identifiable Data Handling Solution)** – Will the personal identifiable data collected and processed as part of this research be stored in the UCL Data Safe Haven (mainly used by SLMS divisions, institutes and departments)?
Yes ☐ No ☒

f. How long will the data and records be kept for and in what format?
When the data has been anonymised, they will be kept for a minimum of ten years after publication or public release.
The interview data will be transcripts kept in word document format.
The structured observation schedules will be kept as hardcopies.
The photographs will be kept as hardcopies and also soft copies in a OneDrive folder that is password protected and encrypted.

Will personal data be processed or be sent outside the European Economic Area? (If yes, please confirm that there are adequate levels of protections in compliance with GDPR and state what these arrangements are)
No

Will data be archived for use by other researchers? (If yes, please provide details.)
No

g. If personal data is used as part of your project, describe what measures you have in place to ensure that the data is only used for the research purpose e.g. pseudonymisation and short retention period of data'.
I will give pseudonyms to all my participants in my transcripts and in the final thesis report and the data and records will be kept as long as the duration of the thesis.

* *Give further details in* ***Section 8 Ethical Issues***

**Section 8 – Ethical Issues**

Please state clearly the ethical issues which may arise in the course of this research and how will they be addressed.
**All** issues that may apply should be addressed. Some examples are given below, further information can be found in the guidelines. *Minimum 150 words required.*

- Methods
- Sampling
- Recruitment
- Gatekeepers
- Informed consent
- Potentially vulnerable participants
- Safeguarding/child protection
- Sensitive topics
- International research
- Risks to participants and/or researchers
- Confidentiality/Anonymity
- Disclosures/limits to confidentiality
- Data storage and security both during and after the research (including transfer, sharing, encryption, protection)

- Reporting
- Dissemination and use of findings

**Informed consent**

Informed consent: Participants will be informed of the study through different sets of information sheets and consent forms for teachers, parents/carers and children. Consent will be obtained from children through a face-to-face self-introduction of the researcher and a form to indicate yes/no response. The self- introduction will explain the purpose of the study, the methodology and inform students about how the results of the study will be used. At the beginning of interviews with parents/carers, teachers and children, I will explain that the data will remain confidential and that they have the rights to withdraw consent from the study at any point. Although the nature of the research does not cover any particularly sensitive topic, I will take note if participants appear anxious, uncomfortable or embarrassed, and pause the interview to remind participants of their right to withdraw, as consent is viewed as a 'continuous process' (Lloyd & Gatherer, 2006). Similarly, communication partners of the child could also make that decision to withdraw based on their knowledge of the child. To minimise this, I will take steps to build rapport prior to each interview and put participants at ease. If they appear to be tired during the interview, I will present them with the opportunity to take a break before continuing.

**Confidentiality/Anonymity**

As the sample is relatively small, participants may be worried that they will be easily identifiable. I will ensure that I use letter names to record each transcript. I will also ensure that names within the transcript are pseudonymised such that no individual is identifiable through the research. Their names and identity will not be revealed in the data collection, analysis and report of the study findings.

**Interview Sessions with Parents/carers and Teachers**

Each interview will be conducted individually and I will be the only one who should be able to match the identities of the participants and voice recordings. Interviews will be conducted face-to-face in the school setting.

**Sessions With Children and Communication Partners**

Each session will be conducted individually with only the child and a trusted adult that understands the child's communication well. As the only researcher present, I will be the only one who should be able to match the identities of the participants and voice recordings.

**Data Management**

Transcripts and audio recordings will be stored securely in line with General Data Protection Regulation (GDPR) and Data Protection Act 2018 guidelines.

**Data Transcription**

I will ensure that transcription is conducted in a private room to avoid the possibility of it being heard by others. Names will be written as pseudonyms.

Please confirm that the processing of the data is not likely to cause substantial damage or distress to an individual
Yes ☒

**Section 9 – Attachments.**

*Please attach your information sheets and consent forms to your ethics application before requesting a Data Protection number from the UCL Data Protection office. Note that they will be unable to issue you the Data Protection number until all such documentation is received*

a. Information sheets, consent forms and other materials to be used to inform potential participants about the research (List attachments below)
   Yes ☒ No ☐
   1) Information sheets for teachers and Heads
   2) Information sheets for parents/carers
   3) Consent forms for head teachers, teachers and other staff
   4) Consent forms for parents/carers
   5) Participant Information Sheet and Consent Form for children
   6) Email to Schools

b. Approval letter from external Research Ethics Committee Yes ☐
c. The proposal ('case for support') for the project Yes ☒
d. Full risk assessment Yes ☐

**Section 10 – Declaration**

I confirm that to the best of my knowledge the information in this form is correct and that this is a full description of the ethical issues that may arise in the course of this project.

I have discussed the ethical issues relating to my research with my supervisor.
Yes ☒ No ☐

I have attended the appropriate ethics training provided by my course.
Yes ☒ No ☐

**I confirm that to the best of my knowledge:**

The above information is correct and that this is a full description of the ethics issues that may arise in the course of this project.
Name Hui Jun Ho
Date 19 May 2022

**Please submit your completed ethics forms to your supervisor for review.**

**Notes and references**

**Professional code of ethics**
You should read and understand relevant ethics guidelines, for example:
British Psychological Society (2018) *Code of Ethics and Conduct*
Or
British Educational Research Association (2018) *Ethical Guidelines*
Or
British Sociological Association (2017) *Statement of Ethical Practice*
Please see the respective websites for these or later versions; direct links to the latest versions are available on the Institute of Education Research Ethics website.

**Disclosure and Barring Service checks**
If you are planning to carry out research in regulated Education environments such as Schools, or if your research will bring you into contact with children and young people (under the age of 18), you will need to have a Disclosure and Barring Service (DBS) CHECK, before you start. The DBS was previously known as the Criminal Records Bureau (CRB). If you do not already hold a current DBS check, and have not registered with the DBS update service, you will need to obtain one through at IOE.

Ensure that you apply for the DBS check in plenty of time as will take around 4 weeks, though can take longer depending on the circumstances.

**Further references**
Robson, Colin (2011). *Real world research: a resource for social scientists and practitioner researchers* (3rd edition). Oxford: Blackwell.
This text has a helpful section on ethical considerations.

Alderson, P. and Morrow, V. (2011) *The Ethics of Research with Children and Young People: A Practical Handbook.* London: Sage.

This text has useful suggestions if you are conducting research with children and young people.

Wiles, R. (2013) What are Qualitative Research Ethics? Bloomsbury.
A useful and short text covering areas including informed consent, approaches to research ethics including examples of ethical dilemmas.

**Departmental Use**

If a project raises particularly challenging ethics issues, or a more detailed review would be appropriate, the supervisor must refer the application to the Research Development Administrator via email so that it can be submitted to the IOE Research Ethics Committee for consideration. A departmental research ethics coordinator or representative can advise you, either to support your review process, or help decide whether an application should be referred to the REC. If unsure please refer to the guidelines explaining when to refer the ethics application to the IOE Research Ethics Committee, posted on the committee's website.
Student name: Hui Jun Ho
Student department: Psychology and Human Development
Course: DEdPsy
Project Title: The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings

**Reviewer 1**
Supervisor/first reviewer name: Dr Leda Kamenopoulou
Do you foresee any ethical difficulties with this research? No

Supervisor/first reviewer signature:
Date: 24/05/2022

**Reviewer 2**
Second reviewer name: Dr Cynthia Pinto
Do you foresee any ethical difficulties with this research?
No
Second reviewer signature:
Date: 30/4/2022

**Decision on behalf of reviewers**
Approved ☐
Approved subject to the following additional measures ☐
Not approved for the reasons given below ☐
Referred to the REC for review ☐

Points to be noted by other reviewers and in report to REC:

Comments from reviewers for the applicant:

***Once it is approved by both reviewers, students should submit their ethics application form to the Centre for Doctoral Education team:*** IOE.CDE@ucl.ac.uk.

Institute of Education

UCL

**Notice of amendment to previously approved IOE PGR research project**

This form is designed for **EdD and MPhil/PhD students** at the UCL Institute of Education who have **previously obtained ethical approval** for their research, and who now need to **amend their data collection methods** in light of COVID-19-related disruption.

You should read the **guidance on moving on to online data collection**, which is circulated with this form.

When you have completed this form, please **email it to your supervisor** along with any amended participant-facing documents such as information sheets and consent forms, **and** your original ethical approval form. The supervisor will then review and, if appropriate, suggest further amendments. When s/he approves the amendments, s/he will sign the form electronically and return it to you.

When the form is complete and signed by your supervisor, please email it, along with the amended instruments, to IOE.CDE@ucl.ac.uk **and** data-protection@ucl.ac.uk. Use the subject line **Notice of amendment to IOE PGR research project**

**Section 1 – Project details**

a. Project title: The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings
b. Student name: Hui Jun Ho 910225
c. Project reference (REC code, if known): Enter text
d. Your department: IOE Psychology and Human Development

**Section 2 - Care for participants and researchers**

Please make brief notes on how you will address care for participants and for yourself as researcher in the change to online research given the particular context of your participants

Based on my pilot, the following changes will be made to my data collection

1) Parents/carers to be offered the choice of face-to-face or online interviews. As many parents/carers live very far away from the special schools, which usually cater to a wide catchment area, it will be easier to recruit parents/carers if the logistics of the interviews are considered.
2) Video recordings for sessions with children and communication partners rather than only audio recordings. Video recordings, instead of only audio recordings, will aid in the transcription process as many of these children with CCN have idiosyncratic ways of communicating which are unique to them. It will be important to video record the interview such that my transcription is as accurate as possible and best reflect the responses of these children. I will include video recordings in all my consent and check-in with my participants that they are comfortable to do so. I will let

participants know that if they feel uncomfortable about being filmed at any point, they have the right to ask for the camera to be turned off. Similarly, communication partners could make that decision based on their knowledge of the CYP.

**Section 3 - Secure online data collection**

If your research involves **online interviews or focus groups** how will you conduct this and address the issues in the guidance?

The interviews will be conducted online via Zoom. I will be the only one who is able to match the identity of the participants and the recordings. During the interview, I will inform participants that I will be recording the interview. I will also check with them of potential risks to confidentiality in terms of whether there are others in shared spaces in the home. One way would be to interview them when their child is in school.

If your research involves **online surveys and/or questionnaires** how will you conduct this and address the issues in the guidance?

NA

**Section 4 – Data management and security**

**Please see the** guidance, and note how you will engage with storing and managing your data securely

All video recordings will be kept in my UCL OneDrive folder and deleted immediately after I have transcribed the data. I will also follow the data management and security that I have outlined in my previous ethics approval.

**Section 5 – Signature of supervisor**

I have reviewed the amendments and approve these changes to the data collection methods.

Name
Dr Leda Kamenopoulou
Signature
Click or tap here to enter text.
Date

## Appendix I: Information Sheet and Consent Forms for Participants

Institute of Education

UCL

### The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings

**Information for Headteachers**

My name is Hui Jun. I am currently studying for a Doctorate in Educational Psychology at the Institute of Education, University College London. I am inviting your school to take part in my research project.

This information sheet explains my research. Please read the following information carefully and retain the information sheet for your records. If there is anything that is unclear, or if you require any additional information, do not hesitate to contact me at [redacted]

After reading this information sheet, if you are willing to participate, you will be asked to sign a consent form to confirm agreement. **Participation in this research is entirely voluntary and you can withdraw at any time**.

**What this research is about:**

This study aims to understand the friendships and social relationships of children with complex communication needs in and outside of special school settings. I hope to find out more about –

According to child, parent and teacher's views, how do children with complex communication needs view and experience their friendships and social relationships at home, in school and in the community?

- How are those friendships and social relationships established and maintained?
- What are the barriers to friendship development?

How do parents and teachers facilitate the friendships and social relationships of children with complex communication needs at home, in school and in the community?

To answer these questions, I hope to interview parents/carers, teachers, and children, and observe the target children in school. I will meet with each target child to gain their views about friendships through a series of activities. Involvement in the research will be anonymous and all information gathered will be treated in the strictest confidence.

**What will happen if you agree to participate:**

I am looking for target children who fit the following criteria -

a) between 12 and 18 years old
b) limited in speech and communicates using AAC
c) able to understand the concept of friendship
d) able to recognize and select a small number of familiar words or symbols.

*Interviews*

With your agreement, I will be conducting face-to-face or online interviews with teachers and parents/carers lasting approximately one hour. During the interview, I will ask them a series of open questions about the friendships and social relationships of children with complex communication

needs. These interviews will be audio-recorded to ensure effective transcription, and I may also take notes during the process.

*Observations*
With your agreement, I will be conducting observations of the target children in your school. Observations are used to gain a snapshot of the actual interaction patterns of children with CCN. I will observe each child for 2 observations – one 30 minute classroom observation and one 30 minute breaktime observation.

*Direct Work With Children*
With your agreement, I will be asking the target children to participate in activities to gain their views on friendships and social relationships in your school. The activities include asking the target child to rank their friends, share about their best friend through a questionnaire, share about the activities they do with friends, take the researcher on a school tour to share places that are meaningful to them and their friends, bring photographs and/or objects from home that represent friends, and make a book about friends. I anticipate having 3 – 5 meetings with each child lasting approximately 1 hour each. I will be taking videos and photos during the different activities to log the choices and to aid in my data analysis.

During these meetings with the target child, a communication partner familiar with the target child's communication will need to be present to ensure that I interpret the child's responses correctly. This can be a member of staff in school or the child's parents/carers.

**Benefits of participation**:
Whilst there are no direct benefits to the participants for taking part in this work, your school's participation will contribute to a better understanding of the friendships and social relationships of children with complex communication needs. It is hoped that the data will contribute to an understanding of how children with complex communication needs view and experience friendships and social relationships, and potentially support schools and families in the initiation and maintenance of such friendships.

**Confidentiality:**
The researcher will analyse the information gathered during the research process. All responses will be anonymised, names will be removed and any other information that could lead to the participant being identified will be removed.

All recordings and transcripts will be stored securely on an encrypted and password protected laptop and will not be accessible to anyone but the researcher and her supervisor.

**Withdrawal from the research project:**
If after deciding to participate, you change your mind, you can withdraw at any point, and do so without further explanation.

**Contact Information:**
If you have any questions about this research project, please feel free to email the researcher at [redacted]

**Data Protection Privacy Notice**
The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk.

This ‘local’ privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information from research studies can be found in our ‘general’ privacy notice for participants in research studies here.

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the ‘local’ and ‘general’ privacy notices. The lawful basis that will be used to process any personal details: ‘Public task’ for personal data and ’Research purposes’ for special category data.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Institute of Education

UCL

# The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings
# Headteacher's Consent Form

If you are happy to participate in this study, please complete this consent form by ticking each item, as appropriate, and return to the researcher via the contact details below:

1) I confirm that I have read and understood this information sheet, and have had the opportunity to consider the information, ask questions, and have had these questions adequately answered. ☐

2) I understand that my school's participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

3) I agree for interviews to be conducted in school and to be recorded. ☐

4) I agree for classroom observations and playground observations to take place within the school. ☐

5) All data from the research will be kept secure and they will be retained for a minimum of ten years after publication or public release. I know that all data will be kept under the terms of the General Data Protection Regulation (GDPR). ☐

6) I understand that in exceptional circumstances anonymity and confidentiality would have to be broken, for example, if it was felt that practice was putting children at risk, or there were concerns regarding professional misconduct. In these circumstances advice would be sought from a senior manager from another local authority who will advise us as to the appropriate course of action and as to whether we need to inform the authority of what someone within the school has told us. ☐

Name:……

Signature: …… Date: ……

Name of researcher: Hui Jun Ho

Signature: …… Date: ……

**Please email the form to: Hui Jun Ho (**[redacted]

Institute of Education

UCL

## The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings

**Information for School/Teachers/Teaching Assistants**

My name is Hui Jun. I am currently studying for a Doctorate in Educational Psychology at the Institute of Education, University College London. I am inviting you to take part in my research project.

This information sheet explains my research. Please read the following information carefully and retain the information sheet for your records. If there is anything that is unclear, or if you require any additional information, do not hesitate to contact me at [redacted]

After reading this information sheet, if you are willing to participate, you will be asked to sign a consent form to confirm agreement. **Participation in this research is entirely voluntary and you can withdraw at any time**.

**What this research is about:**

This study aims to understand the friendships and social relationships of children with complex communication needs in and outside of special school settings. I hope to find out more about –

According to child, parent and teacher's views, how do children with complex communication needs view and experience their friendships and social relationships at home, in school and in the community?

- How are those friendships and social relationships established and maintained?
- What are the barriers to friendship development?

How do parents and teachers facilitate the friendships and social relationships of children with complex communication needs at home, in school and in the community?

To answer these questions, I hope to interview parents/carers, teachers, and children, and observe the target children in school. I will meet with each target child to gain their views about friendships through a series of activities. Involvement in the research will be anonymous and all information gathered will be treated in the strictest confidence.

**What will happen if you agree to participate:**

You are invited to participate as you teach a target child who fits the following criteria -

a) between 12 and 18 years old
b) limited in speech and communicates using AAC
c) able to understand the concept of friendship
d) able to recognize and select a small number of familiar words or symbols.

*Interviews*

With your agreement, some of you will be asked to participate in a face-to-face interview lasting approximately one hour. During the interview, you will be asked a series of open questions about the friendships and social relationships of children with complex communication needs. Please answer as openly and honestly as possible. These interviews will be audio-recorded to ensure effective transcription, and the researcher may also take notes during the process.

*Observations*
With your agreement, you will be asked to participate in observations. Observations are used to gain a snapshot of the actual interaction patterns of children with CCN. I will observe how the child interacts with you and their peers in the classroom. There will be one classroom observation of 30 minutes.

*Direct Work With Child*
During the meetings with the target child, there will be a communication partner familiar with the child's communication present to ensure that the researcher interprets the child's responses correctly. With your agreement, you may be asked to be a communication partner. I will be taking videos and photos to aid in my data analysis.

Participation in this activity is completely voluntary. There are no anticipated risks in taking part in this project, however if you begin to feel uncomfortable in any way, you have the right to withdraw without any further explanation.

**Benefits of participation**:
Whilst there are no direct benefits to the participants for taking part in this work, your participation will contribute to a better understanding of the friendships and social relationships of children with complex communication needs. It is hoped that the data will contribute to an understanding of how children with complex communication needs view and experience friendships and social relationships, and potentially support schools and families in the initiation and maintenance of such friendships.

**Confidentiality:**
The researcher will analyse the information gathered during the research process. All responses will be anonymised, names will be removed and any other information that could lead to the participant being identified will be removed.

All recordings and transcripts will be stored securely on an encrypted and password protected laptop and will not be accessible to anyone but the researcher and her supervisor.

**Withdrawal from the research project:**
If after deciding to participate, you change your mind, you can withdraw at any point, and do so without further explanation.

**Contact Information:**
If you have any questions about this research project, please feel free to email the researcher at [redacted]

## Data Protection Privacy Notice

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk.

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information from research studies can be found in our 'general' privacy notice for participants in research studies here.

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices. The lawful basis that will be used to process any personal details: 'Public task' for personal data and 'Research purposes' for special category data.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Institute of Education

UCL

# The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings
# Teacher's/Teaching Assistant's Consent Form

If you are happy to participate in this study please complete this consent form by ticking each item, as appropriate, and return to the researcher via the contact details below:

1) confirm that I have read and understood this information sheet, and have had the opportunity to consider the information, ask questions, and have had these questions adequately answered. ☐

2) I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

3) I know that I can refuse to answer any or all of the questions and that I can withdraw from the interviews and/or classroom observations at any point. ☐

4) I agree for the interviews to be recorded, and that recordings will be kept secure. ☐

5) I agree to take part in classroom observations. ☐

6) (if applicable) I agree to be the communication partner of the target child when necessary, and I will not share the data with anyone else. ☐

7) All data from the research will be kept secure and they will be retained for a minimum of ten years after publication or public release. I know that all data will be kept under the terms of the General Data Protection Regulation (GDPR). ☐

8) I agree that small direct quotes may be used in reports (these will be anonymised). ☐

9) In understand that in exceptional circumstances anonymity and confidentiality would have to be broken, for example, if it was felt that practice was putting children at risk, or there were concerns regarding professional misconduct. In these circumstances advice would be sought from a senior manager from another local authority who will advise us as to the appropriate course of action and as to whether we need to inform the authority of what you have told us. ☐

Name:……

Signature: …… Date: ……

Name of researcher: Hui Jun Ho

Signature: …… Date: ……

**Please email the form to: Hui Jun Ho (**[redacted]

Institute of Education

UCL

## The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings

**Information for Parents/Carers of Target Student**

My name is Hui Jun. I am currently studying for a Doctorate in Educational Psychology at the Institute of Education, University College London. I am inviting you to take part in my research project.

This information sheet explains my research. Please read the following information carefully and retain the information sheet for your records. If there is anything that is unclear, or if you require any additional information, do not hesitate to contact me at huijun.ho.20@ucl.ac.uk.

After reading this information sheet, if you are willing to participate and to give consent for your child's participation, you will be asked to sign a consent form to confirm agreement. **Participation in this research is entirely voluntary and you can withdraw at any time**.

**What this research is about:**

This study aims to understand the friendships and social relationships of children with complex communication needs in and outside of special school settings. I hope to find out more about –

According to child, parent and teacher's views, how do children with complex communication needs view and experience their friendships and social relationships at home, in school and in the community?

- How are those friendships and social relationships established and maintained?
- What are the barriers to friendship development?

How do parents and teachers facilitate the friendships and social relationships of children with complex communication needs at home, in school and in the community?

To answer these questions, I hope to interview parents/carers, teachers, and children, and observe your child in school. I will meet with your child and gain their views about friendships through a series of activities. Involvement in the research will be anonymous and all information gathered will be treated in the strictest confidence.

**What will happen if you agree to participate:**

You and your child are invited to participate as your child fits the following criteria -

a) between 12 and 18 years old
b) limited in speech and communicates using AAC
c) able to understand the concept of friendship
d) able to recognize and select a small number of familiar words or symbols.

*Interviews*

With your agreement, you will be asked to participate in a face-to-face or online interview lasting approximately one hour in school. During the interview, you will be asked a series of open questions about the friendships and social relationships of your child. Please answer as openly and honestly as possible. These interviews will be audio-recorded to ensure effective transcription, and the researcher may also take notes during the process.

*Observations*
With your agreement, your child will be asked to participate in 2 observation sessions in school. Observations are used to gain a snapshot of the actual interaction patterns of children with CCN. I will observe your child for 2 observations – one 30 minute classroom observation and one 30 minute breaktime observation.

*Direct Work With Child*
With your agreement, your child will be asked to participate in activities to gain their views on friendships and social relationships. The activities include asking your child to rank their friends, share about their best friend through a questionnaire, share about the activities they do with friends, take the researcher on a school tour to share places that are meaningful to them and their friends, bring photographs and/or objects from home that represent friends, and make a book about friends. I anticipate having 3 – 5 meetings with your child lasting approximately 1 hour each. The photographs that your child bring will not be copied and will be returned to your child. However, I will be taking photos and videos during the different activities to log the choices and to aid in my data analysis.

During these meetings with your child, a communication partner familiar with your child's communication will need to be present to ensure that the researcher interprets your child's responses correctly. This can be yourself or a member of staff in school.

Participation in this research is completely voluntary. There are no anticipated risks in taking part in this project, however if you begin to feel uncomfortable in any way you have the right to withdraw your child without any further explanation.

**Benefits of participation**:
Whilst there are no direct benefits to the participants for taking part in this work, your participation will contribute to a better understanding of the friendships and social relationships of children with complex communication needs. It is hoped that the data will contribute to an understanding of how children with complex communication needs view and experience friendships and social relationships, and potentially support schools and families in the initiation and maintenance of such friendships.

**Confidentiality:**
All recordings and transcripts will be anonymised, names will be removed, and any other information that could lead to your child being identified will also be removed. The data will not be accessible to anyone but the researcher and her supervisor.

**Withdrawal from the research project:**
If after consenting for your child to participate, you change your mind, you can withdraw at any point, and do so without further explanation.

**Contact Information:**
If you have any questions about this research project, please feel free to email the researcher at [redacted]

## Data Protection Privacy Notice

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk.

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information from research studies can be found in our 'general' privacy notice for participants in research studies here.

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices. The lawful basis that will be used to process any personal details: 'Public task' for personal data and 'Research purposes' for special category data.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Institute of Education

UCL

# The Friendships and Social Relationships of Children with Complex Communication Needs in and outside of Special School Settings
# Parent's/Carer's Consent Form

If you are happy for you and your child to participate in this study, please complete this consent form by ticking each item, as appropriate, and return to the researcher via the contact details below:

1) I confirm that I have read and understood this information sheet, and have had the opportunity to consider the information, ask questions, and have had these questions adequately answered. ☐

*Parent Interviews*

2) I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

3) I know that I can refuse to answer any or all of the questions and that I can withdraw from the interviews at any point. ☐

4) I agree for the interview to be recorded, and that recordings will be kept secure. ☐

*Child Participation*

5) I agree for my child to be observed and interviewed. ☐

6) I understand that my child's participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

7) I agree to be the communication partner of the target child when necessary, and I will not share the data with anyone else. ☐

8) I agree for my child's interview to be recorded, and that recordings will be kept secure. ☐

9) All data from the research will be kept secure and they will be retained for a minimum of ten years after publication or public release. I know that all data will be kept under the terms of the General Data Protection Regulation (GDPR). ☐

10) I agree that small direct quotes may be used in reports (these will be anonymised). ☐

11) I understand that in exceptional circumstances anonymity and confidentiality would have to be broken, for example, if it was felt that practice was putting children at risk, or there were concerns regarding professional misconduct. In these circumstances advice would be sought from a senior manager from another local authority who will advise us as to the appropriate course of action and as to whether we need to inform the authority of what you have told us. ☐

Name:……

Signature: …….. Date: ……..

Name of researcher: Hui Jun Ho

Signature: …….. Date: ……..

**Please email the form to: Hui Jun Ho (**[redacted]

*Obtaining Consent from Students*

Hello!
My Name is Jun.

1

I am studying at university.

2

I am doing a project.
My project is about how children make friends.

3

I want to join you in class and at breaktime.
I also want to do some activities with you.
I want to ask you some questions during the activities.
The activities will help me learn more about how you make friends.

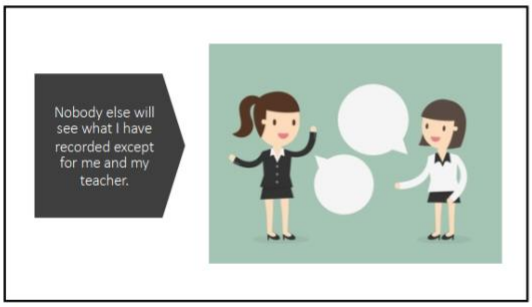
4

Your teacher or your parent will join us in the activities.

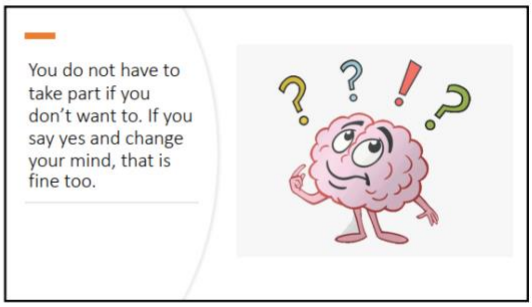
5

I will record my observations on paper.
I will also record our activities using an audio recorder.

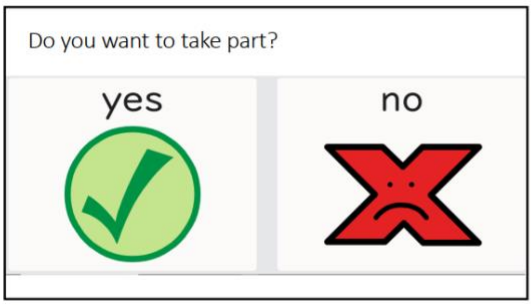
6


Nobody else will see what I have recorded except for me and my teacher.

7


You do not have to take part if you don't want to. If you say yes and change your mind, that is fine too.

8


Do you want to take part?
yes
no

9

## Appendix J: Example of Coded Interview Transcript

| Transcript | Initial Codes |
|---|---|
| 0:23:44.830 --> 0:23:51.190 Ho, Huijun<br>Umm, OK, OK. And what do you think are some barriers to friendship development?<br><br>0:23:52.840 --> 0:23:53.580 A B<br>Erm… [big pause] obviously her communication is biggest consideration. Then erm… accessible activities which are suitable for A and for mainstream as well. For example, erm… How do I put it? I mean, I don't know what's the solution for this. For example, uh, she likes air jump.<br><br>0:24:35.230 --> 0:24:36.380 Ho, Huijun<br>Sorry? What is that?<br><br>0:24:35.210 --> 0:24:38.790 A B<br>You know when you jump at the jumping trampoline park?<br><br>0:24:38.620 --> 0:24:39.980 Ho, Huijun<br>Ah, OK. [nods]<br><br>0:24:39.410 --> 0:24:45.60 A B<br>Yeah, she likes that, but she finds it too busy with other students?<br><br>0:24:45.540 --> 0:24:46.20 Ho, Huijun<br>Yeah?<br><br>0:24:46.330 --> 0:24:47.480 A B<br>In the quieter time, that you can't take the other students? So you know… So it's very difficult to find opportunities because… She likes erm… She likes to have people who are normal, let's say not special needs because they interact with her better. She likes, she likes a lot of copying, so she does very well around students who are erm… better able than her? Yes. So having opportunities which are like this and really, there are no social activities which are accessible for A especially without my support. | Communication as a barrier to friendship<br><br>Lack of accessible spaces in the community for student<br><br>Student finds some community spaces such as trampoline park too busy with other students<br><br>Mother thinks student prefers friends who are normal and do not have special needs because they interact with her better<br><br>Difficulties finding social activities to interact with students without special needs without mother's support |

| | |
|---|---|
| 0:25:39.970 --> 0:25:45.600 Ho, Huijun<br>I see. OK. And if I were to ask, what are some accessible activities that you think would… | |
| 0:25:48.760 --> 0:25:54.710 A B<br>So it is only one. There's an AKC club that she goes to on a Saturday. | |
| 0:25:54.950 --> 0:25:56.330 Ho, Huijun<br>AKC club? | |
| 0:25:56.830 --> 0:26:0.250 A B<br>AKC club uh. It's a short break service. So she goes with day trips with them. So there also she has one to one support, but there are other students. And she quite likes all the people. There are adults as well, so you know, she interacts very well with the adults as well there. | Student enjoys going to short break service |
| 0:26:16.910 --> 0:26:17.330 Ho, Huijun<br>Yeah. | |
| 0:26:18.90 --> 0:26:19.460 A B<br>But that's the only thing. Any other service? They can't accept her because of her complex medical needs. | Difficulties finding accessible services for student due to complex medical needs |
| 0:26:27.950 --> 0:26:30.940 Ho, Huijun<br>Uh, I see. OK, OK. | |
| 0:26:30.230 --> 0:26:31.740 A B<br>So that's a huge barrier. | |
| 0:26:32.10 --> 0:26:38.910 Ho, Huijun<br>OK, I see. And for this camp is it for like mainstream students or is it… | |
| 0:26:37.830 --> 0:26:40.220 A B<br>No, it's special needs. It's special needs. | |
| 0:26:39.630 --> 0:26:50.770 Ho, Huijun<br>Special needs, ok. Umm, but in a way you want to have more different variety of activities, but a lot of them don't take students with special needs. | |
| 0:26:48.940 --> 0:27:6.240 A B<br>Yes. Yeah, they don't take… as in there are special needs thing as well, but they are more for more able students like maybe on autism spectrum… they can't provide one-o-one that A needs or they can't provide… some of them don't… no BSL… And while the communication iPad is good, but it is, it's very slow to interact? It's not… yeah. Because other thing is you can't have eye contact when you are having communication iPad. It's like the person is into that. | Community services only catering to those on the autism spectrum<br>Staff not trained to communicate with student as they do not know BSL or |

| | |
|---|---|
| So that becomes a barrier. You know, so… In a in a way, they're not many facilities which train staff and things like that, you know? And so A cannot develop her own interactions and…Somehow… her peers at school, because of so many problems with GDPR and things like that, You know you can't chat the same way unless you take a lot of effort to connect with the family, and there the barrier becomes that because the students aren't...driving it, families need to be compatible, isn't it?<br><br>0:28:15.440 --> 0:28:16.520 Ho, Huijun<br>Yeah.<br><br>0:28:16.120 --> 0:28:20.130 A B<br>To interact? That's too much. Asking for too much, you know, because...we can be very different backgrounds and we have different students have different needs and things like that. It's…<br><br>0:28:27.570 --> 0:28:34.0 Ho, Huijun<br>Yeah. And also because you're saying because of GDPR, the school doesn't share parent information.<br><br>0:28:33.620 --> 0:28:35.90 A B<br>No, no, no, no longer.<br><br>0:28:35.290 --> 0:28:37.970 Ho, Huijun<br>Ah, I see. OK.<br><br>0:28:37.600 --> 0:28:45.490 A B<br>And because of COVID or even elsewhere, they haven't because of the fund cuts, there haven't been any school fairs… school events, where you could meet up together and you know. So there are nothing like, you know, you would have a class get-together… All things like that, there's there's hardly been anything like that.<br><br>0:29:0.760 --> 0:29:8.870 Ho, Huijun<br>I see. And it's so because the families don't interact, we don't know which ones are more compatible and which ones could be friends.<br><br>0:29:8.390 --> 0:29:18.30 A B<br>Because if you wouldn't track, maybe you know you would meet few times, then the parents click together, then you would meet in the… in the park and say, you know, let the students play together or something like that. None of that happens.<br><br>0:29:20.330 --> 0:29:21.480 Ho, Huijun<br>I see.<br><br>0:29:21.310 --> 0:29:25.630 A B<br>They may be few students because, especially because I don't go to | Makaton. Inability to communicate with student<br><br>Communication difficulties due to iPad being slow to interact and lack of eye contact which are barriers to friendship development<br><br>Connecting with other families in school is effortful due to GDPR constraints so schools no longer share information<br><br>Families need to be compatible to connect with each other<br><br>Families can have different backgrounds and students with different needs that make interactions difficult<br><br>Impact of COVID on interactions between families in schools<br><br>No longer school events for families to meet up<br><br>The desire to connect with other families in school and get students to play together outside of school |

| | |
|---|---|
| school to drop A… She goes on a school bus, so there's no opportunity to meet any parents, no.<br><br>0:29:31.820 --> 0:29:35.460 Ho, Huijun<br>Ohh, there must be difficult.<br><br>0:29:34.270 --> 0:29:37.820 A B<br>Yeah. So that, I mean those are kind of barriers that. Yeah, because it's just not her. It's the whole system that our…<br><br>0:29:45.280 --> 0:29:52.780 Ho, Huijun<br>Yeah, it's the whole system. Not just A. And how do you facilitate friendships for for A?<br><br>0:29:54.180 --> 0:30:1.80 A B<br>So socially it is we try to do activities with other families who have…students so that she sees or go to… take her to movies or go for walks or you know, trampoline park or musicals, especially because A likes musicals so… | School drop-offs in the morning a time to meet parents<br><br>Student takes the school bus so no opportunity to meet other families at drop-off<br><br>The difficulties of building friendships is a systemic issue<br><br>Friendships facilitated by doing shared activities with other families |

## Appendix K: Example Table of Codes and Extracts for Thematic Analysis

**Theme 2: We Share a Connection Beyond Words – It Goes Without Saying**

**What the theme is about (central organising concept):** This theme is about how students connect with and maintain their friendships with their friends through a variety of means that go beyond speech.

**What the boundary of the theme is:** connecting with friends through activity-based friendships, multimodal communication and physical intimacy being key to the friendships and social relationships

**What is unique and specific to this theme:** pulling together of student, parent and teacher views about how students are able to connect and maintain their friendships through a variety of ways that go beyond speech

**What this theme contributes to overall analysis:** This theme highlights the importance of giving students with complex communication needs opportunities within the school day to dance, sing, swim, do art... etc. That these activities are just as important as other more valued subject areas such as daily living skills and communication skills, which schools tend to place a higher emphasis on.

| Sub Themes | Example Codes | Example Excerpts |
|---|---|---|
| Dance, Sing and Swim with Me – Activity-based friendships | Activity based friendships | I think… she… activity-based friendships is something because then you don't have to talk a lot which is… But if she's doing things together, going on trips together (A Mum) |
| | Friendships through singing and playing music | C teacher Ok. What else so you like? What else do you like doing with your friends? Let's have a look what have we got.<br>C student [immediately picks another picture] C teacher Play music. That's really good too.<br>Hui Jun And who do you do it with?<br>C student [points to F and P]<br>Ho, Huijun P as well. Ohhh. |
| | Friendships through art | Ho, Huijun Painting, you like to paint in The Art Room. Do you like to do it by yourself or with a friend?<br>A student [signs friend]<br>Ho, Huijun With a friend. And who do you like to paint with? Can you tell me?<br>A student [navigates AAC] B. |
| | Friendships through physical activities | O student [points to] dancing<br>Ho, Huijun Dancing. You dance with Mi, and then you became friends with Mi<br><br>M student [points to] walking outdoors Ho, Huijun So you really enjoy walking outdoors. |

| | | |
|---|---|---|
| | | M teacher We've done that a few times.<br>Ho Huijun So who would you like to walk outdoors with? [takes out photo list of classmates] Who do you like to walk outdoors with? Is these any of these… your current classmates? Or your previous classmates?<br>M student [points to] Mu<br><br>F student [points to] Dance<br>Ho, Huijun You like dancing with C yeah.<br>F student Dance, sing, music<br><br>C teacher [laughs, as C already has a picture in his hand] No, I know he was going to go for that one. You like swimming with all your friends, is it?<br>C student [nods]<br><br>A student [points to swimming]<br>A teacher You have been swimming with Al haven't you?<br>A student [signs Yes and smiles]<br><br>Mi likes very much to do when there is some kind of physical element to a singalong. Like heads and shoulders, knees and toes, you know. He likes to do that together with other people or to show him doing it to other people. He actually very much likes to show off his dancing skills... He's wheelchair bound but he likes to do dancing.(M Mum)<br><br>Dancing to music. He dances from the moment he wakes up to nighttime. He just loves dancing.(F Dad)<br><br>She loves a Tik Tok dance. She's always trying to get someone to dance with her. (S Mum) |
| | Friendships through play | F student [points to and verbalises] playground<br>Ho, Huijun You like to play with J at the playground. What do you play?<br>F student Slide<br><br>Ho, Huijun How did you become friends with Je?<br>C Student [points at the playground symbol] Hui Jun Ohhh you like to go play at the playground with Je.<br>C teacher Oh Je is really good at the playground, isn't she? |

| | | |
|---|---|---|
| | | Ho, Huijun I see. So Je is really good at playgrounds. This is the playground, isn't it? [hands C a picture of the playground which he takes] [C teacher and HJ laugh]<br><br>C teacher Does Je go on the climbing frame?<br>C student [nods]<br>C teacher She does. How about you? Do you go on the climbing frame?<br>C student [nods and gives a big smile] |
| | Friendships through eating together | F student Eat<br>F teacher Ok, you eat together.<br>F student Go MacDonald's [not intelligible]<br>Ho Huijun Is it MacDonalds?<br>F teacher He said MacDonald's, do you go to MacDonalds? [with club] |
| | Friendships through having a chat | C student [presses How was your weekend?} C teacher You ask him what do you do at the weekend?<br>C student [continues eye contact with teacher and nods]<br>C Teacher So you have a chat. Oh.<br><br>S student [points to] chat An P.<br>Ho, Huijun You like to chat with An and P, P is good at talking then.<br>S student [nods vigorously and smiles] Yeah yeah yeah talking. |
| | Friendships through watching TV/sharing iPad together | F student [points to and verbalises] watching TV, watching TV. J, watching TV.<br>Ho, Huijun What do you watch together?<br>F student CBB! |
| | Friendships can continue to be built through having birthday parties | Huijun My mommy can help me make friends by… Can your mummy help you make friends? Does she take you out?<br>S student Yeah.<br>Huijun Where do you go?<br>S student Party?<br>Huijun Oh party! To make friends! |
| It doesn't matter if you talk or not | Use of multimodal communication | But I think that was also learned because he's given this computer to be his voice, because he's very good at gesturing and with his facial expressions, his body language, and you could read him like a book. [C teacher] |
| | Flexibility and comfort in multimodal communication | C student [points into the distance<br>C teacher You do some pointing?<br>C student [points again] |

| | | |
|---|---|---|
| | | Ho, Huijun How does he talk to you?<br>C teacher Does Is use his voice?<br>C student [nods]<br><br>S student Talking. [signs talk]<br>S teacher But Mu writes down what he wants to say, he doesn't talk. So… so he writes things down, doesn't he?<br>Ho, Huijun So Mu will write for you… and then you talk.<br>S teacher He also uses his hands to sign.<br>S student [gestures and signs for] signing. We talk [through sign].<br><br>Ho, Huijun Is it Makaton signs?<br>S student Yeah.<br>Ho Huijun And you know Makaton as well. [S student nods] and you do sign with Mu?<br>S student [nods and smiles] Yeah<br>S teacher You like to talk, don't you, with Mu.<br>S student Mm hmm [and smiles] |
| | Playing with AAC by finding words and things on it | A teacher Sometimes they both play with their machines [AAC], so they will find words and things. It's never a conversation… just… [signals for back and forth] |
| | I don't think the students here mind if you talk or not | I don't think that the students here actually mind if you talk or not. [M teacher J]<br><br>Speech isn't something... I mean, Mu has been here for two years and he doesnt really talk at all... and they will go to him or they will talk to him and wait for his response and things. So I think for them, actually, using AAC is quite common for them. So I think because it's not a mainstream setting, that difference is they're probably used to the accommodation more than others. [M teacher J]<br><br>And honestly, even if they have to hang out in silence, or if they're just doing it on facial expressions, or watching something and sharing things, they're perfectly happy to communicate in that way and not rely on speech. I think for some of them, the presence is just as important that someone wants to sit there and be with them. [M teacher J] |

| | | |
|---|---|---|
| | | I think, because we're in a special setting, they're so used to everyone being different and having that communication that's really Student and new friend developed friendship as they were put together different. So I think they're just like, Oh, you have your iPad, I have my whiteboard, we'll make it work. And if we need, we'll get an adult to sort it [M teacher J] |
| Physical intimacy is part of our friendship | Enjoying physical interactions/closeness | They had a hug then they just walked around holding hands looking at photographs and stuff. [F Dad]<br><br>So she is always, you know, she takes care of M, she strokes his hair, she holds his hand. She's one year older. So she went to the secondary school here one year before M. M was left in primary school. [M mum and Dad]<br><br>At the playground, another student Al runs up to A and gives her a hug. Al was from her previous class. They had been classmates for a while. [observation notes]<br><br>Don't touch me. Don't touch me. I don't think he'd be friends with them. But if you do, let him touch you, I think then you're a friend you're in. He's not fussy?. Physical contact. Yeah, as long as you accept physical contact, he'll be your friend. [F teacher] |
| | Worries around developmentally appropriate touch | As far as their interactions, with M I think it's most people like to get really physically close to him and he draws them in then they have a chat and he doesn't mind hand holding he likes smiling, he makes all those gestures. [M teacher J]<br><br>S really likes the company of D, who was her classmate the previous year, and actively seeks to engage with him. Teacher shared some concerns about them being teenagers and holding hands often, and the need to teach what is appropriate for them at this age. [observation notes]<br><br>knowledge of personal space because S would hug everyone if she could. And she's very caring and I think it's a way she just needs a bit more guidance on when that's a good time and when it's not [S teacher J] |

## Appendix L: Table of Responses for Friendship Quality Questionnaire

| Dimension | Question | **Mark** | **Saphira** | **Oscar** | **Adina** | **Carter** | **Frank** |
|---|---|---|---|---|---|---|---|
| Conflict | I can get into fights with my friend. | **N** | **Y** | **N** | **Y** | **Y** | **N** |
| | My friend and I can argue. | **Y** | **N** | **N** | **Y** | **Y** | **N** |
| Security | I can talk to my friend about a problem at school or at home. (Reliable Alliance) | **Y** | **N** | **Y** | **-** | **N** | **Y** |
| | If my friend and I have a fight, we can say 'I'm sorry' and everything will be alright. (Transcending Problems) | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** |
| Help (Aid, Protection) | My friend would help me if I needed it. (Aid) | **Y** | **Y** | **N** | **Y** | **Y** | **Y** |
| | My friend would help me if someone else was bothering me. (Protection) | **Y** | **Y** | **-** | **-** | **Y** | **N** |
| Companionship | My friend and I spend all our free time together. | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** |
| | My friend thinks of fun things for us to do together. | **Y** | **Y** | **Y** | **Y** | **M** | **Y** |
| | My friend and I go to each other's houses after school. | **Y*** | **N** | **N** | **Y*** | **N** | **Y*** |
| | Sometimes my friend and I just sit around and talk. | **Y** | **Y** | **-** | **Y** | **Y** | **Y** |
| Closeness (Affective Bond, Reflected Appraisal) | I will miss my friend if my friend had to move away. (Affective Bond) | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** |
| | I feel happy when I am with my friend. (Affective Bond) | **Y** | **Y** | **Y** | **Y** | **Y** | **Y** |
| | I think about my friend even when my friend is not around. (Affective Bond) | **Y** | **Y** | **N** | **Y** | **Y** | **Y** |
| | My friend is happy for me if I do a good job at something. (Reflected Appraisal) | **-** | **Y** | **-** | **Y** | **-** | **Y** |
| | Sometimes, my friend does things for me, or makes me feel special. (Reflected Appraisal) | **Y** | **Y** | **Y** | **Y** | **-** | **Y** |

## Appendix: M: Research Timeline

| Task | Feb-May 2022 | Jun 2022 | Jul 2022 | Aug 2022 | Sep 2022 | Oct 2022 | Nov 2022 | Dec 2022 | Jan 2023 | Feb 2023 | Mar 2023 | Apr 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Ethics Application** | | | | | | | | | | | | |
| **Pilot** | | | | | | | | | | | | |
| **Recruitment** | | | | | | | | | | | | |
| **Data Collection** | | | | | | | | | | | | |
| **Data Transcription** | | | | | | | | | | | | |
| **Data Analysis** | | | | | | | | | | | | |
| **Report Writing** | | | | | | | | | | | | |