Title: 'Facilitating Expression beyond Speech: Methods for Engaging Students with Complex Communication Needs in Research and Educational Practice'

Data availability statement: The participants of this study did not give written consent for their data to be shared publicly, so due to the sensitive nature of the research, supporting data is not available.

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Abstract

Aims: Being able to communicate, through language or other means is an essential pre-requisite in the development of friendships. This study investigated the friendships of students aged 11-19 with complex communication needs (CCN), who had limited speech and used Augmentative and/or Alternative Communication (AAC) to communicate. This paper outlines the methods used for engaging students with CCN while findings relating to the development of friendships have been published in a separate paper (Ho et al., 2024).

Method: This study used a Mosaic Approach, which combines traditional methods of interviewing and observation with participatory methods, to elicit students' views. Participants included six students, eight of their parents and six of their teachers or teaching assistants.

Findings: It is possible to elicit the views of students with CCN using a Mosaic approach, which involved adapted versions of participatory approaches including a Pyramid Ranking, Card Sorting, School Tours, Using Photos and Objects, and Book Making, in addition to traditional methods of data collection. There needs to be considerable preparation to ensure

that the approaches used are personalised for each student knowing how they prefer to communicate, what to include and making appropriate use of communication partners.

Limitations: This study aimed to understand friendships in and out of school. Information about friendships out of school was limited as the communication partners were from school and it was more difficult for them to elaborate on students' responses when they spoke about home. Students who might not understand the concept of friendship, or could not communicate about friendships through AAC were excluded from this study. More innovative approaches could be trialled in future research to elicit their views.

Conclusion: Students with CCN are not passive responders to their environment. They have agency and can choose who they want to be friends with, what activities they want to engage in with different friends and how friends adapt to the other's needs to create meaningful friendships.

Keywords: children's voices, research methods for students with special needs, friendships, social relationships, special school

Introduction

According to the United Nations Convention on the Rights of the Child (UNCRC, 1989), all children and young people should have access to education that develops them to their full potential, and those with Special Educational Needs/Disabilities (SEN/D) should have the same rights. Article 23, page 9, of the Convention states that a child with a disability "should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child's active participation in the community". Governments must do all they can to support them and their families. In Article 12, page 5, the views of children should be sought and respected, where every child has the right to express their views in all

matters affecting them, and to have their views considered and taken seriously (UNCRC, 1989). Furthermore, there is national legislation (The Special Educational Needs and Disability Regulations, 2014) that mandates local authorities to assess and support children's education, health and care needs through Education, Health and Care (EHC) plans. When securing an EHC needs assessment, a local authority must consult the child or young person and their parents, and consider their views, wishes and feelings, and eliciting views is typically the responsibility of the educational psychologist preparing the psychological advice.

However, because of the complexities of eliciting the views of students with CCN, these are under-represented in both research and practice (Lewis-Dagnell et al., 2023). Educational psychologists and other professionals often rely on the views of parents and school staff to provide information about students' views. Dunford (2024) showed that in five draft Educational Health and Care Plans, three did not include the child's views directly i.e. did not report the child's views in quotes or first person.

This study aimed to find ways to elicit the views of students with CCN about their friendships and social relationships In this paper, we describe tools and techniques that were used as part of the Mosaic approach, to piece together an overarching picture of their friendships and social relationships. These methods of eliciting pupil voice could be used by researchers and educational psychologists to ensure that the views of this group are heard. For a full account of the main findings of the study, see Ho et al. (2024).

Definitions of CCN and AAC and the Importance of Communication in Developing Friendships

Students with CCN are a heterogenous 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, for example, 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). Students with CCN may use aided systems, which use external equipment, such as speech-generating devices and picture exchange boards, or unaided systems, which involve using bodily cues, such as gestures and sign language (Sigafoos et al., 2016). AAC is used to support speech and writing and as part of a total communication approach – using the right combination of communication methods for a student to experience the most successful interactions (Clarke et al., 2012).

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, every day 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).

Eliciting the Voices of Students with CCN

Obtaining views from students with CCN can be difficult. Use of the Mosaic Approach, which combines traditional methods of interviewing and observing with participatory methods (Clark & Moss, 2017) is one way this can be overcome. This approach uses interviews and observations as pieces of the 'mosaic' in addition to participatory methods such as taking 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, relying on the co-construction of meanings rather than extracting one 'truth' (Gallacher & Gallagher, 2008; Clark & Moss, 2017).

Although the Mosaic Approach was 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). Although students may respond differently to different tools, using multiple tools enables a wide range of views to be elicited (Lydiatt, 2015).

The Mosaic Approach uses narrative methods to understand students' lives through the elicitation of personal stories (Niemi et al., 2015). These include life storybooks, memory books, and ranking tasks, where students rank statements, photographs or images and it is the explanations behind the decisions that provide valuable information (Clark & Moss, 2017; Fargas-Matlet, et al., 2010). Such methods require good spoken language skills so these tools require adaptations for students with CCN to ensure they play to their strengths.

Another methodology in the Mosaic Approach is the use of visual methods, 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). Photography, another visual method, captures students' everyday lives, placing them at the centre of research, and offers communication without needing 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 giving them control over the discussion, 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 Mosaic Approach principles and encourage co-construction of meaning (Carroll et al., 2018).

However, visual approaches to psychological research have low uptake due to a lack of guidance as to how to conduct such research (Bates et al., 2017). Fawns (2020) suggested using a reflexive methodology – to accept subjective interpretations, where each study needs its own unique method, and the use of a sensible approach rather than a systematic approach to capture complexity rather than consistency. Thus, this study adopted a similar approach – one that is reflexive, unique, and sensible to capture the complexities of working with students with CCN.

Method

This paper reports the methods for engaging students with CCN in research and educational practice, while findings relating to friendships have been published in a separate paper (Ho et al., 2024).The study had 20 participants – six students, eight of their parents and six of their teachers/teaching assistants were recruited through purposive sampling from three London special schools, to meet the following inclusion criteria: a) Be between 11 and 19 years old, b) have limited speech and communicates using AAC, c) understand the concept of friendship, and d) able to recognise and select a small number of familiar words or symbols.

These criteria were discussed with teachers/teaching assistants who knew the students well before inviting them to be part of the study. For example, if a student could answer the question about who a friend is and name some peers as friends, they were deemed as understanding the concept of friendship.

Approaches and Tools Used

As summarised in Figure 1, this research was carried out in two stages.

[insert Figure 1 here]

Ethics approval was given by the Institute of Education (IOE) Student Research Ethics Committee (Z6364106/2022/03/79), with considerations for informed consent, confidentiality/anonymity and data management. Consent was obtained from students through a face-to-face self-introduction, where the first author used a child friendly information sheet to explain the purpose and methodology of the study and asked for consent using a yes/no response. At the beginning of interviews, the first author explained the data would remain confidential and that participants had the right to withdraw consent at any point. Communication partners could also make that decision to withdraw based on their knowledge of the students. What follows is a description of the tools used.

Stage 1: Semi-structured Interviews and Observations

Interviews. Semi-structured interviews were conducted with parents and teachers/teaching assistants to establish their views of the students' friendships and social relationships, barriers to friendship development and how they facilitated friendships. The interview questions were adapted from the literature (e.g. Anderson et al., 2011) and from the first authors' experiences with students with CCN. They included questions about friendships in and out of school, shared activities, friendship quality, barriers and how adults facilitated the development of friendships (See Appendix A: Interview Questions for Parents and

Appendix B: Interview Questions for Teachers). The interviews were audio-recorded, transcribed and content analysed.

Observations. Observations were conducted in class and during breaktimes 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. Observations were conducted based on the 3 Cs approach – context, content and concepts (Fetters and Rubinstein, 2019). The focus for observations using the approach is illustrated in Table 1 below:

[insert Table 1 here]

Each student was observed twice (30 minutes each) – once in class and once at breaktimes. Breaktimes (in the playground or at lunch) were chosen as these are times 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. Observations were double checked with staff present to aid in reflections and preliminary ideas about what was observed (See Appendix C: Observation Schedule Template). Observation data was in written form and content analysed.

Reflections on Stage 1. The interviews and observations were a crucial first step in preparing for the engagement with students with CCN. Interviews provided insights into students' friends and activities, informing the development of data collection tools for Stage 2. The observations provided opportunities to learn more about each student's unique communication methods - crucial for planning how to gather their views. A structured observation approach with a coding framework was initially piloted but an unstructured approach proved more useful –qualitative notes captured relevant data that would have been lost with coded categories. For example, the 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 and the interesting ways that teachers were facilitating helping behaviours could not be captured through the structured observation schedule.

Stage 2: Direct Work with Student Through Participatory Methods

Students' views were elicited through six tools, pyramid ranking activity, preferred activities with friends cards, best friends activity, school tours, collections from home and book-making, with a set of guiding questions accompanying the tools (Biggs et al., 2020; Dada et al., 2020; Webster & Carter, 2010). All tools were piloted with one student, and they were all found to be suitable, with the first three tools (pyramid ranking activity, preferred activities with friends cards, best friends activity) being more useful in eliciting views. Thus, these three were used 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. Students' participation in the tools are shown in Table 2 below:

[insert Table 2 here]

To ensure that students' views could be fully and accurately elicited the following preliminary steps were taken:

a) Pre-session discussions to consider students' needs: Discussions were held with each student's communication partner, either the students' teacher or teaching assistant, and tools were refined based on the discussions. This was an important step to ensure that there was the best chance of success of using the tools with each student.

b) Use of same symbol systems as the schools: Boardmaker and WidgetOnline symbols were used as they were the most commonly used by schools to ensure the students were already familiar with the symbol systems presented to them.

c) Considerations of possibility of communication breakdown: Communication breakdown is common in conversations with persons with CCN (Sellwood et al., 2022). A communication partner 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 interpretations. At times, they would help elaborate, which the interviewer would then check with the student for concurrence, to prevent belief and biases from influencing the interpretation.

Tool A: Pyramid Ranking Activity.

Background. Models of friendships suggest that friendships exist on a continuum, ranging from best of friends to close friends, good friends, just friends, acquaintances and strangers (Adler & Adler, 1998) The pyramid ranking activity was used to rank students' friends, and this was adapted from the diamond ranking activity, a tool used to facilitate discussion in previous participatory research (Hill et al., 2016; Rao, 2020). The diamond ranking activity is completed in pairs or small groups to rank nine photographs or statements in order of importance. In decreasing order of importance, there is 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 are no right or wrong answers.

Adaptation. A pyramid rather than diamond was used to better reflect the continuum model of friendships. Students were also presented with photographs and names of their

friends in and outside of school.These photographs and names were gathered based on interviews with teachers and parents, and included students from their previous class, current class and peers outside of school. After an initial pilot, to aid communication, a communication board of possible activities that the students liked doing with their friends was created. The possible activities included were based on the interviews with teachers and parents. (Appendix D: Pyramid Ranking Activity)

Procedure. Students were presented with a pyramid and photographs and names of their peers in and outside of school. They were asked to rank their friends and describe what they liked doing with them, "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. Guiding questions included: Who is your best friend? Point to your best friend. Who are your close/good friends? What do you like doing with _____? How did you become friends? How do you communicate with ____?

Reflections. This was a very useful tool. All students understood the activity well and had no difficulty in ranking their friends, participating in the activity with minimal support. They were active participants in the discussion, and their choice of friends and the activities they picked they enjoyed doing with their friends shaped the discussion. The ranking decisions provided valuable insights into the students' friendships. They had clear views about their friendships that were communicated with this tool, and a rich picture of their experiences was painted.

Tool B: Preferred Activities with Friends Cards.

Background. This tool aimed to understand what students liked doing with their friends through a card sorting activity. The technique, known as School Preference Cards,

was developed by Hill et al. (2016) for students with communication challenges and learning difficulties, to access their views on residential school experiences. Their approach was adapted from the Kingswood Sensory Preferences system – it consisted of 75 photographic cards illustrating sensory experiences with phrase labels, sorted into positive, negative and neutral categories (Brand et al., 2012, as cited in Hill et al., 2016).

Adaptation. For each student, 35 photocards of school activities were prepared, based on possible areas and things that they liked doing with their friends and labelled accordingly. Photocards included spaces and activities such as playing at the playground/on the swing, going to the gym, going swimming, eating lunch, and classroom activities such as playing on the keyboard and hanging out on the beanbags. Although initial categories of 'yes/like', 'no/dislike' and 'don't mind' were created, these categories were deemed unnecessary during the pilot. Instead, students picked photocards 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.

Procedure. Photocards were laid out on the table in front of each student. They were told, "Here are some photos and pictures of activities and people in school. What do you like to do in school with your friends?" Guiding questions included, "Do you like to…?" and "Who do you like to do … with?"

Reflections. This tool was very useful in understanding what the students enjoyed doing with their friends. The conversations were student-led, and students were excited about the familiar spaces and environments depicted in the photocards. This allowed them to determine the interview direction, giving them agency in telling their stories. They eagerly shared their favourite spaces and activities and who they liked doing those activities with. Some students rapidly picked one card after another to share with the researcher. The

photocards were effective in building a shared understanding and establishing common ground between the interviewer and students quickly. Many of the responses were elaborated upon through the students' aided AACs and communication partners. (Appendix E: An Example of Preferred Activities with Friends Cards).

Tool C: Best Friends Activity.

Background. This tool aimed to explore the quality of the students' best friendships using a questionnaire. Questionnaires have been used to understand students' friendships, such as the Friendship Quality Scale, a self-report measure where a student nominates his/her best friend and answers questions about the friendship quality (Bukowski et al., 1994). The scale, with 23 items rated on a five-point Likert scale, measures five key components – companionship, conflict, help, security and closeness (Bukowski et al., 1994). Scores are calculated by taking the mean for each item.

Adaptation. The Friendship Quality Scale (Bukowski et al., 1994) was piloted, and adaptations were made by reading aloud the questions to support understanding and providing an enlarged version of the scale with five different faces (from 1 to 5) for the student to point to. Some questions that covered the same characteristic of friendship were reduced, as although such questions were important for validity, they were confusing for the student who wondered why the interviewer was asking the same questions repeatedly. Thus, the number of questions was reduced to 15.

Some students found using the five point scale difficult and it was finally adapted giving the student the option of a 'Yes' or 'No' response which was also shown visually. During the pilot, the student also used a variety of adjectives, both positive and negative, to describe his best friend, and how his best friend made him feel, on his aided AAC. This

prompted the preparation of a list of positive and negative adjectives and emotion symbols for the other students (Appendix F: Adapted Friendship Quality Questionnaire for Students).

Procedure. Students were asked about the quality of their relationship with their best friend**,** using a prompt, "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." To elaborate on their responses, students were asked prompts such as, "What are some words to describe your best friend?" and "How do you feel when your best friend does…?" and asked to point to the words/emotions.

Reflections. This tool was useful in giving an understanding of the quality of relationships of students with CCN with their best friend. The list of adjectives and emotions helped students expand on their answers. Notably, students shared negative traits and about conflicts within their best friends (Ho et al., 2024), a finding not previously captured in the friendships of students with CCN in previous research (Biggs & Snodgrass, 2020).

Tool D: School Tours.

Background. This approach was based on photo tours that use a forward-facing camera to capture students' views about their environments, where 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. The use of a school tablet was piloted, with a front-facing camera for students to take photographs of places where they enjoyed spending time with friends, but it was deemed unnecessary as students preferred showing these places directly. Thus, the activity was conducted without a camera, aligning with the mosaic approach of adapting tools to students' needs.

Procedure. Students guided the first author on a tour of the school. They were told, "We are going on a school tour! Can you take me around the school to show me places where you enjoy spending time with your friends?"

Reflections. Students enjoyed showing their favourite school places and activities they enjoyed doing with their friends. The places included the playground, going on the climbing frame and roundabout, the gym and going on the treadmill with a friend, painting in the art room and gardening with friends, and even lounging on beanbags in the classroom with friends. The tours also revealed activities the students enjoyed doing alone. Four out of the six students participated – one could not, due to time constraints, and another, due to mobility issues.

Tool E: Collections From Home.

Background. To understand friendships at home and in the community, parents were asked to provide five photographs and/or objects representing friends and/or activities that the students did outside school. This approach was based on Ibrahim (2016) who adapted the Mosaic Approach to incorporate symbolic objects, making the mosaic three-dimensional (Clark & Moss, 2017), allowing participants to choose which photographs and objects to talk about, giving them more agency in the research process and helping structure interviews in a way that is relevant to their interests (Fawns, 2020).

Adaptation. No adaptations were necessary.

Procedure. After the interview with parents, parents were asked to provide five photographs and/or objects. These items were then used in the session with the students, where they were told, "You have brought some things to share about your friends. Can you tell me more about this photograph/object?

Reflections. Only two parents provided photographs for discussions. It was challenging to elaborate on the photographs in school with a communication partner who was from school, and did not know the background and what the students did outside of school. A home-based communication partner or conducting the activity at home might have been more effective, allowing students to pick photographs/objects from home to guide the conversation.

Tool F: Book Making.

Background. Students were tasked to make a book about friendships using photographs and materials from the other tools. This approach was based on Clark and Moss (2017), who suggested that bookmaking 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 reflect on their everyday experiences (Clark & Moss, 2017).

Adaptation. Sentence starters were provided to help students think about their friendships (e.g. My friend and I enjoy _____. A good friend _____.) (Appendix G: Sentence Starters as Part of Book Making Activity).

Procedure. Students were told that they were going to make a book about friends. They were to choose a photograph or draw a picture of their friend, and to use sentence starters to describe their friends.

Reflections. This activity was meant to be used in conjunction with tool E, where students would make a book using photographs about their friendships and sentence starters. Due to few photographs being collected, and also motor constraints and time limitations, only two students drew some drawings of their friends. Nevertheless, the sentence starters alone were useful, and all students participated in conversations using them.

Data Analysis. Student interviews were video-recorded and transcribed to capture non-verbal responses. Data was analysed using reflexive thematic analysis (Braun & Clarke,

2021). Data was first analysed within each participant group ,where codes were written within each participant group and the first author started constructing tentative categories based on the codes, before comparing them across participant groups. Trustworthiness was enhanced through data triangulation of student, parent and teacher views and observations, and methodological triangulation, with different ways of collecting data to gain an enriched understanding of students' friendships. Member checking was done during interviews, where information was confirmed by the first author and the communication partner, and three transcripts with codes were sent to participants to ensure views were accurately represented. Initial themes were discussed with EP colleagues and ex-colleagues in special education for relevance and practicality.

Discussion

This paper illustrates that capturing the voices of students with CCN is possible through extensive preparations prior to capturing their voices, with the use of the right tools and techniques. Prior preparations involved securing the support and participation of those who know the students best, interviewing them, showing them the proposed data collection tools and how they could be adapted and used, and eventually involving them as communication partners in the co-creation of knowledge with the students. It also involved observing the students to understand their forms of communication and being in their classrooms to ensure familiarity before speaking with the students themselves. There was a need to adopt a research approach that gave adequate time, a degree of flexibility and creativity, which were conditions necessary for meaningful participation. Overall, this study highlights that with thorough preparation and involvement of adults who are familiar with the students, the views of the latter can be effectively elicited.

This approach aligns with Lewis-Dagnell et al. (2023), who conducted a systematic review of creative methods developed to facilitate the voices of children and young people with complex needs and advocated for researchers to push boundaries by 'developing inclusive methods which are novel, creative and individualised to each young person'. The researchers highlighted the value of co-constructed methods to elicit students' voices, and the importance of co-construction with familiar adults to support these methods (Lewis-Dagnell et al., 2023). They concluded spending time with children and young people, their families and practitioners to co-construct knowledge was the way forward for this population (Lewis-Dagnell et al., 2023).

This paper emphasizes the importance of a toolbox approach for enabling voice and participation, in line with Lewis-Dagnell et al. (2023). Their review described that all studies employed multi-modal approaches like photographs, symbols, videos, observations, sign language and adapted questionnaires. The tools described, through the use of a Mosaic approach, painted an overarching picture of the friendships and social relationships of students with CCN, with many pieces of the jigsaw being elicited through the voices of the students themselves. The use of a Mosaic Approach, as suggested by Clark & Moss (2017), played to the students' strengths, allowing them to communicate through a variety of ways, and to be viewed as experts in their own lives and tell their stories in their own ways. One student said thank you to the researcher at the end of his interview, and his communication partner commented it that was the first time he had used his voice, indicating that students appreciated the opportunity to share about their friendships. These bespoke tools can offer greater insights into the views of students with CCN, and should be trialled, with researchers engaging in constant listening, observing and reflecting to enter students' worlds, at least for a moment in time.

Creative tools do not replace traditional data collection methods. Interviews with parents and teachers and student observations, remain valuable and are often used alongside creative methods to elicit students' views (Clark & Moss, 2017; Lewis-Dagnell et al., 2023). As Richards and Crane (2020) noted, triangulation and multiple methods can provide a rich picture of students' lives.

This paper challenges the view that there are limitations to eliciting the views of students with the most complex needs, making it difficult to do so (Ware, 2004). Conventionally, these students have often been viewed as 'needing help' due to differences in appearance or needing assistive equipment (Demetriou, 2021). Thehe focus on oral speech renders experience to be legitimate only when it is spoken (Burr, 1999), resulting in these students being inaccurately regarded as lacking in agency, to be unable to voice their experiences or to participate in society (Simmons & Watsons, 2014). Lundy (2007) termed their exclusion from decision-making in their own lives as a 'double denial' of their voice, doubting their competence due to being both children and disabled.

Strengths and Limitations

Research into the use of methods for voices remains in its infancy (Lewis-Dagnell et al., 2023). Researchers and educational psychologists must continue to find creative ways to listen to often unheard voices and use insights to guide outcomes and provisions. A strength is that the first author, an educational psychologist, has successfully used these activities in her practice to guide friendship interventions in schools. Knowing students' friends and potential friends helps tailor specific interventions. A limitation is that although the study aimed to understand friendships outside of school, information about out-of-school friendships was limited as the communication partners were from school and it was more difficult to elaborate on students' responses when they spoke about home. Moreover,

regarding those students who were not deemed eligible to participate in this research (e.g. who did not understand the concept of friendship), future research may develop ways to elicit their views and experiences.

Conclusion

This paper highlights that students with CCN can express their views and questions the factors limiting opportunities for them to influence their outcomes. Negative attitudes may contribute to low expectations and limited participation (Sheehy & Nind, 2005). Advocates see these students as active social agents, emphasising the need for innovation and research to understand their perspectives (Biggs et al., 2020; Nind et al., 2010). This paper underscores the importance of doing research with these students, rather than on them, shifting the focus away from societal perceptions of and assumptions about their friendships to the students' own views. Listening to their voices can improve their quality of life, aligning with UNCRC (1989) and national legislation on EHC needs assessments. Educational psychologists and researchers play a crucial role in shaping the discourse of SEND, to consider how the politics of SEN/D are construed in various contexts and find ways to shape educational goals meaningful to the children and young people.

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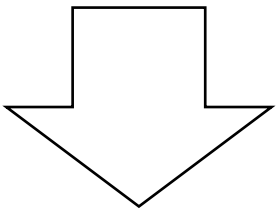
Figure 1: *Stages in Research*

<table>
<tr><td colspan="2">Stage 1: Semi-structured Interviews and Observations</td></tr>
<tr><td>Interviews

Semi-structured interviews were conducted with parents and teachers to establish their views of the students' friendships.</td><td>Observations

Unstructured observations were conducted. Each student was observed for two intervals of 30 minutes each – one in class and one at breaktime.</td></tr>
</table>



<table>
<tr><td colspan="6">Stage 2: Direct Work with Student through Participatory Methods</td></tr>
<tr><td>Pyramid Ranking Activity</td><td>Preferred Activities with Friends Cards</td><td>Best Friends Activity</td><td>School Tours</td><td>Collections From Home</td><td>Book Making</td></tr>
</table>

Table 1: *3 Cs Approach*

Category	Definition	Focus
Context	The setting for the observations	What subject? Where is it? Who is teaching? How many students are there? How many adults are there? What is the classroom arrangement like? How is the context contributing to friendships development?
Content	What happens during the observation period	What is target student doing? How are the students interacting and communicating? What actions/events are occurring? What is the timing/sequence of events? 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? How does the observation relate to prior observations or literature? What are some potential implications of my observations?

Table 2: *Students' participation in tools*

	Pyramid ranking activity	Preferred Activities with Friends Cards	Best Friend Activity	School Tours	Collections From Home	Book-Making
Adina	X	X	X	X	X	X
Carter	X	X	X	X	X	X
Frank	X	X	X	-	-	-
Mark	X	X	X	-	-	-

Oscar	X	X	X	X	-	-
Saphira	X	X	X	X	-	X

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?

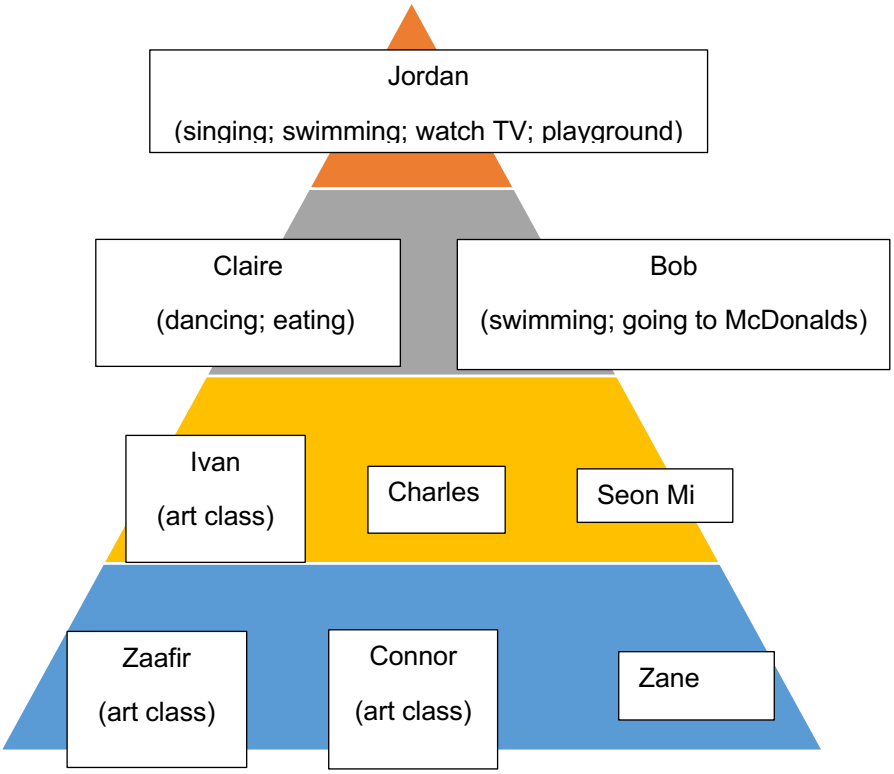
Appendix C: Observation Schedule Template

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:	
Date:	**Time:**
Observation Session Number:	
Location:	
Research Questions: 1) 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? 3.5 How are those friendships and social relationships established and maintained? 3.6 What are the barriers to friendship development? 2) 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: Pyramid Ranking Activity

What Frank Does with Different Friends



Names used are pseudonyms

Appendix E: An Example of Preferred Activities with Friends Cards

Playing on the swings

Note: Not an actual photograph from the study

Appendix F: Adapted Friendship Quality Questionnaire for Students: Responses

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 G: 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.