

## RESEARCH

# Gateways to Friendships among Students who use AAC in Mainstream Primary School

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This study explores the personal characteristics that influence the establishment of friendships among seven students who use augmentative and alternative communication (AAC) and fellow students in primary school. Students using AAC, fellow students, parents, and school staff were interviewed about how the students established friendships at school. The results revealed that students using AAC and fellow students exerted agency in friendship establishment by showing clear preferences for people and activities. Fellow students reported a larger number of personal as well as interactional qualifiers for friendship than students who used AAC. Implications of the findings are discussed.

**Keywords:** friendship establishment; children; augmentative and alternative communication (AAC); agency; school

## Introduction

Friendships are important for children as they support their development (Engle, McElwain, and Lasky 2011), social participation (Asbjørnslett, Engelsrud, and Helseth 2012) and the formation of their identity (Adler and Adler 1998). However, children with little or no functional speech who use augmentative and alternative communication (AAC) are often lonely (Raghavendra et al. 2013) and they are likely to have fewer friends than peers without disabilities (Raghavendra et al. 2012; Thirumanickam, Raghavendra, and Olsson 2011).

There are numerous definitions of friendship but little consensus on a single definition (Berndt and McCandless 2009). We understand friendship as a close social dyadic relationship, which can be either reciprocal or unilateral. When discussing children's friendships, it is important to acknowledge and seek children's voices about the issues that concern them (Hohti and Karlsson 2014) rather than only considering children's friendships from the viewpoint of adults. In a study of children aged 8–10 years representing a variety of disabilities (Morrison and Burgman 2009), children defined a friend as someone who liked them, was helpful and cared for them, was kind, and accepted any personal differences. Anderson, Balandin, and Clendon (2011) identified that peers of students using AAC aged 7 to 14 years described a friend as someone who was similar with much in common with themselves (e.g., shared interests and experiences) or someone who they perceived as nice, kind or funny.

The ability to communicate (or speak) is crucial in developing friendships (Hruschka 2010). Consequently, it is important to understand how children using AAC establish friendships with peers. Knowledge about the establishment of friendships between children who use AAC and their peers without disabilities is sparse (Østvik, Ytterhus, and Balandin 2017). Most children develop and experience friendships from early childhood. However, the processes of establishing friendships are complex, involving environmental and individual factors (Fehr 1996). Although children who use AAC may be friends with peers without disabilities (Anderson, Balandin, and Clendon 2011), they are at risk of experiencing substantial barriers to establishing such friendships. These include limitations in the time spent with peers (Raghavendra et al. 2012; Chung, Carter, and Sisco 2012), shared activities (Thirumanickam, Raghavendra, and Olsson 2011), participation (Anderson, Balandin, and Clendon 2011; Raghavendra et al. 2012), as well as limited social interactions with peers (Chung, Carter, and Sisco 2012; Raghavendra et al. 2012).

Children are social agents with the potential of practicing agency. Robson, Bell, and Klocker (2007, 135) defined agency as 'an individual's own capacities, competencies, and activities through which they navigate the contexts and positions of their lifeworlds'. Children are not only capable of constructing their own lives (James 2009; Robson, Bell, and Klocker 2007) but also of having a significant influence in the lives of other children (Mayall 2002). Children are exerting agency when they demonstrate social interest in particular children and motivation to be involved in certain activities. Researchers interested in the establishment of friendships have demonstrated that children without disabilities tend to make friendship with children with similar characteristics as themselves (e.g., gender, age, behaviour,

ethnicity, attitudes, interests, academic achievement, popularity) (Rubin et al. 2011). Hammersley (2016) argued that children's agency may be considered as relational due to children's (in)ability to act freely from adult's power or control in a situation. At school, children make active choices of social relationships to peers within the frames (e.g., social structures) defined by adults. Hence, within the local context children operate they may act as prominent and competent actors in changing their social relationships. Thereby, establishing friendships implies exertion of agency, which can be said to be part of what Corsaro (2015, 152) described as '... persistent attempts to gain control over their [children's] lives'.

For most children in western countries, shared routines and activities are incorporated in the peer culture, defined as '... a stable set of activities or routines, artefacts, values and concerns that children produce and share in interaction with peers' (Corsaro 2009, 301). The school is an important arena for the development of social relationships among students, as it fosters opportunities for social interactions, participation in activities and friendships with fellow students (Rogeskov, Hansen, and Bengtsson 2015). Children using AAC also establish friendships at school through play (Anderson, Balandin, and Clendon 2011; Calculator 2009).

Several researchers have noted that play represents an important framework for children's establishment of friendship (Bagwell and Schmidt 2011; Corsaro 2009, 2015). Among preschool children without disabilities, the search for "playable" friends who offer company, exchange of experiences, or who can be allies in making discoveries is an ongoing process (Ytterhus 2011). Based on her study of friendships among children without disabilities in day-care, Öhman (2015) argued that there is an interdependence between play and friendship. Successful play interaction may become friendships, and friendships promote play between children. The relationship between play and friendship was also recognized by Willis et al. (2016), who identified friendships as important for children with intellectual, developmental, sensory and/or motor impairments having fun. In an investigation of the meaning of play among Canadian school children aged 7 to 9 years, Glenn et al. (2013) reported that children without disabilities considered all activities that were fun as play. The children in Glenn et al.'s (2013) study, in common with those reported in previous research (Rubin et al. 2011) enjoyed playing with children with similar play interests and identified friends and siblings as their preferred playmates. However, the children disliked playing with children who were perceived as mean, bad or boring.

Some children may have restricted possibilities to exert agency in selecting friends, because they are considered vulnerable or incompetent by adults (Komulainen 2007) or because their capacity for exercising agency is not recognized by adults (Wickenden and Kembhavi-Tam 2014). In addition, restrictions in children's personal capacities may also limit their ability to exert agency. Pufall and Unsworth (2004) identified close ties between agency and voice, and they identified voice as a manifestation of agency. They defined voice as the "cluster of intentions, hopes, grievances, and expectations that children guard as their own" (8). Children using AAC are at risk of being unable to exert agency because of their restricted means of functional communication. We interpret functional communication as spontaneous communication that can influence the social environment and promote social interaction in natural settings (Pettersson 2001). Thus, environmental restrictions (e.g., too much control by adults) and personal limitations may interact and limit children who use AAC's exertion of agency in the establishment of friendships.

Limited social interactions between children using AAC and their peers (Chung, Carter, and Sisco 2012; Raghavendra et al. 2012), along with limited research on friendship among children who use AAC warrants closer attention to how children who use AAC establish close social relationships with other children. Other researchers (Therrien, Light, and Pope 2016; Østvik, Ytterhus, and Balandin 2017) have noted that it is important to investigate what contributes to the development of friendships among children who use AAC in order to explore whether existing models of friendship development explain the development of friendship among children using AAC. Due to the school's role as an important arena for development of social relationships between children, the aim of our study was to explore the personal characteristics that influence the establishment of friendships among school students using AAC. The research questions were (1) what preferences for friendships do students using AAC and fellow students report, (2) what activities do these students prefer, (3) what characteristics of a friend do both groups of students report, and (4) how do these students establish friendships?

## **Method**

This study was based on data sourced from four different interview groups: students using AAC, fellow students, parents, and staff at school. By combining information from different groups, we gathered rich and nuanced pictures of the phenomena of how friendships are established.

## **Recruitment**

Using information provided from Norwegian habilitation services for children and the national services for special needs education (Statped), mainstream public schools were asked to provide anonymous information about students in first to fourth grade who use AAC. We used this information to invite schools and staff, parents and students to participate in the study, based on the following inclusion criteria: The schools were public mainstream schools with students using AAC enrolled, the schools were located close enough to the university area to allow fieldwork, participants were unknown to the first author despite previous employment in Statped, and the first author's former colleagues had no role in supervising the students. The procedure followed the guidelines of the Data Protection Official for Research (NSD) in Norway and the national ethical guidelines for Social and Humanistic Sciences.

### Participants

The students' voices (Pufall and Unsworth 2004) were our main focus in the study. Their perspectives were supplemented with adults' perceptions. The study included 41 participants, forming four interview groups, including 7 students using AAC by means of graphic communication in first to fourth grade in mainstream primary school, 10 fellow students, 6 parents of students using AAC, and 18 staff from schools where the children using AAC were enrolled. The students were distributed across six schools in six municipalities, comprising both rural and urban areas.

In addition to non-symbolic communication modes (e.g., vocalizations, facial expressions, and body language), the students using AAC used different symbolic modes of communication including speech with reduced intelligibility, graphic symbols on paper cards, communication boards, communication books, speech-generating devices (SGDs) and/or signed Norwegian). Five students used a manual wheelchair. All students using AAC spent time in the general education classes and in the school's special unit for children with special needs. Each student had an individualised subject curriculum.

Fellow students were in first to seventh grade. Ten fellow students were invited and agreed to participate in the study based on the first author's observations and the staff's assessments of those students who had the closest social relationships with the students using AAC. They spent time with the students using AAC in the general education classes, at the special unit, and at recess. The participants are described in **Table 1**.

### Interviews

The first author conducted semi-structured interviews with each participant in appropriate locations at the schools. Including different interview groups enabled data triangulation and strengthened the trustworthiness of the results. The interviews were conducted during fieldwork, which also included participant observation. Separate interview guides were used for each of the interview groups, and the interviews were audio recorded. Copies of the interview guides are available from the first author. A staff member was present during interviews with students using AAC and helped support communication between the first author and the student. During the interviews, three students using AAC used a communication book with photos and graphic symbols and one student used a SGD. The first author transcribed the interviews verbatim.<sup>1</sup> In order to protect confidentiality, proper nouns (e.g., John Smith) were replaced by generic nouns (e.g., assistant).

### Data analysis

The transcriptions were analysed according to constructivist grounded theory using an inductive approach (Charmaz 2014). This approach incorporates participants' multiple and constructed social realities, which is important as the knowledge in this research field is sparse. The analysis included initial coding, focused coding, memo-writing, and category construction. The first author conducted initial coding of all transcriptions. The second author coded 10% of

**Table 1:** Participants in the study.

Students using AAC		Fellow students		Parents of students using AAC	Staff at school
Name	Grade	Name	Grade		
Anthony	4	Arnold <sup>b</sup>	3	Mother	Alice (class teacher) Annie (special teacher) Annabel (assistant) Belinda (special teacher) Barbra (activity therapist) Cornelia (class teacher) Chloe (special teacher) Connie (assistant) Doris (activity therapist) Dolores (activity therapist) Estelle (class teacher) Ellen (activity therapist) Gabrielle (class teacher) Greta (special teacher) Gina (assistant) Gwen (assistant) Helen (class teacher) Henrietta (assistant)
		Ashley <sup>a</sup>	4		
Beatrice	4	Becky <sup>a</sup>	4	n/a	
		Bridget <sup>b</sup>	7		
Colin	3	Carter <sup>a</sup>	3	Mother	
		Chris <sup>a</sup>	3		
Diana	4	Daniella <sup>a</sup>	4	Mother	
Elaine	1	Emily <sup>a</sup>	1	Father	
George	3	Gareth <sup>b</sup>	5	Mother	
Harriet	3	Hannah <sup>a</sup>	3	Mother	

Note: <sup>a</sup> Fellow student in class. <sup>b</sup> Fellow student in special unit.

<sup>1</sup> The data was collected in Norwegian. However, the authors, one of whom is a native English speaker, have translated the quotes.

the data to verify the initial coding. The few differences identified in the initial coding were discussed, but the authors agreed that there were no substantial disparities in the coding. The subsequent analytical steps were conducted by the first author, although each step was discussed with the co-authors. Focused coding was conducted for each interview group (Charmaz 2014). Preliminary memos were written for each focused code, and subsequent memos compared the focused codes with each other, across interview groups. Focused codes and their underlying dimensions were compared within and across all transcriptions. Tentative categories were constructed based on selected focused codes for each interview group. During memo-writing, sub-categories of significant focused codes were identified. Categories from all interview groups were compared and where similar merged across the groups. Appendix 1 comprises examples of initial codes and focused codes.

**Results**

Two categories concerning the establishment of friendship among students who use AAC emerged: (1) Demonstrating clear preferences, which indicated self-initiated agency among students using AAC and fellow students, and (2) qualifying for friendships that described the students' perspectives on being a friend. The categories and the sub-categories are illustrated in **Figure 1**.

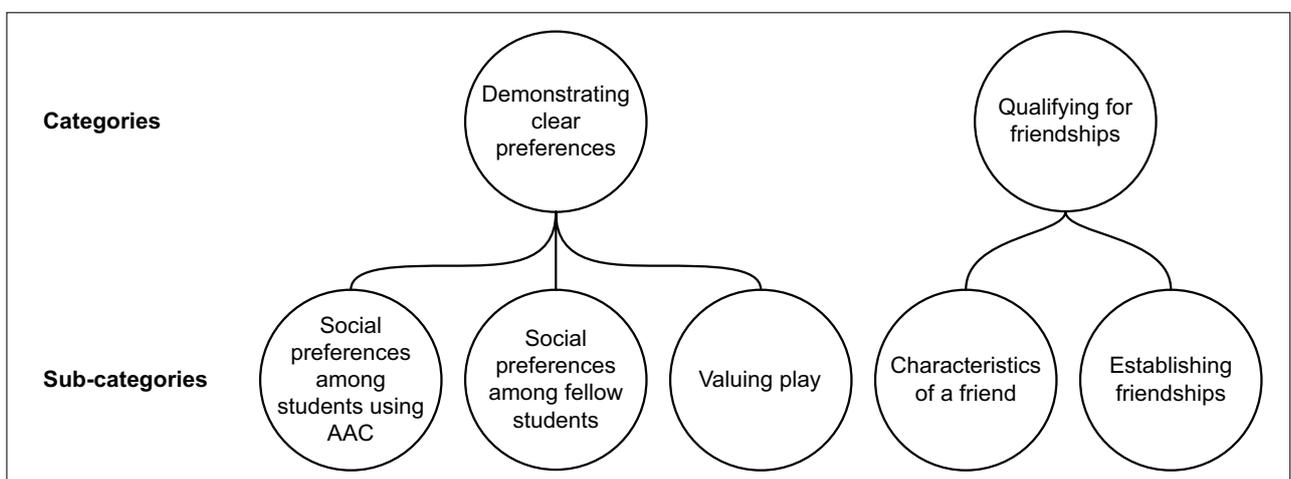
**Demonstrating clear preferences**

Social preferences among students using AAC

Students using AAC demonstrated clear preferences for friendships with fellow students, but the information provided varied in clarity. Hence, triangulation with information from fellow students, parents, and staff was important. Three students using AAC stated explicitly that they liked spending time with fellow students, and referred to having fun and playing together as important aspects of their interactions. The following quote refers to the conversation between the first author and Colin, which used a SGD:

Researcher: *Are there any children you like to be with?*  
 SGD: *"Calvin"*  
 Researcher: *Calvin. Yes. Are there some more children you like to be with?*  
 SGD: *"Claus"*  
 Researcher: *Yes.*  
 SGD: *"Caroline. Caroline. Caroline. Chanette."*  
 Researcher: *Caroline and Chanette.*  
 SGD: *"Claire"*  
 Researcher: *Yes. These are the ones you like most to be with?*  
 Colin: *Yes*

In addition, parents and staff claimed that most students using AAC showed some social interest in other children. 'She [Diana] is extremely social' (Diana's mother). Furthermore, two staff reported that the students using AAC did not like being apart from other students. Colin's special teacher noted that Colin would stay in the general education classroom without his SGD rather than be in his special group room together with a staff member and his device. 'Being the only one in the room is boring!' (Chloe, special teacher). In addition, some students using AAC described romantic interests in fellow students. One mother reported that her son fell in love with a girl in first grade:



**Figure 1:** Categories concerning the establishment of friendship among students who use AAC.

I stood with my back to him when he was on the music pages [of the SGD]. Then I asked: "How was it with Catharina today? Was it okay with Catharina?". "Yes", he says. He was sitting there behind me and playing music. So I said "Yes, are you sweethearts, or?". Then it took only a few seconds and he navigated through quite a few pages. And then out it comes [from the SGD] "In love" "In love". "Oh, are you in love?" I said, still with my back to him. "Yes", he said. Then after a few more seconds, "Dizzy" [from the SGD]. [Laughing]. "Are you so in love that you are completely dizzy?". "Yes". (Colin's mother)

Most students using AAC had preference for specific students at school. When answering the question who they liked to be with at school two students named fellow students in the general education class, and two named students in the special unit, with two students naming fellow students both in the general class and the special unit. Two students using AAC stated they preferred spending time with fellow students of the same gender, whereas two others reported liking students of both genders. Most students who used AAC preferred fellow students of the same age. However, some indicated they liked older and/or younger fellow students at the school's special unit. One student explicitly stated there were no fellow students she liked to spend time with, although she reported having several friends at school.

Staff perceived that students using AAC preferred fellow students that they already knew and with whom they had positive experiences. Staff also claimed that two of the students using AAC preferred spending time with adults rather than other students. Moreover, parents stated that their children demonstrated particular interest in children who engaged in "action" and physical play, were confident in their communication, or were also at auxiliary housing.

#### Social preferences among fellow students

Fellow students commented that they preferred interacting with other students of similar age and gender, and students who did not break the rules (e.g., tagging, quarrelling, or slandering others). With one exception, fellow students explicitly stated that they valued spending time with the students who used AAC. Two stated: 'It's nice to be with Beatrice during recess' (Becky) and 'I like her [Diana] because she is who she is' (Daniella). Another fellow student hoped to get to know the students using AAC better, in order '... to know what she's [Harriet] like.' (Hannah).

Staff reported that some fellow students of both genders, in the general class and in the special unit, showed interest in the students who used AAC. Staff commented that fellow students in class volunteered to be buddies at recess with the students using AAC or might join a student using AAC when staff pushed the wheelchair in recess. Staff also reported that they suspected some fellow students wanted to visit the students at home or to spend time with them alone at recess. Additionally, staff reported that those fellow students with the closest relationships to students using AAC gave personal greetings (e.g., Colin got an advent heart with the text "You are a good friend" from two of the boys in class). However, staff also noted that some students in class ignored the students using AAC or devalued their capabilities: '... somehow, they are not interested in him [Colin] at all. I don't think they have any idea that he can think.' (Chloe, special teacher).

Some fellow students highlighted that they enjoyed doing activities with the students who used AAC (e.g., playing, training): 'It is fun. Sometimes I train with Colin, so I can become stronger.' (Carter, fellow student). Two fellow students stated that they liked spending time with students using AAC because they did not argue in play or gossip: 'I don't like to be with the other kids [except for Harriet and another girl in class] because there are always quarrels' (Hannah, fellow student). 'She [Diana] quarrels ... she doesn't speak so much about me and stuff like that. But, a lot of the class do [talk] about me' (Daniella, fellow student).

Some fellow students reported that they valued the students who used AAC for their personal qualities. Some emphasized that the students using AAC were warm, kind, funny, or that they did not hurt their feelings. Staff also emphasized personal qualities as important for social relationships: 'He [Colin] is a positive person in a way. So he's easy to like. That's a big plus for him.' (Connie, assistant). However, fellow students also indicated that they associated students using AAC with playing up:

He [Anthony] always has energy. It's quite fun then. For example, if we are sitting and watching television, he jumps on the sofa or does something. There's always some nonsense going on. (Ashley, fellow student)

It was a party ... we had sodas and then Beatrice went to drink, then she burped, then she drank it all up ... then Brenda went to lift her up, and then Beatrice farted in Brenda's face [laughing]. (Becky, fellow student)

Although they talked about clowning around, both Ashley and Becky spoke positively about the students who used AAC. Furthermore, an assistant claimed that the fellow students enjoyed playing football with Colin, who had support to move his wheelchair during the game:

He's welcome. They think it's fun. In the beginning it was like, "Oh, it's so boring because we have to be careful." "No" I said, "You won't need to be careful. Colin withstood a ball in his face." And then it was okay. And the ball, it went right under the footrest. So then you just had to run and push the ball into the goal, and then he scored. (Connie, assistant)

### Valuing play

Most students using AAC stated that play was their preferred interest at school. Some students who could walk or enjoyed physical activity using their wheelchair highlighted play that involved physical activity (e.g., trampoline, ball games), whereas others using wheelchairs emphasized calmer activities (e.g., listening to audiobooks, playing with dolls, painting, cooking). Two parents commented that their children enjoyed active play (e.g., ball games, being lifted from the wheelchair and carried over their shoulders). According to staff, students using AAC had a variety of interests, including practical activities (e.g., cooking, excursions, gym), activities typical of younger children (e.g., playing in the sandpit, playing Captain Sabretooth<sup>2</sup>), and academic activities (e.g., social studies, solving academic tasks). Staff indicated that two of the students preferred activities that occurred in the special unit rather than in the class as the activities were better adapted to the students' needs. Consequently, they showed reluctance to be in class. Furthermore, some parents and staff reported some resistance to certain activities (e.g., going outside at recess, answering questions in class):

And in the breaks, they [fellow students] run out to play, and ... if he can choose then he does not go outside at recess at all. It is very rare that he wants to go out in recess ... when he is out at recess it's because we say 'now we'll go out'. (Greta, special teacher)

Fellow students, like their peers using AAC reported play as their favourite activity at school. They liked sedentary and creative activities (e.g., Lego, Arts and crafts) as well as activities that are physically more demanding (e.g., climbing the climbing frame or trees, playing football).

### Qualifying for friendships

#### Characteristics of a friend

Students using AAC described a friend as a person who is kind, helpful, and who they could do things with (e.g., play, ride the bus, play on the carousel). Fellow students too, reported that being kind and helpful were characteristics of friends. Other characteristics reported by fellow students were being nice, being a good person, showing care, providing comfort, being inclusive (i.e., inviting others to play), being supportive, not speaking ill of others, and telling someone if something was wrong. A fellow student at a special unit emphasized sharing toys as the most important characteristic of a friend: 'That they really have lots of Lego' (Arnold). Fellow students made distinctions between a friend and a best friend. The following statements emphasise the quantity of time spent together along with providing support and kindness:

So a friend ... is just some who comforts you and plays with you ... but best friends ... she comforts you and will be a friend when you are sad and never hurts you, but sometimes a friend just hurts you a bit and often becomes an enemy. (Daniella, fellow student)

A friend, it is someone one plays with sometimes, and a best friend ... then you play together almost every time. (Carter, fellow student)

Being best friends, it's a bit like being with a friend very often. But, being just a friend, then you are somehow not with the person very, very much. (Hannah, fellow student)

Five fellow students reported that their friend who uses AAC's' lack of functional speech did not affect the meaning of their friendships. Ashley stated: "No, I think that he is good as he is".

#### Establishing friendships

Several students using AAC noted that they established friendships by playing with other children. Two students recounted that they became friends with fellow students during shared time in kindergarten or at the day care facilities for schoolchildren (SFO). One mother said that her son became friends with a girl in the class as the families, who were neighbours, had shared time together at holidays and during leisure periods since the children were little. In common with students using AAC, fellow students stated that they established friendships with peers by playing, but also by talking, asking if they could play together, asking other children their names and age or if they would like to be friends, visiting each other at home, and going to school together:

I just start to play with them and stuff. So finally ... they noticed me ... You play pretty much ... [with] those you are more together with. And then, finally ... it just becomes like that. (Ashely, fellow student)

First, we talked a little bit, and then we played a bit together with. Then we became friends. (Arnold, fellow student)

[I] had to ask what they were called ... [I] had to ask if I could join in and play with them. (Emily, fellow student)

<sup>2</sup> Captain Sabretooth is a fictional pirate figure in Norway, who is very popular among young children.

Fellow students said they became friends with the students using AAC by taking the initiative to get to know them better, or by being part of social activities organized by adults (e.g., leisure activities with the neighbours, kindergarten, SFO):

I think it was when I went to SFO, when Brenda [class student] and I went to the SFO ... and every day when we went home, we used to pop in to see Beatrice [at the special unit] and asked if we could get a cuddle. I think it started like that. (Becky, fellow student)

I just started helping him [Colin] (Christian, fellow student)

We [Hannah and Harriet] blew bubbles, and then we were in the sandpit, and then we had race [laughing]. (Hannah, fellow student)

Although five students using AAC thought it was easy to make new friends, several barriers to developing friendships were identified. One student claimed it was difficult to establish new friendships because she used technical aids (e.g., orthoses) and depended on help from others. In addition, several parents considered the students' communication restrictions challenged the establishment of friendships: 'That's the gateway to having friends. Being able to communicate.' (Colin's mother). 'It's [Diana's communicative restriction] a huge obstacle. It is quite a severe limitation when developing friendships.' (Diana's mother).

## Discussion

The results indicate there were reciprocal friendships between the students using AAC and the fellow students interviewed. This corresponds with findings reported by Anderson, Balandin, and Clendon (2011). However, there were some differences in the preferences reported by the two groups. The fellow students interviewed preferred students with certain similarities to themselves (i.e., age, gender, rule compliance). Other researchers have reported similar preferences (Rubin, Bukowski, and Bowker 2015). At the same time, the students who used AAC reported a slightly different pattern of preference. Their preferences varied more in terms of age and gender, and some students showed preference for fellow students with similar disabilities located at the school's special unit. The parents' reports indicated that their sons and daughters who used AAC valued fellow students who facilitated activities that they could not manage themselves without support (e.g., "action" and physical play). Physical activities, along with developing romantic feelings for a fellow student are typical in the school peer culture (Corsaro 2009) and indicate that several students using AAC are typical of their school culture despite their communication difficulties.

### *Qualifiers for friendship*

Students using AAC along with fellow students described different qualifiers for friendship. The reported qualifiers related to who the students are (i.e., personal qualifiers) and what students do to become friends (i.e., interactional qualifiers). Although students using AAC and fellow students reported two similar characteristics for friends (i.e., kind, helpful), our results revealed several differences between the student groups concerning personal qualifiers for friendship. Only students using AAC emphasized the characteristic of a friend being someone they could share an activity with (e.g., play). This recognition of a friend being someone to share activities with partly corresponds with the characteristic of being a "playable" friend as noted by Ytterhus (2011). This emphasises the importance of sharing something perceived as valuable with another child. Hence, having a friend was not only the primary goal, but also represented the means for gaining access to and sharing meaningful activities. Additionally, the importance of sharing activities emphasized the dimension of action in the relationships between students using AAC and fellow students. However, fellow students described a larger number of personal characteristics required for a friend. Some of these characteristics were similar to the characteristics provided both by children without disabilities (Anderson, Balandin, and Clendon 2011) and children with disabilities (Morrison and Burgman 2009).

The most important interactional qualifier for establishing friendship, reported by both groups of students, was playing with other students. That play was identified both as a personal qualifier and as an interactional qualifier for establishing friendships emphasises its importance. Both students using AAC and fellow students reported this interactional qualifier, which underscores the role of play in students' peer culture despite the varied capacities in communication and mobility among students using AAC. Hence, our results support the relationship between play and friendship identified by several other researchers (Bagwell and Schmidt 2011; Corsaro 2009; Öhman 2015; Willis et al. 2016).

Fellow students reported more varied and a larger number of interactional qualifiers for friendship than the students using AAC. Several of these strategies implied use of speech (i.e., talking, asking to play together, asking about other children's name or age, asking to be friends). Although the students using AAC used means other than speech to communicate, they were more restricted in their capacity to engage in conversations with other children than their fellow students without disabilities. Certainly the views expressed by the adults in our study supported other researchers' arguments (Pufall and Unsworth 2004) that agency interplays with the ability to communicate, and being able to speak is important for children's establishment of friendship (Hruschka 2010). We would argue

that the difference in number of interactional qualifiers described by the two groups of students may be interpreted in conjunction with the importance of sharing activities, which students using AAC noted as important. We argue that students using AAC may be more oriented towards activities that require less communication but are based upon action. Functional communication (Pettersson 2001) is an important tool for exerting agency in order to achieve friendships with fellow students. Overall, the limited access to interactional qualifiers for friendships indicated that the students using AAC were more vulnerable in establishing friendships than their fellow students who could speak.

In addition to play, participants noted that social structures organized by adults were important for establishing friendship. This finding is consistent with Corsaro's (2009) notion about shared routines in the peer culture, which often take place as a result of adult intervention in children's lives. Hence, the school is an important arena for establishing friendships among students who used AAC. This finding corresponds with previous research (Anderson, Balandin, and Clendon 2011; Calculator 2009) and emphasises the importance of using opportunities to support interaction between students who use AAC and fellow students in order to facilitate friendships.

### ***The importance of agency***

By demonstrating clear preferences for particular people and activities, both students using AAC and fellow students exerted agency in the local contexts in which they participated at school. When describing the characteristics associated with a friend, both groups of students were able to identify qualifiers for friendship. Not only did they identify such qualifiers, but they also acted on the basis of them. Among both groups of students, agency manifested in the competency of differentiating between several options (e.g., persons and activities) and the capacity of choosing and expressing who they wanted to spend time with and which activities they preferred to engage in. In addition, agency among fellow students also included initiatives to spend time with students using AAC. An important commonality concerning agency between students using AAC and fellow students was their stated preference for play. As noted, both groups of students reported play as the favourite activity at school. Thus, by agency they constructed a potential for sharing the same arena and activities and thereby facilitated opportunities for establishing friendships.

Lack of functional speech did not prevent the students who used AAC from exerting agency in certain contexts. Nevertheless, it may have limited the extent of agency, the contexts involved, and the impact of the agency performed. Without sufficient means for intelligible and unambiguous communication with fellow students and staff at school, students who use AAC may be at risk of being overlooked, neglected/ignored, rejected, and/or misunderstood. However, exercising agency requires certain room to manoeuvre, and imposes a responsibility among adults to facilitate spaces for children's voices at school (Hohti and Karlsson 2014). Our results indicate the need for reflexive practice both among fellow students and staff including being sensitive, interpretative, and appreciative towards initiatives taken by students using AAC to influence their social relationships.

This study had several limitations. Restrictions in the students using AAC's communication as well as the interpretation of their communication may have obscured nuances in their reports about how they established friendships. Moreover, no member checks accompanied the data analysis to validate the data. Such checks might have provided supplementary information or revealed misinterpretations. However, the results coincided with the first author's observations during his fieldwork.

To conclude, results from this study emphasised the importance of acknowledging the students' voice concerning their social relationships. Both groups of students made important contributions about establishing friendships among students using AAC and fellow students. Our results identified and acknowledged agency among students using AAC and their fellow students concerning preferences for particular students and activities within their local contexts at school. Furthermore, the results highlighted the importance of play as a gateway to engage in activities, which may promote the establishment of friendship. Future research exploring how students using AAC and fellow students play (e.g., initiations to play, perceived outcome) is warranted. In addition, we suggest the investigation of establishing friendship among older students using AAC.

### **Additional File**

The additional file for this article can be found as follows:

- **Appendix 1.** Examples of initial and focused coding of interview data in category Demonstrating clear preferences. DOI: <https://doi.org/10.5334/sjdr.51.s1>

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## Competing Interests

The authors have no competing interests to declare.

## References

- Adler, P. A., and P. Adler. 1998. "Friendships: Close and Casual." In *Peer Power – Preadolescent Culture and Identity*, edited by P. A. Adler, and P. Adler, 115–35. New Brunswick, NJ: Rutgers University Press.
- Anderson, Kate, Susan Balandin, and Sally Clendon. 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. DOI: <https://doi.org/10.3109/07434618.2011.577449>
- Asbjørnslett, Mona, Gunn Helene Engelsrud, and Solvi Helseth. 2012. "'Friendship in all directions': Norwegian children with physical disabilities experiencing friendship." *Childhood* 19(4): 481–94. DOI: <https://doi.org/10.1177/0907568211428093>
- Bagwell, Catherine L., and Michelle E. Schmidt. 2011. *Friendships in childhood and adolescence, Guilford series on social and emotional development*. New York: Guilford Press.
- Berndt, Thomas J., and Melissa A. McCandless. 2009. "Methods for investigating children's relationships with friends." In *Handbook of peer interactions, relationships, and groups*, edited by Kenneth H. Rubin, William M. Bukowski, and Brett Laursen, 63–81. New York, NY, US: The Guilford Press.
- Calculator, Stephen N. 2009. "Augmentative and alternative communication (AAC) and inclusive education for students with the most severe disabilities." *International Journal of Inclusive Education* 13(1): 93–113. DOI: <https://doi.org/10.1080/13603110701284656>
- Charmaz, Kathy. 2014. *Constructing grounded theory*. 2nd ed, *Introducing qualitative methods series*. London: Sage.
- Chung, Yun-Ching, Erik W. Carter, and Lynn G. Sisco. 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): 349–67. DOI: <https://doi.org/10.1352/1944-7558-117.5.349>
- Corsaro, William A. 2009. "Peer Culture." In *The Palgrave Handbook of Childhood Studies*, edited by Jens Qvortrup, William A. Corsaro, and Michael-Sebastian Honig, 301–15. Palgrave Macmillan.
- Corsaro, William A. 2015. *The sociology of childhood*. 4th ed. *Sociology for a new century*. Los Angeles, Calif: Sage.
- Engle, Jennifer M., Nancy L. McElwain, and Nicole Lasky. 2011. "Presence and quality of kindergarten children's friendships: concurrent and longitudinal associations with child adjustment in the early school years." *Infant & Child Development* 20(4): 365–86. DOI: <https://doi.org/10.1002/icd.706>
- Fehr, Beverly. 1996. *Friendship Processes*. Thousand Oaks: SAGE Publications. DOI: <https://doi.org/10.4135/9781483327440>
- Glenn, Nicole M., Camilla J. Knight, Nicholas L. Holt, and John C. Spence. 2013. "Meanings of play among children." *Childhood* 20(2): 185–99. DOI: <https://doi.org/10.1177/0907568212454751>
- Hammersley, Martyn. 2016. "Childhood Studies: A sustainable paradigm?" *Childhood*. DOI: <https://doi.org/10.1177/0907568216631399>
- Hohti, Riikka, and Liisa Karlsson. 2014. "Lollipop stories: Listening to children's voices in the classroom and narrative ethnographical research." *Childhood* 21(4): 548–62. DOI: <https://doi.org/10.1177/0907568213496655>
- Hruschka, Daniel Jacob. 2010. *Friendship: Development, Ecology, and Evolution of a Relationship, Origins of Human Behavior and Culture*. Berkeley: University of California Press. DOI: <https://doi.org/10.1525/california/9780520265462.001.0001>
- James, Allison. 2009. "Agency." In *The Palgrave Handbook of Childhood Studies*, edited by Jens Qvortrup, William A. Corsaro, and Michael-Sebastian Honig, 34–45. London: Palgrave.
- Komulainen, Sirkka. 2007. "The Ambiguity of the Child's 'Voice' in Social Research." *Childhood* 14(1): 11–28. DOI: <https://doi.org/10.1177/0907568207068561>
- Mayall, Berry. 2002. *Towards a Sociology for Childhood*. Buckingham: Open University Press.
- Morrison, Rachel, and Imelda Burgman. 2009. "Friendship Experiences among Children with Disabilities Who Attend Mainstream Australian Schools." *Canadian Journal of Occupational Therapy* 76(3): 145–52. DOI: <https://doi.org/10.1177/000841740907600303>
- Öhman, Margareta. 2015. "Ska vi leka som vi gjorde igår? Om lek som relation och vänskap." In *Barndom i barnehagen: Vennskap*, edited by Maria Øksnes, and Anne Greve, 101–18. Oslo: Cappelen Damm Akademisk.
- Østvik, Jørn, Borgunn Ytterhus, and Susan Balandin. 2017. "Friendship between children using augmentative and alternative communication and peers: A systematic literature review." *Journal of Intellectual & Developmental Disability* 42(4): 403–415. DOI: <https://doi.org/10.3109/13668250.2016.1247949>
- Pettersson, Britt-Marie. 2001. *Hur kommunicerar vi med varandra? – Ett samverkansmaterial för föräldrar till barn med funktionshinder och särskolans personal för att stödja barnets kommunikation [How do we communicate with each other? – A collaborative material for parents of children with disabilities and special school personnel to support the child's communication.]* Stockholm: Stiftelsen ALA.
- Pufall, Peter B., and Richard P. Unsworth. 2004. "The Imperative and the Process for Rethinking Childhood." In *Rethinking Childhood*, edited by Peter B. Pufall, and Richard P. Unsworth, 1–21. New Brunswick, NJ, USA: Rutgers University Press.

- Raghavendra, Parimala, Catherine Olsson, Janelle Sampson, Rachael McInerney, and Timothy Connell. 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. DOI: <https://doi.org/10.3109/07434618.2011.653604>
- Raghavendra, Parimala, Emma Grace, Lareen Newman, Denise Wood, and Tim Connell. 2013. "‘They think I’m really cool and nice’: The impact of Internet support on the social networks and loneliness of young people with disabilities." *Telecommunications and the Digital Economy* 63(2): 1–22. DOI: <https://doi.org/10.7790/tja.v63i2.414>
- Robson, Elsbeth, Stephen Bell, and Natascha Klocker. 2007. "Conceptualizing agency in the lives and actions of rural young people." In *Global Perspectives on Rural Childhood and Youth: Young Rural Lives*, edited by Ruth Panelli, Samantha Punch, and Elsbeth Robson, 135–48. New York/Oxon: Routledge.
- Rogeskov, Maria Lomborg, Helle Hansen, and Steen Bengtsson. 2015. "A Comparison of Social Life among 11-Year-Old Disabled Children and 11-Year-Old in General." In *Childhood and Disability in the Nordic Countries: Being, Becoming, Belonging*, edited by Rannveig Traustadóttir, Borgunn Ytterhus, Snæfríður Thora Egilson, and Berit Berg, 179–95. London: Palgrave. DOI: [https://doi.org/10.1057/9781137032645\\_12](https://doi.org/10.1057/9781137032645_12)
- Rubin, Kenneth H., Robert Coplan, Xinyin Chen, Julie C. Bowker, and Kristina L. McDonald. 2011. "Peer Relationships in Childhood." In *Social and Personality Development: An Advanced Textbook*, edited by Michael E. Lamb, and Marc H. Bornstein, 309–60. New York: Psychology Press.
- Rubin, Kenneth H., William M. Bukowski, and Julie C. Bowker. 2015. "Children in Peer Groups." In *Handbook of Child Psychology and Developmental Science*, edited by Marc H. Bornstein, and Tama Leventhal, 321–412. Wiley. DOI: <https://doi.org/10.1002/9781118963418.childpsy405>
- Therrien, Michelle C. S., Janice Light, and Lauramarie Pope. 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. DOI: <https://doi.org/10.3109/07434618.2016.1146331>
- Thirumanickam, A., P. Raghavendra, and C. Olsson. 2011. "Participation and social networks of school-age children with complex communication needs: a descriptive study." *Augmentative and Alternative Communication* 27(3): 195–204. DOI: <https://doi.org/10.3109/07434618.2011.610818>
- Wickenden, Mary, and Gayatri Kembhavi-Tam. 2014. "Ask us too! Doing participatory research with disabled children in the global south." *Childhood* 21(3): 400–17. DOI: <https://doi.org/10.1177/0907568214525426>
- Willis, Claire, Sonya Girdler, Melanie Thompson, Michael Rosenberg, Siobhan Reid, and Catherine Elliott. 2016. "Elements contributing to meaningful participation for children and youth with disabilities: a scoping review." *Disability and Rehabilitation*, 1–14. DOI: <https://doi.org/10.1080/09638288.2016.1207716>
- Ytterhus, Borgunn. 2011. "„Das Kinderkollektiv“ – Eine Analyse der sozialen Position und Teilnahme von behinderten Kindern in der Gleichaltrigengruppe." In *„Dabeisein ist nicht alles“ – Inklusion und Zusammenleben im Kindergarten*, edited by Max Kreuzer, and Borgunn Ytterhus. München.

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