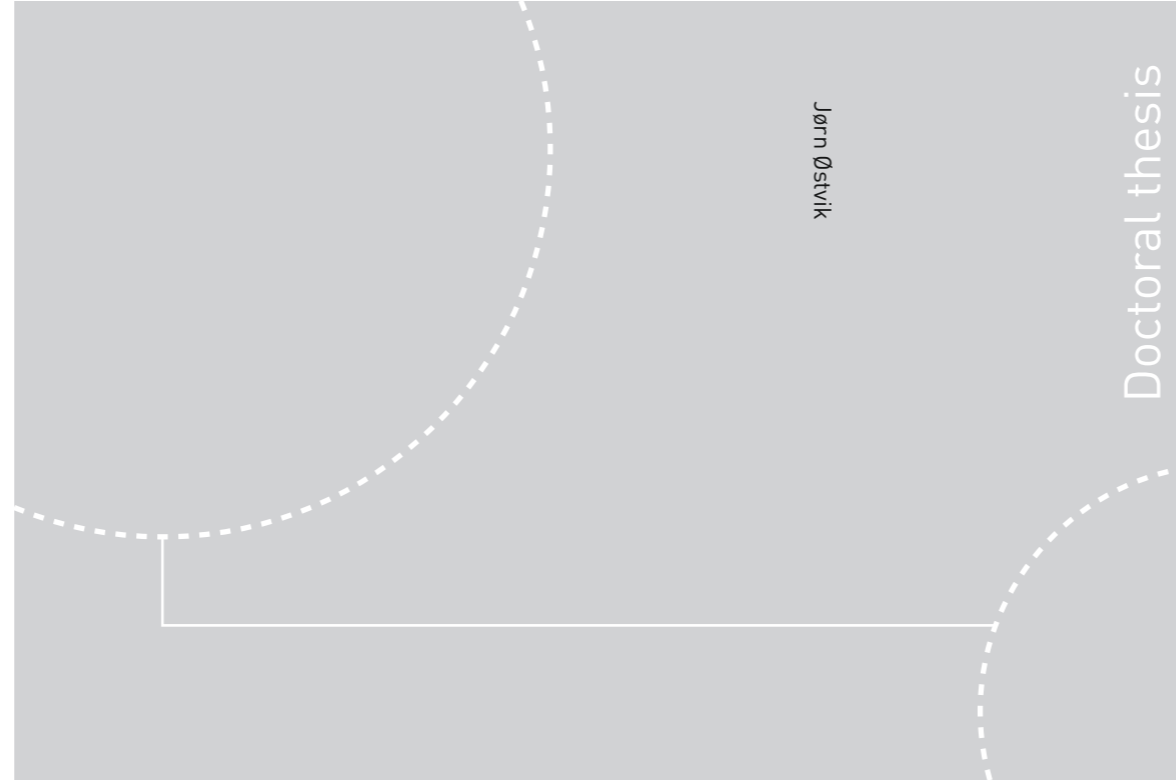


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Jørn Østvik

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 **NTNU**  
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Science and Technology

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**NTNU**  
Norwegian University of Science and Technology  
Thesis for the Degree of  
Philosophiae Doctor  
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Department of Public Health and Nursing

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Thesis for the Degree of Philosophiae Doctor

Trondheim, October 2017

Norwegian University of Science and Technology  
Faculty of Medicine and Health Sciences  
Department of Public Health and Nursing



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# Sammendrag

Vennskap regnes som en av de mest betydningsfulle sosiale relasjoner gjennom livet, og skolen er en viktig arena for barns utvikling av vennskap. På tross av at det er gjort betydelig forskning om vennskap blant elever uten funksjonsnedsettelse, har få studier utforsket vennskap blant elever som helt eller delvis mangler et funksjonelt talespråk og som dermed er avhengig av alternativ og supplerende kommunikasjon (ASK).

Denne studien har hatt som mål å få en større forståelse av vennskap blant elever som bruker ASK i den ordinære, norske offentlige skolen på de lavere trinnene. Studien baseres på følgende forskningsspørsmål: (1) Hva karakteriserer vennskap mellom elever som bruker ASK og deres medelever? (2) Hva slags faktorer i skolemiljøet influerer på vennskap mellom elever som bruker ASK og deres medelever? (3) Hvilken rolle har elever som bruker ASK, medelever, foreldre til elever med ASK og skolepersonale i utviklingen av vennskap blant elever som bruker ASK? Studien består av to deler: en systematisk litteraturstudie og en empirisk studie av sju elever som bruker ASK. Resultatene fra studien er rapportert i fem artikler. Datamaterialet fra den empiriske studien omfatter semi-strukturerte intervjuer av elever som bruker ASK, medelever, foreldre til elever som bruker ASK og skolepersonale. Transkripsjonene er analysert med utgangspunkt i en konstruksjonistisk grunnet teori tilnærming.

Resultatene fra den empiriske studien danner grunnlaget for utviklingen av en grunnet teori om vennskap blant elever som bruker ASK, basert på sju konseptuelle kategorier. Den grunnet teorien omfatter forutsetninger for elevenes vennskap på følgende tre nivåer: (1) Det organisatoriske og strukturelle nivået (manglende omforente rammer, ambivalens og motsetninger om strukturer, og elever som besøker klassen). (2) Det interpersonlige nivået (interaksjonelle fasilitatorer og barrierer). (3) Det intrapersonlige nivået (kvalifiserer for vennskap, demonstrerer tydelige preferanser). Forutsetningene på alle tre nivåer influerer utviklingen av få, nære sosiale relasjoner blant elevene som brukte ASK. Diskusjonen av studiens resultater omfatter teoretiske implikasjoner, empiriske implikasjoner, skolepolitiske implikasjoner, og metodologiske refleksjoner.





# Abstract

Friendships are one of the most important social relationships in life, and the school is an important arena where children establish these. Despite the extensive research on friendships among students without disabilities, very few studies have explored the friendships among students with little or no functional speech who rely on augmentative and alternative communication (AAC).

The aim of this study was to achieve a deeper understanding of friendships among students who use AAC in the Norwegian primary mainstream public school. It addressed the following research questions: (1) What characterizes friendships between students using AAC and their fellow students? (2) What factors in the school environment affect friendships between students using AAC and fellow students? (3) What is the role of students using AAC, fellow students, parents, and staff in the development of friendships among students who use AAC? The study consists of a systematic literature review and an empirical study of seven students using AAC. The results are reported in five papers. The data in the empirical study included semi-structured interviews with students using AAC, fellow students, parents of students using AAC, and staff. The transcriptions were analyzed using a constructivist grounded theory approach.

The results from the empirical study formed the basis for the development of a grounded theory on friendships among students using AAC, informed by seven conceptual categories. The grounded theory includes preconditions for the students' friendships at the following three levels: (1) The organizational and structural level (i.e., lacking common purpose, ambivalence and contradictions about structures, and visiting fellow students). (2) The interpersonal level (i.e., interactional facilitators and barriers). (3) The intrapersonal level (i.e., qualifying for friendships, demonstrating clear preferences). The issues at all levels influenced the development of few close social relationships among the students who used AAC. The discussion section includes theoretical implications, empirical implications, policy implications, and methodological reflections.



# Acknowledgement

Friendship is a comprehensive topic. It holds experience, expectation, identity, relational understanding, and much, much more. I have not traveled on this academic journey of friendship all alone. I want to thank some people who have been of great inspiration and support prior to commencement and during the four years of this project.

First, I want to thank the students who use AAC – for accepting my invitation and participating in the study. Not to forget the participating fellow students, parents, and staff members who contributed with their unique and complementary perspectives. These 41 participants made this study of friendship possible. Thank you all.

Moreover, I think it is important to acknowledge my history as a professional in Statped, who have been my employer since 1996. Thus, I want to thank my former colleague Aase Lyngvær Hansen, who contributed with reflexive thinking about my project idea. I am grateful that you introduced me to one of the most important supporting people in this project, my main supervisor and professor Borgunn Ytterhus. I also want to thank my dear colleague Hanne Almås for our longstanding, close, and constructive cooperation in promoting communication among children, youths, and adults who need AAC. Our shared efforts and contributions have combined to create a symbiosis of experience and knowledge that formed one of several important starting points for this work. Thank you very much. Additionally, I want to thank my dear colleague Herlaug Hjelmekke, for your passion, wisdom, and invaluable work in making inclusive education possible for students who don't have the opportunity to claim their rights. I still remember our longstanding and interesting conversations about life and professional practice as guiding lights.

During the period as a PhD candidate, I have made new friendships in my workplace at NTNU. The lonely life at my office has been replaced daily by pleasant conversations in the lunchroom, interesting spontaneous discussions in the kitchen or in the hallway, or just the simple but important experience of belonging to a group of very nice people. This is addressed to all of you – thank you very much.

Two people have been of incredible value to me during my research. I want to give special thanks to my supervisors, main supervisor and professor Borgunn Ytterhus at NTNU and co-supervisor and professor Susan Balandin at Deakin University, Australia. With

knowledge and insight, patience, and passion for this field of research you make people shine. Borgunn, you have provided invaluable encouragement in periods of considerable academic challenges. Your capacity to always be accommodating has been striking. I admire your ability to supervise with the highest professional expertise, while still demonstrating a respectful and attentive attitude for my academic contributions. You really do what you speak! Susan, being located on the opposite side of the earth has not prevented your insightful advices from improving my work. With sharp academic glances, you have helped me to refine my perspectives and constantly challenged my professional achievements. Thanks to both of you for the faith you have had in me and this project.

Finally, devoted thanks to my dear and lovely wife Eva Kristin, who has provided the most valuable and instructive friendship ever to me. You demonstrate the very facets of a close and best friendship. Every day – every context – always. Thank you.

Trondheim, May 2017

*To Naomi, who makes us smile.*

# List of papers

## Paper 1

Østvik, J., Ytterhus, B., & Balandin, S. (2016). Friendship between children using augmentative and alternative communication and peers: A systematic literature review. *Journal of Intellectual & Developmental Disability*, 1-13.  
doi:10.3109/13668250.2016.1247949

## Paper 2

Østvik, J., Balandin, S., & Ytterhus, B. (2017). A “Visitor in the Class”: Marginalization of Students Using AAC in Mainstream Education Classes. *Journal of Developmental and Physical Disabilities*, 29(3), 419-441. doi:10.1007/s10882-017-9533-5

## Paper 3

Østvik, J., Balandin, S., and Ytterhus, B. Interactional facilitators and barriers in social relationships between students who use AAC and fellow students. *Manuscript submitted and under review for publication.*

## Paper 4

Østvik, J., Ytterhus, B., and Balandin, S. (2017). “So, how does one define a friendship?” : Identifying friendship among students using AAC in inclusive education settings. *European Journal of Special Needs Education*, 1-15. doi:10.1080/08856257.2017.1312799

## Paper 5

Østvik, J., Ytterhus, B., and Balandin, S. Gateways to friendships among students who use AAC. *Manuscript submitted and under review for publication.*



# Introduction

*With friends our attention becomes focused, distractions lessen, awareness of time disappears: We emerge into a world in which the intimacy and joy shared with others is the fundamental reality, and for a time the world becomes a different place.*

Reed Larson and Nancy Bradney <sup>1</sup>

For most children, friendship is a natural, enjoyable, and prominent part of their childhood. As children grow, they become less dependent of their care providers and they spend increasingly more time with peers. Their social networks develop as they engage in activities with friends, acquaintances, and strangers. During childhood, adolescence, and adulthood some of these social relationships may evolve into best friend relationships and remain vital parts of the individual's social life. This is what most parents hope for their children. This is what most children experience. Thus, from a developmental perspective, friendship is a normative experience (Bagwell & Schmidt, 2011).

It is easy to overlook and underestimate the sorrow or loneliness of unfulfilled friendships when well-functioning social relationships are present in children's lives. Furthermore, the success of children's friendships cannot be taken for granted. Children grow up in a range of different circumstances. A significant contributor to a good quality of life is that the child is able to communicate functionally. Communication is a core characteristic of all human beings, and an essential part of human interaction. Most children use speech to communicate, participate, play, learn, and to develop social relationships. However, not all children have functional speech. Children with little or no functional speech may rely on augmentative and/or alternative communication (AAC) in order to express themselves and to understand other people's communication. Children who communicate without functional

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<sup>1</sup> Larson, R. W., & Bradney, N. (1988, p. 124). Precious moments with family members and friends. In R. M. Milardo (Ed.), *Families and social networks* (pp. 107–126). Newbury Park, CA: Sage.



speech are likely to have different challenges when developing close social relationships compared to their speaking peers. Results from previous research indicate that people who use AAC may experience difficulties in establishing and maintaining friendships due to their communication challenges (McNaughton & Kennedy, 2010). This dissertation directs attention to two important aspects of children's lives – friendship and communication. The context for this investigation is the school. Hence, this dissertation is about friendship among children who use AAC in their daily life in mainstream primary public schools in Norway.

## Overall aim of the study

The overall aim of this dissertation is to achieve a deeper understanding of friendships among students who use AAC in the Norwegian mainstream primary public school. The study is an exploration of the perceptions of friendships from the viewpoints of students, parents, and staff at school. By exploring the perceptions of the students' friendships from different viewpoints, this dissertation provides new knowledge in a field characterized by limited research efforts. Hence, the results reported in this dissertation may increase attention towards the social life of students who use AAC among researchers, policy makers, teachers, practitioners, and parents. In the long run, increased attention to these issues in research, clinical, and educational practice may result in additional efforts to support the students' opportunities to develop and engage in close and lasting friendships with peers.

The school is an important arena for children's development of friendships and social skills (Ogden, 2009). Apart from the family, the school is perhaps the most important social context for learning, development, and establishment of social relationships among western children. Hence, this study is about friendships at school. Moreover, this study includes students using AAC between 6 and 10 years of age. The decision to limit the students' age to this period is based upon the following: (1) Researchers have identified a turning point in children's social participation, peer activities, and social relations at this age (Ytterhus, Wendelborg, & Lundeby, 2008). After about 10 years of age, children with disabilities are increasingly at risk of being marginalized from social relationships with peers. (2) In his study of Canadian and Scottish children aged between 6 and 14 years without disabilities, Brian Bigelow (1977) argued that children's expectations of friendship change as they grow older. Until children are about 11 years old, their expectations of a friend relate to someone they find it expedient to play with in order to have fun (the reward-cost phase, 7-8 years) and of someone with whom they share common values and rules (the normative phase, 9-10 years).

When children grow older, their expectations of a friend become more related to someone they can share empathy, understanding, and self-disclosure (the empathy phase, 11-13 years). The requirements of communication may become more stringent in the empathy phase than in the former phases because interactions become increasingly based on conversation. I have chosen to limit the age group to children below the empathy phase in order to investigate friendships that primarily do not rely on conversation. (3) Based upon the first two arguments, knowledge from this study may serve as a basis for interventions aiming to facilitate the development of friendships between students who use AAC and fellow students during the first years at primary school.

## Research questions

The research reported in this dissertation is based upon three main research questions:

**1. *What characterize friendships between students using AAC and their fellow students?***

The research literature has not yet provided any support how knowledge from research on friendships among children without disabilities applies to friendships among children who use AAC. This research question aims to explore the friendships among students who use AAC and the characteristics of those friendships, including the relevance of understanding these friendships within the framework of existing models of establishment and maintenance of friendship.

**2. *What factors in the school environment affect friendships between students using AAC and fellow students?***

Friendships among children are not solely influenced by children's individual characteristics. Certainly, environmental factors also influence children's ability to form friendships (Fehr, 1996). As the school is an important context for making friendships among students, it is important to investigate how structural and organizational factors may influence the friendships among students who use AAC.

**3. *What is the role of students using AAC, fellow students, parents, and staff in development of friendships among students who use AAC?***

At school, people in different roles influence the students using AAC's social relationships. To question how this happens provides new knowledge to our understanding of the friendships among students who use AAC and how they develop.

## Situating my position

I did not enter this field of research with a blank slate. For the reader to understand my personal and professional background for this study (Clarke, 2005; Tong, Sainsbury, & Craig, 2007), I provide a brief description of my position below. The topic and the research questions in this dissertation have developed from the last 10 years of personal experience with and knowledge of people who use augmentative and alternative communication. The basis for some of the choices I have made in the research have been related to my personal history as a professional in AAC. Brown (2000) described these kinds of considerations as social factors in research, and include (1) the goals of research, (2) the ethical standards for research, and (3) personal beliefs. My position is consistent with Max Weber's contention that social science research is not value neutral (Martin & McIntyre, 1994).

Until I commenced this research, I had worked for 17 years as a senior advisor in Statped<sup>2</sup>. My work included a variety of tasks related to AAC. The work entailed communication assessment, supervision of professionals and parents and/or relatives involved in interventions promoting communication among children, youth, and adults using AAC. It also included development work and dissemination of knowledge in the field. In the same time period, I had several commitments to the Norwegian branch of ISAAC<sup>3</sup> that works to improve the lives of people who use AAC. I was also engaged in development work in several working groups convened by The Norwegian Directorate for Education and Training<sup>4</sup>. During this period, meetings with children, youth, and adults who used AAC, parents and relatives, and professionals in day care facilities and schools had an impact on the emerging idea for this research project.

In 2006, along with colleagues in Statped I had the opportunity to translate the assessment and intervention planning tool *Social Networks* (Blackstone & Berg, 2003) into Norwegian. This material positions communication within a social context, by paying

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<sup>2</sup> Statped ([www.statped.no](http://www.statped.no)) is a national, special needs education support service for municipalities and county municipalities in Norway.

<sup>3</sup> Isaac Norway ([www.isaac.no](http://www.isaac.no))

<sup>4</sup> [www.udir.no](http://www.udir.no)

attention to the person's interaction with the environment, through descriptions of social networks, conversation topics, and strategies that communication partners use to support communication. Through numerous interviews with parents of children who were using AAC and professionals, where I used the Social Networks material in the role of advisor in Statped, I developed an understanding that many of the children who were at the starting point of the assessments, lacked close social relationships with peers. Furthermore, my encounters with three students using AAC who I became acquainted with during a project in a mainstream public school were crucial for promoting my interest in and understanding of social relationships, inclusion, and the importance of visionary leadership in the school administration (Østvik & Almås, 2010). Gradually, I developed a growing awareness of the numerous reports about the children's lack of close social relationships. Later, I became curious about the thoughts and emotions children using AAC might have about friendship, what friends they have, how they make friends with other children, and what expectations they have of making friends. My intellectual interpretations as well as my emotions that emerged when I heard the stories about the children's social relationships guided me to initiate this research project.

When I started working on the doctoral dissertation at NTNU in May 2013, I recognized that my knowledge-based understanding of children who use AAC and the emotional experiences acted as preconceptions of the field. According to Malterud (2001, p. 484), preconceptions consist of "previous personal and professional experiences, prestudy beliefs about how things are and what is to be investigated, motivation and qualifications for exploration of the field, and perspectives and theoretical foundations". Preconceptions precede the understanding of a phenomenon and affect how the specific matter is understood (Dalen, 2011; Wormnæs, 1987). In my work with this dissertation, my preconceptions have underpinned several of the key decisions I have made in the development of research questions, the conduct of the fieldwork, and the analysis of the data material. My preconceptions were related to in-depth knowledge of the Norwegian school system and experiences and skills in communicating with individuals using AAC. Additionally, expectations concerning the student using AAC's social relationships, the staff's competence in AAC, the organization of the students using AAC's educational provision, and how to get access to the field in order to conduct the fieldwork were also part of my preconceptions. When entering this research field, I was obliged to take off my "supervisor hat" and put on my "researcher hat" in order to remain open to the data. Firstly, I tried to identify my

preconceptions and their consequences for this research field. Secondly, I tried to apply strategies for managing my preconceived ideas, including using a constructivist grounded theory approach, discussing the data with my supervisors, and writing memos during the data analysis. Hence, my preconceptions are not necessarily abolished, but rather I have tried to identify and manage them.

## Theoretical framework

*The quality of anyone's life is enhanced by opportunities to develop and maintain friendships with peers and to share the mutual rewards that are possible.*

Debbie Staub<sup>5</sup>

People have different prerequisites for managing their everyday life, reaching their goals, or fulfilling their dreams. Having an impairment can change the individual's opportunities and result in restrictions in life. Additionally, a variety of intrinsic and extrinsic obstacles for living the life desired may be present. Disability has been the subject of different viewpoints (Grue, 2009). Discourses based on medical perspectives on disability relate the causes of disability to the impairments associated with the individual and thereby locate the problems of disability with the individual due to physical, sensory and/or cognitive pathology (Goodley, 2011). As Goodley (2014) noted, "when disability is phrased through medical knowledge it threatens to be read solely through biological, genetic, hormonal, neurological and physiological language" (p. 4). On the other hand, social discourses of disability, which have emerged during the last 20-25 years, recognize the existence of impairments with disability being understood as a "negative social reaction" (Sherry, 2010, p. 10) to those impairments. The Disabled People's International (1982) made the following distinction between impairment and disability, based on the definition provided by the Union of the Physically Impaired Against Segregation (1976): Impairment is the functional limitation within the individual caused by physical, mental or sensory impairment. In contrast, disability is the loss of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers. Hence, among social discourses of disability, disability is interpreted as a social construct and "an act of exclusion: people are disabled by contemporary society" (Goodley, 2011, p. 8). In his review of perspectives within the social

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<sup>5</sup> Staub, D. (1998, p. 97). *Delicate threads: Friendships between children with and without special needs in inclusive settings*. Bethesda, US: Woodbine House.

discourse of disability, Goodley (2011) described several models of disability (i.e., the social model, the minority model, the cultural model, and the relational model). Here, I will comment on two of these perspectives, namely the social model of disability and the Nordic relation model of disability. I choose to comment on these perspectives in more detail due to their impact on the disability discourse during the last decades (i.e., the social model of disability) and the widespread position in Nordic disability research that I consider myself to be part of (i.e., the Nordic relational model of disability).

The social model of disability (Oliver, 1990), founded on the work of the Union of the Physically Impaired Against Segregation, represents a different perspective from the medical perspective by (1) arguing that disability is caused by the construction of social barriers, and by (2) de-emphasizing the impact of impairment on disability. However, the latter viewpoint has been subject to controversy. The social model of disability, especially the British branch of disability studies, has been strongly criticized for not acknowledging the influence impairment might have on disability (e.g., Shakespeare, 2014). Shakespeare (2014) associated closely with the Nordic relational model of disability, which assumes that (1) disability occurs as a result of a mismatch between the individual's capacity and the demands represented by the environment, (2) disability is determined by the situation or the context, and (3) disability is relative due to the characteristics of the environment (Goodley, 2011; Tøssebro, 2004). Hence, within this perspective disability occurs throughout interactions between the individual's capacities and constraints (e.g., impairment) and the environment's demands and potential inability to fulfill the individual's needs. This viewpoint also corresponds with the definition of disability provided in the Convention of the Rights of Persons with Disabilities (CRPD) (UN General Assembly, 2006).

In the papers included in this dissertation, I have endeavored to use the term *disabilities* to describe disabilities within the perspectives of the Nordic relational model of disability as far as possible. At the same time, I have realized the importance of adopting a pragmatic position to this issue, because of the journals' policy of the use of terms and thereby the possibilities of getting the papers published. Besides, the papers did not allow for any deeper explanations of my standpoints on disabilities. Therefore, in order to use a terminology expressing the substantial differences between an individual's impairment and disability caused by environment's lack of meeting the individual's needs, I use the terms impairment and disabilities explicitly in the compilation of this dissertation (page 1 to 144).

An individual's recognition of being different due to an impairment may cause the perception by others of inferiority due to the discrediting attribute of the impairment, defined as the *stigma* (Goffman, 1968). Individuals who are aware of possessing a stigma may wish to reduce the attention on or the visibility of the stigma. Goffman (1968) defined this process as *covering*. Covering may occur when a child decides against using a technical aid in an encounter with children without impairments. She may cover her use of the aid (which she may depend on) in order to avoid stigmatization associated with an underachievement caused by the impairment that the particular aid is aimed to support. Ytterhus (2012)'s description of mandating rules among children might shed some light on the act of covering. Among children aged 9-12 years, Ytterhus identified three mandating rules: Being good enough, being similar enough, and being status congruent (i.e., congruence between competence and the use of symbols common in the peer group). It is reasonable to argue that the presence of mandating rules might motivate children to perform covering when perceiving a stigma. Despite the children with impairments' potential of considering themselves as stigmatized, Wickenden (2011)'s study of teenagers who used AAC along with Asbjørnslett (2015)'s study of physically impaired children aged 11-14 years indicated that youngsters with impairments also have similar preferences for activities and interests as their peers without impairments.

This dissertation rests on three main areas of research, clinical, and educational practice – augmentative and alternative communication, friendship, school policy and educational provision. In the following, each of these areas will be elaborated on as the basis of the research questions defined. However, I will first elaborate on this study's philosophy of science.

## The social construction of friendship

This study uses a social constructivist approach (Delanty & Strydom, 2003; Yardley & Bishop, 2010) in the investigation of friendships among students who use AAC. The social constructivist approach, which was largely based on the contributions of Berger and Luckmann (1966), rejects the legitimacy of an objective social reality but acknowledges the existence of multiple social constructions of realities (Guba & Lincoln, 1989; Lincoln & Denzin, 2013; Mills, Bonner, & Frances, 2006). According to Lincoln, Lynham, and Guba (2013), the constructivist paradigm is characterized by three main features: (1) a relativist ontology (arguing that several realities exist), (2) a subjectivist epistemology (understanding



is constructed in cooperation between researcher and participant), and (3) naturalistic methodological procedures (conducting research in naturalistic environments). A key argument of social constructivism is that “the ways in which we collectively think and communicate about the world affect the way that the world is” (Elder-Vass, 2012, p. 4). This is closely associated with the Thomas theorem which states that “if men define situations as real, they are real in their consequences” (Thomas & Thomas, 1928, p. 572). Consequently, in my own case, my interpretation of the phenomenon of friendship influences my identification of my friendships. What then constitutes a social construction? According to Nortvedt and Grimen (2004), a social construction entails production of and maintenance of cognitive activities (i.e., thoughts, understandings, decisions, and actions) regarding social phenomena.

I do not declare myself entirely committed to the radical branch of constructivism, which claims a subjective reality in both natural *and* social phenomena. However, I do acknowledge the presence of an objective reality in natural phenomena (e.g., the medical existence of damage to the larynx or malformations of the brain during pregnancy may cause limitations or barriers in the ability to speak), and I fully recognize social constructivist perspectives on social phenomena such as communication and friendships which are the central issues of concern in this dissertation. Moderate (“narrow”) constructivists accept the existence of natural phenomena that are not socially constructed (Nortvedt & Grimen, 2004). Hence, I consider myself a moderate constructivist (Elder-Vass, 2012; Hess, 1997), which position is compatible with the viewpoints of the Nordic relational model of disability described above (cf. page 8) which acknowledges the objectivity of the individual’s impairment and the social construction of disability.

This study carries several attributes that belong to the constructivist paradigm. Firstly, interviewing is a collaborative work between the researcher and the interviewee (Gubrium & Holstein, 2003). During the interviews I conducted, students, parents, and school staff made individual interpretations of social relationships among the students. Through the stories told, the perspectives put forward, and the reflections of social life given, the participants in the project constructed different views of their life worlds in which multiple social constructed realities emerged (Guba, 1990). As the life world represents individual perceptions of everyday life (Brinkmann & Kvale, 2015) and descriptions of how the individual relates to this life (Dalen, 2011), individual constructions of social life represent important aspects of knowledge of peoples’ interpretations, motivations, and priorities. Secondly, my perspectives in the interviews, my preferences in the observations, and my interpretations of the stories

told are also constructions, representing a researcher's interpretations of social life and social relationships among the students involved. Thirdly, my analysis are deconstructions and subsequently analytical reconstructions of the original constructions made by the participants about their social life worlds (Charmaz, 2014; Sohlberg & Sohlberg, 2009). Additionally, the analysis emanates from my methodological considerations. Fourthly, students' everyday life in inclusive mainstream education is complex. Descriptions of this complexity benefit from the use of a grounded theory study (Belanger, 2000), which may secede from more unified theories by seeing data in fresh ways (Charmaz, 2014). Finally, in my encounters within the field of practice during the fieldwork it was important to critically assess the empirical data that could be relevant for the research questions defined for this study. This implied that I have tried to keep a professional distance from the field of study and not uncritically adopt the perspectives and language of those I have studied (Bourdieu, Chamboredon, Passeron, & Kraus, 1991). Through a constructivist approach using constructivist grounded theory (Charmaz, 2014) I have developed my own constructions of the students' social lives at school based on their initial data. To conclude, I cite Kathy Charmaz: "Constructivist grounded theorists assume that both data and analyses are social constructions that reflect the conditions of their production" (2014, p. 240).

Our ontological standpoint influences how we understand the phenomenon of friendship. Within an idealistic position, subjective ideas, notions, perceptions, and interpretations of the phenomenon are emphasized (Sohlberg & Sohlberg, 2009). From this perspective, friendship can be understood as a subjective experienced social phenomenon that does not necessarily originate from observable accounts in the physical world. This is consistent with Sohlberg and Sohlberg's argument that an objective social reality does not exist in a social psychological idealistic perspective, which also is part of the constructivist paradigm. The review of literature on friendship (cf. Paper 1) revealed that friendship is a social phenomenon without an agreed definition. Definitions clarify the meaning of concepts, which are important in science as they facilitate "where to look, what to look for, or how to recognize what you were looking for when you find it" (Becker, 1998, p. 110). In this study, the conceptualization of friendship is important. Although definitions "serve to fix boundaries of phenomena or the range of applicability of terms or concepts" (Suppe, 2000, p. 76), several types of definitions exist and form the terms for how they are interpreted and applied. The phenomenon that is subject to a definition is referred to as the *definiendum* (e.g., friendship), and what limits the phenomenon is denoted as the *definiens* (Suppe, 2000). Although this may

be subject to discussion, I will argue that most definitions of friendship, especially in the psychological research literature, are *operational* definitions that put a strong emphasis on the definiens (e.g., the criteria of reciprocity in friendship) that are “testable or subject to empirical evaluation” (Suppe, 2000, p. 77). Operational definitions are commonly used within the positivist science tradition that pays attention to objectivity and measurability (Sohlberg & Sohlberg, 2009). Use of an operational definition of friendship involves strict delimitations in the meaning of friendship in order to be able to test the criteria (definiens) for the phenomenon (definiendum). Hence, operational definitions of friendship implicitly appear as objective descriptions. In contrast to operational definitions, a real definition of friendship would be based upon a knowledge claim that a certain definition is the only true definition because it represents the ultimate essence of friendship (Sohlberg & Sohlberg, 2009). However, I did not find any reasonable arguments for considering existing definitions of friendship as real definitions due to their lack of an explicit argument of a true and essential definition of this phenomenon. Although reciprocity is a prominent feature in several definitions of friendship in the psychological research literature (cf. Table 1, page 25), it could be argued that reciprocity is a hallmark of friendship that does not differ from other defining features of friendship (Peter Sohlberg, personal communication, December 23, 2016).

A definition of the concept of *friendship* is not only a theoretical construct, but it also acts like a bridge between theory and practice, and it is normative for how new experience and new knowledge is located in the theoretical landscape. Moreover, a definition of friendship also helps the identification and classification of observable social phenomena in practice, which qualifies to be included or excluded from this concept and thereby has impact on how we think about friendship. The developments in the research on friendship among children are mainly related to children without disabilities (Buysse, Goldman, West, & Hollingsworth, 2008; Moore-Dean, Renwick, & Schormans, 2016; Webster & Carter, 2007). Hence, the definitions of friendship are primarily rooted in those of children without disabilities and “shaped by the collection of cases we have on hand with which to think about the problem” (Becker, 1998, p. 120). Whether the definitions of friendship in Table 1 (page 25) are universal and thus valid for all children including those with impairments who might have another basis for friendship, is understudied. When a concept like friendship is derived from dominant assumptions (conceptualization of friendship among the majority [i.e., children without impairments]), it may risk of breaking the principle of generalizability when

applied on a minority (e.g., children who use AAC). According to Collins (2003), a generalized concept (e.g., friendship) involves a generalized point of view on the phenomenon described. Collins argued that the generality represents “a collective and omnipresent social viewpoint” (p. 457). Based on this argument it is possible to conclude that generalized concepts should include descriptions that also are valid for entities (e.g., people) who are not part of the dominant (majority) assumptions. However, a dilemma occurs by what Collins described as a “viewpoint of a plurality of other persons”. The exact number of the plurality is not given. Thus, the number of people needed to constitute plurality or what people who may not be included by the given concept might be subject to arbitrary practice.

An important question is how accumulated knowledge of friendship among individuals who initially have not been part of the group that the concept of friendship is based on, is located in this theoretical landscape. Is it possible to describe accumulated knowledge by using an established definition of the concept, or will new knowledge be interpreted outside the framework of the current definition? In Alfred Schutz’ terminology of typification (Schutz, 1962), will new experiences and knowledge of social relationships fit in as typical elements of friendship? New knowledge can illuminate new aspects of the phenomenon being studied and expand the understanding of the concept as defined. It may also be that an existing definition of a concept (e.g., friendship) does not adequately represent the social practice that exists and which is described by new knowledge. Thus, new knowledge may challenge or depart from the substantial meaning of the concept as articulated by the definition. Such refractions can cause changes in how new knowledge is implemented in existing concepts and theories. This is a situation encompassed by what Alvesson (2011, p. 108) denotes as *D-reflexivity*, which “indicates problems and uncertainties with efforts to establish how things are, whether it is objective truth, authentic experiences or superior theoretical insights”. *D-reflexivity* implies deconstruction, defensiveness, and destabilization and “means a confrontation with dominant views on knowledge, privileging certainty, closure, and authoritative research results” (p. 108). Hekman (2004) declared concepts opposing the perceived reality as subject to epistemological fallacy. From this perspective, a divergence between individuals’ perceived social life worlds and prevalent terminology will, according to Hekman, cause epistemological invalidity. To avoid this, the researcher is committed to reflect on his choice of concepts and interpretations of the phenomenon under study. The researcher’s reflexivity about these issues can mold the basis for new concepts or initiate a redefinition of existing concepts.

Sohlberg and Sohlberg (2009) warned against a reductionist approach in how we deal with social phenomena. By adopting a reductionist approach that simplifies the complexity of the phenomenon, important characteristics and/or processes of the phenomenon might become unclear or be ignored. It may be more appropriate to nuance rather than simplify the definition of friendship when new knowledge about close social relationships is acquired. Such an approach is consistent with what Alvesson (2011) defined as *R-reflexivity*, which includes reconstruction, re-presentation, and rethinking with the purpose to challenge “a discourse, an interpretation, a concept or a representation in order to produce an alternative, better or supplementary knowledge contribution” (p. 110). I consider both types of Alvesson’s reflexivity as relevant in the forthcoming discussions of the results (cf. *Discussion*, page 75).

## Communication with little or no functional speech

### **Introductory perspectives on communication**

Communication is a vital part of being a human being (American Speech-Language-Hearing Association, 1991), and communication facilitates friendship (Rubin, Coplan, Chen, Bowker, & McDonald, 2011). However, the interpretations of the substantial meaning of and processes involved in communication are diverse and several definitions of communication have been suggested. The definition of communication provided by the UN General Assembly (2006, p. 4) in the CRPD, pays attention to the message and emphasizes and nuances the variety of communication forms:

“Communication” includes languages, display of text, Braille, tactile communication, large print, accessible multimedia as well as written, audio, plain-language, human-reader and augmentative and alternative modes, means and formats of communication, including accessible information and communication technology.

There are two main directions that can be taken in the conceptual understanding of communication (Fiske, 2004; Norèn, Samuelsson, & Plejert, 2013). The first viewpoint, denoted by Fiske as the “transmission of messages” (p. 25), is based on the assumption of a sender, a message (encoded by the sender), and a receiver (decoding the message). According to Norèn et al. (2013, p. 4), this kind of conceptualization belongs to a research tradition which “refers to the monologic model of transfer of information between individuals” (see

also Pickl, 2008). The definition of communication provided by The National Joint Committee for the Communication Needs of Persons With Severe Disabilities (1992) interprets communication within this perspective:

Any act by which one person gives to or receives from another person information about that person's needs, desires, perceptions, knowledge, or effective states. Communication may be intentional or unintentional, may involve conventional or unconventional signals, may take linguistic or nonlinguistic forms, and may occur through spoken or other modes. (p. 42).

This definition encompasses processes, contents, intentions, forms, and modes of communication. The second viewpoint is characterized by Fiske as the "production and exchange of meanings" (p. 25). This viewpoint coincides with Norèn et al. (2013)'s emphasis on the importance of considering the construction of meaning in the dialogue and framing communication within a dialogical and interactional context. They defined communication as "shared practices of cooperative meaning-making and that these practices are temporal, context-sensitive and activity-bound in nature" (p. 5). In this dissertation, I take an eclectic viewpoint on communication. I acknowledge the emphasis on the contents, intention, forms, and modes of communication provided above (National Joint Committee for the Communication Needs of Persons With Severe Disabilities, 1992; UN General Assembly, 2006), but I also agree with Norèn et al. (2013) by including the perspectives on communication as a cooperative meaning-making process. The terms "augmentative and alternative modes" and "other modes" included in the definitions provided by UN General Assembly (2006) and the National Joint Committee for the Communication Needs of Persons With Severe Disabilities (1992) respectively, direct attention to the field of augmentative and alternative communication (AAC).

### **Augmentative and alternative communication (AAC)**

People who have little or no functional speech may benefit from using augmentative and alternative communication (AAC). The term *augmentative and alternative communication* was coined by the formation of the International Society for Augmentative and Alternative Communication (ISAAC) in 1983 (Vanderheiden, 2002). Though, the term *augmentative communication* was already introduced in 1980 by Harris and Vanderheiden (1980) to "help

offset a perception that communication boards and other similar devices were only to be used when there was no hope for speech”, because professionals in the practice field were afraid that children would stop trying to speak when they were provided with communication aids (Vanderheiden, 2002, p. 47). By the formation of ISAAC, the term *alternative communication* was included as a term for substituting speech when the child had to rely completely on other communication modes than speech (Glennen, 1997). AAC is defined by the American Speech-Language-Hearing Association (2005, p. 4) as:

. . . an area of research, clinical, and educational practice. AAC involves attempts to study and when necessary compensate for temporary or permanent impairments, activity limitations, and participation restrictions of individuals with severe disorders of speech-language production and/or comprehension, including spoken and written modes of communication.

Unlike several other definitions of AAC which direct attention only to clinical and/or educational practice (e.g., Cress, 2002; Lloyd, Fuller, & Arvidson, 1997; Speech Pathology Australia, 2012), the definition above explicitly acknowledge the position of AAC within all three areas of practice identified. The need for AAC may be caused by congenital causes (e.g., cerebral palsy, autism, severe intellectual impairment), or by acquired medical conditions (e.g., traumatic brain injury, stroke, cancer, or amyotrophic lateral sclerosis) (Beukelman & Mirenda, 2013a; Fletcher, 1997; Reichle, Beukelman, & Light, 2002). An important goal of using AAC is to provide functional communication during interactions with other individuals (i.e., spontaneous communication with the capacity of influencing the social environment by interacting in natural settings) (Pettersson, 2001; Rowland & Schweigert, 1993). Communicative interaction using AAC serves to fulfill several purposes (Light, 1988), including: (a) the expression of needs and wants; (b) the transfer of information; (c) the establishment, maintenance, and development of social closeness; and (d) the adjustment to social conventions by adapting to social etiquette. AAC may consist of unaided as well as aided communication (Milikin, 1997; Siegel & Cress, 2002). Whereas unaided communication implies using the body to produce the expression (e.g., vocalizations, gestures, signs, eye movements), aided communication involves use of an external object to produce the expression (e.g., using a physical object, a communication board, or a speech generating device). In common with typical communication, augmentative and alternative

communication is multimodal (Milikin, 1997), implying the use of several modes of expression (e.g., a speech generating device combined with facial expressions and gesture). Another facet of AAC is its multidisciplinary nature in that it incorporates knowledge from a range of disciplines, including linguistics, speech language pathology, occupational therapy, physical therapy, technology, engineering, psychology, and education (Beukelman & Mirenda, 2005; Swengel & Marquette, 1997).

People who use AAC are often referred to as having complex communication needs, a term commonly used in the literature and referring to people who have “communication needs associated with a wide range of physical, sensory and environmental causes which restrict/limit their ability to participate independently in society” (Balandin, 2002, p. 2). In this dissertation, I will not use this term as I consider it does not clearly address the limitations in using functional speech as the core reason for the use of AAC. For this reason, the term is also criticized by other researchers (e.g., Alant, Bornman, & Lloyd, 2006). Hence, I will use the term AAC as a descriptor for research, clinical, and educational practice concerning children with little or no functional speech (e.g., AAC research).

### *Prevalence of AAC*

We have no exact figures on the number of people who may benefit of AAC due to lack of functional speech as their primary communication mode. Instead, several estimates have been made. Tetzchner and Martinsen (2002) estimated that about 0.5 % of Norwegian children aged 1-19 years old may benefit from use of AAC because of developmental disabilities. In the Norwegian population, this includes about 6000 children<sup>6</sup>. This result coincides with the estimate for the population of Victoria in Australia reported by Perry, Reilly, Cotton, Bloomberg, and Johnson (2004). A similar estimate was provided in a recent study by Creer, Enderby, Judge, and John (2016). They investigated the prevalence of the need for AAC caused by medical reasons in the UK population and reported an estimate of 0.5 %. However, such estimates have varied across researchers, populations, and points in time. Bercow (2008) estimated a prevalence of 1.0 % among English children aged 5 years old who were likely to benefit from AAC. The Office of the Communication Champion and Council (2011) provided estimates of people who require AAC ranging from 0.33 % (i.e., children) to 0.54 % (i.e.,

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<sup>6</sup> The number is calculated for the Norwegian population aged 1-19 years old, based on figures from Statistics Norway as of January 1 2016 ([www.ssb.no](http://www.ssb.no)).



adults; including needs of AAC caused by acquired injuries, e.g., stroke, cancer, spinal injuries), whereas Beukelman and Mirenda (2013a) estimated that 1.3 % of the population will benefit from using AAC. It is important to note that some estimates did not include children with acquired injuries who also may benefit from AAC. Additionally, results from more recent research indicate that the number of children who use AAC in Norway may be inaccurate. In their study of children with cerebral palsy in Norway, Andersen, Mjøen, and Vik (2010) reported that only 54 % of the children with either significant speech problems or no speech used AAC. Hence, a substantial minority of the children in the study were at risk of not developing functional communication. The study indicated the importance of distinguishing between those children who actually use AAC and those children that may benefit from using AAC.

Moreover, according to Light and McNaughton (2014, p. 7) the population who might benefit from using AAC is increasing as “AAC interventions are now implemented with a much larger and more diverse population” due to an increased understanding of the benefits of AAC. These benefits relate to several areas, including speech and language development, intelligibility of speech, recovery from stroke or traumatic brain injury, loss of speech or language caused by degenerative conditions, or temporary conditions, and support comprehension of language. To conclude, the figures of the population of children who use or may benefit from using AAC are uncertain and the number of children who may benefit from using AAC may be larger than the estimates indicate. Despite agreement that children with little or no functional speech can benefit from AAC there are few studies that have explored how using AAC impacts on a child’s life, including the development of friendships.

### *Research areas in AAC*

A review of the historical development of the research, clinical, and educational practice of AAC demonstrates that researchers have paid limited attention on friendships among children who use AAC. Areas of substantial development within the AAC field have largely related to various efforts of improving communication. In their retrospect on the developments in AAC during the last 40 years, Light and McNaughton (2012) argued that in the beginning of this period research and clinical practice paid most attention on the use of AAC in order to provide functional communication to express needs and wants. Moreover, according to Hourcade, Everhart Pilotte, West, and Parette (2004)’s review of the AAC history in the USA from the 1950’s until 2004, the AAC field was subject to major changes in four areas: (1)

social change and legislation, (2) assessment practices, (3) intervention practices, and (4) family and cultural issues. Several researchers agree that intervention practices aimed to promote communication among individuals who have little or no functional speech have had significant impact on the origination of the AAC field (Alant et al., 2006; Tetzchner & Grove, 2003). Especially, use of technology in AAC interventions have been subject of increased attention in research, clinical, and educational practice on AAC (Wilkinson & Hennig, 2007). This tendency is also evident when reviewing the most frequent subjects discussed in articles published in one of the most prominent journals for AAC, the *Augmentative and Alternative Communication* journal. By investigating the articles from the first 30 years of the journal's publication history (1985-2014), McNaughton and Light (2015, p. 261) identified seven areas of research within the field, including:

- (a) early intervention . . . ,
- (b) AAC intervention for individuals with autism spectrum disorders . . . ,
- (c) the language development of individuals who require aided communication . . . ,
- (d) the use of visual scene displays for people with aphasia . . . ,
- (e) microswitch technology for children with profound and multiple disabilities . . . ,
- (f) communication partner instruction . . . , and
- (g) speech output technologies for individuals with autism spectrum disorders.

The increasing focus on technology might have to some extent led the attention away from other important aspects regarding use of AAC. Light and McNaughton (2013) warned against the strong emphasize on technology as a primary force in AAC interventions, and suggested increased attention to how technology rather can be an asset for the individuals' needs, skills, and preferences, including the development of friendships. Thus, it is justified to argue that social issues such as close social relationships and friendship have not been a prominent issue in AAC research. Some scholars have argued for the importance of directing more attention to social perspectives in the AAC field. Among several key principles for research and clinical/educational practice in AAC, Blackstone, Williams, and Wilkins (2007) suggested to focus on individuals' societal roles and their social relationships, including establishment and maintenance of friendships. In a study of what adults using AAC considered important issues for research (O'Keefe et al., 2007), the participants preferred research that contributed to increased opportunities to accomplish common everyday life skills. One of the five life skills reported was the ability to establish and maintain friendships. O'Keefe et al.'s study

represented research that is not only important for its results, but also for the recognition of the expertise of families, professionals, and those who use AAC is part of the increasing practice of involving individuals who use AAC and their families in decisions which has gathered momentum since the 1990s (Hourcade et al., 2004).

Friendship has until today been a largely unexplored theme in AAC research. Recapitulating the above conceptualization of communication as a cooperative meaning-making process (Norèn et al., 2013), I argue that friendship is about social processes that heavily rely on communication. A strong relationship between communication and social relationships was advocated by Jim Prentice (2000), an adult who used AAC : “Deny a person the ability to articulate intelligibly and that person is sentenced to live in social, intellectual and emotional isolation” (p. 213). Thus, communication may be characterized as a double-edged sword; functional communication can be an asset but the lack of functional communication may be a limitation of children’s social capital.

## Childhood as a social structure

Until the emergence of the paradigm of social studies of children and childhood during the 1980 and 1990s (Jenks, 1982; Prout & James, 1990), the prevailing perspectives in research represented an individualistic approach to children. The individualistic approach regarded childhood primarily as a period in children’s life and characterized children as incompetent human beings who were about to become mature and competent adults (e.g., the extensive works of the Swiss psychologist Jean Piaget; Durkheim, 1982). These perspectives were partly represented by developmental psychology research and sociological research that largely focused on the developmental and socialization aspects of children (e.g., developmental milestones in children’s life, children’s immaturity and limited skills, and children’s developmental journey towards becoming mature and competent human beings as adults) (James, 2009; Jenks, 2004; Prout & James, 1990; Woodhead, 2013). With the new paradigm of social studies of children and childhood, childhood was seen as a social construction and a segment in social structures (Prout & James, 1990). From Qvortrup (2009)’s point of view, childhood is a permanent social structure which always exists and is independent of the individual child. Through the identification of childhood as a social structure, Alanen (2001) argued that childhood is basically a generational phenomenon. She provided multiple interpretations of the concept of generations, implying that *generation* can be identified as (1) a location of people in historical time, (2) a continuation of family and

social descent through kinship, or (3), by referring to Mannheim (1952), a common consciousness or identity through shared experiences, based on belonging to a particular age group, which shares the same historical and social events.

By considering the concept of generation as representing a common consciousness or identity, generation was defined as a social construction. This conceptualization comprises three stages (Alanen, 2001). First, individuals that share the same social experiences by being born in the same social and historical period (location) share the same generational location. At this stage, they are considered as a “potential generation”. Second, individuals who share the same generational location, share the same interpretations of their experiences and definitions of the situations experienced. At this stage, the generation becomes an “actual generation”. Third, within an “actual generation” individuals may form “generational units” by interacting together in coping with the experiences they encounter as an “actual” generation (i.e., a group).

An acknowledgement of childhood both as a social structure and a generational phenomenon form premises for the understanding of *peer culture*. One definition of peer culture is “a stable set of activities or routines, artefacts, values and concerns that children produce and share in interaction with peers” (Corsaro & Eder, 1990, p. 197; see also Adler & Adler, 1998; Corsaro, 2009). Through these perspectives, exclusion from the mainstream school, which is an important social arena for children, may contribute to establishment of parallel peer cultures among children. One of the important elements of children’s peer culture is friendship (Corsaro, 2009, 2015a). The next chapter elaborates several perspectives of friendships in more detail.

## Friendships among children

Friendship is a social relationship that makes an imprint in people throughout life. Friendships are observed among children as young as two years old, manifested by children’s preference for other children, mutual affection, and reciprocal play (Bagwell & Schmidt, 2011; Corsaro, 2015a; see also Howes, 1996). In the subsequent stages of life – from early childhood, school age, adolescence, adulthood, to old age – friendships develop rapidly to become one of the most important social relationships for life (Rubin, Bukowski, & Bowker, 2015; Webster & Carter, 2007). Thus, within the research literature there is agreement that friendships are important.

Friendships have been subjected to study since the time of the ancient Greek philosophers, including Aristotle's three types of friendship - utility, pleasure, and goodness (Pangle, 2002). However, most empirical research on friendship has been conducted since the 1970s (Bagwell & Schmidt, 2011). Friendships are important for our understanding of children's development in several areas, including social, emotional, cognitive, psychosocial development and adjustment (Bagwell & Schmidt, 2011; Nangle, Erdley, Newman, Mason, & Carpenter, 2003; Newcomb & Bagwell, 1995; Rubin, Wimsatt, Heverly-Fitt, & Barstead, 2015). Understanding children's friendships is also important from children's perspectives as children value their friends highly.

### **Functions of friendships**

Scholars have described several functions of children's friendships. According to Bukowski (2001), friendship (1) ascribes value to the children included in the relationship, (2) protects children from stress by reducing their levels of anxiety, (3) supports children's development by facilitating explorations and development of new skills, and (4) represents a peer culture which has a substantial influence on children's lives. In addition to the valuable and protective function of friendships, Bukowski, Motzoi, and Meyer (2009) introduced morality as a function of friendships which captures the obligations, intentions, and acts of goodness and goodwill between friends. The functions of children's friendship change during childhood. Among younger children, aged 3 to 7 years, friendships facilitate excitement and amusement, whereas in middle childhood (children aged 8 to 12 years) friendships support the developments of behavioral norms and self-presentation skills (Parker & Gottman, 1989). Additionally, scholars have also argued that friendships provide "affection, good company, and fun . . . emotional security . . . helpfulness, advice, and instrumental aid . . . opportunities for intimate disclosure . . . and prototypes for later romantic, marital, and parental relationships" (Rubin, Fredstrom, & Bowker, 2008, p. 1086). In the following sections, some overarching perspectives on the concept of friendship are presented. In order to avoid repetition, details on the developmental processes of friendships, organizational and structural preconditions for friendship among students who use AAC, attitudes towards children who use AAC, quality of friendship, or how students using AAC establish friendships are not presented as these topics are covered in Paper 1 and 4, Paper 4, Paper 2, Paper 3, and Paper 5 respectively.

## Developmental perspectives on friendships

The research literature on friendship is influenced by knowledge informed by psychological as well as sociological research (Brooks, 2004). Psychological research studies have to a large extent focused on individual characteristics and developmental issues in social relationships between peers. Kvello (2006) described friendship as part of the concept of *social relationships*. According to Maccoby (1999, p. 158), (social) relationships “. . . exist between two people when their lives are interdependent. By interdependent we mean that two people’s behaviors, emotions, and thoughts are mutually and causally interconnected”. Social relationships are formed and changed through unique patterns and qualities of interactions between individuals over time (Elicker & Englund, 2016; Elicker, Englund, & Sroufe, 1992). Research has revealed strong bonds between friendship and interaction among children without disabilities (e.g., Corsaro, 2015a; Fehr, 2008; Perlman, Stevens, & Carcedo, 2015; Rubin, Bukowski, et al., 2015) and among children with disabilities (e.g., Staub, 1998; Webster & Carter, 2007; Willis et al., 2016). Such interactions arise from *encounters* between children. In her study of children with disabilities in kindergarten, Ytterhus (2002) distinguished between children’s voluntary and ascribed social encounters. Both types of encounters can be either spontaneous or planned. In voluntary social encounters the child determines who he/she spends time with and chooses what role to take towards others (e.g., peers). Ascribed social encounters refer to situations where another person (e.g., an adult) or a social construct (e.g., which school class the child belongs to and which other children attend the class) defines the role of the child and who the child spends time with. Most children are part of both voluntary and ascribed social encounters.

Social relationships between children are different from those between children and adults. In order to understand this, a common approach is to categorize children’s social relationships in vertical and horizontal relationships (Bagwell & Schmidt, 2011; Hartup, 1992; Janson, 2004; von Tetzchner, 2012). A *vertical relation* is characterized by one of the individuals involved (e.g., the adult) having more knowledge and social power than the other (e.g., the child) due to the individuals’ capacities. In contrast, a *horizontal relation* is established between individuals with similar social power and is based on equivalence, which promotes better opportunities for co-operation and negotiations (Carter & Nutbrown, 2016). For most children, the relationship with peers is recognized as a horizontal relationship due to their equal status (Blatchford, Pellegrini, & Baines, 2016). As children grow older, horizontal

relationships become increasingly important (Schwab, 2015), and some of these relationships include friendship (von Tetzchner, 2012).

Scholars distinguish between several types of social relationships among children, such as familial relationships (Bukowski, Newcomb, & Hartup, 1996; Hartup & Abecassis, 2002), peer group acceptance/rejection (Ladd, 2005; Rubin, Burgess, & Coplan, 2002), friendships (Bukowski et al., 1996; Hartup & Abecassis, 2002; Ladd, 2005; Rubin et al., 2002), bullying and victimization among peers (Rubin et al., 2002), enemies (Hartup & Abecassis, 2002), and romantic relationships (Bagwell & Schmidt, 2011; Hartup & Abecassis, 2002). As this dissertation is about friendship I will not comment on the other social relationships any further.

Many perspectives and interpretations of friendship have emerged since the 1970s and there is no agreement on a common theory about friendship (Bagwell & Schmidt, 2011). In psychological developmental research, friendship is mainly described as a dyad (Bagwell & Schmidt, 2011; Blatchford et al., 2016; Newcomb & Bagwell, 1995; Parker & Asher, 1993; Rubin et al., 2008; Schneider, 2016). Despite the increasing body of research on friendship (e.g., Bagwell & Schmidt, 2011), there is no agreed definition of friendship (Berndt & McCandless, 2009; Pound, 2011). However, it is possible to identify certain features among different definitions of the concept. Hence, in this chapter I will present examples of definitions of friendships within the psychological research tradition in order to establish a basis for the present research. Subsequently, I will provide sociological perspectives on friendship before I make a summary of the friendship literature.

In the psychological research tradition, friendship is mainly defined through references to various qualities of the social relationships between individuals. Some qualities occur more frequently than others across the various definitions. Table 1 presents a variety of definitions of friendship, derived from psychological developmental research literature.

**Table 1**      **Examples of definitions of friendship in psychological developmental research**

<b>Definitions of friendship</b>	<b>Reference</b>
“ . . . an affective tie between children which has three necessary components: mutual preference, mutual enjoyment, and the ability to engage in skillful interaction”	Howes (1983, p. 1042)
“ . . . voluntary interdependence between two persons over time, that is intended to facilitate social-emotional goals of the participants, and may involve varying types and degrees of companionship, intimacy, affection, and mutual assistance”	Hays (1988, p. 395)
“ . . . a close, affective tie between two peers”	Kerns (1996, p. 137)
“ . . . dyadic tie between two children”	Doll, Murphy, and Song (2003, p. 116)
[friendships are] “ . . . voluntary, intimate, dynamic, relationships founded on cooperation and trust”	Gifford-Smith and Brownell (2003, p. 248)
“ . . . positive, reciprocal relationship between two children”	Buysse et al. (2008, p. 79)
“ . . . voluntary, personal relationship, characterized by equality and mutual involvement, reciprocal liking, self-disclosure, and the provision of various kinds of support”	Fehr (2008, p. 29)
“ . . . there appears to be three operationally defining features of friendship: (1) Each member of the dyad affirms the existence of the friendship; (2) The relationship derives primarily from mutual affection . . . and (3) The relationship is voluntary”	Rubin et al. (2008, p. 1086)
[friendships are] “ . . . voluntary and reciprocated relationships between two or more children who exhibit (a) mutual liking for and attachment to one another, (b) frequent proximity to one another and engagement in shared activities, and (c) evidence of enjoyment and positive effect”	Hollingsworth and Buysse (2009, p. 288)
“ . . . a ‘friend’ is someone whom a person knows and likes”	Berndt and McCandless (2009, p. 64)
“ . . . a close relationship between two individuals”	Rubin, Bowker, McDonald, and Menzer (2013, p. 9)
“ . . . a dyadic relationship where the individuals, who are not family members or romantic partners, know and like each other”	Blatchford et al. (2016, p. 31)

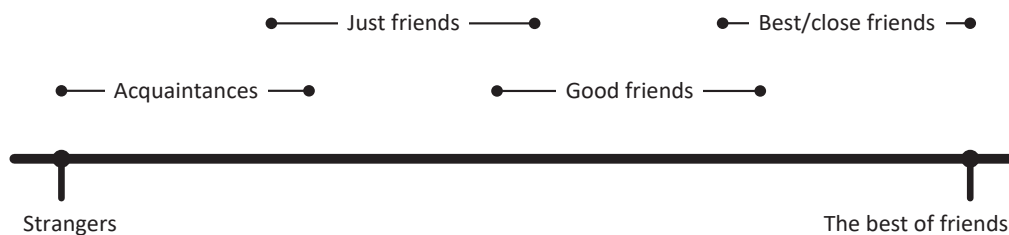
As can be seen from these examples, several researchers have defined friendship as a *reciprocal* relationship between children. Sometimes the terms reciprocal friendships and mutual friendships are used interchangeably by researchers (Newcomb & Bagwell, 1995). In this dissertation, the term reciprocal friendship will be used when referring to these two interpretations of friendship. The emphasis on reciprocity in psychological approaches to friendship is illustrated by the following statement by Bagwell and Schmidt (2011, p. 6): “. . .



reciprocal friendship nominations are the gold standard in developmental psychological research". Thus, it can be argued that reciprocity relates to the individuals' reciprocal enjoyment as well as the preference for and choice of each other in a relationship.

Parallel with the widespread understanding of reciprocity as an important feature of friendship, attention is also directed towards unilateral friendships. In *unilateral* friendships, only one of the individuals nominate the other as a friend (Hayes, Gershman, & Bolin, 1980; Lodder, Scholte, Goossens, & Verhagen, 2015; Scholte et al., 2009; Thomas & Bowker, 2013). Scholars have made a distinction between unilateral *given* friend nominations and unilateral *received* friend nominations. This addresses who makes the nomination of friend (unilateral given nomination) and who is the subject of the friend nomination (unilateral received nomination) (Lodder et al., 2015; Scholte et al., 2009). As a rule, unilateral friendships are characterized by being less affective than reciprocal friendships (Newcomb & Bagwell, 1995).

Taking into account the accumulation of knowledge and experiences of friendships noted above (cf. *The social construction of friendship*), one way of integrating new knowledge into an existing conceptual system, while avoiding simplification of the complexity of the phenomenon under study is by using *classification*. Classification is based on certain dimensions of the social world and assumes that the division of dimensions includes a holistic description of a particular phenomenon (Sohlberg & Sohlberg, 2009). A feasible strategy to deal with challenges related to different interpretations of the concept of friendship is to classify the various dimensions associated with different forms or qualities of friendship. Different qualities of friendship may thus be represented by different dimensions. As an example, reciprocal friendship and unilateral friendship can be included in a single, common conceptual system for friendship as suggested by Berndt and McCandless (2009). Berndt and McCandless argued that although prominent attributes of friendship (e.g., mutual knowing, liking, favoring, time sharing, benevolence, intimacy, and trust) have impact on the quality of children's friendships, these attributes are not essential for the definition of friendship. They introduced a *friendship continuum* that is based on an acknowledgment that children's friendships are characterized by the children's varying degrees of mutual knowledge and affection to each other. The friendship continuum consists of sliding transitions with blurred boundaries between the polarities of *strangers* and *best friends*. This continuum is presented in Figure 1.



**Figure 1 Friendship continuum suggested by Berndt and McCandless (2009, p. 65)**

The friendship continuum makes it possible to describe how social relationships may be assessed differently among several persons within the same conceptual system. Another advantage of using this continuum is that including social relationships of varying social closeness, including unilateral friendships, provides a robust model.

The friendship continuum suggested by Berndt and McCandless (2009) described above can be seen as a hybrid definition of friendship. It can be argued that the definition is stipulative (Sohlberg & Sohlberg, 2009; Suppe, 2000) because the authors declare how they interpreted the various dimensions of friendship. On the other hand, according to the authors the dimensions in the friendship continuum closest to the polarity “The best of friends” demand reciprocity. There are no explicit, absolute criteria which indicate when a social relationship belongs to one dimension rather than another. However, the dimensions closest to the polarity “The best of friends” represent a conceptual understanding that is closely related to an operational definition (Sohlberg & Sohlberg, 2009) because social relationships are assessed by how they reflect an explicit articulated, defined essence of friendship. The friendship continuum is flexible as it accepts different assessments of friend relationships within the frames of slack boundaries, and facilitates the existence of friendship reports without excluding certain positions or perspectives.

Friendships among children who use AAC have received limited research attention. Although the development of friendships is experienced as demanding among individuals who use AAC (Dattilo, Benedek-Wood, & McLeod, 2010) and children who use AAC may have difficulties in establishing friendships with peers due to obstacles in participation in social communication (e.g., laughing, arguing, complaining, telling stories) (Therrien, Light, & Pope, 2016), previous researchers have reported several conditions for establishing positive relationships between students who use AAC and peers. Hunt, Doering, Maier, and Mintz (2009) identified the following four main conditions that impact on children using AAC’s

ability to establish friendships: (1) opportunities to spend time with peers, (2) motivation and communicative means to interact with peers, (3) accessibility to peers with motivation and communicative skills to interact effectively, and (4) organizational, emotional, and social support which facilitates establishment of positive, social relationships. Shared experiences have also been reported as important for maintaining friendships by other researchers (Anderson, Balandin, & Clendon, 2011). In order to facilitate social interaction and positive social relationships between students using AAC and peers, Hunt et al. (2009) suggested a social support model consisting of the following strategies, which may have positive influence on students' establishment and maintenance of friendships: (1) Providing information to peers to assist the development of positive social relationships with students who use AAC, including ability awareness (accomplishments, strengths, competencies, and educational support among students who use AAC). (2) Identification of and use of interactive media in order to facilitate communication between students who use AAC and peers. (3) Organization of shared activities which facilitates interaction between students who use AAC and their peers.

### **Friendships in contexts**

Psychological developmental approaches have been criticized by sociologists for being more concerned with the properties of the individuals in a social relationship, and less concerned with the relationship itself (Adams & Allan, 1999). In substantial parts of the psychological research literature on children's friendships, a common approach assumes that friendships are largely independent of the context. This understanding of friendship is restricted as it neglects how friendships are constituted in time and contexts. In the new sociological approach of social relationships which developed during the 1990s, the relationships were acknowledged as having their own distinctive characteristics as well as being operating within complex contextual frames (Adams & Allan, 1999). Allan (1998) stressed the importance of understanding friendships within the contexts they arise from:

Friendship is a variable relationship, with the particular form it takes being influenced by the specific context in which it develops . . . Thus, while friendships are rightly seen as being constructed through the actions of individuals, these actions are not in some sense 'free-floating' but are inevitably bound to the social and economic environment in which they are being enacted. (p. 687)

Furthermore, the American sociologist William A. Corsaro criticized the psychological developmental approaches for mainly paying attention to the “endpoint of development” by comparing children’s friendship conceptions with those made by adults (Corsaro, 2015a, p. 16; Corsaro & Eder, 1990, p. 199). He argued that children have the capacity to have friends without having a complete developed system of concepts: “You can be a friend without fully having an adult conception of friendship” (Corsaro, 2015b, p. 164). Corsaro emphasized the importance of understanding friendship as a social construct on the basis of children’s involvement in activities with other children, where they engage in sharing and doing things together. Thus, his description of friendship differed from psychological approaches, which have tended to provide explicit and restricted definitions of the concept. Corsaro stated:

I see friendship as something active, in a social context. The context itself is being created, it is not something you slip into, it is something you create through interacting together. And it is different to this notion of an abstract conception. I think the same way about culture . . . that culture is in the doing, it is performative. I don’t think culture is guides and norms which tell you how to behave. I think culture is what you do in your everyday life. The same goes for friendship – it is in the doing and sharing (Corsaro, 2015b, p. 174).

Sociological researchers have also contributed to knowledge about friendships in other areas. Children who are friends tend to provide support for each other and protect their joint activities from other children (Corsaro, 2015a; Sundsdal, 2015). Several scholars (Adams & Allan, 1999; Corsaro, 2015a, 2015b) brought forward alternative sociological perspectives on friendship which countered much of the psychological research literature on children’s friendship. These perspectives, along with other sociological contributions have expanded the ideas and knowledge about friendships among children. Within the context of this dissertation, these sociological viewpoints on friendship can be viewed as important addendums that initiate and support a critical reflection of, rather than an alternative to, the psychological viewpoints described above.

### *Students' agency*

Students are social actors that practice agency. Robson, Bell, and Klocker (2007) understood *agency* as “an individual’s own capacities, competencies, and activities through which they navigate the contexts and positions of their lifeworlds, fulfilling many economic, social, and cultural expectations, while simultaneously charting individual/collective choices and possibilities for their daily and future lives” (p. 135). Agency may relate to “decisions and everyday actions that are carried out within highly restrictive contexts” (thin agency), or to “the latitude to act within a broad range of options” (thick agency) (Klocker, 2007, p. 85). Moreover, Robson et al. distinguished self-initiated agency from more imposed forms of agency (e.g., expected agency, requested agency, or forced agency). Although they argued that the success of agency relates to the individual’s confidence and perception of being able to exert agency, the context also influence the individual’s ability to exert agency. This contextualization is also referred to as situated agency, taking into account that circumstances and opportunities for agency vary. According to Robson et al. (2007), agency among children is dynamic and depends on who they are with, what activities they are doing, and the place of the activity. Students’ agency can be observed in different local contexts at school (e.g., initiatives towards fellow students and adults, expressing preferred activities, participation in activities, negotiations about everyday life at school, complains on tasks or activities, escapes from unwanted activities, or delaying tactics). Although researchers have increased their attention on agency during the last 20 years, research on agency among children with special needs is sparse (Robson et al., 2007).

Moreover, agency relates to social power. Though unequal (asymmetric) power relations usually occur between adults and children (Alanen, 2001; Holt, 2004), they also may occur between children (Punch, Bell, Costello, & Panelli, 2007). Children with disabilities are especially vulnerably for having less social power compared to children without disabilities as they “enter the interaction in a subordinated dependent position” (Nordström, 2011, p. 80). According to Nordström (2011), such unequal power relations may either cause children without disabilities to exclude children with special needs from participation, or children with disabilities may choose a marginalized position due to the consequences of the demands in the situation.

## Social competence

Researchers have emphasized the importance of children's competence in their social life. The Norwegian researcher Terje Ogdén (2015) referred to *personal competence* as consisting of cognitive competence (i.e., language, reasoning, cognition, and meta-cognition), physical competence (i.e., motor skills, coordination of body movements), and social competence (i.e., skills in contact and interaction with other people). In the context of this dissertation, all three competencies are relevant for the establishment and maintenance of friendship between children: Firstly, a child's capacities in language and reasoning (cognitive competence) influence how she interacts with other children and the subjects of her conversations. Hence, social communication is closely related to social competence (Odom, McConnell, & Brown, 2008). Secondly, a child's capacities to move and handle physical objects will influence where she is able to locate herself independently and what activities she is able to participate in with other children. Thirdly, the social skills of the child will influence her social interaction with peers and the adaption to the peer group.

There is no unified definition of social competence, but several researchers have emphasized social competence as a prerequisite for friendships. Based on a reworking of the definitions provided by Weissberg and Greenberg (1998) and Garbarino (1985), Ogdén (2015, p. 228) defined *social competence* as [my translation]:

Social competence is about integrating thoughts, feelings, and behaviors to develop knowledge, skills, and attitudes that make it possible to establish and maintain social relations. It leads to a realistic perception of one's own competence, social mastering in the short and long term, social acceptance, and personal friendships.

Thus, social competence includes knowledge, social skills, as well as attitudes in children's interaction. Ogdén described socially competent children as cooperative with the capacity of a clear communication and able to quickly establish fellowship with other children in play and conversations. At school, students who use AAC may face obstacles in obtaining a clear communication as well as the quickly establishing fellowship with other students due to their communication challenges. Light (1989, 1997; 2003; see also Light and McNaughton, 2014) introduced *communicative competence* as an interpersonal construct based on linguistic, operational, social, and strategic skills, psychosocial factors, and environmental barriers and supports. Clearly, the social skills component described in these studies (i.e., sociolinguistic

skills – skills to conduct a dialogue and skills to express communicative functions; sociorelational skills – interpersonal aspects of communication) have commonalities with the concept of social competence defined above. Moreover, among preschool children without disabilities, researchers have identified positive relations between social competence and friendship in general (Lindsey, 2002; Sebanc, 2003), and between higher levels of social competence and reciprocal friendships (Vaughn, Colvin, Azria, Caya, & Krzysik, 2001).

Children’s friendships develop in contexts and friendships cannot be detached from these. As Bourdieu et al. (1991, p. 18) noted, “social relations cannot be reduced to relationships between subjectivities driven by intentions or ‘motivations’, because they are established between social conditions and positions and therefore have more reality than the subjects whom they link”. The educational system constitutes an important contextual framework for children’s friendships. Hence, the next section presents a review of how policy regulations in the Norwegian school system may have influenced the context in which friendships can occur among students who use AAC.

## School policy regulations

The educational system is an institution that influence children’s lives by providing organized arrangement (Frønes, 1994). Clearly, the school is an important arena for establishing friendship between children (Conway, 2008; Fehr, 2008; Hunt et al., 2009; Røgeskov, Hansen, & Bengtsson, 2015). For several centuries, the organization of the educational provision for students in primary school has influenced the development of social relationships and friendships between students. The following review focuses on the policy of inclusive education and the legal rights for students who need AAC in Norway. Both issues constitute a significant issue for the organization of and the implementation of education for students who use AAC, and play an important role in the basis for friendships between students who use AAC and their fellow students.

### **Inclusive education**

Inclusive education has substantial potential to enhance the opportunities for the development of social relationships between students with disabilities (including students who use AAC) and students without disabilities as agreed by Webster and Carter (2007) and other researchers. Goldman and Buysse (2007, p. 167) stated: “For those especially concerned with the development of young children with disabilities, the promise of inclusion is the enhanced

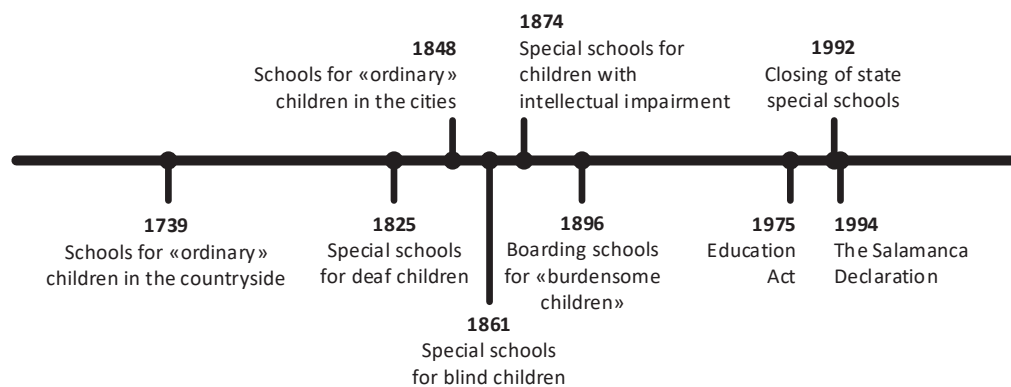
possibility for such relationships, especially between children with and without disabilities.”. Hence, teachers and other staff at school play an important role in “arranging interactive activities and facilitating positive social interactions” (McNaughton & Kennedy, 2010, p. 9).

Until recent years, there has been a practice of excluding students with impairments from students without impairments in the educational system. The formal educational system in Norway was introduced by a royal decree in 1739 which introduced schools for “ordinary” children in the countryside which was followed up with schools for “ordinary” children in the cities in 1848 (Haug, 2014; Sorkmo, 2010). From 1739 until the first half of the 1800s, the Norwegian school system was mainly reserved for children regarded as able to benefit from schooling. Children who were not considered to be able to benefit from schooling were excluded from school. During the 1800s, special schools for students with several kinds of impairments were established; the first school for deaf children in 1825, the first special school for blind children in 1861, the first special school for children with intellectual impairments in 1874, and finally the establishment of boarding schools for children perceived as the most burdensome and socially perishing in 1896 (Kermit, Tharaldsteen, Haugen, & Wendelborg, 2014; Sorkmo, 2010). Despite the introduction of the Folk school in 1889 which aimed to provide educational provision for all children, the practice of segregation of children still continued as the implementation of students with impairments posed difficulties due to the great variety among children (Haug, 1999). Not until 1976, did all primary education in Norway founded on the same law (i.e., The Education Act of 1975). From then on, students with impairments could either attend special schools or receive educational provision in segregated groups in the ordinary local school (Emanuelsson, Haug, & Persson, 2005; Haug, 1998). Some years later, in 1988 the law of primary education was changed and all children were given the right to attend their local school (Kittelsaa, Ytterhus, & Kermit, 2015).

Thus, until the closing of the state special schools in 1992, children with a range of impairments were excluded from mainstream public schools for more than 250 years. The practice of excluding students with impairments from mainstream schools entailed separation of substantial parts of the education’s content (e.g., different curricula and teaching aids), as well as separation of the geographical location and the physical facilities of the education (e.g., different schools, often located far away from the student’s home). In 1994, the Salamanca statement and framework for action on special needs education (UNESCO, 1994) stated that special education principally should be achieved through inclusion in mainstream schools. Special needs education was defined by OECD (2007, p. 19) as “those with special



educational needs are defined by the additional public and/or private resources provided to support their education”. Since then, this ideology of inclusion has characterized the educational policy in most Western societies during the last 20 years, including Norway (Kermit et al., 2014). The historical precursors for the current policy of inclusive education in Norway are presented in Figure 2.



**Figure 2** Historical precursors for the current policy of inclusive education in Norway

### *Perspectives on inclusion*

The recent interpretations of childhood provided by the paradigm of social studies of children and childhood may offer new insights into the exclusion of students with impairments from mainstream schools in the period between 1739 and 1992. Taking Mannheim (1952)’s and Alanen (2001)’s perspectives of generation as a common consciousness or identity into account, this sheds new light on the exclusion of children with impairments in the educational system. Previously, the exclusion of these students from mainstream education forced the students to be physically, socially, and culturally separated from other students. This practice caused major consequences for students with impairments, including (1) strong limitations in sharing the same generational location, (2) limited possibilities for sharing the same interpretations of impressions due to lack of shared experiences, and (3) almost non-existent membership of “generational units” due to lack of interaction. Instead, children with impairments in special schools or other segregated educational settings were at risk of developing unique and parallel generations based on shared experiences with other students with impairments in the same time and location.

Although the political decision of closing the state special schools in 1992 (Kirke- og undervisningsdepartementet, 1990; Kirke- og undervisningskomiteen, 1990) entailed a policy towards inclusive education for all students, recent research has revealed increasing marginalization and segregation from mainstream education classes among students with impairments in Norwegian mainstream public schools (Wendelborg & Tøssebro, 2008, 2010, 2011). *Marginalization* is understood as “the process through which persons are peripheralized on the basis of their identities, associations, experiences, and environments” (Hall, Stevens, & Meleis, 1994, p. 25). Several researchers have identified challenges associated with the implementation of inclusive education, both in the national context (Fasting, 2013; Haug, 2014) and the international context (Avramidis & Norwich, 2002; Davis & Watson, 2001). Several researchers (Meyer, 2001; Schnorr, 1990) have characterized students with disabilities as visitors or guests when entering inclusive educational settings, due to their temporal participation in class:

This is somebody who is like a visitor. There are times in our lives when we are all visitors, when we are ignored, and when we are expected to be like “ghosts” in an environment or situation. (Meyer, 2001, p. 17)

Peter was viewed as an outsider, someone who is not “in our class”, a visitor who “comes and goes.” (Schnorr, 1990, p. 235)

In their multi-continent literature review of teachers’ attitudes towards inclusion, Avramidis and Norwich (2002) identified positive attitudes to but no support for acceptance of a total inclusion of all students. Thus, the consequences of Mannheim (1952)’s and Alanen (2001)’s perspectives on generations reduce the basis for counting students with impairments as full members of the same generation as children without impairments. Not being a (full) member of the same generation as children without impairments may result in major consequences for those excluded, including the opportunities to establish and develop friendships with children at their local mainstream school and domicile.

Hence, interpretation of the concept of *inclusion* and reflection on the practice of inclusive education is important in understanding such intra-generational differences. There is no agreed definition of inclusion (Ainscow, Dyson, & Booth, 2006; Florian, 2014; McLaughlin & Jordan, 2005), and practices of inclusive education are often locally

determined within the respective national educational systems (Artiles & Dyson, 2005). Some scholars have described inclusion in broad terms. Dyson (2005) characterized inclusive education as an attempt to solve what he defined as a dilemma between commonality and differences (i.e., providing different educational provision to students with unequal preconditions). A corresponding understanding was also provided by Zelaieta (2004, p. 37), which associated inclusion with principles and processes related to the “school’s capacity to respond to pupil diversity and promote greater participation for all pupils”. Arnesen (2004) simply described inclusion as increasing students’ participation in the community and actively counteracting for excluding factors.

Other scholars have provided more specific definitions of inclusion. Ainscow (2005) identified four elements of inclusion, consisting of (1) a continuous process of responding to the diversity among students, (2) making improvements in policy and practice by identification of and removal of barriers, (3) improving students’ presence, participation, and achievement, and (4) paying special attention to groups of students that are vulnerable for being marginalized, excluded, and not achieving according to their qualifications. This definition acknowledges the importance of taking into account the local contexts for inclusion and describes more fundamental characteristics of the concept. According to Haug (2014), inclusion in the Norwegian context involves increased fellowship, participation, democratization, and benefit for students.

In contrast, a definition that implies a higher level of specificity of the substance of inclusion was provided by Qvortrup (2012). Qvortrup distinguished between two dimensions of inclusion: (1) the type of inclusion, and (2) the different kinds of social communities. The types of inclusion constituted physical inclusion (i.e., presence in community), social inclusion (i.e., participation in community), and psychological inclusion (i.e., perceived inclusion). All three types of inclusion defined by Qvortrup are important issues for the legitimacy of being a member of a generation as defined by Alanen (2001). The different kinds of social communities, which according to Qvortrup often exist simultaneously and are intertwined, included (1) formal communities led by professionals, (2) communities including children and adults, (3) other communities organized by adults, (4) self-organizing communities, and (5) communities including only children. A prominent feature of most definitions of inclusion referred here is activity. Ytterhus and Tøssebro (2006, p. 71)’s following statement describes the link between inclusion and activity: “There is no inclusive community that children and youth can be placed passively into [my translation]”. In this

dissertation, I will apply Qvortrup's operational definition of inclusion due to its relevance for the data material reported in the papers. Additionally, the Norwegian policy for inclusive education (The Norwegian Directorate for Education and Training, 2015) also relies on Qvortrup's definition of inclusion.

However, the most important aspect of inclusion in school is about educational practice. Booth and Ainscow (2011) identified facilitators and barriers to inclusive education at five levels: the state level, the municipality level, the school level, the classroom level, and the student level. These levels have also been described within the Norwegian context (Nes, 2017). Other researchers have identified other influential elements on inclusion. Haug, Nordahl, and Hansen (2014) described the following 10 elements that make impact on inclusive education: vision of inclusive education, location of students in the mainstream school, adapted curriculum, adapted assessment, adapted education, acceptance of inclusion, physical access, support for inclusion, resources, and leadership that supports inclusion. Moreover, Ainscow et al. (2006) identified several factors that may support the development of inclusive educational practices. The factors included (1) constructive dialogues among staff with different experiences and beliefs in order to promote inclusive education, (2) principal's style of management and the organization of leadership, (3) active use of evidence from and critical perspectives on practice, and (4) support of reflexivity regarding the relationships between inclusive values and practice. Considering these reports, an important element in inclusive education is leadership at school. The important role of the principal in promoting inclusive education is also described by other researchers (Ainscow & Sandill, 2010; Horrocks, White, & Roberts, 2008; Praisner, 2003). A call for stronger leadership in inclusive education is also justified through the critique of exclusionary practice raised by Davis and Watson (2001), which claimed that structural issues must be accompanied by personal and institutional values in order to avoid disempowerment of children and unreflexive practice.

### **Legal basis for using AAC**

As Paper 1 and Paper 3 in this dissertation reveal, several studies associate use of AAC with constraints regarding participation, interaction, and social relationships with speaking fellow students. The legal basis for students who need AAC in the Norwegian educational system was clarified through a revision of the Education Act in 2012 (Kyrkje- utdannings- og forskingskomiteen, 2012). The legislative amendment was implemented because the existing legislation was perceived as inadequate in fulfilling the needs of students who used AAC. The

revised law did not imply new legal rights, but clarified that students who need AAC have the right to learn and to use AAC as part of their educational provision (cf. §§ 2-16, 3-13, 3-14, 4A-13), including the right to (1) use appropriate modes of communication, (2) use the necessary communication aids in education, and (3) receive necessary training in using augmentative and alternative communication (Næss & Karlsen, 2015).

It may be reasonable to expect that practice in accordance with this amendment can foster communication between students who use AAC and fellow students. Moreover, interventions aimed to support communication among students who use AAC will benefit from being rooted in IEP goals (Individualized Education Program) (Klang et al., 2016; Poppes, Vlaskamp, de Geeter, & Nakken, 2002). In turn, this can strengthen the basis for the students' social relationships allowing the opportunities for friendship increase. However, no studies have been identified that examine such consequences of this amendment.

## Methods and material

*We are all constructivists if we believe that the mind is active  
in the construction of knowledge.*

Thomas A. Schwandt <sup>7</sup>

To answer the research questions, the study consisted of two parts: a systematic literature review and an empirical study. Due to the variety and the complexities of friendships, the research took advantage of triangulation. Triangulation entails use of multiple methods or data sources, and is “an attempt to secure an in-depth understanding of the phenomenon in question . . . [and] the display of multiple, refracted realities simultaneously” (Denzin & Lincoln, 2011, p. 5). In this study, the methodology facilitated the use of different types of triangulation, including data triangulation and methodological triangulation (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005; Flick, 2007). Firstly, the data included several sites and participants with different roles and perspectives about friendships among students who used AAC. It also included data from a systematic literature review. Secondly, the methodological triangulation included use of semi-structured interviews with all participants. It included selected questions from the Social networks tool. Additionally, during the fieldwork participatory observations were conducted. The data analyses did not include the observational data. However, it is difficult to secede oneself from the experiences from the fieldwork. The methods applied will be discussed critically in the section Methodological reflections (page 95).

### Systematic literature review

To clarify current knowledge about this topic, a systematic literature review was conducted. A systematic literature review implies a systematic, justified, documented, and verifiable literature search to identify, evaluate, and synthesize knowledge in a field (Fink, 2010;

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<sup>7</sup> Schwandt, T. A. (1998). Constructivist, interpretivist approaches to human inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *The landscape of qualitative research theories and issues* (pp. 221–259). Thousand Oaks, CA: Sage.

Haraldstad & Christophersen, 2004). The systematic literature review was conducted at the same time as the recruitment of participants and ahead of the fieldwork. Paper I presents the results from the literature review.

During planning of the review, a protocol (Booth, Papaioannou, & Sutton, 2012; Schlosser, Wendt, & Sigafos, 2007) was developed in order to use a roadmap for how to conduct the review and which quality criteria to use in the assessments of the included literature. The linguistic constraints were literature in English. As the systematic literature study only represented one part of the total study and was limited by a certain timeframe, I did not prioritize to avail any services that could translate the results from searches in other foreign languages into English or Norwegian. A limitation of this review was that it did not include some common search terms (e.g., *complex communication needs*, *communication disorder*) in order to expand the search criteria and thereby increase the likelihood of gaining more relevant results.

The literature searches also included Norwegian search terms in five Norwegian literature databases<sup>8</sup>, using the search term *alternativ AND supplerende kommunikasjon AND venn\**. However, this search did not provide any relevant results for the study and this literature search was not reported in Paper I.

## Empirical study

The empirical part of the study included four groups of participants: (1) students who used AAC in first to fourth grade who attended Norwegian mainstream public schools; (2) fellow students to the students using AAC; (3) parents to the students using AAC; and (4) staff at school. As the study included students using AAC who partially receive medical treatment, I decided to clarify whether the study was subject to consideration by the Regional committees for medical and health research ethics (REK). On the basis of advice from REK, I submitted a remit assessment form to REK in June 2013. REK replied by asking for further details about the study (see Appendix 1) and a full application was sent to REK in August 2013. In a letter of reply received in October 2013 (see Appendix 2) REK stated that the study represented a

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<sup>8</sup> Bora (Bergen Open Research Archive, <http://bora.uib.no>), Duo (Scientific archive for the University of Oslo, <http://www.duo.uio.no>), Helsebiblioteket (The Norwegian Electronic Health Library, <http://www.helsebiblioteket.no>), Idunn (the Scandinavian University Press' digital publishing platform for academic journals and books, <http://www.idunn.no>), and Norart (Norwegian and Nordic index to periodical articles, [www.nb.no/baser/norart](http://www.nb.no/baser/norart)).

different kind of research than medical and health research, and should therefore not be considered by the Health Research Act. Hence, the research study was submitted to the Data Protection Official for Research at the Norwegian Social Service Data Service (NSD) after reception of the letter from REK. NSD recommended implementation of the project in November 2013 (see Appendix 3). Papers II-V present the results from the empirical study. A description of the rationale for the methodological approach in the empirical study follows. The description provides a more complete overview of the methods and the materials applied than that within the articles allow for.

### **Recruiting participants**

The procedure for recruiting participants to the project was consistent with advice from NSD. It was chosen in order to meet the requirement of anonymity of the students and parents until the point in time they consented to participate in the project. The recruitment procedure included several phases and is described below.

Written requests for information to the project was sent to Statped's four regional offices and all habilitation services for children in Norway (see Appendix 4). The institutions were asked to provide the names of schools and the schools' municipality that may have had students in first to fourth grade who used AAC by means of graphic communication. Of 27 requests, 12 institutions answered the requests. 6 of the 12 institutions provided information about schools. This information identified 51 schools, distributed among 26 municipalities spread across several regions in Norway. The criteria for selecting schools for the next phase of the recruitment were as follows: (1) The school reported to have one or several students between first to fourth grade who used AAC; (2) The school was a public mainstream school; (3) I did not have any knowledge about the student using AAC from earlier supervision in my role as advisor in Statped; (4) Colleagues at the department where I had a position as senior advisor in Statped or colleagues in Statped who I had close work relationships to did not provide supervision concerning the student using AAC in the same period as my planned fieldwork; (5) The distance to the school's geographical location was not too demanding for conducting the fieldwork. Regarding the schools' geographical location, I will point out that the financial assets in the PhD project were limited. Hence, the schools' geographical location made impact on which schools were selected for the study. 40 schools were selected for the next phase of the recruitment, whereas 11 schools did not fulfil these criteria.

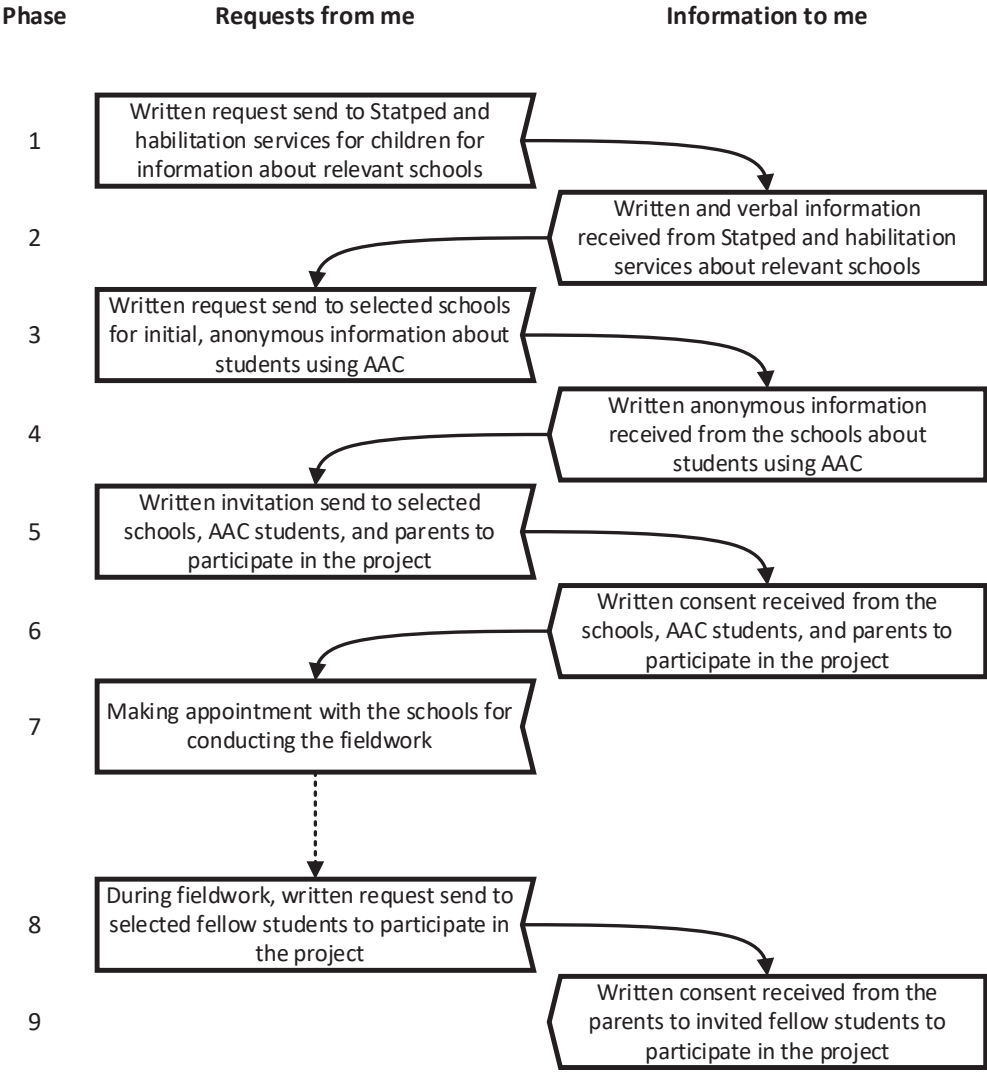


The selected schools received written requests and they were asked if they had students using AAC in first to fourth grade (see Appendix 5). A blank information form followed the request (cf. Appendix 5). The schools were asked to reply by completing the information form by providing anonymized information about students who used AAC by means of graphic communication. A consent form was included in the request, providing parents to give their consent that the school provided anonymous information about the student using AAC to the research project (see Appendix 6). 12 of 40 schools returned completed forms with the requested information. The received forms included information about a total of 18 students using AAC. I rejected information from 10 of the schools due to one or several of the following reasons: (1) The student's use of symbolic communication was considered very limited based on the student's reported diagnosis/impairment. (2) Staped provided supervision to the student at this time. (3) The form missed identifying information about the school. (4) Consent from parents that allowed the school to provide anonymous information about the student was missing.

Totally, eight students were invited to participate in the project. According to the information acquired from the schools, the invited students used AAC by means of visual communication (e.g., Signed Norwegian and/or graphic communication in terms of photography, graphic symbols, and/or orthographic scripture in communication materials in paper or communication aids). The invitations to the students using AAC and their parents (see Appendix 8 and Appendix 9) were sent to the schools and forwarded to the families since their identity were not yet known to me. The invitations to the students using AAC were adapted to their expected level of understanding based on the information previously provided by the schools. These invitations, as well as the invitations to the fellow students (see below), were written based on recommendations of using a colloquial language, without difficult phrases and still appreciative to the children (Øverlien, 2013). The schools received separate invitations (see Appendix 7). The recruitment procedure is presented in Figure 3. Phase 3 to 7 in the procedure was repeated for each student using AAC included in the project. All requests as well as the invitations to participate in the study is given in the Appendices (page 259).

I received consent to participate in the project from seven students using AAC, their parents, a representative of the school administration, and the staff at school working with the student. During the conduction of each fieldwork, I invited selected fellow students to an interview about friendship and their social relationship to the student who used AAC. The

selection of fellow students was made upon an assessment based on my observations of activities, which included the student using AAC and fellow students as well as staff members' reports of the students' social relationships.



**Figure 3 Procedure for recruiting participants**

The recruitment of participants was demanding. There were several issues related to access that restricted my opportunities to recruit students to the project. The criteria for selecting schools (see above) delimited which schools and students that qualified to be

included in the project. Additionally, I identified gatekeepers (Fangen, 2010; Johnson, Douglas, Bigby, & Iacono, 2011; Olli, Vehkakoski, & Salanterä, 2012) in three phases during the recruitment procedure. I understand gatekeepers as people who are "...guarding the gate which opens for contact with the other participants and access to the field [my translation]" (Fangen, 2010, p. 67). In this project, the gatekeepers possessed different relationships to the students who used AAC. They also possessed different roles in my attempts to gain access to the research field. During Phase 2 (cf. Figure 3), 7 of 27 institutions provided the requested information. Two regional offices in Statped offered to forward my requests to relevant schools in order to protect the schools' identity. I accepted one of these offers. Moreover, 3 of 27 institutions refused to provide information about schools with reference to protection of privacy or the refusal was given without any explicit argument. However, the remaining 17 institutions did not provide any reply concerning my request. In Phase 4, 11 of 40 schools provided anonymous information about students who used AAC. The remaining 29 schools did not provide the requested information. The schools' explicit reason for omitting the requested information related to missing students using AAC in first to fourth grade, unwillingness among staff members to participate in the project, and reduced capacity among staff (e.g., due to illness). However, some schools refused the request without providing any reason and other schools did not answer the request.

Hammersley and Atkinson (2007) warned against attempts from gatekeepers (e.g., staff members) to select interviewees for the research. During my fieldwork, I took into consideration the staff members' assessments of which fellow students they considered to have a close social relationship to the students using AAC. However, my observations during the fieldwork in advance of the interviews qualified for an independent assessment of which fellow students I considered most relevant to interview. The selection criteria were fellow students who spent most time with the student using AAC and who were among those with the perceived closest social relationship to the student using AAC. The invitation was a written request in two versions, forwarded by the class teacher. One version was aimed for the fellow students and the other version was aimed for their parents (see Appendix 10 and Appendix 11). All invited fellow students accepted the invitation to be interviewed verbally and through a written consent from their parents. The consents indicated that parents to all students using AAC and parents to most fellow students provided personally adapted information instead of or in addition to the written information.

Unlike Hammersley and Atkinson (2007)'s notion concerning low return rates of consent from parents to include their children in research project, the return rate was high among the students and their parents. The different types of gatekeepers influenced the decisions concerning access to the research field. Most of the formal gatekeepers identified during the recruitment process were as expected, due to their formal position in deciding access to information about schools and students using AAC. However, I also discovered relevant but initially not identifiable or informal gatekeepers (Hammersley & Atkinson, 1987, 2007). Here is an example: On my request for anonymous information about students using AAC (cf. phase 3 in Figure 3), a staff member representing the school administration provided the following reply: "I have talked to the assistant who has been with our student here since she began. She [the assistant] did not want to participate in this [study] and therefore we refuse to participate".

Additionally, the recruitment procedure was time consuming. As Figure 3 illustrates, the procedure involved administrative processes and dialogues with different gatekeepers in several phases. After the information from Statped and habilitation services for children became available, the participants were recruited over a period of 10 months (phase 3 to 6 in Figure 3). The recruitment of new participants continued until one month before the last fieldwork activity. This time consuming process entailed that further processing of the data from the fieldwork in the period between each fieldwork mainly confined to transcription of the interview data and organization of the field notes from the observations.

### **The participants**

The study included 41 participants in total. They were spread over four groups of participants and included 7 students using AAC, 10 fellow students, 6 parents, and 18 staff members. The four participant groups represented different roles and perspectives of the social relationships among the students using AAC. Hence, they provided unique contributions to data on different themes in order to construct complementary perspectives regarding the research questions.

By referring to a variety of studies Schneider (2016) demonstrated that children's self-reports may provide important information about their feelings, thoughts, and impressions concerning social relationships. By including students, this study acknowledges children's perspectives of their life worlds (Hohti & Karlsson, 2014; James, 2007). The inclusion of children is also in accordance with the recommendations of The National Committee for

Research Ethics in the Social Sciences and the Humanities (2016). However, according to Schneider (2016) children's self-reports have previously been questioned for their trustworthiness by several researchers due to children's underestimations of personal problems, unawareness of shortcomings in behavior, or exaggerated descriptions. As a result, adults' perspectives have been prominent in a range of child studies (Hohti & Karlsson, 2014; James, 2007; Schneider, 2016). The absence of children's voices in child studies is commented by researchers such as Allan (2008), who characterized children's missing voices as a loss for research: "The absence of the voices of minority groups has been a major problem in research in inclusion and . . . the missing voices of disabled people has created serious gaps in knowledge" (p. 44). Despite the critics of including children in research, other researchers have demonstrated children as competent research collaborators (Christensen & James, 2008).

To ensure the participants' anonymity, I refer to them using pseudonyms (i.e., students using AAC and fellow students) or by referring to their role (i.e., parents and staff). The main characters in the dissertation – the students who used AAC – are represented by the following pseudonyms: Anthony, Beatrice, Colin, Diana, Elaine, George, and Harriet. Two of the students using AAC, Diana and Elaine, attended the same school. Additionally, the schools' name and other identifying information about the participants and the schools are removed. All participants in the study are presented in Table 2. Fellow students and staff who have pseudonyms with the same initial letter as the pseudonym of the student using AAC are related to this student.

**Table 2**      **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)
		Ashley <sup>a</sup>	4		Annie (special teacher)
Beatrice	4	Becky <sup>a</sup>	4	n/a	Annabel (assistant)
		Bridget <sup>b</sup>	7		Belinda (special teacher)
Colin	3	Carter <sup>a</sup>	3	Mother	Barbra (activity therapist)
		Chris <sup>a</sup>	3		Cornelia (class teacher)
Diana	4	Daniella <sup>a</sup>	4	Mother	Chloe (special teacher)
					Connie (assistant)
Elaine	1	Emily <sup>a</sup>	1	Father	Doris (activity therapist)
					Dolores (activity therapist)
George	3	Gareth <sup>b</sup>	5	Mother	Estelle (class teacher)
					Ellen (activity therapist)
Harriet	3	Hannah <sup>a</sup>	3	Mother	Gabrielle (class teacher)
					Greta (special teacher)
					Gina (assistant)
					Gwen (assistant)
					Helen (class teacher)
					Henrietta (assistant)

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

Although the students who used AAC had little or no functional speech, most of them used speech as one of several modes of symbolic communication (e.g., graphic symbols or signed Norwegian). During the process of recruiting students who used AAC to the project, one of the schools reported that one student used a variety of symbolic communication modes. However, during the fieldwork I identified a discrepancy between the school's initial report regarding the student's modes of symbolic communication and the symbolic communication modes used in practice. Despite the absence of use of symbolic communication other than speech, I decided to include the student in the project. The

communication and mobility modes used by the students using AAC reported by the participants during fieldwork and observed by me are described in Table 3.

**Table 3** Communication and mobility modes among students using AAC.

Communication and mobility modes	Anthony	Beatrice	Colin	Diana	Elaine	George	Harriet
<b>Communication modes</b>							
Speech <sup>a</sup>	X	X	X		X	X	X
Vocalizations / sounds	X	X	X	X	X	X	X
Facial expression	X	X	X	X	X	X	X
Eye movements				X			X
Gestures	X		X			X	X
Speech generating device			X <sup>b,c</sup>	X <sup>c</sup>		X <sup>c</sup>	X <sup>c</sup>
Graphic symbols			X <sup>d</sup>	X <sup>d</sup>		X <sup>e</sup>	X <sup>f</sup>
Photos			X	X			
Signed Norwegian	X <sup>g</sup>	X					
Communication cards			X			X	
Communication boards				X		X	
Communication book				X		X	X
Eye gaze communication device							X <sup>h</sup>
Always access to communication aids			Partly	X	n/a		
Always opportunity to request communication aids			X	X	n/a	X	Partly
<b>Mobility modes</b>							
Manual wheelchair			X <sup>i</sup>	X <sup>i</sup>	X <sup>i</sup>	X <sup>i</sup>	X <sup>i</sup>
Electric wheelchair						X <sup>j</sup>	
Other mobility aids			X <sup>k</sup>				X <sup>k</sup>

*Note.* <sup>a</sup> Weak, unclear, and/or partly intelligible. <sup>b</sup> Talking switch (i.e., One Step). <sup>c</sup> Advanced speech generating device (i.e., Rolltalk, Tobii). <sup>d</sup> Picture Communication Symbols (PCS). <sup>e</sup> Bliss. <sup>f</sup> SymbolStix. <sup>g</sup> Used rarely of students using AAC and by staff. <sup>h</sup> Used in little extent due to issues in controlling the device with the eyes. <sup>i</sup> Pushed by another person. <sup>j</sup> Operated by another person. <sup>k</sup> Walking aids (i.e., Walker).

All students using AAC spent time in their mainstream class and in the school's special unit. Only six students were formally enrolled in the mainstream class. The seventh student spent part of the time in the mainstream class. However, staff members at the school's special unit

had the formal responsibility for the student's educational provision and the student was not registered at the mainstream class list. The schools' special unit provided education for students with a variety of impairments who also had needs other than the use of AAC. These students are here referred to as students with special needs, and they were in different grades. Although the special unit was organized differently among the schools, at most schools the special unit was organized as a formal, organizational department with its own staff physically located in separate rooms at the school. At one of the schools the special unit was less formally organized in terms of a more informal department at the school. Although the two students using AAC who attended the same school (i.e., Diana and Elaine) were in different grades, they spend much time together at the school's special unit.

With one exception, all fellow students participating in the study were of same gender as the respective student using AAC (cf. Table 2). Seven of the fellow students attended the same mainstream class as the students using AAC. The remaining three fellow students spent time with the students using AAC at the schools' special unit. They were in different grades than the students using AAC (i.e., one student in lower grade and two students in higher grade).

## **Fieldwork**

The fieldwork was carried out at six different schools. It was conducted over a period of nine months, from April to December 2014, and I spent one week with each student using AAC at the school. The fieldwork included participatory observation (Atkinson & Hammersley, 1994) in various contexts involving social interactions between the student using AAC and fellow students, as well as in-depth interviews of all participants. When performing participant observation, the researcher is involved in interaction with other people, but at the same time observes their actions (Fangen, 2010). My observations of the students took place every day during the fieldwork, during lessons in the classroom, individual activities with staff members in separate rooms, activities with fellow students with special needs at the school's special unit, in recess as well as during activities in the day care facilities for schoolchildren (SFO). I wrote the field notes, sometimes only as extended keywords, during my observations using a field note book. Immediately after an observational session and at the afternoon or evening the same day, I wrote more detailed field notes using a tablet device. The observational data from the fieldwork consisted of a total of 402 pages of text. However, only interview data



were analyzed and are reported in Paper II – V. The rationale for this decision is discussed in more detail in the Analysis section below.

During the first day of the fieldwork at each school, I was first introduced to the student using AAC before I took part in observations that also included fellow students. The procedure of how I was introduced to fellow students varied among the schools. At three schools I introduced myself to fellow students in the mainstream class during my first observation in the class. I told the students that my purpose was to learn about friendships between students with little or no speech and their fellow students at the school. At the remaining schools, I was told by staff on arrival at the school on the first day of the fieldwork that the mainstream class had been informed by staff previously that I would visit the class, who I was, and why I would participate in activities with the class. I was also told that the class was used to having visitors as part of the services (e.g., the educational-psychological services (PPT), the habilitation services for children) provided to the student using AAC or the school. On this basis, I considered that the fellow students in these classes were provided with sufficient information about my visit. Hence, I decided not to present myself to the class any further.

I met several of the students using AAC for the first time in the school's special unit when I arrived at the school for the first day of the fieldwork. I greeted the student using AAC before I gradually was introduced to fellow students at the special unit. As in the mainstream classes, I was told by staff members that the fellow students in the special units was informed about my visit in advance.

### **Semi-structured interviews**

In order to investigate the various perspectives among the participants, separate interview guides (Patton, 2002) were applied for each of the four participant groups (see Appendix 12 to Appendix 15). The function of the interview guides was to structure the interviews in order to outline the topics of interest (Brinkmann & Kvale, 2015). The interview guides were composed of mixed questions about friendship derived from other studies of friendship (Anderson et al., 2011; Weiss, Smith, & Theeboom, 1996), as well as questions I developed based on my preconceptions (i.e., knowledge to and experiences of the field of study). The interview guides consisted of different types of questions (Patton, 2002). They included (1) experience and behavior questions, i.e., “what a person does or has done aim to elicit behaviors, experiences, actions, and activities that would have been observable had the

observer been present” (p. 348) (asking students using AAC, fellow students, parents, and staff); (2) opinion and values questions, i.e., questions regarding goals, intentions, desires, expectations (asking students using AAC, fellow students, parents, and staff); (3) knowledge questions, i.e., questions regarding factual information (asking parents and staff); and (4) sensory questions, i.e., questions “about what is seen, heard, touched, tasted, and smelled” (p. 350) (asking fellow students, parents, staff). Use of the interview guides made it possible to specify some questions of expected importance concerning the students’ social relationships in advance (Patton, 2002).

The semi-structured interviews (Brinkmann & Kvale, 2015) took place in the second half of the week of the fieldwork at each school. The timing for the interviews was chosen for two reasons. Firstly, the observations conducted ahead of the interviews provided a richer basis for completing the interviews. Although the interviews were based on semi-structured interview guides, I had the opportunity to extend my predefined interview questions with questions relating to events I had observed previously during the fieldwork. In that way I was able to construct interview data that also was related to events I had observed myself. The opportunity to bring in episodes from the observations was important in the interviews for all participant groups. Secondly, the quality of an interview partly rests on the established trust between the interviewee and the researcher (Tjora, 2013). This is especially important when interviewing children (Dalen, 2011; Wilson & Powell, 2001). Interviews with children entail inequality in social power due to age, status, and knowledge (Bedoin & Scelles, 2015), placing children in the subordinate position to the researcher. Hence, it was important for me to spend time with and participate in activities with the students in different contexts before the interviews took place in order to establish a relationship of trust and rapport with the students (Hunt et al., 2009; Mandell, 1988; Punch, 2002; Tjora, 2013; Wilson & Powell, 2001). Examples of such activities were morning assemblies and lessons in the classroom, meals and group activities at the special unit, playing in the sandbox and skipping rope in recess, excursions with the class, and playgroups and meals at the after school care. By conducting the interviews in the last part of my fieldwork at each school, the interviews benefited from the relationship I had established with the students (i.e., students using AAC as well as fellow students) during my participation in activities with them. As such, participant observation as a preceding activity to the interviews became an important component in increasing the students’ confidence in me as a stranger in class.

When interviewing children, the quality of the interview is strengthened by locating the interview at a venue familiar for the child, using an appreciative communication style, and possessing competence in communication with the child (this is especially important when interviewing children using AAC) (Dalen, 2011). Furthermore, it is important to avoid statements that could be perceived as expectations and that might affect the child's response to a question in order to please the researcher (Wilson & Powell, 2001; Zajac & Hayne, 2003). As a researcher, it is also important to be aware of children's tendency to provide responses that are socially acceptable rather than socially unacceptable (Faux, Walsh, & Deatrick, 1988). Children may be reluctant to provide negative or embarrassing information to a researcher (Steward et al., 1996). Interviewing children who use AAC has received little attention among researchers (Anderson & Balandin, 2011). However, according to Anderson and Balandin (2011) the methodological challenges that the researcher has to consider when interviewing children, including attention, comprehension, compliance, and power relations, are likely to be increased among children who use AAC. Anderson and Balandin argued for the use of feedback strategies to check the accuracy of the researcher's interpretation of the children using AAC's responses.

An important objective of the interviews was to grasp the participants' perspectives concerning issues related to social relationships, including their subjective stories, experiences, beliefs, knowledge, attitudes, and practices with relevance for my research questions. By using a qualitative methodology, I expected to find different and similar perspectives within and between the groups of participants based upon the unique role each group represented. The individual along with the group perspectives were important for my understanding of organizational and social structures that might influence the social relationships among the students. As such, the interviews provided relevant data material to person centered analysis as well as analysis focusing on structural factors (Tjora, 2013).

When conducting the interviews I pursued statements from the interviewees that I considered relevant for my research questions which were not represented in the interview guide (McCracken, 1988). I also used an iterative approach with concurrent analysis so that one interview informed the questions asked in the next. With two exceptions, the interview guides consisted of open-ended questions (Wilson & Powell, 2001). These exceptions are commented in the subchapter *Interviews with students using AAC* (page 54) below.

The interviews guides across the four interview groups included different kinds of questions and unequal numbers of questions. As the participants had different roles and

insights in the social relationships among the students who used AAC, the interviews also identified differences across the participant groups. The average length of the interviews for the four participant groups were as follows (hh:mm:ss): students using AAC 00:21:21, fellow students 00:11:15, parents 00:34:37, and staff 00:55:21. The mean length of the interviews with the students using AAC was longer than the interviews with the fellow students, although a majority of the questions in the interview guide for the latter interview group were the same as the questions in the interview guide for the students using AAC.

Although I prepared, initiated, and led the interviews, the dialogues with the interviewees represented a co-construction of data (Charmaz, 2015) where the interviewees' perspectives set a distinct mark on the data. The interviews were conducted using a high quality sound recorder (Roland R-05) for optimized recording of the students' and the adults' voice. The interviews were transcribed verbatim in full using the FTW Transcriber software, providing 692 pages of text. The transcriptions included indications of pauses and laughter.

#### *Selected questions from the Social networks tool*

Due to my previous experience from Statped in translating and using the Social networks tool (Blackstone & Berg, 2006) in communication assessment, I decided to use selected questions from this tool to obtain descriptions of the social networks among the students who used AAC (see Appendix 16). Social Networks is a tool for assessment and planning, aimed to help professionals to develop goals which support the communication among individuals who use AAC in order to provide increased life quality and participation in everyday life activities. The tool consists of a questionnaire and the researcher enters the participants' information in the form. The selected questions from the Social Networks tool were asked in the latter part of the interviews of 5 fellow students, 6 parents, and 16 staff members, providing a total of 27 interviews. In the remaining interviews of fellow students and staff (i.e., 5 fellow students, 2 staff members), the Social Networks tool was not applied due to lack of time (i.e., staff, fellow students), lack of motivation among interviewees (i.e., fellow students), or lack of feasibility of this type of question (i.e., fellow students at special unit).

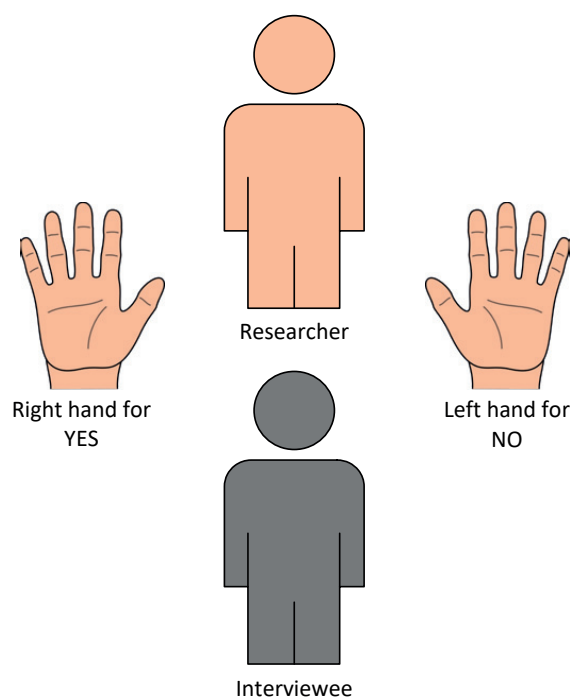
The selected questions from the Social Networks tool related to identification of communication partners (i.e., acquaintances and friends at school) to the student using AAC, communication partners' strategies to support social interaction with the student using AAC, and conversation topics in dialogues with the student using AAC. The selected questions are reported in the Appendices (page 259).

### *Interviews with students using AAC*

During the interviews with students using AAC, it was important for me that the students used the communication modes they were familiar with and which they had mastered. I wanted their full attention on the conversation. Hence, I did not bring communication materials (e.g., cards or pointing boards with graphic symbols) with vocabulary that could be suitable for the topics I expected we might talk about because I considered the materials would be unfamiliar to the students. There is also a risk of putting words into their mouths (Brewster, 2004) by providing participants with specific and perhaps unfamiliar vocabulary by means of photos or visual symbols. Additionally, as the students who communicated by means of graphic symbols used different types of graphic systems (e.g., PCS, Bliss, SymbolStix), I had no practical options for developing such materials, individually adapted to each student using AAC, at the location of each fieldwork. Five of the students used spoken language during the interviews. Their spoken language was sometimes difficult for me to understand as they spoke in a low voice, the pronunciation was not always intelligible, and the vocabulary was very restricted. Despite their restrictions in speech, three of these students used spoken language exclusively during the interviews. The other two students also used a communication book or a speech-generating device.

The interviews with the students using AAC were conducted in the presence of a staff member. The staff member knew the student well and supported the communication between the student and me by providing interpretations of the student's communication or affirmations of my interpretations of communication. By acting as interpreters, the staff clarified most of the issues relating to any misunderstandings or inadequate interpretations that I made of the students' expressions. However, staff members' interpretation of students' communication might have reflected the interpreter's beliefs, hopes, or desires based upon the context and their prior knowledge of the students (Grove, Bunning, Porter, & Olsson, 1999). By verbally repeating answers from the students, and asking the students if my interpretation of the answers was correct, I attempted to strengthen the validity in the interpretations of the students' communication (Wilson & Powell, 2001). In interviews with the two students using AAC with very restricted communicative means to answer open-ended questions, I decided to ask questions that could be answered with yes and no. I also decided to use the same partner-assisted scanning strategy (Costello, 2000) as staff members when they provided communicative support to the students. In these interviews, I positioned myself seated in front of the student. After I asked a yes/no question I immediately raised my right hand and said

Yes, then I raised my left hand and said *No*. The student using AAC answered the question by looking at the hand representing the preferred answer. Both students often smiled when they looked at my right hand representing yes. One of these students also made a sound and made movements with her arms when she smiled and looked at the hand representing yes. When the students looked at my left hand representing no, they did not provide any change in their bodily expressions (e.g., no gestures or sounds). I repeated the answers loudly. For one of the students, in cases of unexpected answers or long response time before the answer was given, I repeated the student's answer and then asked if I had understood the answer correctly by using the same strategy for questioning as described above. Figure 4 illustrates the communicative support strategy applied in interviews with the students using AAC with restricted means to answer open-ended questions.



**Figure 4** Communicative strategy for supporting questions with Yes/No answers.

The communication strategies by means of symbolic communication used by the students using AAC during the interviews are presented in Table 4. In addition to symbolic

communication, the students also applied non-symbolic communication modes during the interviews (cf. Table 3).

**Table 4** Communication strategies used by students using AAC during interview.

Communication strategies	Anthony	Beatrice	Colin	Diana	Elaine	George	Harriet
Answering open-ended questions using speech <sup>a</sup>	X	X	X		X	X	
Answering yes/no questions				X			X
Using spoken language	X	X	X		X	X	
Looking at photos/graphic symbols in an eye gaze communication book				X			X
Pointing at photos/graphic symbols in a communication book						X	
Using a speech-generating device			X				

*Note.* <sup>a</sup> Using mostly single words, the students' speech was weak, unclear, and/or often unintelligible.

### *Interviews with fellow students*

The time and the location for the interviews with the fellow students was arranged in cooperation with the class teacher (i.e., fellow students in mainstream class) or the special teacher (i.e., fellow students in special unit). I was told by staff that the fellow students were informed about the practical aspects ahead of the interviews. When I met the fellow students for interview, most of them were smiling and I had the impression that they were motivated for and comfortable with the upcoming conversation with me. Ahead of two of the interviews, staff members told me that the fellow students (i.e., Bridget, Hannah) were happy to be invited and looked forward to be interviewed. However, statements from two other fellow students during the interviews may have indicated a social stigma (Goffman, 1968) associated with being chosen as interviewee. During the last part of the interview, Carter asked: "But, will you talk to someone else [i.e., fellow students]?" When I told him that I already had interviewed Chris in the class who he knew well, he did not comment any further on this issue. Moreover, in the first part of another interview, Daniella gave a more confrontational statement: "But why do you actually do this [interviewing] to me, with me?". Although we had, from my viewpoint, a relaxing conversation, she may revealed qualms about the

conversation by referring to her position of being an interviewee concerning her social relationship with Diana.

As I conducted the interviews using interview guides, the interviews included a certain number of questions prepared in advance which I hoped to complete. I had several experiences where the students reacted differently to the length of the interview. In one interview, a fellow student in the school's special unit stated that he wanted to abort the interview after 06:57 minutes: "I think it's just too many questions." (Arnold). The interviewed was immediately stopped and the student was free to leave the room. On the other hand, another fellow student from mainstream class explicitly stated that she wanted to continue at the moment I was about to end the interview. The conversation between Ashley (the fellow student) and me is quoted below:

Researcher: But, you know . . . we're almost done . . . if you want to go to the gym afterwards so . . .

Ashley: Nope. I'm going with the A group, at the end of the day.

Researcher: Oh, are you?

Ashley: Yes.

Researcher: Yes . . . Hope you don't get bored because you did not go to the gym then.

Ashley: Nope. I will go to the gym afterwards.

Researcher: You do?

Ashley: Yes.

Researcher: Okey. Yes, but that's fine. It would be a bit silly if I should keep you busy here while you wanted to do something completely different.

Ashley: [laughs]

Researcher: So we are actually completed. But . . . thanks for talking to me.

Ashley: Mmm. Annie [special teacher] said it took about half an hour [laughs]

Researcher: Yes, I thought so. It was me who told Anny that . . .

Ashley: Mmm.

. . .

Researcher: Yeah. However . . . you responded so quickly . . . Thanks for the chat.

Ashley: Mmm.

Researcher: So you are free to go. Are you going back to class, or?

Ashley: Yeah, we are doing block letters. However, I will not return. It's so boring.



Researcher: Oh, yes. You will [laughs], you'd rather talk more perhaps?

Ashley: Yes

## **Analysis**

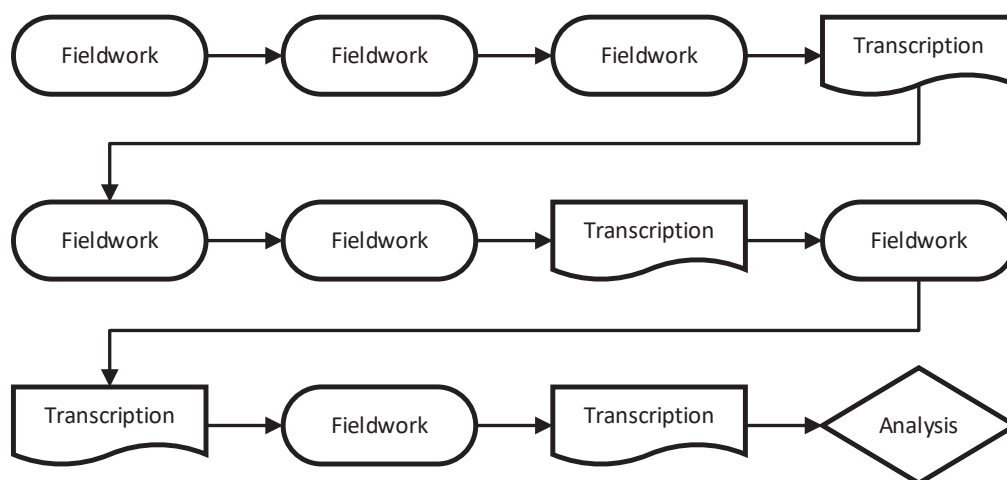
### *Constructivist grounded theory*

The framework for the data analysis followed a constructivist approach to grounded theory (Charmaz, 2014). Classic grounded theory (Glaser & Strauss, 1967) has been criticized for its positivistic approach (Charmaz, 2009; Clarke, 2005), loss of a sense of context caused by fragmentation of data (Bryman, 2001), as well as for not taking sufficient account of the context in which actions and processes take place and thereby de-emphasizing structural elements (Burawoy, 1991; Midré, 2009). Constructivist grounded theory developed as a shift away from the positivistic paradigm and Charmaz (2014) refuted the criticism of not paying attention to contextualization by arguing that constructivist grounded theory also includes analysis on the macro level and referred to a number of contextualized grounded theory studies. Constructivist grounded theory incorporate multiple and constructed social realities which are interpreted within the frames of the researcher's position, perspectives, and preconceptions. In the first stages of the analysis, constructivist grounded theory is based on an inductive approach, but assumes an abductive approach in subsequent analytical stages (Charmaz, 2009, 2014; Thornberg, 2012). According to Charmaz (2014, p. 201), abduction let "you consider all possible theoretical interpretations of your data but maintain a critical, skeptical stance toward these theories".

As constructivist grounded theory basically implies an inductive approach to analysis of the data material, the rationale for this decision was based on several motives: (1) The systematic literature study, which was conducted before the analysis started and reported in Paper I, revealed that little research has been conducted on friendship among children using AAC. (2) Grounded theory was considered as an appropriate methodological move to handle my preconception of the field as the analysis is based upon the data constructed (Charmaz, 2014), not upon interpretations of data based on existing theories. In addition, (3) grounded theory was expected to represent an appropriate strategy for handling the participants' multiple perspectives (Clarke, 2005), i.e., the perspectives of the students using AAC, fellow students, parents, and staff at school respectively through interpretive analysis. Taking into account the results from previous research revealing that children may nominate peers as friends without being reciprocally nominated by these children, the existence of unilateral

friendships (e.g., Berndt & McCandless, 2009; Kvello, 2006; Newcomb & Bagwell, 1995; Scholte et al., 2009) suggests that investigating multiple perspectives on friendship is important. Using the term *constructivist*, Charmaz (2014) emphasized the importance of the researcher’s subjectivity and influence in construction and interpretation of data (see also Clarke, 2005; Clarke, Friese, & Washburn, 2015). Hence, the interpretations and the results of this study bear my imprints. I am the author “... of a reconstruction of experience and meaning” (Mills et al., 2006, p. 26), processed from the data material and analysis based on the fieldwork. In the hands of a research colleague, the approach to the research field and the outcome of this study could have been of a different nuance: The premises for the study might have been changed, the glances during the fieldwork might have been turned in another direction, the coding perspectives during the analysis might have been different, and the results may have been interpreted with some other perspectives. Inevitably, this study’s design and results represent my glances on the students’ social relationships.

The analysis was conducted after the completion of the fieldwork. Figure 5 shows the timeline for the fieldwork, transcriptions, and the analysis.



**Figure 5** Timeline for the fieldwork, the transcriptions, and the analysis.

The analysis included the following analytical steps: initial coding, focused coding, and categorizing. Coding implies ascribing labels to segments of data (e.g., transcriptions of interviews) that describes the essence of each segment. According to Charmaz (2014), “we define what we see as significant in the data and describe what we think is happening” (p.

115). Moreover, “coding distills data, sorts them, and gives us an analytic handle for making comparisons with other segments of data” (p. 4). As grounded theory emphasizes the importance of identifying processes, I aspired to code the data using gerunds in all analytical steps in order to reflect action (Charmaz & Bryant, 2016; Glaser, 1978). All transcripts were organized into one of the four interview groups. Initial coding, characterized by codes that stay close to the data (i.e., codes that provide a description close to what the data mean), was conducted on all transcriptions within each of the four participant groups. The initial coding, which included coding of segments of data, resulted in four coding sets, representing a total of 2488 initial codes (students using AAC: 129 codes; fellow students: 226 codes; parents: 478 codes; staff: 1655 codes). Based on the initial codes, focused coding was conducted on each of the initial coding sets. Focused coding implies categorizing of initial codes which “appear more frequently among your initial codes or have more significance than other codes” (Charmaz, 2014, p. 138), providing analytical progression based on the codes considered most relevant for the research questions. This process also included the constant comparative method (i.e., comparisons between initial codes and data, comparisons across initial codes, and comparisons across focused codes). The focused coding resulted in 97 focused codes (students using AAC: 13 codes; fellow students: 18 codes; parents: 26 codes; staff: 40 codes).

During the next phase of the analysis, the focused codes were used to develop tentative categories within each of the four coding sets. By categorization, the conceptual level of the analysis (i.e., initial and focused coding) transforms from description to a theoretical level and forms the basis for the concept in the theory constructed (Charmaz, 2014; Clarke, 2005). A total of 24 tentative categories were constructed across the interview groups (students using AAC: 4 categories; fellow students: 7 categories; parents: 5 categories; staff: 8 categories). By comparing focused codes and tentative categories within and across the tentative categories and with data, seven final categories were constructed by merging tentative categories across the interview groups. During the categorization, I aimed to identify processes and actions represented in the data material in order to avoid “viewing individuals as discrete units of analysis, as a key strategy in constructing theory and moving beyond categorization types of individuals” (Charmaz, 2014, p. 245). Appendix 17 presents examples of coding in the respective phases of the analysis.

During all analytical steps, memo-writing (Charmaz, 2014; Saldaña, 2009) was a vital part of the analyses. As “memos are sites of conversation with ourselves about our data” (Clarke, 2005, p. 202), I wrote memos as well as diagrams as methods for documenting and

reflecting on my data (e.g., codes, categories, relationships between codes/categories, data, descriptive data etc.). The memo-writing was concurrent with my initial and focused coding and facilitated all steps of the data analysis.

Due to the extensive work in recruiting students (cf. *Recruiting participants*, page 41), the main analysis of the data material began after the fieldwork was completed as shown in Figure 5. In conducting analysis using the grounded theory approach, *theoretical sampling* provide additional refinement of the categories constructed (Charmaz, 2014). Theoretical sampling implicates gathering more data (e.g., interview data or observational data) after completing the main steps in the analysis (i.e., initial coding, focused coding, identifying tentative categories) in order to refine the tentative categories identified. The gathering of data stops when theoretical *saturation* is achieved, which means that new data will not add new properties to the conceptual categories (Charmaz, 2014). However, due to the extensive efforts to recruit participants to the study, it was not possible to complete the initial and focused coding steps before all fieldwork was completed. For this reason, theoretical sampling was not conducted in the study. Thus, the time consuming steps in grounded theory forced some adjustments of the methodology, which also have been subject to criticism of the grounded theory approach (Bryman, 2001; Midré, 2009).

After analyzing the interview data, I realized that the data material from the observations were too extensive to incorporate into the present analysis, taking into account the timeframes for the project. Therefore, rather than analyzing the observational data, I decided to use my impressions from the observations and some of the field notes as informal backdrops and descriptive examples as adjuncts to the interview data.

## **Ethical considerations**

### *Codes of ethics*

Conducting research that involves humans requires ethical consideration to safeguard the individuals' interests and the need for protection. The social sciences are informed by codes of ethics that form the grounds for sound research practice. Lincoln and Denzin (2013) described the following four ethical guidelines for social research: (1) Informed consent, (2) deception, (3) privacy and confidentiality, and (4) accuracy. The National Committee for Research Ethics in the Social Sciences and the Humanities (2016) in Norway, which provides guidance and advice on research ethics, has congruent guidelines. Concerning this study, I will comment briefly on each of these guidelines.

*Informed consent:* In the invitations to participate in this study, the participants in all interview groups received written information about (1) the background and the purpose of the study, (2) how the fieldwork would be carried out, (3) participation in the study was voluntary, and (4) the opportunity to withdraw from the study. In addition, parents and staff did also receive information about (5) the opportunity to see the interview guides before the interviews, (6) anonymization of data, and (7) how the data material was handled. Parents and staff confirmed their participation with a written consent, and the participation of students using AAC and fellow students was confirmed by active parental written consent (Corsaro, 2015a). The appendices 6 – 11 include detailed information about the informed consent.

*Deception:* There was no deception in this study. Participants were told about the purpose of the study and that what happened was not a secret and could be discussed. Ahead of and during the fieldwork, I aimed to provide truthful information to the participants. I endeavored to provide the information requested by the participants or the information I thought they might need.

*Privacy and confidentiality:* In order to ensure anonymity, the names of all participants were replaced with pseudonyms. In addition, any information that could be used to identify the participants, the schools, or the local communities were removed.

*Accuracy:* I have sought to handle the data material respectfully, implying no omissions, fabrications, nor fraudulent information. By following the constructivist grounded theory approach (Charmaz, 2014), I have aimed to process the data material as it has appeared to me, without explicit references to existing theories or empirical evidence. Hence, I have solely based my analysis on the participants' constructions of the students' social realities.

### *Research on children*

In conducting the research practice described in the presentation of the empirical study above (page 40), I sought to fulfill recognized guidelines for research ethics (Lincoln & Denzin, 2013; The Ethical Research Involving Children, 2013; The National Committee for Research Ethics in the Social Sciences and the Humanities, 2016). In the following, I will pay attention to research ethics of special relevance in conducting research on children.

The international ethical guidance provided by The Ethical Research Involving Children (2013), approved by The Norwegian National Research Ethics Committees, identified the following main areas for ethical consideration: (1) harm and benefits, (2) informed consent, (3) privacy and confidentiality, and (4) payment and compensation.

*Informed consent* as well as *privacy and confidentiality* is described in the presentation of the codes of ethics above and I will not dwell any further on these issues.

The issues of *harm and benefits* concern assessments of the benefits of including children as participants in the research compared to the risk of harm that children can be exposed to. In this study, I considered the students' participation as vital due to my opportunity to answer the research questions and to the importance of acknowledging and including the students' voices. Additionally, as my initial assumption that research on friendship among children using AAC was restricted I prioritized to include multiple perspectives on the students' friendships. Hammersley and Atkinson (2007) emphasized the importance of a reflexive research practice that takes into considerations children's right to privacy when investigating issues in their private lives. Although my presence at the schools involved increased attention on particular students and issues concerning their private lives, I considered the students' risk of harm as low and the negative consequences limited. My expectation of low risk of harm concerning the investigation of the students' social relationships is also supported by Hymel, Vaillancourt, McDougall, and Renshaw (2002). By referring to results from previous studies, they argued that investigation of children's social relationships by asking children questions concerning their social networks does not have negative consequences for the interaction between children or to feelings of loneliness.

Furthermore, the study did not include *payment and compensation* to the participants. I did not provide any incentives for the students to participate or provide certain information during the fieldwork.

Besides the ethical considerations provided by the The Ethical Research Involving Children (2013), the relationship between the researcher and the child is also part of the research ethics in qualitative research (Nind, 2009). As described in the presentation of the semi-structured interviews (page 50), I aimed to establish a relationship of trust and rapport (Dalen, 2011; Hunt et al., 2009; Mandell, 1988; Punch, 2002; Wilson & Powell, 2001) with the students through participatory observations ahead of the interviews.

I also considered other issues with importance for the ethical considerations in involving children in the study. Although important for interviewees at all ages, when interviewing children it is especially important to avoid leading questions or providing suggestions (Brinkmann & Kvale, 2015), avoid imposing the researcher own views (Punch, 2002; Øverlien, 2013), use a language that is simple and easy to understand (Punch, 2002),

and avoid dominance in the conversation (Christensen, 2004). During the interviews, I sought to follow these recommendations.

Although I did not formally employ a steering or advisory group for the study as suggested by Nind (2009), my work with children as an advisor in Statped and my discussions of methodological issues with my supervisors which have extensive research experience with children provided a base for ethical reflections during the study.

## The quality of this study

### Quality criteria in constructivist grounded theory studies

Charmaz (2014) described four criteria for evaluating grounded theory studies: (1) Credibility, (2) originality, (3) resonance, and (4) usefulness. She argued that a combination of credibility and originality “increases resonance, usefulness, and the subsequent value of the contribution” (p. 338). In the following I will comment on each of these issues.

In order to provide *credibility* in this study, I made efforts to become familiar with the settings and topics of the research, provide sufficient data including the various perspectives represented, conduct systematic comparisons between data and categories, and present logical links between the data, the analysis, and the arguments. I also aimed to provide evidence for my claims (i.e., incorporation of the participants’ statements, descriptions of analysis, thorough discussion of results). Additionally, conducting the systematic literature review provided an important theoretical and empirical framework for the discussion of the results from the empirical study and strengthened the arguments and the credibility (Charmaz, 2014).

As the research into friendships among students who use AAC is sparse, this study adds *originality* to the existing body of research. By using an inductive approach, the participants’ reports informed the analytical steps and illuminated the data in fresh ways. Through the discussions of the results of this study, I have extended the current research on friendship, including the provision of a conceptual rendering of the data, and challenged the educational practice reported. Moreover, the results reported in the papers as well as the suggested implications for practice, policy, and research of my research in the *Discussion* also highlight the originality and the significance of this study.

In order to strengthen the *resonance* of this study, I have related the students using AAC’s friendships to contextual issues at several levels (e.g., organizational and structural issues at the school, national and international policies on inclusive education). By also

following an abductive approach in constructivist grounded theory, the findings and the discussions are linked to existing research and theory.

The relevance of the forthcoming suggested empirical, policy, and research implications of this study indicates the *usefulness* of this study. Additionally, results reported in the papers (e.g., marginalization of students using AAC in Paper 2) may indicate generic processes that can be present in other contexts such as the inclusion/exclusion of people with special needs in society in general. The presence of generic processes is one hallmark of the usefulness of a study (Charmaz, 2014).

In addition to the quality criteria suggested by Charmaz (2014), within the constructivist approach, Guba and Lincoln (1989; 1994) suggested both *trustworthiness* and *authenticity* as criteria for evaluation of the quality of studies using qualitative data. Below I describe how I have addressed these criteria.

### **Trustworthiness**

*Trustworthiness* is used as a description of the quality criteria of studies within the constructivist approach (Lincoln et al., 2013). Trustworthiness holds four components (Guba, 1981; Guba & Lincoln, 1989; Guba & Lincoln, 1994; Lincoln & Guba, 1985; Shenton, 2004): (1) Credibility, (2) transferability, (3) dependability, and (4) confirmability.

*Credibility*; First, the study adopted a constructivist grounded theory approach, which is a recognized research method (Denzin & Lincoln, 2011). Second, due to my previous experience in AAC and cooperation with parents and teachers as an advisor in Statped, I had knowledge and experience in the field of study and I was familiar with the school culture. This previous experience strengthened the planning and the conduct of the fieldwork. Third, I made use of both data triangulation and methodological triangulation (cf., section Methods and material), which provided a diversity of data from a variety of sources and sites. Fourth, I used several strategies to help ensure transparency of the project for participants. Participation was voluntary, and I explicitly informed the participants about the opportunity to withdraw from the study without penalty at any time. In addition, I made efforts to establish rapport with the students during the fieldwork. Fifth, during the whole study I held debriefing sessions with my supervisors in which we discussed methodological and any other issues of concern. Sixth, although the observational data were not part of the analysis they represented thick descriptions of the phenomenon under study. Comparisons of the statements from the



interviews and the field notes from my observations confirmed many reports from parents and staff about the students using AAC's social relationships.

*Dependability*; As with the issue of credibility, triangulation provided opportunities to confirm the dependability of the results. Use of data triangulation and methodological triangulation helped to construct a robust basis for conclusions that could be drawn across the various contexts. Moreover, the descriptions in the section Methods and material provided opportunities to assess the research processes, including the recruitment process, the fieldwork, and the analysis (i.e., audit trail, cf. Bringer, Johnston, & Brackenridge, 2004; Guba, 1981; Shenton, 2004).

*Confirmability*; Triangulation strengthened the confirmability of the study and ensured that the data originated from the participants' experiences and perspectives. Use of data triangulation revealed multiple perspectives from participants with different roles about the students using AAC's social relationships and contributed to "reduce the effect of investigator bias" (Shenton, 2004, p. 72). By situating my position ahead of the study, I have given an account for the basis of my preconceptions. I have also described the basis for the choice of the methodological approach of the study. Additionally, the use of the constant comparative method and the identification of common themes also strengthened this study's confirmability.

### **Authenticity**

Authenticity includes five criteria (Guba & Lincoln, 1989; Guba & Lincoln, 1994): (1) Fairness, (2) ontological authenticity, (3) educative authenticity, (4) catalytic authenticity, and (5) tactical authenticity. Apart from fairness, the other four criteria are not discussed here as they were not part of what I aimed to discover or attempted to assess.

*Fairness* entails the quality of the representation of all relevant stakeholders' perspectives, values, concerns, and claims in the text (Lincoln et al., 2013). This study represents four groups of stakeholders (i.e., students using AAC, fellow students, parents, and staff). Hence, the study includes the most relevant actors who can shed light on the students using AAC's social relationships. An important contribution of the study is the inclusion of the students' voices concerning their friendships, which counteracts the absence of children's voices in previous research concerning children's life worlds (Allan, 2008; Hohti & Karlsson, 2014; James, 2007; Schneider, 2016).

# Findings

## Paper 1

Østvik, J., Ytterhus, B., & Balandin, S. (2016). Friendship between children using augmentative and alternative communication and peers: A systematic literature review. *Journal of Intellectual & Developmental Disability*, 1-13.  
doi:10.3109/13668250.2016.1247949

Friendship is acknowledged by many researchers as a unique social relationship, with significant impact on children's development, participation, and identity. The research on friendship among children without disabilities is extensive. Yet, we have limited knowledge about friendship among children who have no or little functional speech, who use AAC.

The purpose of this paper was to present a systematic literature review that identified the current research on friendship among children who use AAC by addressing the following review questions: (1) How is friendship defined in research on children using AAC? (2) How is friendship established and maintained among children using AAC? (3) How are peer relations and interactions between children using AAC and their peers described? (4) What promotes and/or hinders friendship between children using AAC and their peers?

Seventeen international general-purpose databases were searched by using the search term "augmentative AND alternative communication AND friend\*". The inclusion criteria were: (a) literature in English; (b) the population was restricted to children; (c) the age of children was limited to 13 years and under; and (d) the types of publication were peer-reviewed articles, doctoral dissertations, and book chapters. Of a total of 1184 results from the database search, the study included eight articles. The included articles related to children using AAC between 18 months and 18 years old and they included inclusive educational settings, learning support units/special classes, and a health institution.

This review indicated that there is limited research on friendship among children using AAC. The results revealed that structural factors (i.e., being in the same class), human factors (i.e., shared social values, positive attitudes towards impairment, and motivation for friendship), use of technology (i.e., online social networking), and communication training for peers facilitated the establishment of friendships between children using AAC and peers.

Important agents for maintaining these friendships were social values, peers' knowledge of and attitudes towards disability, personal characteristics of friends, peers' perceived rewards and benefits of the relationship, shared experiences, and common interests. Peers valued their friendships with children who used AAC, but they considered these friendships as different from other friendships. Children using AAC participated in a lower number of activities and for a smaller percentage of time compared to children without disabilities, and their patterns of social networks were strongly connected to participation.

The results call for further research on indicators of social relationships as well as types of friendships among students using AAC, how these children establish friendships, and how their social relationships develop or change. Future research would also benefit from exploring the appropriateness of using existing models of friendship development in explaining friendships among children using AAC, including investigation of the role of reciprocity.

## Paper 2

Østvik, J., Balandin, S., & Ytterhus, B. (2017). A "Visitor in the Class": Marginalization of Students Using AAC in Mainstream Education Classes. *Journal of Developmental and Physical Disabilities*, 29(3), 419-441. doi:10.1007/s10882-017-9533-5

The Salamanca Statement (UNESCO, 1994) declared that every student with special needs should have a place within the regular education system and several researchers have acknowledged the importance of participation in class. Still, research on inclusive practice in the Norwegian mainstream public school reveals that more students with special needs spend more time outside of class than before, and they become more marginalized at school as they grow older. Although there is no agreed definition of inclusion, several scholars have argued that inclusive education must entail physical presence in mainstream class, participation in instructional activities, skilled staff, team collaboration, planning of skills, and individual education programs of high quality. The students' social life at school partly rests on how the educational provision is designed for participation and interaction with other students.

The aims of this study was to investigate the following issues: (1) What kind of activities do students using AAC and fellow students interact in at school? (2) What are the perspectives of fellow students, parents, and staff in including students using AAC in mainstream education classes? (3) What is the role of staff concerning inclusion of students

using AAC in mainstream education classes? 41 participants participated in the study, including 7 students using AAC in Norwegian mainstream public schools, 10 fellow students, 6 parents of students using AAC, and 18 school staff. A semi-structured interview was conducted with each participant and the interview data were analyzed using a constructivist grounded theory approach (Charmaz, 2014).

The analysis identified three organizational and structural preconditions for friendship between students using AAC and fellow students: Visiting fellow students, ambivalence and contradictions about structures, and lack of common purpose. Having a visiting role entailed that students using AAC spent limited time in their mainstream class, in favor of time spent at the school's special unit or at individual activities. Hence, the students using AAC were placed in a marginalized position. Although staff valued shared time and interactions between students using AAC and fellow students in the mainstream class, ambivalence and contradictions about several structures for social relationships were identified due to loss of meeting places and contextual factors for interaction with fellow students. Lack of common purpose among staff implied blurred goals for the student using AAC's social development, disagreements about the students' educational provision, staff's needs of training and supervision and limited cooperation between staff members. The findings were discussed in relation to existing research, and implications for future research and practice are also discussed.

### Paper 3

Østvik, J., Balandin, S., and Ytterhus, B. Interactional facilitators and barriers in social relationships between students who use AAC and fellow students. *Manuscript submitted and under review for publication.*

Reports from researchers indicate that communicating using AAC can be challenging. Students who use AAC make fewer initiations to start an interaction with fellow students, rely on others to others to initiate communication, are likely to be asked closed (yes/no) questions, take fewer turns in interactions than speaking fellow students, and may have limited use of formal symbol systems. They are also likely to take a respondent role which is associated with passive communication. However, positive attitudes and communicative support from fellow students may reduce the effect of communicative challenges, increase students using AAC's participation with fellow students, and promote establishment of friendships.

Hence, relational aspects may influence the social relationships among students who use AAC. The importance of considering the influence of both individual factors and environmental factors on social relationships among students with disabilities is also recognized by other researchers. Still, how relational aspects between students who use AAC and fellow students influence their social relationships is not clear. Hence, the aim of this study was to investigate how relational aspects among students who use AAC, fellow students, and staff may influence the students' social relationships as perceived by parents and staff.

Six parents and 18 staff for seven students using AAC participated in semi-structured interviews. The transcriptions of the interviews were analyzed using a constructivist grounded theory approach (Charmaz, 2014). The analysis identified several interactional facilitators and barriers to social relationships between students using AAC and fellow students. Shared experiences with fellow students, positive attitudes among fellow students towards interacting with students using AAC, provision of communicative support from fellow students and staff to students using AAC, and fellow students' confidence in communication with students using AAC facilitated interactions among the students. In contrast, the analysis identified several interactional barriers to social relationships. These included communication challenges, restricted initiatives for interaction, ever increasing differences in functioning, health issues among students using AAC, students using AAC's violations of social codes and uncertainty (i.e., due to loud noises, the unknown, being in class), negative attitudes among fellow students towards students using AAC, and limited attention on friendships among parents.

Fellow students' acceptance of students using AAC, attempts at interaction, and communicative support strengthened the social relationships between the students. As fellow students' confidence in communication promoted interaction with the students using AAC, the results indicated the importance of providing communication training in the use of AAC to fellow students to strengthen their opportunities to engage in meaningful communication with students who use AAC. The results also indicated that staff at schools might provide information about the students using AAC's disabilities to fellow students, including causes of lack of functional speech and use of AAC in order to support the development of positive attitudes and social relationships between the students. It may also be beneficial to increase attention on friendships in the cooperation between parents and staff at school in order to strengthen the efforts in supporting the students' social relationships. Future research may

benefit from the investigation of causal relationships between extrinsic mechanisms and students using AAC's passive role in communication.

## Paper 4

Østvik, J., Ytterhus, B., and Balandin, S. (2017). "So, how does one define a friendship?" : Identifying friendship among students using AAC in inclusive education settings. *European Journal of Special Needs Education, 1-15*. doi:10.1080/08856257.2017.1312799

Most research on friendship among children has focused on children without disabilities. This research has provided knowledge about the selection, development, maintenance, and functions of and interactions in friendships. Although reciprocity is emphasized as an important characteristic in several definitions, the research literature presents no consensual definition of friendship. Still, scholars have acknowledged the importance of considering unilateral friend relationships. Berndt and McCandless (2009) designated friendship as a continuum ranging from strangers, acquaintances, just friends, good friends, best/close friends, to the best of friends.

Yet, we do not have reliable indications that existing knowledge is relevant for our understanding of friendships among children who use AAC. Hence, the aim of this study was to identify the friendships between students using AAC and fellow students at school by addressing the following research questions: (1) What characterize friendships between students using AAC and fellow students, and (2) what is the consensus between the participants' reports on these friendships. Four groups of participants participated in the study, including 7 students using AAC in primary school, 10 fellow students, 6 parents of students using AAC, and 18 school staff. Each participant was interviewed and the data were analyzed using a constructivist grounded theory approach (Charmaz, 2014).

In all, the students using AAC reported 29 friendships with fellow students at school. The mainstream class was the most important venue for making friends at school. The four participant groups reported very different friendships among the students using AAC. Both the students using AAC and the fellow students who participated in interviews reported friendships that were not reciprocal with the other part in the dyad. These results indicate that students using AAC could express clear preferences for whom they regarded as friends. The characteristics of the reported friendships among student using AAC were beyond those of ordinary friendships. Similarity was not a prominent characteristic as the reported friendships

occurred across gender, age, the existence of disabilities, and academic achievement. These findings indicate the benefit of considering friendships beyond the issue of similarity between friends. Parents and staff claimed that most of the students using AAC had a different kind of friendships (i.e., superficial, neither being close friends nor play-friends) compared with their speaking fellow students, indicating restrictions in the usually accepted idea of friendship quality.

It is difficult to identify the reported friendships within a unified frame of one, unambiguous definition of friendship. However, the results from this study can be interpreted within the friendship continuum described by Berndt and McCandless (2009). In order to develop our knowledge about friendship among students who use AAC, this paper suggests future research in several areas, including commonalities and differences between children who use AAC and who do not use AAC, characteristics of best friend relationships that include students using AAC, further exploration of the broad interpretation of friendship revealed and the relationship to loneliness, as well as longitudinal studies which investigate patterns of friendships during longer periods of time and during different kinds of transitions.

## Paper 5

Østvik, J., Ytterhus, B., and Balandin, S. Gateways to friendships among students who use AAC. *Manuscript submitted and under review for publication.*

The school is an important arena for children's development of social relationships. Children are social agents, who practice agency by making choices about which social relationships and activities they want to engage in. Exertion of agency is important for children's establishment of friendships. As research has identified close ties between the ability to communicate and the exertion of agency, children who use AAC are at risk of restricted possibilities to exert agency in order to establish friendships.

The aim of this study was to explore personal characteristics that influence the establishment of friendships among students using AAC and fellow students by addressing the following research questions: (1) Which preferences for friendships with peers report students using AAC and fellow students? (2) Which activities with peers prefer students using AAC and fellow students? (3) What characteristics of a friend are identified by students using AAC and fellow students? (4) How are friendships between students using AAC and fellow students established? The study comprised semi-structured interviews of 7 students who used

AAC in primary school, 10 fellow students, 6 parents, and 18 staff members at the schools. The data were analyzed using a constructivist grounded theory approach (Charmaz, 2014).

The results revealed that both groups of students reported clear preferences for certain people and activities. The reports from the students who used AAC were ambiguous. Some students preferred fellow students in class, others preferred fellow students at the school's special unit, and some students liked to be with fellow students from both the class and the special unit. Most fellow students stated they valued spending time with students who used AAC because they liked their personal qualities, they enjoyed common activities, or because students using AAC did not argue in play nor did they gossip. The favorite activity among both groups of students was play, which also was the most reported interactional qualifier (strategy) for establishing friendships among students using AAC and a common strategy among fellow students. Both groups of students described a friend as a person that is kind and helpful. However, fellow students reported a larger number of friend characteristics and more varied and a larger number of interactional qualifiers for friendships than the students who used AAC.

By stating preferences for particular fellow students and activities, students using AAC demonstrated the capacity of exerting agency within the local context within which they operated. Nevertheless, agency interplays with the ability to communicate and the lack of functional speech may have put students using AAC at risk of being overlooked, neglected/ignored, rejected, and/or misunderstood in everyday life at school. Their limited access to interactional qualifiers for friendships (i.e., the ability to talk, asking to play together, asking about other children's name or age, asking to be friends) made students using AAC more vulnerable when establishing friendships compared to their speaking fellow students. Consequently, the results from this study emphasized the importance of identifying and recognizing students' will concerning their social relationships.





# Discussion

*You don't have to have any conception of friendship  
to actually be a friend.*

William A. Corsaro <sup>9</sup>

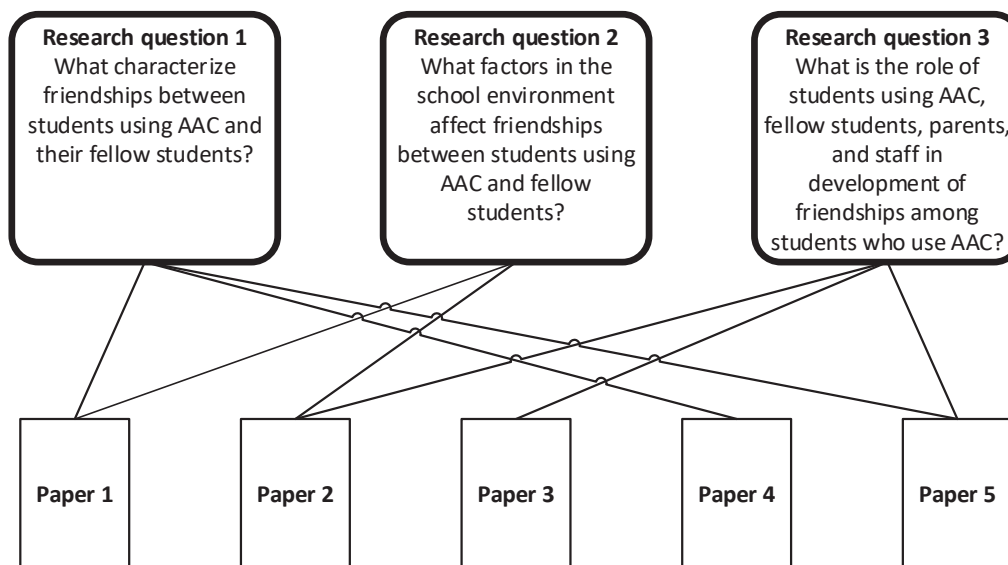
In this chapter, I will discuss the theoretical, empirical, and policy implications of my research, provide methodological reflections, and discuss implications for future research. The aim of this study was to achieve a deeper understanding of friendships among students who use AAC in Norwegian primary mainstream public school. To recapitulate, the following research questions directed my research:

1. What characterize friendships between students using AAC and their fellow students?
2. What factors in the school environment affect friendships between students using AAC and fellow students?
3. What is the role of students using AAC, fellow students, parents, and staff in development of friendships among students who use AAC?

Figure 6 shows which of the papers addresses the respective research questions.

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<sup>9</sup> Øksnes, M. (2009). «You don't have to have an internalized conception of friendship to actually be a friend». Interview with William A. Corsaro. In M. Øksnes & A. Greve (Eds.), *Barndom i barnehagen : Vennskap* [Childhood in the kindergarten : Friendship] (pp. 161-174). Oslo: Cappelen Damm Akademisk.



**Figure 6** Overview of papers that address the respective research questions

In the five papers included in this dissertation, I have made efforts to bring forth new knowledge about relevant topics regarding friendships among students who use AAC. The systematic literature review presented in Paper 1, as well as the review of the research areas in AAC presented in the Theoretical framework (page 18) demonstrated that the knowledge and the research efforts regarding friendships among children who use AAC are sparse.

This was a qualitative study with distinct participants and contexts. As always in qualitative studies, the results cannot be statistically generalized to other students or contexts. However, the theoretical, empirical and policy implications identified can be used as a basis for discussion to examine present practice and to inform future research.

## Theoretical implications

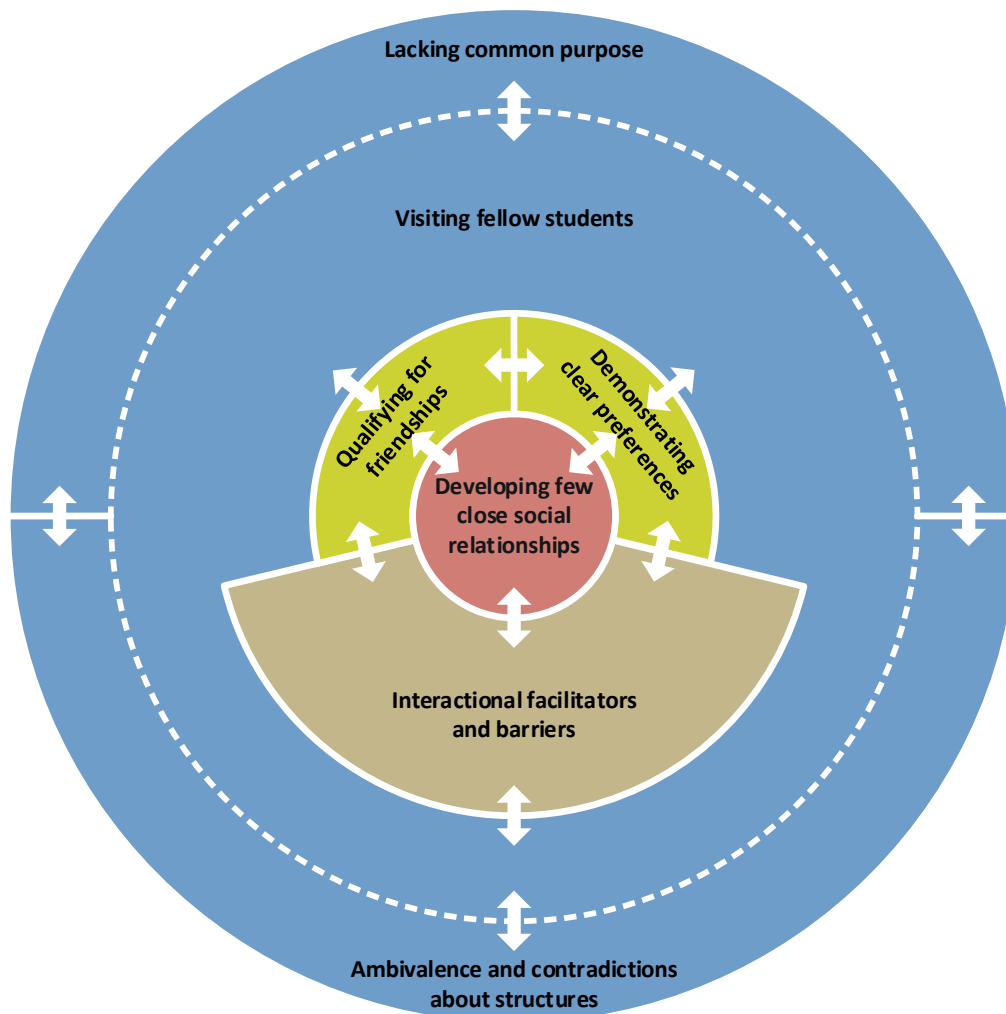
### **A grounded theory on friendships**

In this chapter, I present a grounded theory on friendships among students using AAC based on the results from the empirical data. The following seven conceptual categories have informed the development of the grounded theory:

- Lacking common purpose
- Ambivalence and contradictions about structures
- Visiting fellow students
- Qualifying for friendships
- Demonstrating clear preferences
- Interactional facilitators to and barriers of social relationships
- Developing few close social relationships

Figure 7 presents a visual model of the grounded theory developed in this study. Next, I will give a short description of this model.

The outermost circle in the model represents two organizational and structural preconditions for participation and interaction between students who use AAC and fellow students: lack of common purpose among staff, and ambivalence and contradictions about structures among staff. The next circle represents the visiting role of students using AAC in mainstream classes. The outermost and the next outermost circle constitute the organizational and structural level in the model. The middle circle represents interactional facilitators and barriers to social relationships and constitutes the interpersonal level. The penultimate inner circle represents two influential elements for friendships at the intrapersonal level: qualifying for friendships and demonstrating clear preferences. The innermost circle represents the limited development of close social relationships among students using AAC. The arrows in the model illustrate the influential relationships between developing a few close social relationships and influential elements at the intrapersonal, interpersonal, and organizational and structural level. The model identifies preconditions for friendships among students who use AAC at all three levels. Additionally, the model has similarities with ecological systems theory (Bronfenbrenner, 1979). Thus, the results from this study supports theories that are based upon such levels of contexts. In the next section, I will discuss the theoretical implications of the model's conceptual categories in more detail. The discussion will follow the respective circles (levels) in the model, starting with the two outermost circles.



**Figure 7** Model of a grounded theory of friendships among students using AAC

### **The organizational and structural level**

The organizational and structural level in Figure 7 consists of several fundamental preconditions for friendships between students who use AAC and fellow students at school. The *lack of common purpose* among staff concerning the educational provision to students using AAC was associated with inadequate systematic efforts to provide inclusive education in accordance with the national policy. Although it is expected that IEP goals guide interventions, the reported practice of relying on blurred goals for provision of education and social development is not consistent with the preferred practice reported by other researchers

(Klang et al., 2016; Poppes et al., 2002). It is reasonable to argue that the existence of blurred goals for the students' social development may result in a lack of guidelines, efforts, and capabilities to support the students' social relationships. Such guidelines, efforts, and capabilities may include assessment, development, and prioritization of relevant measures regarding staff's competence in AAC and cooperation among staff. Lacking common purpose also indicates that practice was not characterized by clear leadership aimed at promoting inclusive practice. Several researchers (Ainscow et al., 2006; Ainscow & Sandill, 2010; Davis & Watson, 2001; Horrocks et al., 2008; Mitchell, 2008; Praisner, 2003) have noted the importance of leadership and clear goals. Hence, without a common purpose, staff lacked the necessary assets for planning and conducting education in accordance with the Norwegian national policy.

The lack of common purpose for inclusive education made possible *ambivalence and contradictions about structures* among staff. The students using AAC in this study were mostly in ascribed encounters (Ytterhus, 2002) at school. In other words, they were participating in educational activities in general classrooms and at the school's special unit. They also participated in some voluntary encounters (e.g., at recess). Recess is deemed to be an organizational construction that facilitates voluntary activity among the students. Although staff made efforts to arrange encounters between students who used AAC and fellow students and to support their interactions, these efforts lacked consistent practice. Without the support of a common purpose regarding the students' education, deviations from inclusive education arose. These included a lack of explicit operationalization of inclusive education, limited and irregular presence in class, missed opportunities for students using AAC to participate in a multitude of activities with fellow students in class, eating meals or having recess at different times than fellow students, and loss of or reduction of meeting places with fellow students. These practices are consistent with teachers' lack of attitudes towards total inclusion of students with special needs reported by Avramidis and Norwich (2002).

Largely, the lack of common purpose and ambivalence and contradictions about structures permitted the grounds for a practice where students using AAC were *visiting fellow students* in mainstream classes. As the educational provision entailed that students using AAC spent more than half of their time at school outside the class, their role as visitors in class (Meyer, 2001; Schnorr, 1990) stood out. This practice is not compatible with several theoretical perspectives on inclusion (cf. Ainscow, 2005; Ainscow et al., 2006; Arnesen, 2004; Haug et al., 2014; Qvortrup, 2012). Interestingly, there was a gap between the reported

educational practice and Qvortrup's (2012) definition of inclusive education which partly underlies the Norwegian education policy (The Norwegian Directorate for Education and Training, 2015). The educational practice of students using AAC violated the physical as well as the social inclusion defined by Qvortrup (2012), due to their limited presence in class and to their limited possibilities for participation and interaction with fellow students during the time spent in class. The students using AAC were not asked about their perceptions of inclusion, analogously to Qvortrup's third type of inclusion (psychological inclusion). However, taking into account that the mainstream class was the most important arena for friendships among students who used AAC (about two-thirds of the students using AAC's reported friendship related to students in the class), it is reasonable to expect that the students might perceived being present, participating, and interacting in class as important. Furthermore, the reported educational practice also violated several of Ainscow (2005)'s elements of inclusion, including improvement of policy and practice by identification of and removal of barriers to inclusion, the improvement of students' presence and interaction with fellow students, and special attention being paid to groups of students that are vulnerable for being marginalized and excluded from the mainstream class. The substantial absence from class also conflicts with Arnesen (2004)'s emphasis on increased participation as well as Haug (2014)'s definition of inclusion, which comprises increased fellowship, participation, democratization, and students' benefit.

It is also important to reflect on the contexts in which the students using AAC attended the class. Considering the different types of social communities defined by Qvortrup (2012) (e.g., formal teaching contexts, informal contexts such as recess), students using AAC attended almost only in formal communities led by staff, communities that included the student and a staff member, and other staff organized communities at school. The students rarely or never attended in communities consisting solely of students, including self-organizing communities consisting of groups of students or student-student communities without support from staff (e.g., play in recess). Hence, most students using AAC missed opportunities to attend activities that in general are important for children in establishment and maintenance of friendships (Qvortrup, 2012). The limited access to activities consisting solely of students caused significant restrictions to the students using AAC's possibilities to take part in play. As play was the most important interactional qualifier for establishing friendship among students who used AAC and fellow students, the students using AAC's possibilities for establishing friendships became even more restricted. Children's shared time

and shared activities are important characteristics for the establishment of a shared generation. This issue will be discussed in the next chapter.

### *Towards a generational gap?*

Being part of a generation as defined in the Mannheim tradition (Alanen, 2001; Mannheim, 1952), in terms of developing a common consciousness and identity by sharing the same historical and social events, is an important substance in the foundation of children's friendships. However, the position as visitors in class may undermine students using AAC becoming fully part of the same "Mannheim" generation as fellow students in class. Although I interpret Mannheim's description of generations to include larger contexts than just the children's local environment, in the following text I will apply his theoretical understanding of generations to the schools' local contexts.

The education provided outside the mainstream class for students using AAC entailed significant differences regarding the thematic content of the education, type of activities, level of achievement, skills in the student group, participation, interaction, and physical location compared to fellow students in class. Although students using AAC and fellow students spent some time together in class and recess, their shared experiences were restricted. Being visitors in class limited the basis for the construction of a shared "Mannheim" generation. Firstly, students using AAC's exposure to the same local events as their fellow students in the class was limited because those using AAC spent considerable amounts of time outside the mainstream class. They may have had a weaker basis for becoming part of the "potential generation" (Alanen, 2001) that fellow students constituted. Secondly, students using AAC had limited opportunities to share their interpretations of common events with fellow students in class, due to restricted time in class and restrictions on interactions caused by communication challenges. Thus, they may have had difficulties in qualifying as full members for the "actual generation" (Alanen, 2001) that fellow students developed through participation in the academic and social communities in the mainstream class. Thirdly, due to the limitations described above students using AAC were at risk of being excluded from local "generational units" (Alanen, 2001) at school.

At the organizational and structural level "generational units" at school may provide a theoretical framework for understanding the causes and the consequences of the different social relationships that the students developed. Local "generational units" may have similarities with Qvortrup (2012)'s conceptualization of communities. Both of them offer



children opportunities for participation and interaction in shared events and social structures, which may give rise to the establishment and maintenance of friendships. As noted, the students using AAC in this study were physically, socially, and culturally separated at times from fellow students in the mainstream class. Hence, they were at risk of moving towards a generational gap that separated them from their fellow students and being excluded as full members of their “Mannheim” generation.

### *Closing comments*

The practice of visiting among students using AAC challenged the national policy of inclusive education. The results from this study indicated that inclusion became a subject for negotiation among staff and among staff and parents. The staff’s willingness to entertain major compromises on inclusive practice suggests that the national policy of inclusive education was overlooked when staff made decisions concerning the students’ education without ensuring that it had a strong foundation in the national policy.

Researchers have identified the school as an important arena for friendship establishment (Conway, 2008; Fehr, 2008; Hunt et al., 2009; Røgeskov et al., 2015) and the importance inclusive education has on social relationships among students (Goldman & Buysse, 2007; Webster & Carter, 2007). The results from this study revealed that organizational and structural preconditions restricted the students’ possibilities to engage in sustainable friendships with fellow students in class. Despite the staff’s important role in facilitating social relationships between students (McNaughton & Kennedy, 2010), the lack of common purpose, the ambivalence and contradictions about structures, and the exclusion of students using AAC from the mainstream class significantly limited the staff’s potential as facilitators but most of all limited the students’ possibilities for friendships. In short, most students using AAC was not sufficiently situated for close friendships with their fellow students in class. A conclusion is that the staff’s lack of common purpose and ambivalence and contradictions about structures, as well as the student using AAC’s visiting role in mainstream classes constituted a substantial impact on the preconditions at the interpersonal level among the students.

### **The interpersonal level**

The interpersonal level in Figure 7 consists of interactional facilitators and barriers to the social relationships among students using AAC. The forthcoming discussion focusses on

interactional facilitators and barriers that were constructed and practiced within the respective participants' roles. I base this on the assumption that the participants' actions in practice defined their roles at the interpersonal level. Hence, the rationale for this delimitation is to identify the participants' roles by examining the actions of the individuals in the various interview groups. Consequently, this discussion includes the following facilitators: shared experiences and environmental adaption and support. In addition, the following barriers are discussed: communication challenges, restricted initiatives, violations of social codes, and limited attention on friendships. Some of the interactional facilitators and barriers are associated with organizational and structural preconditions for friendships represented by the outermost circle in Figure 7. Interactional facilitators and barriers that the participants brought with them into their roles are excluded from this discussion, and encompass the following: confidence in communication, ever increasing differences in functioning, struggling with health, uncertainty, and attitudes. I will start the following discussion by first paying attention to the interactional facilitators to the students using AAC' social relationships. Afterwards I will discuss the interactional barriers to these social relationships.

### *Interactional facilitators*

The interactional facilitators for the students' social relationships that were constructed and practised within the respective participants' roles included shared experiences and environmental adaption and support.

*Shared experiences* increased knowledge about fellow students at a personal level and strengthened the bonds to the peer group, especially in the class, which was the most important arena for the students using AAC's friendships at school. Identifying shared experiences as a key facilitator to the establishment and maintenance of social relationships between students who used AAC and fellow students is consistent with several perspectives and findings in the research literature. Firstly, sharing experiences is part of belonging to the student group, which is important for making friends at school (Conway, 2008; Fehr, 2008; Hunt et al., 2009; Røgeskov et al., 2015). Secondly, sharing experiences is part of belonging to the same generation, not only with respect to historical time but as much culturally by sharing a common identity (Alanen, 2001; Mannheim, 1952). Thirdly, sharing activities, routines, artefacts, values, and concerns is part of the peer culture (Corsaro, 2009; Corsaro & Eder, 1990). Fourthly, as described in Table 1 (page 25), several definitions of friendship include shared experiences, both implicitly (Fehr, 2008; Gifford-Smith & Brownell, 2003;

Hays, 1988; Howes, 1983) and explicitly (Hollingsworth & Buysse, 2009). Moreover, time sharing is also emphasized as an attribute of friendships by several researchers (Berndt & McCandless, 2009; Corsaro, 2015b). From empirical studies of friendships among students who use AAC, shared experiences are recognized as important for the establishment (Hunt et al., 2009) and the characteristics (Anderson et al., 2011) of friendships. Thus, sharing experiences with peers has a major impact on children's lives, and sharing experiences at school with fellow students is of great importance for all students, including students who use AAC.

However, considering the relationship between shared experiences and establishment and maintenance of friendships reported in this study as well as by other researchers, students' access to activities and opportunities for interaction with fellow students is crucial. As noted in the discussion of the preconditions for friendships at the organizational and structural level (page 78), the visiting role of the students who used AAC limited their opportunities to take part fully in relevant activities with fellow students in class and thereby limited the potential that shared experiences could have on their social relationships. The students' unequal access to various social structures and participation with other students provided fewer opportunities to share experiences compared to those of fellow students. This caused students who use AAC and fellow students to have very different opportunities to develop friendships. Thus, through the identification of the influence shared experiences have on friendship, the importance of inclusive education (Ainscow, 2005; Arnesen, 2004; Haug, 2014; Qvortrup, 2012) becomes evident.

This study indicates the important role staff may have in providing *environmental adaption and support*. Although the study revealed marginalization (Hall et al., 1994) of students using AAC, the staff's (restricted) efforts to facilitate interactive activities between students using AAC and fellow students (i.e., organizing activities or creating opportunities for interaction in other ways, building goodwill, providing encouragement for interaction) promoted the basis for the establishment and maintenance of friendships among the students. These findings correspond with results reported by others researchers concerning students who use AAC (McNaughton & Kennedy, 2010). Without these efforts, it is possible that the students using AAC would have had very limited means to create interactional spaces with fellow students resulting in even more limited friendships.

Moreover, the staff played an important role in compensating for the students using AAC's restricted opportunities to communicate socially. The findings from this study are

congruent with results reported by other researchers (Therrien et al., 2016) that students who use AAC experience difficulties in social communication. As social communication is closely related to social competence (Odom et al., 2008) and because social competence is associated with friendships (Garbarino, 1985; Lindsey, 2002; Ogden, 2015; Sebanc, 2003; Vaughn et al., 2001; Weissberg & Greenberg, 1998), my results demonstrate the importance of providing students using AAC with communicative support from competent people such as staff members. Despite the communicative support provided by staff, the results highlight that providing communication training to students using AAC (Kyrkje- utdannings- og forskingskomiteen, 2012; Næss & Karlsen, 2015) and fellow students might strengthen the basis for social communication among the students. Hence, the need for the provision of communication training also coincides with Light (1989; 2014; see also Light and McNaughton, 2014)'s concept of communicative competence. These authors stressed the importance of building communicative skills among students who use AAC. Additionally, communication training may strengthen the students' independence from adults when interacting together, which may have a positive influence on the students' friendships.

Finally, as fellow students requested information about the students using AAC's disabilities, the staff's role in providing such information was evident. However, I did not get to know the content of this information. The finding that fellow students with the closest social relationships to the students using AAC had the best insights into these students' disabilities and abilities indicates a positive relationship between social relationships and fellow students' level of knowledge concerning the students using AAC's disabilities. Providing general information about the students disabilities and abilities is also consistent with one of the three priority areas in Hunt et al. (2009)'s social support model. However, as the results indicated that provision of such information was not given consistently to all relevant fellow students, there is reason to draw a conclusion that the provision of such information was not sufficiently organized accordingly to the fellow students' needs for information. However, the results indicate that it may be expedient to ensure that all relevant students receive such information. In this way, students who do not have a close social relationship to students who use AAC can develop a better understanding of students using AAC. This may have significance for the development of social relationships between the students. Considering the limitations that were identified among the preconditions for friendships at the organizational and structural level (i.e., lacking common purpose), it is

reasonable to conclude that the potential of providing such information could have been exploited even more.

### *Interactional barriers*

The constructed and practiced interactional barriers to the social relationships between students using AAC and fellow students included communication challenges, restricted initiatives, violation of social codes, and limited attention on friendships. The communication challenges identified among students using AAC and fellow students included restricted use of communication materials and speech-generating devices, lack of competence in AAC among fellow students, breakdowns in dialogues, use of AAC was time consuming, lack of consistent response from students who used AAC, conversations were often based on questions that could be answered yes and no by the students using AAC, and superficial content of conversations and lack of typical gender specific conversations. These challenges restricted interactions between the students. Few attempts at initiating communication were especially noticeable among students using AAC. Other researchers (Chung, Carter, & Sisco, 2012; Clarke & Kirton, 2003) have reported similar results.

The students' limitations in communication and interaction impacted on different roles among students using AAC, fellow students, and staff. The limitations created a need for support for communication and interaction. Staff attempted to meet this need through supportive initiatives aimed at maintaining and improving the communication and interaction between the students. Both students using AAC and fellow students requested support, whereas staff members and occasionally fellow students identified themselves as providers of support. The students' reliance on support from staff members amounted to a limitation on how the social relationships between the students could develop. Hence, the staff's efforts to support the students' communication and interactions appeared to be a double-edged sword. On the one side, the support from staff was an invaluable resource by solving or reducing communicative and interactional issues. On the other side, the presence of and the support from staff restricted the students' opportunities to act and develop their social relationships independently.

Considering the limited use of symbolic communication which also has been reported by other researchers (Chung et al., 2012; Clarke & Kirton, 2003), the students using AAC might have benefitted from increased use of symbolic AAC systems in order to increase the amount and quality of communication with fellow students. Although this study did not

examine the students using AAC's capacity for any mode of communication, it can be argued that the limited use of communication materials or speech-generating devices not due solely the students' capacities. As noted in the discussion on friendships at the organizational and structural level, the staff's limited competence in AAC might contributed to absence of relevant resources to develop the students' use of AAC. Moreover, it is also important to take into account how the reported limitations in use of symbolic communication other than speech correspond with the Norwegian legislation concerning the right to use appropriate modes of communication, use of necessary communication aids in education, and the provision of necessary training in using AAC (Kyrkje- utdannings- og forskingskomiteen, 2012; Næss & Karlsen, 2015).

In addition to communication challenges and limitations in interaction, violation of social codes was an issue for two of the students using AAC. Although a lack of adjustment to social conventions among two students using AAC by failing to use social etiquette (Light, 1988) was reported to relate to the individual characteristics of these students, it can be argued that students using AAC's absence from mainstream class may have contributed to a lack of understanding of social conventions used among fellow students. Any major discrepancies with the social conventions established among fellow students may have violated the values of the peer culture (Adler & Adler, 1998; Corsaro, 2009; Corsaro & Eder, 1990) and contributed to relational distance between the students. Hence, the joint forces of individual characteristics and structural arrangements might have forced these two students in a marginalized position (Hall et al., 1994) that limited their opportunities to establish close social relationships with fellow students.

The communication challenges and the violations of social codes identified in this study correspond with the characteristics of limited social competence (Garbarino, 1985; Ogden, 2015; Weissberg & Greenberg, 1998) and limited communicative competence (Light, 1989, 2003; Light & McNaughton, 2014). Hence, the results from this study indicate associations between social and communicative competence and friendships, which are compatible with results reported by other researchers (Lindsey, 2002; Sebanc, 2003; Vaughn et al., 2001).

Moreover, I will also comment on the reported limitations in paying attention to friendship in the dialogues between parents and staff. The parents' reasons for not requesting friendships as a topic of focus at the schools may be because they prioritized other demanding tasks and issues, such as adaption of aids and seating position, physical training and stretching,

communication training, or general well-being at school. However, it is important to bear in mind the lack of common purpose among staff concerning the students using AAC's education. It can be argued that blurred goals for the students' social development may have influenced which topics staff brought to discussion with the parents. Thus, the limited attention on friendship in these dialogues may indicate a failure by parents and staff to recognize and prioritize friendship as an important topic in their joint efforts in the students' education.

Thus, the limitations in students' communication, interactions, and social adjustment to social codes may be associated with restrictions in the student using AAC's opportunities to establish and maintain friendships with fellow students.

### *Closing comments*

Based on the above discussion concerning interactional facilitators and barriers, I identify distinctive roles among staff, fellow students, and students using AAC in the foundation for the students' friendships at the interpersonal level. The staff was associated with the role of providers of training in AAC and facilitators of use of appropriate modes of communication among students using AAC, including the use of communication aids. However, the fulfillment of their role as facilitators of use of appropriate modes of communication is questionable due to the reported practice and their reported competence in AAC. The results also indicate that staff failed to support the development of social competence (Light, 1989, 2003; Light & McNaughton, 2014) among students using AAC in order to strengthen the quality of the interactions with fellow students. Moreover, the revealed lack of competence in using AAC among fellow students indicates that staff failed to provide adequate training in AAC to fellow students in order to increase the amount and the quality of communication with students who used AAC.

Despite these shortcomings, the results indicated that staff possessed a unique position to influence shared experiences between students using AAC and fellow students, which was important for the students' friendships. However, considering the visiting role of the students who used AAC, the staff's role of facilitating shared experiences was not fulfilled. Moreover, staff played an important role in providing environmental adaption and support with respect to attempting to solve communication challenges between the students, facilitating interactions between the students, and providing information about the students using AAC's disabilities.

Fellow students to students who used AAC possessed several roles concerning their friendships. With respect to the reported communication challenges and restricted initiatives, most of them were trapped by a lack of competence in AAC, and therefore without the necessary means to communicate independently with students using AAC. I identified associations between fellow students' skills in using AAC and knowledge of the students using AAC, and positive attitudes towards and interest in the students using AAC. Those with the closest relationships with the students using AAC were likely to request support from staff and demonstrated actions to maintain contact, while others retreated from the situation when breakdowns happened in the dialogues. When facing the ever-increasing differences in functioning, some fellow students with restricted knowledge about or low interest in students using AAC undermined those who used AAC by speaking with a childish voice or did not pay much attention to topics that students using AAC were interested in. However, in cases when students using AAC violated social codes, fellow students usually attempted to resolve the conflict and indeed worked to avoid these.

### **The intrapersonal level**

The intrapersonal level in Figure 7 includes the students using AAC's personal preconditions for friendships with fellow students, comprising *qualifying for friendships* and *demonstrating clear preferences*. In the following, these preconditions are discussed in relation to the exertion of 'thin' agency and being typical children.

#### *Exerting 'thin' agency*

The results from this study revealed that one of the most prominent personal preconditions was the students' ability to exert agency by demonstrating clear preferences for people and activities in their everyday life at school. Although this was the case both among students using AAC and fellow students, I will restrict the following discussion to students using AAC since they are the protagonists in this study.

Robson et al. (2007)'s conception of agency makes it possible to make a distinction between the individual's capacity, competencies, and activities for exerting agency. Hence, by considering the students using AAC's reports on friendships as well as their interactional barriers to social relationships with fellow students, the results indicate an imbalance between the capacity, competencies, and activities for exerting agency among students using AAC. The results indicated that their competence in making judgements about social relationships



and activities, and their capacities of communicating their preferences in the interview settings were higher than their reported capacities for interaction with fellow students in daily life settings. The students using AAC's interactions with fellow students were limited and relied heavily on support from staff, and their opportunities for exerting agency were largely influenced by staff's priorities, premises, and actions as described by the preconditions at the organizational and structural level. The results revealed a positive relationship between limited opportunities for functional communication (Pettersson, 2001; Rowland & Schweigert, 1993) and restricted abilities to exert agency (Robson et al., 2007). Thus, the students who used AAC mainly exerted 'thin' agency (Klocker, 2007) as they only had the opportunity to act within a narrow range of options due to limited time spent with fellow students, communication challenges, and dependency on support from staff.

Still it is important to acknowledge the students using AAC's exertion of 'thin' agency. Although the students using AAC were associated with a passive role in the interactions with fellow students in daily life settings at school, these results indicate that even the results from the students using AAC's exertion of 'thin' agency provided important contributions in the interviews. During the interviews, they provided clear viewpoints concerning their preferred social relationships and activities. They made different reports on their friendships with fellow students compared with the reports of fellow students, staff, and parents. The students using AAC demonstrated that they were resourceful individuals with the capacity to make judgements on their own terms about their daily life at school. As these judgements provided unique insights into their considerations of friendships, these results support arguments for the importance of including children in research concerning their life worlds. This is also consistent with other researchers' viewpoints concerning the value of including children in child studies (Allan, 2008; Hohti & Karlsson, 2014; James, 2007; Schneider, 2016).

### *Typical children*

Although the students using AAC's impairments limited their capacity on certain areas (e.g., communication, mobility, nutrition), they appeared as typical children. Firstly, like their fellow students in class, most students using AAC reported play as the preferred activity at school and they considered play as an important strategy in making friends. Additionally, the students using AAC's conception of a friend as a person that is kind and helpful corresponded with their fellow students' notions about what a friend is. Although fellow students also

reported other characteristics of a friend as well, the two groups of students reported some similarities in these aspects of friendships. Although the students using AAC's impairments strongly influenced their social relationships with respect to communication, interaction, participation, and social closeness, having impairments was not sufficient to conceal the reported similarities between the students. It is also important to note that the data material did not provide support to any presumption that these reports were based upon a desire to be like fellow students without impairments or caused by mandating rules (Ytterhus, 2012). Unfortunately, I have not succeeded to find other studies than Wickenden (2011)'s study of teenagers that describe children using AAC's inclination to make similar choices as children without disabilities due to common interests or preferences. However, the similarities in preferred activities and conceptions of a friend among students using AAC and fellow students represent an important potential for interaction. Moreover, interaction is strongly associated with friendships among children without disabilities (Corsaro, 2015a; Fehr, 2008; Perlman et al., 2015; Rubin, Bukowski, et al., 2015) and among children with disabilities (Staub, 1998; Webster & Carter, 2007; Willis et al., 2016).

Secondly, one of the students using AAC stated that use of aids (e.g., orthoses) made it difficult to establish friendships. This statement suggests that the student associated use of aids with the label of being different in a comparison with fellow students who did not use aids. The student's devaluation of the use of aids may also indicate a desire to present oneself more like the fellow students in the class in order to avoid the potential discrediting attribute of using aids. This may give associations to Goffman (1968)'s conception of *covering*. The perception of the discrediting attribute of using aids reminds of hearing impaired children's efforts to disguise shortcomings in order to appear as less deviant (Kermit et al., 2014). The student's negative association between use of aids and the establishment of friendships may also be associated to the perception of mandating rules among fellow students (Ytterhus, 2012). Especially, the perception of not being good enough or not being similar enough compared to fellow students due to the dependency of aids may have caused a devaluation of the use of such aids. However, the effects of the potential covering and adjustment to mandating rules may have been two-sided. On the one side, covering might have been motivated by providing an impression that the differences between the students were less than what they really were. Thereby, the student using AAC could presumably appear more attractive to fellow students. On the other side, not using aids would probably reduce the student's functional level due to loss of support. The loss of such support might have caused

restrictions in the student's interaction with fellow students and thereby limited the grounds for social relationships.

### **Returning visitors aiming for friendships**

The review of the conceptual categories in the grounded theory of friendship presented in Figure 7 (page 78) has so far discussed the preconditions for friendships among students who use AAC at different levels and the relationships between the issues. In the following, I relate these issues to the students using AAC's development of few close social relationships and discuss several implications of the reported friendships.

#### *Friendships within straitened circumstances*

The *intrapersonal* preconditions for friendships indicate that students using AAC in this study possessed potential for friendships with fellow students, by demonstrating social interest and exertion of 'thin' agency concerning preferences for particular activities and persons in the local contexts in which they participated at school. In some aspects, they also demonstrated to be typical children with preferences for play and shared conceptions of friendship with fellow students.

Although the preconditions for friendships visualized by the three outermost circles (levels) in Figure 7 represented both enablers and obstacles, this study describes major restrictions for students using AAC to establish and maintain friendships. Among the *interpersonal* preconditions for friendships, the constructed and practiced interactional barriers limited the basis for the students using AAC's basis for friendships at school. Moreover, the organizational and structural preconditions for the students' friendships also put severe limitations on the basis for the fellowship and the interactions between students using AAC and fellow students. Consequently, the students using AAC appeared as returning visitors aiming for friendships within straitened circumstances. Compared with the interviewed fellow students in class, the students using AAC possessed limited conditions for establishment and maintenance of friendships. Although the lack of functional speech caused severe limitations in the student using AAC's communication and interactions with fellow students, the limited conditions for their friendships went far beyond what can be associated with the students' use of AAC. Thus, the students using AAC had to bear the consequences of inadequate support on the interpersonal level as well as the organizational and structural level.

However, it is important also to acknowledge the possibility that decisions made by staff concerning issues at these levels may have been influenced by the staff's interpretation of the students using AAC's social relationships. The reported limitations in the students using AAC's close social relationships may have restricted the staff's initiatives to promote inclusive education for these students.

### *Contextualization of friendships*

The results in this study emphasized the importance of acknowledging context as a mediating factor for how we understand friendships among students who use AAC. This is in line with several researchers who have argued that friendships must be considered within the contextual frames of the students' social relationships (Adams & Allan, 1999; Allan, 1998; Corsaro, 2015b). In this study, contextualization of friendships implies several issues.

Firstly, it is important to consider the various conceptualizations of friendships. Although several students using AAC and fellow students had some common conceptualizations of friendship (i.e., a friend is a kind and helpful person), the participants reported a variety of friendship conceptualizations associated with the students using AAC's social relationships, which were different from those described by several researchers (cf. Table 1, page 25). This variety included a student using AAC's nomination of a doll as a friend and a mother's consideration of belonging as a form of friendship. These conceptualizations emerged from different contexts, originating from the participants' individual experiences, perspectives, and reflexive thinking. Hence, the participants' reports of friendships were contextualized based on their respective conceptualizations of friendship.

Secondly, the various interpretations of friendships were contextualized due to the participants' different positions. In addition to the reciprocal friendships (Bagwell & Schmidt, 2011) reported by the students, both students who used AAC and their interviewed fellow students were subjects for unilateral *given* friend nominations as well as unilateral *received* friend nominations (Lodder et al., 2015; Scholte et al., 2009). The unilateral friend nominations originated from different interpretations of the social relationships between the providers of the friendship nominations and the receivers of the friendship nominations. The students' different interpretations of their social relationships might have originated in contextualization based on individual expectations, interpretation of their shared history of previous interactions, perceived benefits or outcomes of the social relationships, and/or distinct preferences for defining friendship. Moreover, the reported friendships were also

contextualized due to the participants' different roles towards the students who used AAC. As noted in Paper 4, parents and staff provided very different reports about the students using AAC's friendships than the students themselves. Considering Corsaro (2015b)'s notion that children's friendship is in their doing and sharing, it is likely that the students who used AAC might emphasize other contextual aspects of their interaction with fellow students than the staff and the parents did. Hence, the students might also possess different interpretations and meanings of these interactions and social relationships.

To summary, it is important to recognize the variety of concepts of friendship and the diverging interpretations of social relationships among the respective individuals involved. Of special importance is the acknowledgment of students using AAC's perceptions of their social relationships. An emphasis on their perceptions of friendships has clear parallels to Qvortrup (2012)'s emphasis on students' perception of inclusion. Both viewpoints recognize the individuals' subjective perceptions of their life worlds. It is important to remember that the students' friendships were constructed based on their individual perceptions of the social relationships that they engaged in. The varying conceptions and interpretations of friendships make it difficult to hold on to one interpretation of the students' friendships as the only true description of their social relationships. The individuals' different perspectives, valuation, and devaluation of the social relationships should be recognized. In order to identify, recognize, and include the varying interpretations of students using AAC's friendships, I find the friendship continuum suggested by Berndt and McCandless (2009) as an appropriate starting point. Using the friendship continuum as a conceptual framework accompanied by reflexive practices (Alvesson, 2011) may prove to be a useful strategy. Such a strategy might involve three steps, which might produce new insights about students using AAC's friendships. (1) Engaging in deconstruction, defensiveness, and destabilization of the application of strict definitions of friendship (D-reflexivity). (2) Identification of and acknowledgment of the individuals' perceived friendships. (3) Reconstruction, re-presentation, and rethinking (R-reflexivity) of the meaning of the students' social relationships. Applying the friendship continuum will allow for different perspectives and make comparisons of the individuals' perspectives possible.

### *Academic marginalization*

The results from this study and to some extent results from the existing body of research (cf. Paper 1), indicate that students who use AAC are at risk of not developing close social

relationships to fellow students at school. Clearly, this study describes several demanding issues concerning the establishment and maintenance of friendships.

However, it is important to interpret the results from this study within the overall context represented by the conceptual categories presented in Figure 7 (page 78). I argue that students who use AAC will benefit from research and educational practice that avoids academic marginalization caused by a biased and strong emphasis on individual characteristics of students using AAC or by mainly paying attention to other issues that might limit their social relationships to fellow students at school. Rather, students using AAC will benefit from reflexive perspectives that take all levels of preconditions for friendships into account (cf. Figure 7), including conditions at the intrapersonal level. A reflexive research and educational practice will benefit from analysis of each level described in the model presented in Figure 7, as well as taking into account the relationships between the different levels in this model. It is important not to lose sight of the students' ability to exert agency concerning social relationships. The results from this study acknowledge students who use AAC's capacity to provide important information about their perceived friendships. Hence, it is important that professionals and social actors (e.g., researchers, parents, and staff) take advantage of such information and consider students using AAC as resourceful individuals with the capacity of providing explicit preferences about their social relationships as well as having the potential of engaging in friendships with fellow students. The results indicate that it would be beneficial to put emphasis on the facilitation of friendships, including the issues within the grounded theory of friendships presented in this dissertation. Besides, an increased attention on environmental preconditions is compatible with Nordic relational model of disability (Goodley, 2011; Tøssebro, 2004).

## Empirical implications

The results from this study indicated that fellow students are interested in students using AAC, their social relationships are perceived positively, and friendships between students using AAC and fellow students are possible. However, this study unveiled a range of implications for practice concerning the establishment and maintenance of friendships among students who use AAC and fellow students. These implications are categorized into seven areas: (1) Inclusive education, (2) systematic work, (3) communication, (4) support, (5) friendship strategies, (5) knowledge, competence and attitudes, and (7) co-determination. The implications for practice within each area will be further elaborated below.

## **Inclusive education**

My results indicate an association between friendships among students using AAC and presence, participation, and interaction with fellow students in class. Hence, students using AAC are likely to benefit from inclusive education and spending a significant part of their time at school in the mainstream class. To anchor educational practice on national guidelines for inclusive education and facilitate consensus of opinion regarding the meaning of inclusion, all staff members could participate in joint discussions on the implementation of these guidelines. It would be beneficial if such discussions were initiated by the school administration since they could be part of the educational leadership at school. An important issue would be to discuss the meaning of inclusion beyond presence, based on current perspectives in the research literature. It is also important to secure the students' formal enrollment in class.

As participation is an important dimension of inclusive education (Ainscow, 2005; Arnesen, 2004; Haug, 2014; Qvortrup, 2012; Zelaieta, 2004), staff could conduct thorough assessments of relevant activities for students using AAC to promote participation in class in order to identify priorities and make plans for implementation. Such assessments would benefit from identifying practical activities, which might facilitate participation without making excessive demands on communication. In order to strengthen independence from adults in the development of social relationships between students using AAC and fellow students, the students would benefit from engaging in activities that are possible without continuous presence of an adult. Reflection on their own positive and negative influence on the students' social relationships may assist staff members to identify how to improve their support.

Additionally, by providing opportunities for shared experiences among students using AAC and fellow students in academic and social activities in class, staff members may help strengthen the basis for friendships in the class. The identification of the AAC students' absence from recess indicates that presence and participation in recess among students who use AAC should be prioritized. Recess might provide students the opportunity for socialization free from close adult supervision (cf. Qvortrup, 2012). To promote presence, participation, and interaction between students using AAC and fellow students, staff may provide a range of contexts (e.g., meeting places, organized activities) to facilitate social interaction beyond participation in lessons in class. The students may also benefit from a variety of stable social structures where they can participate in mutually enjoyable activities

with fellow students. Although social activities change during schooling, new activities need to be established when existing ones vanish. Among others, social activities that facilitate play in recess are beneficial for students using AAC. It is important to reduce or eliminate physical barriers that restrict the student using AAC's access to participation and interaction with fellow students. Being able to maneuver a wheelchair to all places where fellow students reside promote the students' ability to engage in social and academic interactions. Likewise, the location of the student using AAC's desk in the classroom may influence when, how, and with whom the student engages in conversations. The results from this study demonstrated that locating the desk in the back of the classroom due to power access to charge speech-generating devices limited the student using AAC's possibilities for interaction with fellow students. It is important to reflect on how physical arrangements in the classroom influence interactions between all students.

Students using AAC may need support to take advantage of engaging in a range of activities that enhance interactions with fellow students. Staff can make efforts to identify and support access to and participation in activities that (1) are manageable for students using AAC, (2) are perceived as meaningful and enjoyable for all participants, (3) are naturally integrated into the class' education program, (4) promote possibilities for play, and (5) promote equal participation. Students using AAC may also benefit from participating in group activities with a limited number of students at any one time in order to increase their opportunities to engage in conversations.

### **Systematic work**

The results from this study emphasize the importance of working systematically in order to support friendships among students who use AAC. In the following, I describe relevant strategies for six areas regarding systematic work.

(1) *Goals*: Students using AAC may benefit from assessments of their social preferences, preferences for activities, and personal needs. This information would provide the basis for identification, prioritization, and description of relevant goals with the purpose of strengthening the students' social relationships with fellow students. An emphasis on presence, participation, and interaction with fellow students in class would also be beneficial.

(2) *Planning and implementation*: The implementation of goals would benefit from systematic efforts in prioritizing the defined goals followed by the implementation of relevant measures. Coordination of class activities and individual activities may limit timetabling



conflicts for the activities and provide flexibility for the implementation of measures along with promoting agreement on the goals for social development and for education.

(3) *Roles*: Based on the plans developed, the responsibility for the implementation of measures could be divided among staff members. It is important that the class teacher undertakes a substantial share of responsibility for the student using AAC's education in order to support inclusive education.

(4) *Stability*: A systematic approach based upon staff members with a stable role in terms of the student using AAC is needed. Stability in staff safeguard the student's educational needs as well as providing opportunities for strategic skills development. This is especially important when planning for staff's competence in AAC.

(5) *Cooperation*: Implementation of measures aimed to support the students using AAC's establishment and maintenance of friendships with fellow students includes cooperation on regular basis among staff regarding the student's academic and social development. This includes close and frequent cooperation between the class teacher, special teacher, assistant, and/or other relevant staff members. Regular cooperation makes it possible to review the defined goals, plans, and roles among the staff concerned.

(6) *Monitoring*: Besides the implementation of structures for planning and measuring, it is important to monitor both positive and negative changes in social relationships between students. By monitoring, staff can identify issues that are important for the student using AAC's social relationships. A relevant measure may include periodical conversations between a staff member and the student using AAC about his social relationships at school, expectations to friendships, and needs of support to establish or maintain friendships. However, it is important to exercise caution in the implementation of monitoring in order to avoid the student using AAC being set apart from fellow students in unreasonable amounts of time.

(7) *Evaluation*: Finally, it is important to evaluate existing goals and ongoing measures aimed to support the student using AAC's social relationships in order to assess their relevance and consider the needs for additional goals or measures (cf. Beukelman & Mirenda, 2013b).

## Communication

This study revealed challenges in communication between students using AAC and fellow students. The implications for practice suggested below are intended to ameliorate the communication challenges in order to strengthen the basis for friendships among the students.

(1) *Customization of the AAC system.* It is important to work towards consensus among staff, the family and the student using AAC regarding the goals of customization of the student using AAC's communication system (cf. van der Meer, Sigafos, O'Reilly, & Lancioni, 2011). Without consensus, the customization will be at risk of being insufficient and hence limiting the student's possibilities to achieve functional communication. In customization of graphic symbols on paper cards, communication boards, communication books, speech-generating devices etc., it is important to provide vocabulary that is relevant for the student's respective activities. However, it is also important to provide vocabulary concerning social life (e.g., upcoming events, shared interests, secrets, comments etc.). It will also be beneficial to provide vocabulary concerning social relationships, friends, expectations of friendships, and perceptions of loneliness in order to provide rich conversations about the student's social life. In this area there is a lot of research that can guide practitioners. However, I do not elaborate on this any further as these issues are beyond the scope of this discussion.

(2) *Use of AAC aids.* Students using AAC may benefit from receiving support to get access to and use communication aids in class. Among students with sufficient language skills, symbolic communication using communication aids may provide more understandable communication and a larger vocabulary that can limit the risk of misunderstandings and lack of communication. It is also important to provide students who use AAC opportunities to learn and use AAC technology. This is especially important in interactions with fellow students, and includes communication on social media.

## Support

The results from this study revealed that students using AAC needed support in several areas that are important for their social relationships. Based on the identified needs, there are several implications for practice suggested below:

(1) *Adult support:* Students using AAC may benefit from adult support to initiate social contact, communication, participation, and interaction with fellow students. In addition to being part of social structures (cf. *Inclusive education*, page 32), also they may need adult support in organizing shared activities in order to participate actively with fellow students. It

is also important that students who use AAC are given the opportunity to choose their communication partners and who they want to spend time with in recess as well as in other play and educational activities.

(2) *Independence from adults*: Although students using AAC may need adult support in their interactions with fellow students, it is also important that they develop independent social relationships with fellow students in order to promote relationships typical for their age. Therefore, they are likely to benefit if their dependency on adults is reduced as soon as possible. It is important that staff develop a reflexive understanding of when students are best served by staff being present and providing support, and when it is better for staff keep their distance so that students can be together on their own.

(3) *Fellow students as helpers*: In order to balance the social power between students using AAC and fellow students and to foster friendships rather than a care relationship, staff may exercise caution when asking fellow students to fulfill helping roles for students using AAC.

### **Friendship strategies**

The pathways to friendship are complex and rest on a variety of individual and environmental characteristics. However, in addition to the respective empirical implications described in this chapter, I will emphasize several strategies that may help in establishing and maintaining friendships. It is important to strengthen the various aspects of social competence (Garbarino, 1985; Ogden, 2015; Weissberg & Greenberg, 1998) and communicative competence (Light, 1989, 1997, 2003; Light & McNaughton, 2014) among students who use AAC. This includes strengthening of the competence in using a variety of interactional modes for developing friendships. These may involve opportunities for increased communication with fellow students, including taking part in general conversations, engaging in conversations concerning shared interests, making comments, demonstrating interest in others by asking about who they are and what they like to do etc., sharing secrets, making inquiries about play, and making inquiries about being friends. Moreover, considering the important role play have in children's establishment of friendships, it is beneficial that staff identify and facilitate opportunities for shared play activities between students using AAC and fellow students in recess and other contexts at school.

## **Knowledge, competence, and attitudes**

Several papers in this dissertation stress the importance of strengthening the knowledge, competence, and attitudes among staff and students in order to support the grounds for friendships between students using AAC and fellow students.

(1) *Training and supervision of staff*: Staff have an important role in the interpretation of students who use AAC's communication, in the development of their communication, and to provide the students training in AAC. Therefore, staff may benefit from general training in AAC, and supervision regarding the individual student's AAC system.

(2) *Communication training of students*: To strengthen the students' competence and confidence in using AAC, students using AAC and fellow students will benefit from targeted communication training with the objective that the students can communicate independently as much as possible without the support from staff.

(3) *Information about disability*: Based on the reports on the fellow students' need for information concerning disability, they may benefit from provision of basic information regarding the causes and implications of students using AAC's disabilities in a general overview. By strengthening their understanding of disability and the capacity of the students using AAC, along with increased presence and interaction in mainstream class the barriers to friendships caused by negative attitudes or uncertainty might be limited.

## **Co-determination in the local context**

Because the experiences and consequences of friendship impact on each student, it may be important to provide the student and the parents with the opportunity to influence the foundation of friendships in the local context at school.

(1) *Student co-determination of friendship*: Students using AAC may benefit from staff helping to identify and support the students' efforts to increase social contact and the establishment of friendships with fellow students. Additionally, it may be important to provide the students with opportunities for co-determination regarding their social relationships. In the local context, students who use AAC could be provided opportunities to decide whom they want to spend time with in the same way as other students. However, due to their communication challenges they may benefit from explicit questioning about whom they prefer spending time with. In the formal context, they could be given the opportunity to participate in formalized student co-determination in order to provide information about their

perceptions of their social life at school, including friendships and feelings of loneliness (e.g., by participation in student surveys).

(2) *Attention on friendship*: To succeed in supporting the establishment and maintenance of friendships among students using AAC, it may be important to raise friendship as a prominent issue in cooperation processes among staff members as well as between staff and parents. The limitation of organizational and structural obstacles is a particular important issue to discuss.

(3) *Joint representation for parents*: The relationships between students who use AAC and fellow students might be strengthened by the parents of students who use AAC participating in parent meetings with parents of students in the mainstream education class. This is especially important at schools that have separate parent meetings for students in a special unit. Parents of students using AAC may provide information about their children and take part in parental discussions. Their involvement might have significance for other parents' understanding of the children's needs and opportunities for social relationships, which may also have positive influence on the fellow student's attitudes towards the students using AAC. Likewise, it may be beneficial that parents of children who use AAC have the opportunity to exert influence through the parent representatives in the mainstream education class concerning issues with relevance for their children's social relationships (e.g., organization of and participation in activities/events in the mainstream class).

## Policy implications

The results from this study indicate several implications for the school policy. In the following, I suggest policy implications concerning AAC competence among staff, co-determination for all students, information about disability and training programs aimed at fellow students, and improvement of the inspection of schools in order to strengthen the basis for friendships among students who use AAC.

### **Adequate resources to staff**

It is important to ensure that staff are competent and resourced to include all students regardless of ability. The study revealed that the staff's competence on AAC was associated with their abilities to provide communicative support to students using AAC. In order to provide sufficient communicative support, schools may be required to ensure adequate competence on AAC among staff with responsibility towards students who use AAC. To

ensure adequate competence on AAC among staff, the school may (1) employ staff with relevant skills in AAC, (2) provide continuing education training in AAC, and (3) facilitate sufficient guidance in AAC to staff. It is also important to ensure that there are adequate resources and support to develop communication aids and new teaching materials so students can be involved in learning and social activities.

### **Accessibility**

Based on the reports from parents and staff, it is important to ensure that all schools are physical accessible for all students, in accordance with the guidelines for universal design in public buildings (Ministry of Children and Equality, 2016). All students, including those using AAC, will benefit from equal access to places, materials, activities, and fellow students so that they can participate in local peer communities and develop sustainable social relationships.

### **Formal co-determination for all students**

According to The Quality Framework (The Norwegian Directorate for Education and Training, 2006), students in the Norwegian educational system should be given the opportunity to participate in co-determination. Student co-determination implies participation in decisions regarding the students' education and may influence the basis for the students' social relationships. This opportunity also applies to students who use AAC. However, the analysis of the student surveys conducted during the last four years (2013-2016) in Norway indicate that students who use AAC have not been part of these surveys (Wendelborg, 2017; Wendelborg, Røe, & Federici, 2014, 2016; Wendelborg, Røe, Federici, & Caspersen, 2015). Like other students, students who use AAC may benefit from participating in formal co-determination, including the annual student survey. The results from this study indicated that the students who used AAC did exert agency on areas that influence their social relationships. Hence, their capacities and efforts in these matters constitute arguments for a clarification of the policy guidelines regarding student co-determination.

### **Information and training programs for fellow students**

Results from the systematic literature review as well as the empirical data indicate the importance of strengthening fellow students' knowledge about disability and communicative skills in using AAC. The education policy can be improved by (1) providing systematic information to fellow students concerning the causes and consequences of disabilities from a

general viewpoint. Such information strategies, which may also include information materials, may support fellow students' understanding of students using AAC's challenges and possibilities in academic and social encounters at school. The education policy can also be improved by (2) development of training programs in AAC targeted at fellow students. Improved communication skills among fellow students may improve their interactions with students who use AAC. These measures may support the grounds for social relationships between students using AAC and fellow students.

### **Inspection of schools**

In Norway, the County Governor is responsible for ensuring that each school in the county provides education in accordance with the relevant statutory and regulatory requirements (The County Governor, 2017). In order to promote education that supports the establishment and maintenance of friendships among students using AAC, the County Governor could conduct improved inspection of schools, with the objective of evaluating educational practice based on the regulatory framework for the students' opportunities to establish social relationships with other students. Based on the outcome of the inspection, the County Governor may order schools to implement specific measures aimed to improve the practice. According to the results from this study, the inspections could pay special attention to the following issues: (1) Inclusive education for all students in accordance with the national policy of inclusion. (2) Adequate competence on AAC among staff in accordance to the students' communication. (3) Implementation of formal co-determination among students who use AAC. (4) Provision of relevant information about disability and training in using AAC directed towards fellow students.

### **Methodological reflections**

This chapter provides methodological reflections concerning my research. The planning and conduction of this study entailed a number of choices. These choices were self-initiated or responses to opportunities and limitations in my approach to the research field. Several issues influence the credibility of this study, including my ability to critically reflect on the "conscious experiencing of the self as both inquirer and respondent" (Lincoln et al., 2013, p. 254).

## **Managing preconceptions**

From a constructivist approach the notion about the neutral researcher is questionable (Charmaz, 2014; Rapley, 2004). By situating my position in the very beginning of this dissertation, I have explicitly stated my initial position to the field of study. Undoubtedly, my preconceptions brought me in the position of conducting this study. Thus, I agree with Adele Clarke (2005, p. 13) who stated:

I see prior knowledge of the substantive field as valuable rather than hindering ... And none of this prior knowledge can be or should be erased from researchers' conscious awareness. There is actually 'something ludicrous about pretending to be a 'theoretical virgin'`.

My preconceptions have been of great benefit to me especially in recruiting participants to the research, understanding the staff members' roles, and communication with the students who used AAC. However, identification of preconceptions is an important part of the researcher's reflexivity (Malterud, 2001). Thus, it was important to make efforts to identify existing preconceptions and reflect on how they may have influenced the choices, perspectives, and interpretations made (Charmaz, 2014). By using a constructivist grounded theory approach, I have made efforts to analyze my data in a manner that supported me putting some distance between my preconceptions of the research field and my data analysis. By attempting to ensure that the analysis was guided by the data material and not by my own ideas, I have tried to make the analytical interpretations more robust by guarding against inferences caused by my prior experience, knowledge, assumptions, or expectations.

Use of the constructivist grounded theory approach has also been important in managing new preconceptions that may have arisen during the research. The systematic literature review took place at the same time as the first half part of the fieldwork in the empirical study. One might find arguments that my work on the literature review may have influenced my viewpoints in the fieldwork as well as the subsequent analysis of the interview data, and thereby have extended my preconceptions of the field beyond my existing knowledge and experiences when the research started. Nevertheless, I hope that my reflexive awareness of these issues and the use of the constructivist grounded theory approach with careful memoing limited the impact of my preconceptions on the analysis of the data.



## Triangulation

The use of different types of data sources supported data triangulation and methodological triangulation, which strengthened the methodological quality of this study. A strength of this study was the participation of both children and adults. By including children, the perspectives of the protagonists in the study were emphasized and juxtaposed with the adults' perspectives (Allan, 2008; Hohti & Karlsson, 2014; James, 2007; Schneider, 2016). Including principals as interviewees might have strengthened the data further. Principals have an important role in promoting inclusive education (Ainscow et al., 2006; Ainscow & Sandill, 2010; Davis & Watson, 2001; Horrocks et al., 2008; Mitchell, 2008; Praisner, 2003) and in developing the school culture, thus their inclusion might have provided valuable perspectives on the value base and the fundamental basis of the educational practice. However, including principals was beyond the scope of this study.

The combination of the systematic literature review and the empirical study aggregated multiple perspectives on friendships among students who use AAC from several contexts. It also provided the opportunity to compare the results from this study with existing research. In addition to applying the search term *augmentative and alternative communication*, the literature review may have benefitted from the use of alternative search terms, e.g., *complex communication needs* or *communication disorder*. Alternative search terms may have identified a greater variety of relevant literature concerning children who communicate with little or no functional speech. However, the available time resources did not allow for this.

On the basis of the observations and the written field notes during the field work, I had the opportunity to adjust the interview guides. This was especially important concerning the interviews with students who could answer closed (yes/no) questions only. In addition, the field notes provided a relevant backdrop for the interviews. As noted, the field notes were not analyzed due to the total amount of data. However, the study may have benefited from analysis of the written field notes from the participatory observation. An analysis of the observational data may have provided extended views on inclusive practice and the students' social relationships as well as opportunities to clarify the relationships between the reported practice in the interviews and the observed practice in more detail. The comparisons of reported and observed practice may have strengthened the methodological triangulation and increased the credibility of the results (Charmaz, 2014). Despite the lack of analysis of the observational data, I reflected on my impressions from the observations in the analysis of the

interview data. Although I recognized that the observational data offered opportunities for thick descriptions (Geertz, 1973) of the actions and contexts involved as well as first-hand insights in a greater variety of situations and issues, I did not discover obvious contradictions between the reported and the observed practice. The observations will be analyzed and reported elsewhere at a later date.

### **Interviewing children**

The results from this study concerning the students' nomination of friends, qualification for friendships, and demonstration of clear preferences provided valuable reports about the importance of including children as objects in research. The inclusion of students is also in accordance with the recommendations provided by several researchers (Hohti & Karlsson, 2014; James, 2007; Schneider, 2016). However, the inclusion of students as participants represented several methodological issues.

Firstly, conducting participatory observation before interviewing the students strengthened my position as a trusted guest and increased my chances to establish rapport with the students (Dalen, 2011; Hunt et al., 2009; Mandell, 1988; Punch, 2002; Tjora, 2013; Wilson & Powell, 2001). Through first hand experiences I also got some insight into the students' activities and social relationships at school. My participation in the students' activities and the relationship of trust between the students and me supported a valuable outcome of the interviews. However, the rapport with the students might have been strengthened by spending more time with them ahead of the interviews through an extension of the length of the fieldwork. An even stronger relationship of trust may have provided the basis for more elaborative perspectives about the students' social relationships.

Secondly, it can be argued that the questions raised by two fellow students concerning their position as interviewees may indicate a perception of discredit. The discredited position was associated with an attribute that carries the features of a stigma (Goffman, 1968). Additionally, the discredited position may also be understood as a marginalized position (Hall et al., 1994), based upon the constructed identity of being the only fellow student in class recruited for the interview. The students' questions regarding their positions as interviewees provide a reminder of the importance that the researcher exerts reflexivity about the interviewees' needs for information, especially when children participate in research. Although I informed the students about my purpose of visiting the school and my interview with them, this information was probably not sufficient for these two students as they

questioned their role as interviewee. The students would probably have benefitted from an even stronger clarification of why they were interviewed and that I interviewed other students as well. However, it may also be that the students attempted to engage me in conversation in order to bridge the gap in social power (Alanen, 2001; Holt, 2004).

Thirdly, during the interviews of students there was a risk of constructing data based upon the students' perceived expectations of "correct answers" (Wilson & Powell, 2001; Zajac & Hayne, 2003). Although I tried to avoid expressing any expectations about the students' responses to my questions, they could nevertheless have their own notions about what answers I might wish to hear. In particular, this could be the case among fellow students, who may wanted to appear to have a positive social relationship with the students using AAC. Fellow students' reports about their social relationships with the students using AAC may have been adjusted to what they regarded as socially acceptable (Faux et al., 1988) or by what they considered as negative information about their relationships (Steward et al., 1996). However, as the fellow students' reports corresponded largely with the staff's reports, it is likely that the fellow students provided reports that were credible.

Fourthly, communication challenges during the interviews of students who used AAC may have caused several methodological issues in the co-construction of data (Charmaz, 2014). Because few students using AAC communicated by means of aided communication (e.g., communication book or speech-generating device) during the interviews, most of the students who used AAC had restricted access to adequate vocabulary regarding the topics discussed in the interviews. This might have hampered their opportunities to express nuanced statements concerning their social relationships to fellow students. If the students using AAC had had better access to a more adequate vocabulary for these topics, my abilities to ask follow-up questions and the students' abilities to provide more detailed information during the interviews would have been strengthened. Additionally, the use of staff members as interpreters during the interviews of students using AAC may have caused biases in my interpretations of the students' communication, due to the interpreters' beliefs, preferences, hopes, or desires on the students' behalf (Grove et al., 1999). The risk of misinterpretations was also present during my interpretations of the students' communication when I used partner-assisted scanning strategies (Costello, 2000) to support the students' communication. However, I consider my interpretations of these students' communication as trustworthy as both students used body language (e.g., smiling, making sounds, or making movements with their arms) when answering yes by using eye movements. In contrast, in situations when the

staff member and I perceived that the students answered no, they were calm with a neutral expression on their faces. Hence, I regarded their body language as very distinctive when they answered yes or no.

As the discussions above reveal, there might be several methodological issues to solve when including children as participants in research. To summarize, I will argue that the benefits of including children who use AAC in a study like this outweighs any limitations caused by the inclusion of children. Primarily, the issue should be how students with AAC can be included in such studies.

### **Following the constructivist grounded theory approach**

Following the constructivist grounded theory approach can be time consuming (Midré, 2009), and some compromises have been inevitable during my research. The protracted process of getting access to the field caused several limitations of the study's methodology. Firstly, I missed the opportunity to adjust the interview questions based on ongoing, preliminary analysis during the fieldwork due to the timeline for the fieldwork, transcriptions, and the analysis (cf. Figure 5, page 59). Such adjustments may have facilitated access to additional relevant data material concerning issues of particular interest. Secondly, due to restrictions in time and finances available for the fieldwork, the methodological procedure did not allow for incorporation of theoretical sampling and further saturation of data (Charmaz, 2014) after completion of the main data analysis. Data from theoretical sampling may have refined the conceptual categories and thereby strengthened the analysis in the grounded theory developed in this study (cf. Figure 7, page 78). The limitations identified above restricted the ability to realize the full potential of following the constructivist grounded theory approach.

Classic grounded theory (Glaser & Strauss, 1967) has been subject to criticism for not taking sufficient account of contextual and structural elements in the analysis. In this study, I attempted to take both these issues into account. The analysis identified a lack of common purpose, ambivalence and contradictions about structures, and visiting fellow students as conceptual categories. These categories operate on organizational and structural levels and represent contextual preconditions for the micro level. Such a viewpoint is also in accordance with Charmaz (2014), who argued that constructivist grounded theory may also include analysis at the macro level. Although this may be the subject of different viewpoints, I argue that this analytical approach largely maintained the contextual descriptions of the data material, and answered the criticism raised by Bryman (2001) in a satisfactory manner.

This study benefits from the inductive and abductive nature of the constructivist grounded theory approach (Charmaz, 2009, 2014; Thornberg, 2012). As my research reveals, the body of knowledge concerning friendships among students who use AAC is limited. At the start of this study, it was justified to question the relevance and legitimacy of using theories and results from studies of friendships related to children without disabilities in the understanding of friendships among children using AAC. On this basis, I consider the inductive and abductive approach to be more relevant than a deductive approach to the research questions defined. A deductive approach would increase the risk of overlooking distinctive characteristics of the social relationships among students who use AAC due to ties to existing theories of friendships among children without disabilities.

In line with Charmaz (2014), the abductive approach of the constructivist grounded theory approach applied in this study was beneficial for several reasons. Firstly, an abductive approach made it possible to make logical inferences about the data material, including relationships between conceptual categories. Secondly, abductive reasoning made possible comparisons of the results from this study with (1) results from other studies regarding friendships among students who use AAC, and with (2) results from the body of knowledge concerning friendships related to children without disabilities. Through an abductive approach, the grounded theory visualized in Figure 7 includes an integration of the results from this study with existing theory.

## **Ethics**

To follow ethical guidelines is essential in planning and implementation of a research project. Additionally, it imposes on the researcher considerable ethical responsibility to also take seriously the results that the research produces (The National Committee for Research Ethics in the Social Sciences and the Humanities, 2016). In a discussion on ethics, reporting research is an important issue, and it applies not least to research on children. This can take place at first through the inclusion of children in research about children, the recognition of children's perspectives in the analysis of data, and later through the publication of the research results. From this particular study, it is important to recognize and convey the children's messages about their friendships and those elements that seem to affect these friendships. This study demonstrates that for a majority of the students who used AAC there was a breach between whom the students reported as their friends and their opportunities to spend time with those peers. The breach is mainly due to how their educational provision was designed and

practiced by adults. We are obliged to take seriously the children's reports about their social relationships, and we also must dare to challenge the educational practice when this so clearly violates children's interests as well as the national and international education policy on inclusive education. The issue of the substantial meaning of inclusive education should not only be a discourse based on a line of argument led solely by adults, but rather be a reflexive process that also recognizes and involves the students' expressions of opinion. This is particularly important for students who are at risk for or who completely fall outside formalized forums for student co-determination. Student co-determination is a principle in The Quality Framework based on The Education Act (1998) in Norway. However, as an example it is difficult to conclude from available documentation that students who use AAC have participated in the annual student surveys initiated by The Norwegian Directorate for Education and Training in the period from 2013 to 2016 (Wendelborg, 2017; Wendelborg et al., 2014, 2016; Wendelborg et al., 2015). Consequently, the apparent exclusion of students using AAC from formalized forums for student co-determination provides an additional argument for the ethical responsibility of valuing and reporting research results based on children's reports.

Moreover, this study also directs attention to research ethics concerning other aspects of inclusion of children as participants in research. The students' participation in this study was crucial for the understanding of their friendships. Among several issues, they provided firsthand information about their conceptions of friendship, who they regarded as their friends, and their expectations about friendships. This information had not been available by only interviewing third parties, such as parents and staff. For that reason, I consider this study as important by the contribution of knowledge to friendships among students who use AAC, which have received limited attention in research. Nevertheless, the researcher is obliged to prevent children from being exposed to serious or unreasonable loads (The National Committee for Research Ethics in the Social Sciences and the Humanities, 2016). Although not reported to me, there was a potential risk that the participating students perceived the increased attention through the observations and interviews as incriminating. Being identified as a participant in a research study may have elicited stigmatization from other students. However, I consider this risk as low due to the following: (1) The fieldwork was conducted in the students' natural school environment, which I consider had a supportive influence on the students' perception of security and confidence. (2) Reports from staff members to several of the students who used AAC indicated that professionals from the habilitation services and

other support services sometimes visited the mainstream class to observe and talk with the student who used AAC. According to staff, the students demonstrated an accepting attitude towards these visitors. On the basis that I experienced acceptance from the students, it is not unlikely that I got a similar role among the students. To summarize, I conclude that the study was justifiable to conduct with respect to the prevailing ethical guidelines (The National Committee for Research Ethics in the Social Sciences and the Humanities, 2016).

## Implications for future research

Overall, this study calls for increased attention on social issues related to the use of AAC, including the establishment and maintenance of friendships. The research reported in this dissertation provides several implications for future research. In the following, I will first summarize the major implications reported in the papers. Finally, I present implications for future research based on the overall discussions provided above.

Paper 1 emphasized the need of increased research on friendships among children who use AAC as the existing research is sparse. This literature review identified several research areas of special importance for future research: (1) Explorations of the appropriateness of using existing models of friendship establishment. (2) Further examination of the establishment, maintenance, and change of friendships among children using AAC at different ages, including children who only use nonsymbolic communication. (3) Further investigation of the role of reciprocity in friendships among students who use AAC. (4) Exploration of the role of language in friendships between children using AAC and children without disabilities.

Paper 2 reported marginalizing practices of students who use AAC. Based on these results, I suggest the following priorities in future research: (5) Further exploration of the relationships between aspects of inclusive education and students using AAC's social relationships to fellow students. (6) Investigation of how goals for social development influence establishment and maintenance of friendships among students who use AAC. (7) Conduction of thorough investigation of parents and staff's acceptance of marginalizing practices of students who use AAC.

Paper 3 described interactional facilitators and barriers in the students' social relationships. The results indicate that future research will benefit from several priorities, including: (8) Exploration of the efficacy of increased attention on friendships among students using AAC at school. (9) Further exploration of positive and negative effects of staff's efforts

in building goodwill for students who use AAC. (10) Further investigation of how training in AAC for fellow students affects the social relationships with students using AAC. (11) Investigation of causal relationships between environmental barriers and the passive role in communication identified among students who use AAC, and how dismantling of barriers may influence the students' social relationships positively.

Paper 4 investigated the reported friendships among students using AAC. Based on the results, future research will benefit from the following priorities: (12) Further explorations of commonalities and differences within friendships students using AAC and fellow students without disabilities. (13) Investigation of the distinctive characters of best friend relationships among students using AAC. (14) Conduction of longitudinal studies in order to investigate the development of friendship patterns between students using AAC and fellow students during longer periods of time and during different kinds of transitions. (15) Explore perceptions of loneliness among students who use AAC at school.

Paper 5 provided descriptions of the personal characteristics that influence the establishment of friendships among students who use AAC. The results indicate that future research will benefit from (16) further exploration of the performance of play between students who use AAC and fellow students as well as how shared play influence their friendships.

Additionally, based on the discussions in the subchapter Theoretical implications, I provide the following suggestions for future research. (17) Investigation of the grounds for students using AAC's perceptions of their social relationships to fellow students. (18) Investigation of the positive and negative characteristics of the quality of students using AAC's friendships with fellow students in more detail. (19) Investigation of how students using AAC are part of the same "generational units" (Alanen, 2001) as fellow students during all the steps of the compulsory schooling and how this influence their friend relationships at school. (20) Exploration of students using AAC' exertion of agency towards the development of social relationships after completion of high quality communication training in use of AAC. (21) Further examination of strategies that may help in establishing and maintenance of friendships among students using AAC. (22) Comparing interview data with observational data in order to evaluate the agreement between reported and observed social relationships. (23) Investigation of principals' perspectives on their role in facilitating friend relationships between students using AAC and fellow students by means of inclusive education.





# Conclusions

Considering the influence friendships have in children's lives, and the limited research knowledge concerning friendships among students who use AAC, this dissertation emphasizes the importance of increased attention on friendships among students using AAC. The overall aim of this study was to achieve a deeper understanding of friendships among students who use AAC in the Norwegian primary mainstream public school. The study addressed three research questions. The results from this study reported in the five papers, incorporated in the grounded theory of friendships, and elaborated in the Discussion section provide some conclusions concerning these questions. In the following, I provide short conclusions for each of the three research questions.

## Characteristics of friendships

The students using AAC in this study developed few close social relationships. Most of the reported friendships among these students related to fellow students in class. Although there were diverging reports about the students using AAC's friendships among the respective participant groups (i.e., students using AAC, fellow students, parents, staff), the results provide some conclusions about the characteristics of their friendships. The students using AAC's reported friendships represented a greater variety of the friends' age and gender than what is common among children without disabilities reported in the research literature. Fellow students interviewed liked students using AAC for their personal qualities and perceived their friendships positively. The fellow students had a helping role in these relationships. Previous research indicate that such a role may cause imbalance in the social power and disturb the social equality between the students. Students using AAC and fellow students shared play as a favorite activity at school. The students also shared play as a qualifying activity for establishing friendships.

A major barrier for the establishment and maintenance of friendships among students using AAC was communication challenges, which caused major limitations on the students' interactions with fellow students. Parents and staff considered the friendships among students using AAC as superficial. Moreover, they did not consider these students as traditional friends and fellow students seldom choose the students as playmates.

Friendships among most students using AAC changed positively over time due to increased time spent with fellow students and participation with fellow students, increased initiatives from fellow students, and the students using AAC's increased confidence in social contexts. Contrary, increased differences in levels of functioning compared to fellow students, termination of friendships, and conflicts and intrigues had negative impact on students using AAC's social relationships. Altogether, most the students using AAC wanted more friends at school.

## Environmental facilitators and barriers to friendships

This study described a variety of environmental facilitators and barriers to the students using AAC's friendships. Environmental facilitators to these friendships included the following: (1) Positive attitudes among fellow students. (2) Communication training in use of AAC for fellow students as well as students using AAC. (3) Shared experiences with fellow students, including presence in class. (4) Participation in practical activities as well as in smaller groups with fellow students. (5) Staff's support in organization of activities, as well as staff's support in communication and interactions with fellow students.

In addition, the study described the following barriers to friendships among students using AAC: (1) Practices of marginalization positioned students using AAC in a visiting role in class. Marginalization included limitations in time spent in class, separate parent meetings and class contacts for students in the school's special unit, and multipartite belong to several student groups. In addition, students using AAC spent limited time in recess but considerable time in individual activities. (2) Negative attitudes among fellow students. (3) Loss of or reduction of meeting places with fellow students. (4) Blurred goals for the students using AAC's social development. (5) Disagreements among staff concerning the students' educational provision. (6) Lack of training and supervision on AAC among staff, and (7) little cooperation among staff.

In common with students without disabilities, friendships among students who use AAC were influenced not only by their individual characteristics, but also by environmental facilitators and barriers. However, this study indicates that environmental facilitators and barriers plays an even more important role among students using AAC because their opportunities to change the environmental conditions are more restricted.

## Influencing roles on friendships

In this study, the individuals in the four participant groups played different roles in the establishment and maintenance of friendships among the students using AAC. In the following, I provide brief summaries of the roles among individuals in the respective participation groups.

Students who used AAC played an important role in exerting agency concerning preferences for persons and activities at school. Although they did not communicate these preferences very clearly in their daily life at school, the interviews demonstrated that they had the potential for providing important information about the preferred fellow students and activities. This kind of information, if it is taken note of by staff, can be significant for their social relationships.

Fellow students with positive attitudes towards students who used AAC (i.e., acceptance and handling of otherness) played an important role in demonstrating interest for students using AAC and exploiting the opportunities for interaction with these students. They also played an important role in initiating interactions, although they did so only in limited extent. These interactions influenced their communicative competence in using AAC and their abilities to become better acquainted with the students who used AAC. Fellow students also provided support concerning communication, mobility, and encouragement. They also performed adaptations of activities to support the students using AAC's ability to participate in shared activities. This support influenced the interactions and the students' social relationships positively.

Staff played important roles in influencing friendships among students who used AAC in various aspects. Firstly, although staff possessed opportunities to create interactional spaces involving students using AAC and fellow students in class, they did so only in restricted extent. Their stated intentions of inclusive education confined mainly to physical presence in class in a very restricted extent. The staff's priorities and choices concerning the students using AAC's educational provision caused marginalizing practices among these students. Along with staff's limitations to provide goals for the students' social development, disagreements about the students' educational provision, and limited cooperation with colleagues concerning planning of the students' education made inclusive education for the students using AAC difficult. Secondly, staff engaged in promoting positive social relationships among the students, including building goodwill for students using AAC and providing fellow students with information about the students using AAC's disabilities. In

addition, staff provided crucial support concerning communication and interactions between students using AAC and fellow students. Thirdly, staff did not take full advantage of their opportunities to involve parents in issues concerning the students using AAC's friendships. Fourthly, although this study did not include data material that shed lights on the principal's role, the results indicate that the principals played an important role concerning the staff's (lack of) access to receive supervision and opportunities to increase their competence in AAC as well as the marginalization of students who used AAC.

Parents reported limited attention on friendship as a cooperative topic with the staff. The results indicate that parents were caught up in their daily endeavors to fulfill their children's needs. Consequently, parents did not play any significant role in influencing students using AAC's friendships at school. However, parents may play an important role in providing information that is relevant for the design of goals for the students' social development.

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## Paper I – V





# Paper 1

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## Paper 2

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## Paper 3

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## Paper 4

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## Paper 5

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# Appendices

- Appendix 1: Letter from REK, requesting full application
- Appendix 2: Letter from REK, decision on full application
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- Appendix 4: Request to Statped and habilitation services for children regarding information about schools with students using AAC
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- Appendix 10: Invitation to fellow students to participate in interview sent to parents
- Appendix 11: Invitation to fellow students to participate in interview sent to fellow students
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## Appendix 1

Letter from REK, requesting full application

<b>Region:</b>	<b>Saksbehandler:</b>	<b>Telefon:</b>	<b>Vår dato:</b>	<b>Vår referanse:</b>
REK midt	Øystein Lundestad	73597507	02.07.2013	2013/1314/REK midt
			<b>Deres dato:</b>	<b>Deres referanse:</b>
			26.06.2013	

Vår referanse må oppgis ved alle henvendelser

Jørn Østvik

Institutt for sosialt arbeid og helsevitenskap, Norges teknisk-naturvitenskapelige universitet (NTNU)

### 2013/1314 Utvikling av vennskap blant elever i barneskolen som mangler talespråk

**Prosjektleder:** Jørn Østvik

Vi viser til innsendt fremleggingsvurderingsskjema datert 26.06.2013. Søknaden ble behandlet av komiteens leder på fullmakt med hjemmel i helseforskningsloven § 10, jf. forskningsetikkloven § 4.

#### Prosjektomtale

*Elever uten talespråk har behov for alternativ og/eller supplerende kommunikasjon (ASK) for å gjøre seg forstått. De møter store utfordringer i kommunikasjon med jevnaldrende, og har risiko for redusert samhandling og økt grad av ensomhet. Studier viser at de kan ha vansker med å utvikle vennskap, mangler nære venner og har færre bekjente enn jevnaldrende. Vennskap er en forutsetning for barns allmenne utvikling. Skolen er en viktig arena for å få venner. Det er stor mangel på kunnskap om utvikling av vennskap blant elever med behov for ASK. Forskning er hovedsakelig relatert til barn uten funksjonsnedsettelse. Prosjektet har som målsetting å studere utvikling av vennskap hos elever i barneskolen som bruker ASK ut fra følgende: Hva er likhetene og ulikhetene i utvikling av vennskap mellom elever som bruker ASK og deres medelever? Hvordan kan språkmiljøet støtte eller redusere utvikling av vennskap? Hvilken rolle har skolepersonale og jevnaldrende i utvikling av vennskap? Prosjektet gjennomføres som et doktorgradsarbeid i forbindelse med PhD ved Institutt for sosialt arbeid og helsevitenskap ved NTNU.*

#### Vurdering

Vurderingen er gjort med bakgrunn i de innsendte dokumenter. Komiteens leder er i tvil om prosjektet er fremleggingspliktig, og ønsker at en fulltallig komité vurderer prosjektet i sin helhet. Vi ber derfor om at det sendes inn en full prosjektsøknad, slik at en samlet komité får avgjøre fremleggingsplikten.

#### Vedtak

Prosjektleder bes sende inn en full prosjektsøknad.

Det bes om at komplett prosjektsøknad sendes inn via REKs saksportal:

<http://helseforskning.etikkom.no>

#### Merknad

På skjemaets spørsmål 1d, ber vi deg hake av "ja" for relatert forskningsprosjekt behandlet i REK, spesifisere REK midt, med mappenummer 2013/1314.

For nærmere informasjon om søknadsfrister mm. henvises det til REKs saksportal.

Med vennlig hilsen

Sven Erik Gisvold  
Dr.med.  
Leder, REK midt

Øystein Lundestad  
Rådgiver

**Kopi til:** [rek-midt@medisin.ntnu.no](mailto:rek-midt@medisin.ntnu.no)



## Appendix 2

Letter from REK, decision on full application

<b>Region:</b> REK midt	<b>Saksbehandler:</b> Tone Natland Fagerhaug	<b>Telefon:</b> 73597506	<b>Vår dato:</b> 04.10.2013	<b>Vår referanse:</b> 2013/1514/REK midt
			<b>Deres dato:</b> 27.08.2013	<b>Deres referanse:</b>

Vår referanse må oppgis ved alle henvendelser

Jørn Østvik  
NTNU

### 2013/1514 Utvikling av vennskap blant elever i barneskolen som mangler talespråk

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK midt) i møtet 20.09.2013. Vurderingen er gjort med hjemmel i helseforskningsloven § 10, jf. forskningsetikklovens § 4.

**Forskningsansvarlig:** Institutt for sosialt arbeid og helsevitenskap  
**Prosjektleder:** Jørn Østvik

#### Prosjektomtale (revidert av REK):

*Elever uten talespråk møter store utfordringer i kommunikasjon med jevnaldrende, og opplever oftere enn friske barn redusert samhandling og økt grad av ensomhet. Prosjektet skal sammenligne utvikling av vennskap hos elever som mangler talespråk og friske jevnaldrende ved å se på 1) Hva er likheter og ulikheter i utvikling av vennskap? 2) Hvordan kan språkmiljøet støtte eller redusere utvikling av vennskap? 3) Hvilken rolle har skolepersonale og jevnaldrende i utvikling av vennskap? Data skal samles inn vha. deltakende observasjon og videopptak fra skolehverdagen. Det skal også gjøres intervju av 20 barn (med og uten talespråk) og foreldre, kontaktlærer, spesialpedagog og eventuelle assistenter for de av barna uten talespråk. De deltakende barna skal være elever i 1.-4. trinn i barneskolen. Barn uten talespråk skal rekrutteres vha. Habiliteringstjenesten for barn i fylket, og Statped. Studien er samtykkebasert.*

#### Vurdering

Komiteen viser til prosjektprotokoll, målsetting og plan for gjennomføring. Det omsøkte prosjektets formål er å sammenligne utvikling av vennskap hos elever som mangler talespråk og friske jevnaldrende ved å se på likheter og ulikheter i utvikling av vennskap, hvordan språkmiljøet støtter eller reduserer utvikling av vennskap, og 3) Rolle som skolepersonale og jevnaldrende har i utviklingen av vennskap. REK vurderer at formålet ikke gjelder å fremskaffe ny viten om helse og sykdom som sådan.

Komiteen viser til at det er forskningsprosjekt som gjelder "medisinsk og helsefaglig forskning på mennesker, humant biologisk materiale eller helseopplysninger" som skal forhåndsgodkjennes av REK (jf. helseforskningsloven (hfl.) §§ 2 og 9). "Medisinsk og helsefaglig forskning" er definert som "virksomhet som utføres med vitenskapelig metodikk for å skaffe til veie ny kunnskap om helse og sykdom" (jf. hfl. § 4a). Det er altså i hovedsak formålet med studien som avgjør om et prosjekt skal anses som framleggelsespliktig for REK eller ikke.

Komiteen vurderer at dette prosjektet fremstår som annen type forskning enn medisinsk og helsefaglig forskning. Det skal derfor ikke vurderes etter helseforskningsloven. Prosjektet kan følgelig gjennomføres uten forhåndsgodkjenning av Regional komité for medisinsk og helsefaglig forskningsetikk.

Vi minner imidlertid om at dersom det skal registreres personopplysninger, må studien meldes til Norsk Samfunnsvitenskapelig Datatjeneste via personvernombudet ved forskningsansvarlig institusjon.

Vurderingen er gjort på grunnlag av de innsendte dokumenter. Dersom det gjøres vesentlige endringer i prosjektet, kan dette ha betydning for REKs vurdering. Det må da sendes inn ny søknad.

#### **Vedtak**

Regional komité for medisinsk og helsefaglig forskningsetikk, Midt-Norge har funnet at prosjektet ikke er medisinsk eller helsefaglig forskning, og faller derfor utenfor komiteens mandat, jf. helseforskningsloven § 2. Prosjektet er ikke fremleggelsespliktig, jf. helseforskningsloven § 10 og forskningsetikkloven § 4.

#### *Klageadgang*

Du kan klage på komiteens vedtak, jf. forvaltningslovens § 28 flg. Klagen sendes til REK midt. Klagefristen er tre uker fra du mottar dette brevet. Dersom vedtaket opprettholdes av REK midt, sendes klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Med vennlig hilsen

Sven Erik Gisvold  
Dr.med.  
Leder, REK midt

Tone Natland Fagerhaug  
Rådgiver

**Kopi til:** borgunn.ytterhus@svt.ntnu.no; rek-midt@medisin.ntnu.no

## Appendix 3

Letter from NSD, reply on notification form



Jørn Østvik  
Institutt for sosialt arbeid og helsevitenskap NTNU

7491 TRONDHEIM

Vår dato: 07.11.2013

Vår ref: 35893 / 2 / MSS

Deres dato:

Deres ref:

## TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 14.10.2013. All nødvendig informasjon om prosjektet forelå i sin helhet 04.11.2013. Meldingen gjelder prosjektet:

35893                      *Development of friendships among pupils using augmentative and alternative communication (AAC) in primary school*  
*Behandlingsansvarlig*      *NTNU, ved institusjonens øverste leder*  
*Daglig ansvarlig*              *Jørn Østvik*

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://pvo.nsd.no/prosjekt>.

Personvernombudet vil ved prosjektets avslutning, 20.05.2018, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Vigdis Namtvedt Kvalheim

Marie Strand Schildmann

Kontaktperson: Marie Strand Schildmann tlf: 55 58 31 52

Vedlegg: Prosjektvurdering

*Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.*

*Avdelingskontorer / District Offices:*

*OSLO:* NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. [nsd@uio.no](mailto:nsd@uio.no)

*TRONDHEIM:* NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 19 07. [kyrre.svarva@svt.ntnu.no](mailto:kyrre.svarva@svt.ntnu.no)

*TROMSØ:* NSD, SVE, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 43 36. [nsdmaa@sv.uit.no](mailto:nsdmaa@sv.uit.no)

# Personvernombudet for forskning



## Prosjektvurdering - Kommentar

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Prosjektnr: 35893

Formålet med prosjektet er å undersøke utviklingen av vennskap hos elever som benytter alternativ og supplerende kommunikasjon (augmentative and alternative communication, AAC).

Datamaterialet innhentes gjennom personlig intervju, deltakende observasjon (bruk av videoopptak) og tilgang til opplysninger fra register/journal.

Utvalget består av A) elever med liten eller ingen funksjonell tale fra 1-4 klasse og B) ordinære elever fra 1-4 klasse. Hver elev i gruppe A danner par med en elev i gruppe B, totalt seks til ti par. Elevene rekrutteres via foreldrene som også blir bedt om å delta i prosjektet/bidra med informasjon om barnet og seg selv.

Statped og Habiliteringstjenesten for barn vil bli bedt om å gi informasjon om skoler som har elever som tilfredsstillter kriteriene for elever i gruppe A. Dersom skolen (ved skolens ledelse) er interessert i å delta, bes de om å formidle informasjon om prosjektet til aktuelle elever/foreldre (gruppe A-elever) og innhenter samtykker slik at skolens ledelse kan utlevere enkelte opplysninger om denne elevgruppen. Dersom elev(er) tilfredsstillter utvalgs-kriteriene blir det rettet ny henvendelse til de samme foreldrene med forespørsel om deltakelse i prosjektet. Foreldrene blir bedt om å gi informasjon om sitt utdanningsnivå, hvem barnet bor sammen med og barnets kjønn. For deltakere i gruppe B, sendes det invitasjon til samtlige foreldre og det innhentes samtykke til at deres barn eventuelt kan filmes i samspill med Gruppe A barn og intervjues. Hver elev fra gruppe A, pares/matches med elev fra gruppe B hvor elev A og B kjenner hverandre og hvor foreldre har så lik utdanningsbakgrunn som mulig.

Ifølge prosjektmeldingen skal det innhentes skriftlig samtykke basert på skriftlig informasjon om prosjektet og behandling av personopplysninger. Dette gjelder i forbindelse med alle metodene og alle opplysninger som kan knyttes til en person. Personvernombudet finner informasjonsskrivene, mottatt den 04.11.2013, til de ulike utvalgene (foreldre og barn), til skole og til Statped/Habiliteringstjenesten tilfredsstillende utformet i henhold til personopplysningslovens vilkår. Det er presisert i meldingen til ombudet og i informasjonsskriv til foreldrene at barn som ikke kan forstå den skriftlige informasjonsteksten som er tilpasset barn, må motta tilpasset informasjon om prosjektet fra sine foreldre. Prosjektopplegget virker meget godt gjennomtenkt og ombudet bemerker at informasjonen som gis til alle involverte er godt og hensiktsmessig presentert.

Alle sider ved prosjektet og datainnsamlingen fremgår av informasjonen til utvalget. Ombudet legger til grunn at foreldre til eleven(e) unntar kontaktlærer, spesialpedagog og assistent fra taushetsplikten slik at intervju med fokus på elevenes relasjoner, samhandling kan gjennomføres uten hinder av taushetsplikten. Foreldrene tilbys å få se intervjuguiden som skal benyttes.

Det vil i prosjektet bli registrert sensitive personopplysninger om helseforhold, jf. personopplysningsloven § 2 nr. 8 c).

Prosjektet skal avsluttes 20.05.2018 og innsamlede opplysninger skal da anonymiseres, og lyd- og video-opptak slettes. Anonymisering innebærer at direkte personidentifiserende opplysninger som navn/koblingsnøkkel slettes, og at indirekte personidentifiserende opplysninger (sammenstilling av bakgrunnsopplysninger som f.eks. navn på skole, alder, kjønn) fjernes eller grovkategoriseres slik at ingen enkeltpersoner kan gjenkjennes i materialet.

## Appendix 4

Request to Statped and habilitation services for children regarding information about schools with students using AAC



Statped <region>

## Forespørsel om grunnlagsinformasjon til forskningsprosjekt

Mitt navn er Jørn Østvik og jeg har startet et doktorgradsarbeid ved Institutt for sosialt arbeid og helsevitenskap ved NTNU i Trondheim. Prosjektet skal se på hvordan elever som helt eller delvis mangler talespråk, og som benytter alternativ og supplerende kommunikasjon utvikler vennskap.

### *Bakgrunn og formål*

Elever som helt eller delvis mangler talespråk har behov for alternativ og supplerende kommunikasjon (ASK) for å kunne gjøre seg forstått og for selv å forstå andres kommunikasjon. ASK kan være kommunikasjon med gester, mimikk, lyder, blick, gjenstander, håndtegn, foto, grafiske tegn, symboltavler, kommunikasjonsbøker, talebrytere, talemaskiner m.m. Anslagsvis mellom 0,5 – 1,2% av elevene i den norske skolen har behov for ASK.

Formålet med forskningsprosjektet er å se på 1) likheter og ulikheter i utvikling av vennskap blant elever med behov for ASK og elever uten uttalte funksjonsnedsettelse, 2) hvordan språkmiljøet kan fremme eller begrense utviklingen av vennskap blant elevene, og 3) hvilken rolle jevnaldrende elever og ansatte i skolen kan ha i utviklingen av vennskap blant elever med behov for ASK.

Hovedveileder i prosjektet er professor Borgunn Ytterhus, NTNU, og medveileder er professor Susan Balandin ved Victoria University of Wellington, New Zealand.

Det er liten kunnskap om hvordan elever med behov for ASK utvikler vennskap. Internasjonale studier tyder imidlertid på at elever uten funksjonelt talespråk ikke er inkludert i venneundersøkelser, og at mange av disse sliter med å utvikle vennskap. Denne studien er en av svært få som retter søkelys på utvikling av vennskap blant elevgruppen. Resultater fra studien forventes å kunne bidra til ny kunnskap om tiltak som kan støtte utviklingen av vennskap hos disse elevene og redusere risikoen for opplevelse av ensomhet.

### *Forespørsel*

Statped mottar denne forespørselen fordi vi ønsker å komme i kontakt med grunnskoler som har elever som bruker alternativ og supplerende kommunikasjon (ASK) som følge av at de helt eller delvis mangler talespråk.

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Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no	Bygg 11, nivå 5 NTNU Dragvoll	+ 47 73 59 19 30	Jørn Østvik
	http://www.ntnu.no/ish	7049 Trondheim	<b>Telefaks</b> + 47 73 59 18 85	Tlf: + 47 73 55 10 84

Vi ønsker å rekruttere elever til prosjektet som oppfyller disse vilkårene:

- Eleven går i 1. – 4. trinn.
- Eleven benytter en eller flere former for grafisk kommunikasjon (foto, grafiske tegn, ortografisk skrift i kommunikasjonsmateriell eller på kommunikasjons hjelpemidler).

Dersom Statped har kjennskap til elever som oppfyller kriteriene, ønsker vi følgende opplysninger:

- Skolens navn
- Skolens kommune

For å ivareta elevens anonymitet i denne fasen av prosjektet ønsker vi ikke opplysninger som kan brukes for å identifisere den enkelte eleven.

### ***Vår kontakt med aktuelle skoler, elever og foreldre***

Skoler som Statped evt oppgir vil bli kontaktet gjennom en skriftlig invitasjon om deltakelse i prosjektet. Skolen vil i invitasjonen bli bedt om å fylle ut et enkelt skjema der de blir spurt om å angi om de har elever som oppfyller vilkårene for prosjektdeltakelse (se ovenfor). Skolen returnerer skjemaet til oss dersom de samtykker til å delta i prosjektet. Skjemaet vil ikke omfatte opplysninger som kan identifisere den enkelte eleven.

På bakgrunn av skolenes tilbakemeldinger vil foreldre til barn som oppfyller vilkårene for deltakelse motta invitasjon til å delta i prosjektet. Det enkelte barnet vil samtidig motta en tilpasset invitasjon. Dersom foreldrene anser barnet som ute av stand til å lese / forstå invitasjonen vil vi be foreldrene informere barnet på annen måte. For å ivareta elevens og foreldrenes anonymitet, vil vi be den enkelte skolen om å sende ut invitasjonene. Foreldre som ønsker å delta i prosjektet returnerer samtykkeskjema til oss på vegne av barnet og seg selv.

Studien er tilrådt av Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

***Tilbakemelding fra Statped***

Vi imøteser snart tilbakemelding på forespørselen. Tilbakemeldingen kan gis pr telefon eller skriftlig. Muntlig tilbakemelding rettes til stipendiat Jørn Østvik, telefon 73 55 10 84. Skriftlig tilbakemelding sendes til:

Institutt for sosialt arbeid og helsevitenskap  
Norges teknisk-naturvitenskapelige universitet  
7491 Trondheim  
Att: Jørn Østvik

Dersom Statped har spørsmål til studien, ta kontakt med stipendiat Jørn Østvik, telefon 73 55 10 84.

Med hilsen

Jørn Østvik  
Stipendiat ved Institutt for sosial arbeid og helsevitenskap, NTNU

## Appendix 5

Request to schools regarding anonymous information about students using AAC,  
including blank information form

&lt;skole&gt;

## Forespørsel om grunnlagsinformasjon til forskningsprosjekt

Mitt navn er Jørn Østvik og jeg har startet et doktorgradsarbeid ved Institutt for sosialt arbeid og helsevitenskap ved NTNU i Trondheim. Prosjektet skal se på vennskap blant elever som helt eller delvis mangler talespråk, og som benytter alternativ og supplerende kommunikasjon. Dette er en forespørsel om å bidra til grunnlagsinformasjon for rekruttering av elever til prosjektet.

### **Bakgrunn og formål**

Elever som helt eller delvis mangler talespråk har behov for alternativ og supplerende kommunikasjon (ASK) for å kunne gjøre seg forstått og for selv å forstå andres kommunikasjon. ASK kan være kommunikasjon med gester, mimikk, lyder, blikk, gjenstander, håndtegn, foto, grafiske tegn, symboltavler, kommunikasjonsbøker, talebrytere, talemaskiner m.m. Anslagsvis 0,5 – 1,2% av elevene i den norske skolen har behov for ASK.

Formålet med forskningsprosjektet er å se på 1) hva som karakteriserer vennskap mellom elever som bruker ASK og deres medelever, 2) hvilke miljømessige faktorer som påvirker vennskap mellom elever som bruker ASK og deres medelever, og 3) hvilken rolle jevnaldrende elever og ansatte i skolen kan ha i utviklingen av vennskap blant elever med behov for ASK.

Hovedveileder i prosjektet er professor Borgunn Ytterhus, NTNU, og medveileder er professor Susan Balandin ved Deakin University i Melbourne, Australia.

Det er liten kunnskap om hvordan elever med behov for ASK utvikler vennskap. Internasjonale studier tyder imidlertid på at elever uten funksjonelt talespråk sjelden er representert i vennskapsundersøkelser og at de kan være i risiko for å oppleve utfordringer med å utvikle vennskap. Dette prosjektet er en av svært få studier som retter søkelys på vennskap blant denne elevgruppen. Resultater fra studien forventes å kunne bidra til ny kunnskap som kan danne bedre grunnlag for tiltak som kan støtte utviklingen av vennskap hos disse elevene.

Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no <a href="http://www.ntnu.no/ish">http://www.ntnu.no/ish</a>	Bygg 11, nivå 5 NTNU Dragvoll 7049 Trondheim	+ 47 73 59 19 30 <b>Telefaks</b> + 47 73 59 18 85	Jørn Østvik Tlf: + 47 924 88 789 +47 73 55 10 84

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandlende enhet ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.

### ***Grunnlagsinformasjon for rekruttering av elever til prosjektet***

Skolen bes om å gi opplysninger som skal brukes som grunnlag for å rekruttere elever til prosjektet. Merk at dette gjelder elever i 1. – 4. trinn som benytter ASK. Dersom skolen gir slike opplysninger, vil opplysningene gjennomgås og det vil bli foretatt en vurdering om én eller flere elever med foreldre skal inviteres til å delta i studien. Invitasjon om deltakelse vil i så fall sendes i eget brev til eleven(e) og foreldrene gjennom skolen, og til skolen.

Det vil være frivillig å delta dersom skolen og aktuelle elever/foreldre senere får slik forespørsel.

Det er kun jeg og mine veiledere som vil ha innsyn i grunnlagsinformasjonen som skolen returnerer til oss. Alle personopplysninger vil bli behandlet konfidensielt i tråd med personvernloven og forskningsetiske retningslinjer.

Dersom skolen vil bidra med grunnlagsinformasjon til prosjektet, vennligst følg disse punktene:

1. Rektor videresender vår forespørsel til foreldre/foresatte til elever med behov for ASK om de vil unnta rektor for taushetsplikten vedr de forespurte grunnlagsopplysningene (se vedlegg). Ved behov, kopier vedlagte brev om unntakelse av taushetsplikten til aktuelle foreldre.
  - **Dersom foreldre/foresatte til én eller flere elever unntar rektor fra taushetsplikten, vennligst gå videre til punkt 2.** Merk at foreldre først må gi samtykke til å unnta rektor fra taushetsplikten før rektor kan gå videre til punkt 2.
  - **Dersom ingen foreldre/foresatte unntar rektor fra taushetsplikten, bes rektor snarlig underrette undertegnede om at skolen ikke har grunnlagsinformasjon til prosjektet.**
2. Rektor fyller ut skjemaet «Anonym informasjon om elev(er) som helt eller delvis mangler talespråk» på side 3.
  - Dersom det oppgis opplysninger om flere elever i skjemaet på side 5, anbefales rektor å lage en enkel liste for sin egen del der det framgår hvem som er Elev 1, Elev 2 og Elev 3. I tillegg vil en evt forespørsel fra NTNU til elever og foreldre om deltakelse i prosjektet gå gjennom skolen. Denne forespørselen vil referere til hvilken elev (nr 1, nr 2 og/eller nr 3) som invitasjonen rettes til.
3. Rektor returnerer skjemaet i punkt 2 i vedlagte svarkonvolutt så snart foreldre har gitt samtykke til å unnta rektor fra taushetsplikten (jmf pkt 1) og skjemaet i punkt 2 er utfyllt.

Skolen vil bli kontaktet av meg kort tid etter at brevet er mottatt for en avklarende samtale om skolen har relevant grunnlagsinformasjon å gi til prosjektet. Dersom du har spørsmål til studien, ta kontakt med stipendiat Jørn Østvik, telefon 73 55 10 84 / 92 48 87 89.

Studien er tilrådt Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Med hilsen

Jørn Østvik  
Stipendiat ved Institutt for sosial arbeid og helsevitenskap, NTNU

## Anonym informasjon om elev(er) som helt eller delvis mangler talespråk

Vennligst fyll ut skjemaet nedenfor (obs: ikke oppgi navn på eleven).

Sett kryss for det som passer for den enkelte eleven:

Skole:	Kommune:		
Informasjon om eleven	Elev 1 (sett kryss, ikke navn)	Elev 2 (sett kryss, ikke navn)	Elev 3 (sett kryss, ikke navn)
Eleven går i:			
• 1. trinn			
• 2. trinn			
• 3. trinn			
• 4. trinn			
I tillegg til noe talespråk bruker eleven andre måter å kommunisere på for å støtte eller supplere sin reduserte tale.			
Eleven bruker andre måter å kommunisere på for å erstatte manglende tale.			
Eleven har hele eller deler av sin opplæring sammen med elever som har talespråk og som får ordinær opplæring			
Eleven bruker en eller flere av disse typene kommunikasjonsmateriell eller –hjelpemidler:			
• Enkeltstående foto eller grafiske symboler			
• Peketavler med flere foto eller grafiske symboler			
• Bokstaver eller ord på tavle / papir			
• Kommunikasjonsbok			
• Bryter som snakker for eleven			
• Enkelt kommunikasjonshjelpemiddel som snakker for eleven <i>Beskriv:</i>			
• Datamaskin som snakker for eleven <i>Beskriv:</i>			
• Annet <i>Beskriv:</i>			
Dersom eleven har andre vansker enn redusert eller manglende talespråk, vennligst beskriv disse kort:			
Eleven mottar for tiden tjenester fra Statped			

**Vennligst returner dette skjemaet til:**  
**Jørn Østvik, Institutt for sosialt arbeid og helsevitenskap, NTNU, 7491 Trondheim**

## Appendix 6

Consent form to parents regarding exemption of confidentiality



Til foreldre / foresatte

## Forespørsel om unntakelse fra taushetsplikten

Mitt navn er Jørn Østvik og jeg gjennomfører et doktorgradsarbeid ved Institutt for sosialt arbeid og helsevitenskap ved NTNU i Trondheim. Prosjektet skal se på vennskap blant elever som helt eller delvis mangler talespråk, og som benytter alternativ og supplerende kommunikasjon.

### **Bakgrunn og formål**

Elever som helt eller delvis mangler talespråk har behov for alternativ og supplerende kommunikasjon (ASK) for å kunne gjøre seg forstått og for selv å forstå andres kommunikasjon. ASK kan være kommunikasjon med gester, mimikk, lyder, blikk, gjenstander, håndtegn, foto, grafiske tegn, symboltavler, kommunikasjonsbøker, talebrytere, talemaskiner m.m.

Det er liten kunnskap om hvordan elever med behov for ASK utvikler vennskap. Denne studien er en av svært få som retter søkelys på utvikling av vennskap blant elevgruppen. Resultater fra studien forventes å kunne bidra til ny kunnskap som kan danne bedre grunnlag for tiltak som kan støtte utviklingen av vennskap hos disse elevene.

### **Samtykke**

I forarbeidet til innsamlingen av data til studien har jeg behov for å vurdere hvilke skoler og elever som kan være aktuelle for prosjektet. Til dette har jeg behov for informasjon fra rektor om hvorvidt skolen har elever som er innenfor målgruppen til studien. Rektor vil ikke utlevere opplysninger som direkte kan kobles til enkeltelever. For at rektor skal kunne gi relevant informasjon er jeg avhengig å få ditt/deres samtykke til at dere kan unnta rektor fra taushetsplikten slik at han/hun kan videreformidle aktuelle opplysninger tilbake til meg. Dersom du/dere gir et slikt samtykke, vil opplysningene fra skolen gjennomgå og det vil bli foretatt en vurdering om én eller flere elever med foreldre skal inviteres til å delta i studien. Invitasjon om deltakelse vil i så fall sendes i eget brev til eleven(e) og foreldrene gjennom skolen, og til skolen.

Det vil være frivillig å delta dersom skolen og aktuelle elever/foreldre senere får slik forespørsel.

Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no	Bygg 11, nivå 5 NTNU Dragvoll	+ 47 73 59 19 30	Jørn Østvik
	http://www.ntnu.no/ish	7049 Trondheim	<b>Telefaks</b> + 47 73 59 18 85	Tlf: + 47 73 55 10 84

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandleren ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.

**Norges teknisk-naturvitenskapelige universitet**

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Dersom du/dere har spørsmål til studien, ta kontakt med stipendiat Jørn Østvik, telefon 73 55 10 84 / 924 88 789.

Studien er tilrådt Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Med hilsen

Jørn Østvik

Stipendiat ved Institutt for sosial arbeid og helsevitenskap, NTNU

***Unntakelse fra taushetsplikten***

- Ja, jeg unntar rektor taushetsplikten slik at han/hun kan gi opplysninger om hvorvidt skolen har elever uten talespråk som benytter alternativ og supplerende kommunikasjon, hvilke vansker eleven(e) har i skolen og hvilke kommunikasjonsformer eleven(e) benytter der.

.....  
(Dato og signatur av begge foreldre/foresatte)

Gjelder også dersom du/dere ikke samtykker)

**Vennligst returner dette skjemaet til rektor omgående.**

## Appendix 7

Invitation to participation in the study sent to schools

&lt;skole&gt;

## Invitasjon til deltakelse i forskningsprosjekt

Jeg viser til Deres svar på forespørsel om grunnlagsinformasjon til forskningsprosjekt om vennskap blant elever som helt eller delvis mangler talespråk. På bakgrunn av opplysningene som skolen tidligere har bidratt med ønsker jeg å invitere skolen og den aktuelle eleven med foreldre til å delta i prosjektet.

### ***Kort om bakgrunn og formål med prosjektet***

Formålet med forskningsprosjektet er å se på 1) hva som karakteriserer vennskap mellom elever som bruker alternativ og supplerende kommunikasjon (ASK) og deres medelever, 2) hvilke miljømessige faktorer som påvirker vennskap mellom elever som bruker ASK og deres medelever, og 3) hvilken rolle jevnaldrende elever og ansatte i skolen kan ha i utviklingen av vennskap blant elever med behov for ASK.

Hovedveileder i prosjektet er professor Borgunn Ytterhus, NTNU, og medveileder er professor Susan Balandin ved Deakin University i Melbourne i Australia.

For ytterligere opplysninger henvises det til opplysninger i forespørselen om grunnlagsinformasjon til prosjektet som skolen mottok tidligere. Ønskes opplysninger utover dette bes skolen kontakte undertegnede på telefon 73 55 10 84 / 924 88 789.

### ***Hva innebærer deltakelse i studien?***

For skolen innebærer deltakelse i studien at skolen videresender brev fra oss med forespørsel om deltakelse til den aktuelle eleven som benytter ASK, samt legger til rette for at jeg kan gjennomføre feltarbeid ved skolen. Feltarbeidet innebærer at jeg gjennomfører deltakende observasjon og intervju. Undertegnede avtaler tidspunkt for dette med de aktuelle partene og i samråd med skolen.

Ved observasjon vil jeg være tilstede sammen med elevene og de voksne på skolen. Dette vil skje i undervisningstiden, i friminuttene og eventuelt i SFO. I observasjonene vil data samles inn gjennom notater. Jeg vil ikke ha en aktiv rolle overfor elevene eller de voksne ut over generell sosial samhandling, men jeg i samråd med skolen bør informere elevene om hvorfor jeg er tilstede sammen med klassen. Observasjonene vil gå over en uke. Intervjuene er i utgangspunkt planlagt gjennomført på torsdag og fredag i den aktuelle uken som feltarbeidet gjennomføres.

Det er ønskelig å gjennomføre intervju av eleven med behov for ASK og dennes foreldre/foresatte, av en eller flere utvalgte medelever til eleven med behov for ASK, og av kontaktlærer,

Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no <a href="http://www.ntnu.no/ish">http://www.ntnu.no/ish</a>	Bygg 11, nivå 5 NTNU Dragvoll 7049 Trondheim	+ 47 73 59 19 30 <b>Telefaks</b> + 47 73 59 18 85	Jørn Østvik Tlf: + 47 73 55 10 84 +47 924 88 789

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandlende enhet ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.

spesialpedagog og evt assistent ved skolen. Intervjuet av eleven med behov for ASK vil bare gjennomføres dersom foreldre/foresatte er av den oppfatning at eleven har forutsetninger for å delta i et intervju tilpasset elevens forutsetninger. I intervjuet med eleven med behov for ASK kan det bli aktuelt å spørre en av nærpersionene om å assistere som en slags tolk dersom dette vurderes som hensiktsmessig. Dette avklares evt nærmere.

Foreldre/foresatte og ansatte på skolen kan på forespørsel før intervjuene gjennomføres, få se hvilke spørsmål som vil stilles. Spørsmålene som stilles i intervjuene vil være i tilknytning til de tre målsettingene til prosjektet (se ovenfor).

### ***Hva skjer med informasjonen som samles inn?***

Alle personopplysninger vil bli behandlet konfidensielt i tråd med personvernloven og forskningsetiske retningslinjer.

Datamaterialet som samles inn i prosjektet vil være forsvarlig oppbevart og innelåst. Konfidensialiteten til den enkelte deltaker i prosjektet ivaretas ved at det opprettes et dokument der deltakeren knyttes til en koblingsnøkkel. Dette dokumentet lagres atskilt fra det øvrige materialet.

Det er kun jeg og mine veiledere som vil ha innsyn i datamaterialet i prosjektperioden.

Deltakerne vil ikke kunne gjenkjennes i publikasjoner fra prosjektet. I den grad enkeltpersoner og skoler vil omtales vil det benyttes fiktive navn som ikke vil kunne avsløre identiteten til den enkelte deltaker. Skolen vil ikke beskrives ved navn eller annen informasjon som kan identifisere den.

Prosjektet skal etter planen avsluttes i mai 2018. Notater, lydopptak og opplysninger som knytter den enkelte deltaker til en koblingsnøkkel vil da makuleres.

***Frivillig deltakelse***

Det er frivillig å delta i studien.

Dersom skolen ønsker å delta, vennligst følg disse punktene:

1. Rektor bekrefter ved underskrift at skolen vil delta i prosjektet.
  - a) Bruk skjemaet på side 4.
  - b) Rektor returnerer skjemaet i vedlagte svarkonvolutt innen en uke etter mottatt brev.
2. Rektor videresender vedlagte invitasjon til foreldrene til eleven(e).
3. Rektor videresender skjema for samtykke til elevene(s) kontaktlærer, spesialpedagog og evt assistent.
  - a) Bruk skjemaet på side 5 (ta kopi av skjemaet slik at den enkelte fyller ut eget skjema).
  - b) Kontaktlærer, spesialpedagog og evt assistent til eleven(e) fyller ut hvert sitt samtykke til å delta i prosjektet. Dette skjer på bakgrunn av informasjonen om prosjektet som rektor har gitt på forhånd.
  - c) Den enkelte returnerer skjemaet i vedlagte svarkonvolutt innen en uke etter mottatt brev.

Skolen vil bli kontaktet av meg kort tid etter at brevet er mottatt for en avklarende samtale om deltakelse i prosjektet.

Dersom du har spørsmål til studien, ta kontakt med stipendiat Jørn Østvik, telefon 73 55 10 84 / 924 88 789

Studien er tilrådt Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

Med hilsen

Jørn Østvik  
Stipendiat ved Institutt for sosial arbeid og helsevitenskap, NTNU

Vedlegg:    Invitasjon til foreldre og elev  
              2 x Svarkonvolutter

## Skolens deltakelse i prosjektet

.....  
(Skolens navn)

har mottatt informasjon om studien, og vi er villige til å delta.

.....  
(Dato og rektors signatur)

**Vennligst returner dette skjemaet omgående til stipendiat Jørn Østvik, NTNU.**

**Bruk vedlagte svarkonvolutt.**



## Samtykke til deltakelse i prosjektet

Jeg har lest informasjonen om prosjektet og er villig til å delta.

.....  
(Dato og din signatur)

.....  
(Skolens navn)

Din rolle:     Kontaktlærer             Spesialpedagog             Assistent / Annen rolle

Du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker deg, vil alle opplysninger som er samlet inn bli anonymisert.

Foreldre/foresatte til de(n) aktuelle eleven(e) har eksplisitt samtykket til at du kan intervjues vedr opplysninger om relasjoner, kommunikasjon og samhandling mellom elevene.

Jeg samtykker til å delta i intervju.

Jeg treffes på mobiltelefon ..... / e-post .....

**Vennligst returner dette skjemaet omgående til stipendiat Jørn Østvik, NTNU.**

**Bruk vedlagte svarkonvolutt.**

## Appendix 8

Invitation to participation in the study sent to parents

Til foreldre/foresatte

## Invitasjon til deltakelse i forskningsprosjekt

Mitt navn er Jørn Østvik og jeg har startet et doktorgradsarbeid ved Institutt for sosialt arbeid og helsevitenskap ved NTNU i Trondheim. Prosjektet skal se på vennskap blant elever som helt eller delvis mangler talespråk, og som benytter alternativ og supplerende kommunikasjon.

Nedenfor vil du få informasjon om hensikten med prosjektet og jeg vil be deg/dere om å ta stilling til om du/dere og ditt/deres barn vil delta i prosjektet.

### ***Bakgrunn og formål***

Elever som helt eller delvis mangler talespråk har behov for alternativ og supplerende kommunikasjon (ASK) for å kunne gjøre seg forstått og for selv å forstå andres kommunikasjon. ASK kan være kommunikasjon med gester, mimikk, lyder, blikk, gjenstander, håndtegn, foto, grafiske tegn, symboltavler, kommunikasjonsbøker, talebrytere, talemaskiner m.m. Anslagsvis 0,5 – 1,2% av elevene i den norske skolen har behov for ASK.

Formålet med studien er å se på 1) hva som karakteriserer vennskap mellom elever som bruker ASK og deres medelever, 2) hvilke miljømessige faktorer som påvirker vennskap mellom elever som bruker ASK og deres medelever, og 3) hvilken rolle jevnaldrende elever og ansatte i skolen kan ha i utviklingen av vennskap blant elever med behov for ASK.

Hovedveileder i prosjektet er professor Borgunn Ytterhus, NTNU, og medveileder er professor Susan Balandin ved Deakin University i Melbourne, Australia.

Det er liten kunnskap om hvordan elever med behov for ASK utvikler vennskap. Internasjonale studier tyder imidlertid på at mange elever uten funksjonelt talespråk enten ikke er inkludert i venneundersøkelser eller at de kan ha utfordringer med å utvikle vennskap. Denne studien er en av svært få som retter søkelys på vennskap blant elevgruppen. Resultater fra studien vil ikke direkte endre ditt barns sosiale liv, men studien forventes å kunne bidra til ny kunnskap som kan danne bedre grunnlag for tiltak som kan støtte utviklingen av vennskap hos disse elevene og redusere risikoen for opplevelse av ensomhet.

Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no <a href="http://www.ntnu.no/ish">http://www.ntnu.no/ish</a>	Bygg 11, nivå 5 NTNU Dragvoll 7049 Trondheim	+ 47 73 59 19 30 <b>Telefaks</b> + 47 73 59 18 85	Jørn Østvik  Tlf: + 47 7355 1084 +47 924 88 789

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandleren ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.

### ***Hva innebærer deltakelse i studien?***

For elever og foreldre/foresatte innebærer deltakelse i studien at jeg vil være tilstede sammen med elevene og de voksne på skolen. Dette vil skje i undervisningstiden, i friminuttene og eventuelt i SFO. Innsamlingen av data vil skje ved observasjon og intervju. I observasjonene vil data samles inn gjennom notater. Jeg vil ikke ha en aktiv rolle overfor elevene eller de voksne, men elevene vil bli informert om at jeg vil være tilstede. Observasjonene vil gå over flere dager.

Det er ønskelig å gjennomføre intervju av barnet ditt, av deg/dere som foreldre/foresatt, og av kontaktlærer, spesialpedagog og evt assistent ved skolen. Dersom dere vil delta ber vi om at du/dere informerer barnet om invitasjonen og at barnet selv gir tillatelse. Det vil også gjennomføres intervju av en eller flere medelever. Samtalen med barnet ditt/deres vil bare gjennomføres dersom du/dere mener barnet har forutsetninger for å delta i et intervju tilpasset barnets forutsetninger.

Som foreldre/foresatt kan du/dere på forespørsel, få se hvilke spørsmål som vil stilles barnet før intervjuene gjennomføres. Dere kan også ta kontakt med meg dersom dere ønsker opplysninger om hvilke spørsmål jeg vil stille i intervjuene med skolepersonalet.

Samtalen med barnet ønskes gjennomført sammen med en voksen som kjenner barnet godt og som kan fungere som tolk. Spørsmålene som stilles i intervjuene vil være i tilknytning til de tre målsettingene til prosjektet (se ovenfor).

### ***Hva skjer med informasjonen om dere?***

Alle personopplysninger vil bli behandlet konfidensielt i tråd med personvernloven og forskningsetiske retningslinjer.

Datamaterialet som samles inn i prosjektet vil være forsvarlig oppbevart og innelåst. Konfidensialiteten til den enkelte deltaker i prosjektet ivaretas ved at det opprettes et dokument der deltakeren knyttes til en koblingsnøkkel. Dette dokumentet lagres atskilt fra det øvrige materialet.

Det er kun jeg og mine to veiledere som vil ha innsyn i datamaterialet i prosjektperioden.

Deltakerne vil ikke kunne gjenkjennes i publikasjoner fra prosjektet. I den grad enkeltpersoner og skoler vil omtales vil det benyttes fiktive navn som ikke vil kunne avsløre identiteten til den enkelte deltaker. Skolen vil ikke beskrives ved navn eller annen informasjon som kan identifisere den.

Prosjektet skal etter planen avsluttes i mai 2018. Notater, lydopptak samt opplysninger som knytter den enkelte deltaker til en koblingsnøkkel vil da makuleres.

### ***Frivillig deltakelse***

Det er frivillig å delta i studien, og du/dere kan når som helst trekke ditt/deres samtykke uten å oppgi noen grunn. Dersom dere trekker dere fra videre deltakelse, vil alle opplysninger som er samlet inn om dere bli anonymisert.

**Norges teknisk-naturvitenskapelige universitet**

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Dersom du/dere har spørsmål til studien, ta kontakt med meg på telefon 73 55 10 84 / 924 88 789 eller e-post [jorn.ostvik@svt.ntnu.no](mailto:jorn.ostvik@svt.ntnu.no).

Studien er tilrådt av Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

**Dersom dere ønsker å delta, vennligst gå videre til side 4.**

Med vennlig hilsen

Jørn Østvik  
Stipendiat ved Institutt for sosial arbeid og helsevitenskap, NTNU

Vedlegg:    Invitasjon til barnet  
              Svarkonvolutt

## Samtykke til deltakelse i prosjektet

Jeg/vi har mottatt informasjon om studien, og sammen med

.....  
(elevens navn)

er vi villige til å delta.

.....  
(dato og signatur av begge foreldre/foresatte)

Jeg/vi har også sørget for at barnet er informert:

- gjennom vedlagte informasjonsskriv til barnet
- gjennom tilpasset informasjon fra meg/oss om undersøkelsen fordi jeg/vi ikke anser barnet i stand til å lese det vedlagte skrevet
  
- Jeg samtykker til å delta i intervju
- Jeg samtykker til at mitt/vårt barn kan delta i intervju
- Jeg unntar skolepersonalet fra taushetsplikten vedr opplysninger om relasjoner, kommunikasjon og samhandling mellom elevene

Barnet er:  Jente  Gutt

Barnet bor sammen med (sett ett kryss):

Begge foreldrene  Mor  Far  Andre

Mors høyeste utdanningsnivå (sett ett kryss):

- Grunnskole
- Videregående skole
- Universitet og høyskole (tre år/bachelor-grad)
- Universitet og høyskole (fem år/master-grad)
- Universitet og høyskole (doktorgrad)

Fars høyeste utdanningsnivå (sett ett kryss):

- Grunnskole
- Videregående skole
- Universitet og høyskole (tre år/bachelor-grad)
- Universitet og høyskole (fem år/master-grad)
- Universitet og høyskole (doktorgrad)

**Vennligst returner dette dokumentet i vedlagte svarkonvolutt innen en uke etter mottatt brev.**

Dersom dere ønsker å delta i prosjektet vil dere bli kontaktet av oss om kort tid.

## Appendix 9

Invitation to participation in the study sent to students using AAC

## Invitasjon

Hei

Jeg heter Jørn. Jeg vil invitere deg med i et prosjekt som handler om vennskap. Jeg jobber ved NTNU. NTNU er universitetet i Trondheim. Der lærer jeg å bli forsker.

Det deltar flere elever i prosjektet. Elevene går på forskjellige skoler. Noen av elevene kan snakke. Andre elever kan ikke snakke. Når elevene skal fortelle noe til andre, kan de gjøre bevegelser med kroppen, lage lyder, bruke øynene, peke på bilder, bruke datamaskin, eller gjøre andre ting for å bli forstått.

Du får denne invitasjonen fordi jeg har lyst til å se om du kanskje har venner på skolen, og hvilke venner du har. Jeg vil også lære om hvordan dere blir kjent med hverandre. Jeg har tenkt å besøke skolen noen dager og være sammen med dere. Når jeg er på skolen vil jeg se litt på hva dere holder på med i klassen, i friminuttene og kanskje på SFO. Da vil jeg skrive notater for å huske hvordan dere har det på skolen.

Jeg har lyst til å invitere deg med i dette prosjektet. Det er frivillig å være med. Det betyr at det er du som bestemmer om du vil delta eller ikke. Du kan ombestemme deg underveis. Mamma og/eller pappa har også fått en slik invitasjon. Du kan svare på invitasjonen sammen med dem.

Med hilsen

Jørn Østvik

Stipendiat ved Institutt for sosialt arbeid og helsevitenskap, NTNU

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Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no <a href="http://www.ntnu.no/ish">http://www.ntnu.no/ish</a>	Bygg 11, nivå 5 NTNU Dragvoll 7049 Trondheim	+ 47 73 59 19 30 <b>Telefaks</b> + 47 73 59 18 85	Jørn Østvik Tlf: + 47 7355 1084 / +47 924 88 789

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandlende enhet ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.



## Appendix 10

Invitation to fellow students to participate in interview sent to parents

Til foreldre / foresatte

## Forespørsel om intervju av deres barn

Mitt navn er Jørn Østvik og jeg gjennomfører et doktorgradsarbeid ved Institutt for sosialt arbeid og helsevitenskap ved NTNU i Trondheim. Prosjektet ser på vennskap blant elever som helt eller delvis mangler talespråk, og som benytter alternativ og supplerende kommunikasjon.

### ***Bakgrunn og formål***

Elever som helt eller delvis mangler talespråk har behov for alternativ og supplerende kommunikasjon (ASK) for å kunne gjøre seg forstått og for selv å forstå andres kommunikasjon. ASK kan være kommunikasjon med gester, mimikk, lyder, blick, gjenstander, håndtegn, foto, grafiske tegn, symboltavler, kommunikasjonsbøker, talebrytere, talemaskiner m.m.

Det er liten kunnskap om hvordan elever med behov for ASK utvikler vennskap. Denne studien er en av svært få som retter søkelys på utvikling av vennskap blant elevgruppen. Resultater fra studien forventes å kunne bidra til ny kunnskap som kan danne bedre grunnlag for tiltak som kan støtte utviklingen av vennskap hos disse elevene.

### ***Forespørsel om intervju***

Du/dere mottar denne forespørselen fordi du/dere er foreldre/foresatt til et barn som går i klasse til en/flere elev(er) med behov for ASK. Gjennom noen dager følger jeg nå eleven(e) som benytter ASK. Fordi vennskap utvikles mellom to eller flere er det viktig at jeg også får høre perspektivene på vennskap til barn uten behov for kommunikativ støtte. Jeg har observert at ditt/deres barn er flink til å omgås eleven(e) som benytter ASK og at det bidrar positivt i opplærings situasjoner i skolen. Jeg ønsker derfor å gjennomføre et lite intervju om vennskap med ditt/deres barn. Intervjuet vil bli gjennomført på skolen. Det vil bli gjort lydopptak av intervjuet.

### ***Hva skjer med innsamlede opplysninger?***

Alle personopplysninger vil bli behandlet konfidensielt i tråd med personvernloven og forskningsetiske retningslinjer. Konfidensialiteten til den enkelte deltaker i prosjektet ivaretas ved at det opprettes et dokument der deltakeren knyttes til en koblingsnøkkel. Dette dokumentet lagres atskilt fra det øvrige materialet.

Postadresse	Org.nr. 974 767 880	Besøksadresse	Telefon	Kontaktperson
7491 Trondheim	E-post: ish@svt.ntnu.no	Bygg 11, nivå 5 NTNU Dragvoll	+ 47 73 59 19 30	Jørn Østvik
	<a href="http://www.ntnu.no/sah">http://www.ntnu.no/sah</a>	7049 Trondheim	<b>Telefaks</b> + 47 73 59 18 85	Tlf: + 47 7355 1084

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandlende enhet ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.

Det er kun jeg og mine to veiledere som vil ha innsyn i datamaterialet i prosjektperioden.

Deltakerne vil ikke kunne gjenkjennes i publikasjoner fra prosjektet. I den grad enkeltpersoner og skoler vil omtales vil det benyttes fiktive navn som ikke vil kunne avsløre identiteten til den enkelte deltaker. Skolen vil ikke beskrives ved navn eller annen informasjon som kan identifisere den.

Prosjektet skal etter planen avsluttes i mai 2018. Alle opplysninger som er samlet inn, samt opplysninger som knytter den enkelte deltaker til en koblingsnøkkel vil da makuleres.

### ***Frivillig deltakelse***

Det er frivillig å delta, og barnet ditt/deres kan når som helst trekke seg fra intervjuet uten å oppgi noen grunn.

Dersom du/dere har spørsmål til studien, ta kontakt med meg på telefon 73 55 10 84 / 924 88 789 eller e-post [jorn.ostvik@svt.ntnu.no](mailto:jorn.ostvik@svt.ntnu.no).

Studien er tilrådt av Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

**Dersom du/dere er positive til å la barnet samtale med meg om vennskap, vennligst gå videre til side 3.**

Med vennlig hilsen

Jørn Østvik

Stipendiat ved Institutt for sosial arbeid og helsevitenskap, NTNU

## Samtykke til intervju

Jeg/vi har mottatt informasjon om prosjektet og er villige til å la mitt/vårt barn

.....  
(elevens navn)

bli intervjuet.

.....  
(dato og signatur av begge foreldre/foresatte)

Jeg/vi har også sørget for at barnet er informert:

- gjennom vedlagte informasjonsskriv til barnet
- gjennom tilpasset informasjon fra meg/oss om undersøkelsen fordi jeg/vi ikke anser barnet i stand til å lese det vedlagte skrivet
  
- Jeg samtykker til at mitt/vårt barn kan delta i intervju
- Jeg unntar skolepersonalet fra taushetsplikten vedr opplysninger om relasjoner, kommunikasjon og samhandling mellom elevene

**Vennligst returner omgående dette skjemaet i vedlagte svarkonvolutt til kontaktlærer.**

Dersom dere samtykker til at jeg kan intervjuet barnet  
ønsker jeg å gjennomføre intervjuet barnet i løpet av de første dagene.

## Appendix 11

Invitation to fellow students to participate in interview sent to fellow students

## Invitasjon til en samtale om vennskap

Hei

Jeg heter Jørn Østvik. Jeg jobber ved NTNU, som er universitetet i Trondheim. Der lærer jeg å bli forsker. Jeg lærer om hvordan det er å ha venner for elever som ikke snakker på vanlig måte. Disse elevene forteller på andre måter enn å snakke. Det kan de gjøre gjennom å gjøre bevegelser med kroppen, lage lyder, peke på bilder eller de kan bruke datamaskin som snakker for dem. Noen forteller kanskje hva de vil på andre måter.

Som du sikkert har sett er jeg i klassen din for å følge en elev som ikke snakker. Du har kanskje oppdaget at denne eleven har sin måte å fortelle ting på. Jeg har lyst til å lære mer om hvordan det er å være venner i klassen. Derfor vil jeg gjerne snakke litt med deg om hva du tenker om vennskap. Det er frivillig å være med på samtalen. Det betyr at det er du som bestemmer om du vil delta i samtalen eller ikke.

Samtalen vil skje på skolen. Under samtalen vil jeg bruke en lydopptaker slik at jeg senere kan bedre huske hva vi har snakket om. Når jeg skal skrive om det du og andre har fortalt meg, vil jeg skrive det på en slik måte at ingen kan kjenne igjen hvem jeg skriver om. Dersom du har spørsmål om samtalen kan du spørre meg når jeg er på skolen.

Dersom du vil delta i en slik samtale, kan du la mamma og/eller pappa svare for deg. De har også fått et brev om dette og vet hva det gjelder.

Med vennlig hilsen

Jørn Østvik

Stipendiat ved Institutt for sosialt arbeid og helsevitenskap, NTNU

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7491 Trondheim	E-post: ish@svt.ntnu.no	Bygg 11, nivå 5 NTNU Dragvoll	+ 47 73 59 19 30	Jørn Østvik
	<a href="http://www.ntnu.no/ish">http://www.ntnu.no/ish</a>	7049 Trondheim	<b>Telefaks</b> + 47 73 59 18 85	Tlf: + 47 7355 1084

All korrespondanse som inngår i saksbehandling skal adresseres til saksbehandlende enhet ved NTNU og ikke direkte til enkeltpersoner. Ved henvendelse vennligst oppgi referanse.

## Appendix 12A

Interview guide for students using AAC (full)

(applied for students who answered open-ended questions)

## Intervjuguide #1

*Elever med ASK (gruppe A)*

### Orientering

- Hvem jeg er.
- Hensikten med samtalen.
- Flint at vi kan få prate litt sammen om vennskap.
- Varighet (eleven bestemmer ut fra hvor mye han/hun har å fortelle – ca 30 min).
- Spør om du ikke forstår spørsmål jeg stiller. OK om du ikke kan svare på alle spørsmålene.

### Innledende spørsmål

#### 1. Fortell meg om skolen din. Hvordan er det å gå på skolen?

- Er det noe du liker å gjøre på skolen? Fortell meg om det.
- Hva gjør du i friminuttene? Er du sammen med noen?
- Hva gjør du på SFO? Er du sammen med andre?

#### 2. Fortell meg om barna på skolen.

- Er du sammen med noen? Fortell hva dere gjør sammen.
- Er det noen av barna du liker godt å være sammen med?
- Hva er det som gjør at du liker å være sammen med \_\_\_?

### Vennene dine

#### 3. Har du en venn på skolen?

- Fortell meg om vennen(e) din(e) på skolen.<sup>i</sup>
- Hvordan ble du og \_\_\_ venner?<sup>ii</sup>
- Hva liker du best med vennen(e) din(e)? Hva gjør dere sammen?
- Har du en bestevenn?<sup>iii</sup> Fortell hva som gjør \_\_\_ til en bestevenn?<sup>iv</sup>

#### Dersom barnet ikke har venner:

- Hva synes du om det å ikke ha en venn på skolen?
- Hva kan de voksne eller barna gjøre for at det blir lettere å få en venn?
- 4. Har du venner andre steder enn på skolen? Hvem er de? Hva gjør dere sammen?
- 5. Tror du alle i klassen har en venn?
  - Hvorfor tror du det?

### Hva er en venn?

Prioriter spørsmål i **fet skrift**. Eventuelle oppfølgings-/supplerende spørsmål i grå skrift

#### 6. Hvordan synes du en venn skal være?

- Hva er det viktigste med en venn?<sup>v</sup>
- Er det forskjell på å være venn og bestevenn? Fortell hva som er forskjellig.

### Nye venner

#### 7. Hvordan blir du venn med et annet barn?

- Synes du det er vanskelig å få venner? Hva er vanskelig?

#### 8. Ønsker du deg (flere) venner på skolen?

- Er det noen bestemt på skolen du gjerne vil være venn med? Hvem?
- Hva skal til for at dere kan bli venner?

### Aktiviteter og kommunikasjon med medelever?

#### 9. Hva gjør dere når du er sammen med de andre elevene?<sup>vi, vii</sup>

- Synes du noen ganger det å ikke snakke med munnen betyr noe for forholdet ditt til vennene/medelevene dine? På hvilken måte?

#### 10. Spørsmål om konkrete hendelse jeg har observert i tiden på skolen

### Muligheter og utfordringer i vennskap

#### 11. Hva er det beste med å være venner?

#### 12. Er det av og til vanskelig å være venner?

- Hvorfor? Hva er vanskelig?
- Hvordan er det å beholde vennene sine?
- Hender det at du opplever at du ikke får være sammen med andre elever?<sup>viii</sup> Hva synes du om det?

### Støtte fra andre

#### 13. Hva skal til for at det blir lettere for deg å få nye venner?

### Avslutning 14. Er det noe annet du vil si om det med venner?



## Appendix 12B

Interview guide for students using AAC (simplified)

(applied for students who only answered closed (yes/no) questions)

## Intervjuguide #1

Elever med ASK (gruppe A)

### Forenklet

#### Orientering

- Hvem jeg er.
- Hensikten med samtalen.
- Fint at vi kan få prate litt sammen om vennskap.
- Varighet (eleven bestemmer ut fra hvor mye han/hun har å fortelle – ca 30 min).
- Spør om du ikke forstår spørsmål jeg stiller. OK om du ikke kan svare på alle spørsmålene.

#### Innledende spørsmål

- 1. Liker du å være på skolen?**
  - Er det noe du liker å gjøre på skolen?
  - Hva gjør du friminuttene?
- 2. Har du noen å være sammen med på skolen?**
- 3. Er det noen barn du liker å være sammen med?**  
[ foto av elever? ]

#### Vennene dine

- 4. Hvordan synes du en venn skal være?**
- 5. Har du en venn på skolen?**
  - Hvem er det?
  - Hvordan ble dere venner?
  - Hva gjør dere sammen?
  - Hva er det beste med å ha en venn?
  - Har du flere venner?
- 6. Har du en bestevenn på skolen?**
  - Hvem er det?
- 7. Du og \_\_\_ er litt sammen på skolen.**
  - Liker du å være sammen med \_\_\_?
  - Er dere venner?
  - Hva er bra med å være venn med \_\_\_?
- 8. Er det bra å ha en venn?**
  - Hvorfor?
  - Hva er det beste med å ha en venn?

Prioriter spørsmål i **fet skrift**. Eventuelle oppfølgings-/supplerende spørsmål i grå skrift

**9. Hva gjør du når du vil bli venner med noen?**

**10. Er det av og til vanskelig å være venner?**

- Hvorfor? Hva er vanskelig?

**11. Å få venner, er det vanskelig eller er det lett?**

- Hva skal til for at det blir lettere for deg å få nye venner?

**12. Ønsker du deg flere venner på skolen?**

- Er det noen du har lyst til å bli venn med på skolen?

**13. Tror du alle barna på trinnet / i klassen har en venn?**

- Hvem tror du ikke har en venn?

## Appendix 13A

Interview guide for fellow students (full)

(applied for students who answered open-ended questions)

## Intervjuguide #2

### Medelever (gruppe B)

(individuelle intervju av medelever)

#### Orientering

- Hvem jeg er
- Hensikten med samtalen
- Fint at vi kan få prate litt sammen om vennskap
- Varighet (eleven bestemmer ut fra hvor mye han/hun har å fortelle – ca 30 min)
- Spør om du ikke forstår spørsmål jeg stiller. OK om du ikke kan svare på alle spørsmålene.

#### Innledende spørsmål

### 2. Fortell meg om skolen din. Hvordan er det å gå på skolen?

- Er det noe du liker å gjøre på skolen? Fortell meg om det.
  - Hva gjør du i friminuttene? Er du sammen med noen?
  - Hva gjør du på SFO? Er du sammen med andre?
- ### 3. Fortell meg om barna på skolen.
- Er du sammen med noen? Fortell hva dere gjør sammen.
  - Er det noen av barna du liker godt å være sammen med?
  - Hva er det som gjør at du liker å være sammen med \_\_\_?

#### Vennene dine

### 4. Har du en venn på skolen?

- Fortell meg om vennen(e) din(e) på skolen.
- Hvordan ble du og \_\_\_ venner?
- Hva liker du best med vennen(e) din(e)? Hva gjør dere sammen?
- Har du en bestevenn? Fortell hva som gjør \_\_\_ til en bestevenn?

#### Dersom barnet ikke har venner:

- Hva synes du om det å ikke ha en venn på skolen?
- Hva kan de voksne eller barna gjøre for at det blir lettere å få en venn?

### 5. Tror du alle i klassen har en venn?

- Hvorfor tror du det?

#### Hva er en venn?

### 6. Hvordan synes du en venn skal være?

- Hva er det viktigste med en venn?
- Er det forskjell på å være venn og bestevenn? Fortell hva som er forskjellig.

#### Nye venner

### 7. Hvordan blir du venn med et annet barn?

- Å få venner, er det vanskelig eller lett? Hva gjør det vanskelig/lett?

### 8. Ønsker du deg (flere) venner på skolen?

- Er det noen bestemt på skolen du gjerne vil være venn med? Hvem?
- Hva skal til for at dere kan bli venner?

#### Aktiviteter og kommunikasjon med elev med ASK

### 9. Hva gjør du og [ASK-eleven] når dere er sammen?

- Hvordan er det å være sammen med [ASK-eleven] når han/hun snakker på andre måter enn med munnen?
- Det at [ASK-eleven] ikke snakker med munnen, betyr det noe for hvordan du opplever [ASK-eleven] som en du kan være venn med? Hvordan?

### 10. Spørsmål om konkrete hendelser jeg har observert i tiden på skolen

#### Muligheter og utfordringer i vennskap

### 11. Hva er det beste med å være sammen / venn med [ASK-eleven]?

### 12. Er det av og til vanskelig å være venner?

- Hvorfor er det slik? Hva er vanskelig?

#### Støtte fra andre

- 13. Om det var slik at du ikke kunne snakke med munnen. Hva tror du ville være viktig for deg for å få nye venner?

### 14. Hva tror du er viktig for at [ASK-eleven] skal få [nye] venner i klassen?

#### Avslutning

### 15. Er det noe annet du vil si om det med venner?

## Appendix 13B

Interview guide for fellow students (simplified)

(applied for students who only answered closed (yes/no) questions)

## Intervjuguide #2

## Medelever (gruppe B)

### Ja/nei-spørsmål

(individuelle intervju av medelever)

### Orientering

- Hvem jeg er
- Hensikten med samtalen
- Fint at vi kan få prate litt sammen om vennskap
- Varighet (eleven bestemmer ut fra hvor mye han/hun har å fortelle – ca 30 min)
- Spørre om samtykke til lydopptak (hvorfor lydopptak, tid for oppbevaring, hvem har tilgang)

### Innledende spørsmål

- 1. Liker du å være på skolen?**
  - Har du noen å være sammen med på skolen?
- 2. Er det noen barn du liker å være sammen med?**
  - [ foto av elever? ]
- 3. Har du en venn på skolen?**
  - Hvem er det?
  - Har du flere venner?
- 4. Har du en bestevenn på skolen?**
  - Hvem er det?
- 5. Du og [ASK-eleven] er litt sammen på skolen.**
  - Liker du å være sammen med [ASK-eleven]?
  - Er dere venner?
- 6. Å få venner, er det vanskelig eller lett?**
- 7. Ønsker du deg flere venner på skolen?**
  - Er det noen du har lyst til å bli venn med på skolen?
- 8. Tror du alle barna på ATO har en venn?**
  - Hvem tror du ikke har en venn?

## Appendix 14

Interview guide for parents

## Intervjuguide #3

### Foreldre til elever med ASK

### Sosial kontakt og vennskap

#### Orientering

- Hvem jeg er
- Hensikten med samtalen
- Fint at vi kan få prate litt sammen om vennskap
- Hvor lang tid samtalen ca vil vare – ca 1 time
- Hva som vil skje med opplysningene
- Spørre om samtykke til lydopptak (hvorfor lydopptak, tid for oppbevaring, hvem har tilgang)

#### Innledende spørsmål

### 1. Hvordan opplever du/dere at [barnet ] trives på skolen?

#### Kontakt på fritiden

### 2. Er [barnet] sammen med en eller flere elever fra skolen på fritiden?

- Fortell hva de gjør sammen.
  - Hvem tar initiativ til at barna møtes?
  - Hvor lenge har de kjent hverandre?
3. Er [barnet] sammen med andre barn på fritiden?

#### Kommunikasjon

4. Hvordan oppfatter du/dere at [barnet] kommuniserer med medelevene i klassen?
- Ser du/dere noen utfordringer ved [barnets] kommunikasjonen i hvordan han/hun knytter vennskap til medelevene?

### 5. Fortell om den sosiale kontakten mellom [barnet] og medelevene på skolen.

- Er [barnet] interessert i å være sammen med noen bestemte medelever? Hvordan kommer dette evt til uttrykk?
- Hvordan vil du/dere beskrive disse relasjonene?
- Har [barnet] venner på skolen?
- Har barnet venner utenfor skolen? Evt hvor.

#### Dersom barnet ikke har venner:

- Hvordan opplever du/dere det at barnet ikke har venner på skolen?
  - Hva tror du/dere kan gjøres for at barnet kan få venner på skolen?
6. **Hvilke forventninger opplever du/dere at [barnet] selv har til det å få venner på skolen?**
- Hvordan kommer dette til uttrykk?

#### Miljøfaktorer

7. **Hvilken oppmerksomhet synes du/dere at vennskap får på skolen?**
- Hva betyr dette i praksis for [barnet]?
8. Hva tenker du / dere om den konkrete støtten [barnet] får til å knytte vennskap til medelevene?
- Hvilke muligheter til påvirkning har du/dere selv på å støtte [barnets] sosiale relasjoner med medelever?
9. **Hva er viktig for at barnet ditt skal få muligheten til å få nye venner?**
- Hvordan fungerer dette i praksis på skolen?

#### Avslutning

### 10. Er det noe annet du vil si om det med vennskap?



## Appendix 15

Interview guide for staff

## Intervjuguide #4

### Skolepersonale

(Individuelle intervju av kontaktlærere, spesialpedagog og assistent)

#### Orientering

- Hvem jeg er
- Hensikten med samtalen
- Fint at vi kan få prate litt sammen om vennskap
- Hvor lang tid samtalen ca vil vare – ca 1 ½ time
- Hva som vil skje med opplysningene
- Spørre om samtykke til lydopptak (hvorfor lydopptak, tid for oppbevaring, hvem har tilgang)

#### Innledende spørsmål

1. **Hvordan opplever du at [.....] trives på skolen?**

#### Elevenes kommunikasjonssystem

2. Under observasjonene har jeg sett at [barnet] bruker \_\_\_\_ for å gjøre seg forstått. Benytter [barnet] andre kommunikasjonssystemer eller strategier enn dette for å gjøre seg forstått, eller for å forstå andre?
3. **Hva slags kommunikasjonsmaterieil og/eller –hjelpemidler er tilgjengelig for [barnet]?**
  - Kan barnet bruke dem?
  - Er de alltid tilgjengelige for [barnet]?
  - Hvis ikke, hvordan har [barnet] mulighet til å be om å få bruke materieil/hjelpemidlene?
  - Hvem hjelper [barnet] med å gjøre materieil/hjelpemidlene tilgjengelig?
  - Hva skjer mellom [barnet] og medelevene dersom materieil/hjelpemidlene ikke er tilgjengelig?
4. **Er medelevene i stand til å bruke [barnets] kommunikasjonssystem når de kommuniserer sammen?**
  - Hvordan gjør de det?
5. **Er du i stand til å bruke [barnets] kommunikasjonssystem når dere snakker sammen?**
  - Hvordan gjør du det?
6. Ser du for deg at det er behov for at barnets kommunikasjon kan støttes på andre måter?

### Erfaring og kompetanse

7. Hvilke erfaringer har du med elever som ikke har talespråk, og som benytter alternativ og supplerende kommunikasjon?
8. **Hvordan vurderer du din egen kompetanse i å kommunisere med og støtte kommunikasjon til [barnet]?**
9. **Hvordan er det for medelevene til [barnet] å tolke hans/hennes kommunikasjon?**
  - Hva skjer dersom de ikke forstår hverandre? Hvilke strategier bruke de?
10. Hvordan er det for deg å tolke kommunikasjonen til [barnet]?
  - Hvilke strategier bruker du dersom dere ikke forstår hverandre? Hva skjer?

### Samhandling og sosiale relasjoner

11. **Hvordan vil du karakterisere de sosiale relasjonene mellom [barnet] og medelevene?**
  - Hvilken relasjonell nærhet har elevene til hverandre?
  - Hva tror du medelevene tenker om [barnet] mht vennskap?
12. **Beskriv samhandlingen mellom [barnet] og medelevene i klasserommet.**
  - Hvilken rolle har [barnet] overfor elevene i klasserommet?
13. **Beskriv samhandlingen mellom [barnet] og medelevene i friminuttene.**
  - Hvilken rolle har [barnet] overfor medelevene i friminuttene?
14. Har relasjonen mellom [barnet] og andre elever endret seg over tid?

### *Miljøfaktorer*

15. Hva påvirker de sosiale relasjonene mellom [barnet] og medelevene?
16. Hva fremmer utviklingen av vennskap mellom [barnet] og medelevene?
- Hva synes du fungerer best?
17. Hva svekker utviklingen av vennskap mellom [barnet] og medelevene?
- Hva er mest utfordrende?
18. Er det faktorer i skolemiljøet som påvirker disse relasjonene?
- Hvordan påvirker disse?
19. Hvordan påvirker du grunnlaget for den sosiale kontakten mellom [barnet] og medelevene?
- Hva gjør du helt konkret?
20. Er det satt mål for elevens utvikling av relasjoner til jevnaldrende?
- Hva innebærer målene?

### *Avslutning*

21. Kan du beskrive en episode der [barnet]...
- ...deltar på lik linje med venner
  - ...faller helt utenfor
22. Er det noe annet du/dere vil si om det med vennskap?

## Appendix 16

Selected questions from the Social Network tool

## Kommunikasjonspartnere, strategier som støtter sosialt samspill, og samtaletema

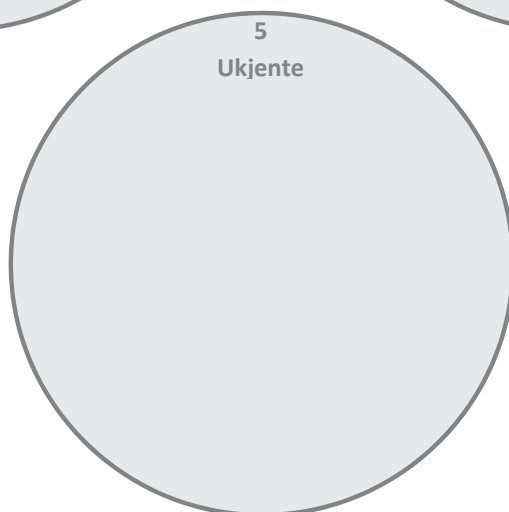
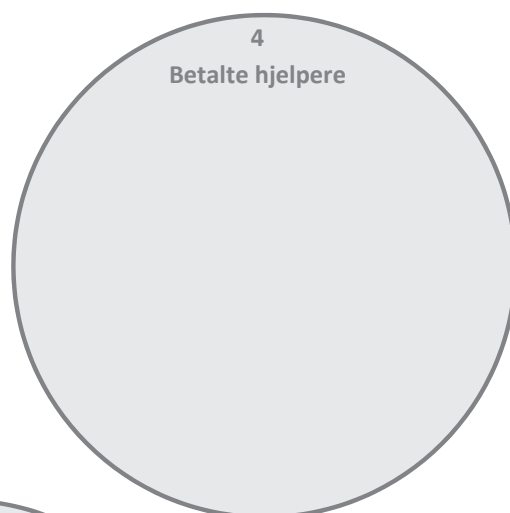
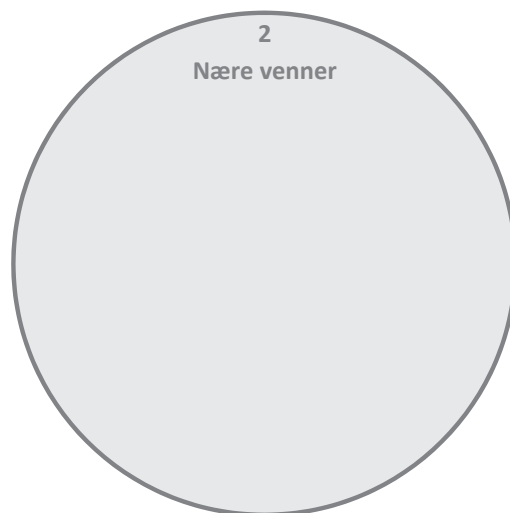
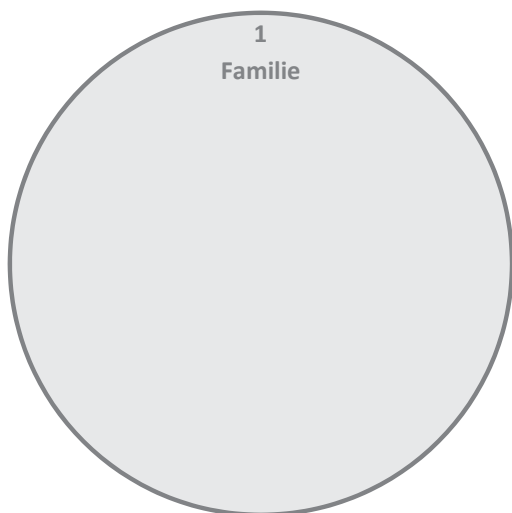
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Skole: \_\_\_\_\_ Dato: \_\_\_\_\_

Informant: \_\_\_\_\_ Rolle: \_\_\_\_\_

## Kommunikasjonspartnere

*Utdrag fra Social Networks (2006)*



Spørsmål på denne siden stilles til: Medelever | Foreldre til elever med ASK | Skolepersonale

## Viktige kommunikasjonspartnere

*Utdrag fra Social Networks (2006)*

Kommunikasjonspartnere som eleven  
kommuniserer mest med

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Mest dyktige kommunikasjonspartnere til  
eleven

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Kommunikasjonspartnere som eleven  
tilbringer mest tid sammen med

---

Elevenes foretrukne  
kommunikasjonspartnere

---

Har eleven en favoritt  
kommunikasjonspartner? Hvem?

---

Kommunikasjonspartnere som er mest villig  
til å lære nye ferdigheter

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Kommunikasjonspartnere som er mest villig  
til å lære andre om hvordan kommunisere  
med eleven

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Kommentarer

## Strategier som støtter sosialt samspill

Utdrag fra *Social Networks* (2006)

### Strategier som medelever bruker for å støtte elevenes *kommunikative uttrykk*

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Familie

---

Nære venner

---

Bekjente

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Betalte hjelpere

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Ukjente

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### Strategier som medelever bruker for å støtte elevenes *forståelse*

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Familie

---

Nære venner

---

Bekjente

---

Betalte hjelpere

---

Ukjente



## Samtaletema

*Utdrag fra Social Networks (2006)*

### **Samtaletema som eleven bruker sammen med ulike typer kommunikasjonspartnere**

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Familie

---

Nære venner

---

Bekjente

---

Betalte hjelpere

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Ukjente

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### **Samtaletema som eleven helst vil snakke om med ulike typer kommunikasjonspartnere**

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Familie

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Nære venner

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Bekjente

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Betalte hjelpere

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Ukjente

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## Appendix 17

Examples of coding in the respective phases of the analysis

### Examples of coding in the respective phases of the analysis

Interview group	Initial codes	Focused codes	Tentative categories	Conceptual categories
Students using AAC	Naming best friend in class	Reporting friendships	Reporting friendships	Developing few close social relationships
	Describing a friend as someone who is kind and helpful	Describing characteristic of a friend	Reporting friendships	Qualifying for friendships
Fellow students	Does not care that the student using AAC does not speak with her mouth	Accepting otherness	Handling otherness	Interactional facilitators and barriers
	Talking with student using AAC by using hands	Supporting students using AAC	Compensating reduced functional ability	Interactional facilitators and barriers
	Participating in "Secret friend"	Describing belonging to class	Visiting fellow students	Visiting fellow students
Staff	Having expectations to friendships	Expecting friendship in varying degree	Developing limited friendships	Developing few close social relationships
	Wanting to be a best friend with someone in class	Demonstrating preferences for certain people	Preferring certain people and activities	Demonstrating clear preferences
	Having a goal concerning social independence	Describing goals for social development	Working without agreed terms	Lacking common purpose