

Terese Wilhelmsen

# **Inclusion of children with disabilities in physical education.**

Current knowledge base and the experiences of children with disabilities and their parents

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Sincerely,

Terese Wilhelmsen

Drammen, December 2018

## **Summary**

### **Background**

Children with disabilities are at risk of social and pedagogical marginalisation and exclusion in physical education (PE). Despite increased international research initiatives, our knowledge of what supports inclusion in PE is still limited. In the Norwegian context, few studies have explored inclusion of children with disabilities in PE.

### **Aim**

Framed within a socioecological perspective, the overall aims of this dissertation were: a) to identify the gaps in the extant knowledge base on inclusion of children with disabilities in PE and b) to explore inclusion in PE as experienced by children with disabilities and parents in Norway. The project distinguishes between physical, social and pedagogical dimensions of inclusion in PE.

### **Method**

The research project employed a parallel multimethod design, in which three methodologically distinct studies resulted in five articles (Article I-V). Study I was a systematic literature review aimed at compiling, organising, and analysing the body of literature on inclusion of children with disabilities in PE from 2009 to 2015. Based on pre-selected criteria and PRISMA guidelines for systematic literature reviews, the search yielded 535 articles of which 112 articles were finally included (Article I).

Study II was a hermeneutic phenomenological interview study aimed at exploring the lived experience of inclusion in PE among children with disabilities and their parents. Based on interviews with 15 children with disabilities and 26 parents, Article II explored how the children with disabilities and their parents experienced social and pedagogical inclusion in various PE settings. The data in Article III was limited to the parental accounts and explored how the parents experienced the PE-related home-school collaboration. In both articles, thematic analysis was employed to capture the essence and the nuances of the participants' experiences with inclusion in PE.

Study III was a cross sectional survey study aimed at exploring the associations between the experiences of physical, social and pedagogical inclusion and intrapersonal, interpersonal, and contextual factors among children with disabilities (Article IV) and their parents (Article V). To better understand the mechanisms that support inclusion in PE, Article

IV explored the associations between children's experiences of social and pedagogical inclusion, perceived motivational climate, physical inclusion and their motivational attributes. The article employed tenets from achievement goal theory and self-determination theory. The participants were 64 children with disabilities attending Norwegian general elementary schools. The analytical approach used was fuzzy qualitative comparative analysis. Article V explored the association between intrapersonal, interpersonal and contextual factors and satisfaction with social and pedagogical inclusion among parents of children with disabilities (N=72). The main analytical modelling approaches used were ordinary least square regression (OLS) and quantile regression (QR).

## **Results and discussion**

With the use of multiple methodological approaches, this dissertation provided insight into the complexity of physical, social and pedagogical inclusion in PE as experienced by children with disabilities and their parents. The review of literature in Study I indicated that despite increased research contributions on inclusion of children with disabilities in PE, the knowledge of how to promote inclusion in PE is still limited. Previous research has largely concentrated on the PE educators' perspectives and attitudes towards inclusion in PE among teachers. Limited research exists on the experiences of children with disabilities and their parents. Based on the gaps in knowledge identified in the Study I, the focus of Study II and III was narrowed down to inclusion in PE as experienced by children with disabilities and their parents.

Study II illuminated the complexity and nuances in the experiences of inclusion in PE among children with disabilities and their parents. The analysis in Article II generated four themes: (a) physical inclusion in PE; (b) pedagogical inclusion and exclusion in PE; (c) social inclusion and exclusion in PE and beyond; and (d) forced exclusion. The themes indicated the situational complexity of and fluctuation in inclusion as experienced by children and parents, as well as how the children navigated exclusive situations in PE. Children with disabilities are still at risk of marginalisation in PE and several children do not receive the PE provision they deserve.

The inquiry into the PE-related home-school collaboration as experienced by parents generated five themes (Article III): a) the lack of PE-related information in the home-school collaboration; b) the parents' experiences of how contradictory expectations between themselves and the school personnel inhibited collaboration; c) the importance of perceived

competence and continuous systematic communication; d) the parents' involvement in school-based activity; and e) the parents' strategies of navigating the system to secure the necessary educational adaptations. The findings show how lack of school routines that ensure systematic PE-related collaboration limits parents' ability to make informed decisions-making in terms of their child's education. The findings also provide insight into the parental labour involved in securing quality education in PE for their children with disabilities.

Study III further illuminated the associations between the experiences of physical, social and pedagogical inclusion and intrapersonal, interpersonal, and contextual factors among children with disabilities and their parents. In Article IV, the analyses of contextual conditions yielded two sufficient inclusion-supportive climates, namely a physically inclusive and mastery oriented climate or a physical inclusive, autonomy supportive and low performance-oriented climate. Thus, physical inclusion in general PE was not sufficient to secure social and pedagogical inclusion and a mastery climate seems to be a particular robust inclusion-supportive climate for children with different motivational profiles and abilities. The configurations of motivational attributes within the inclusion-supportive contexts indicated four sufficient pathways to social and pedagogical inclusion. The different paths indicated that children with different levels of satisfaction of the needs for competence and autonomy could feel both socially and pedagogically included as long as they were task oriented, low on amotivation and experienced satisfaction of the need for relatedness.

The results from Article V indicated that the parents' satisfaction with social inclusion in PE was associated with their attitudes towards inclusion in PE, perceived PE-related information sharing and children's type of disability and degree of physical inclusion. Parents' satisfaction with pedagogical inclusion in PE was associated with their attitudes towards inclusion in PE, PE-related information sharing, and children's degree of disability and physical inclusion. Furthermore, the QR estimates indicated that the explanatory strength of parental attitudes and children's type of disability varied with the degree of parents' satisfaction.



## **Sammendrag**

### **Bakgrunn**

Barn med nedsatt funksjonsevne er i fare for sosial og pedagogisk marginalisering og ekskludering i kroppsøving. Kunnskap om hva som støtter inkludering i kroppsøving er mangelfull til tross for økt fokus på inkludering innen internasjonal kroppsøvingsforskning. I norsk sammenheng eksisterer det fortsatt lite kunnskap om inkludering av barn med nedsatt funksjonsevne i kroppsøving.

### **Hensikt**

Innrammet i et sosialøkologisk perspektiv var de overordnede målene for avhandlingen: a) å identifisere hullene i den eksisterende kunnskapsbasen om inkludering av barn med nedsatt funksjonsevne i kroppsøving og b) å undersøke inkludering i kroppsøving som erfart av barn med nedsatt funksjonsevne og foreldrene deres. Prosjektet skiller mellom fysisk, sosial og pedagogisk dimensjoner av inkludering i kroppsøvingsfaget.

### **Metode**

Forskningsprosjektet benyttet en parallell multimetodisk design, hvorav tre metodologisk forskjellige studier resulterte i fem artikler (Artikkel I-V). Studie I var en systematisk litteraturgjennomgang for å sammensette, organisere og analysere forskningslitteraturen på inkludering av barn med nedsatt funksjonsevne i kroppsøving publisert i tidsperioden 2009-2015. Basert på forhåndsvalgte kriterier og PRISMA-retningslinjer for systematiske litteraturstudier ble 535 artikler identifisert i søkene, hvorav 112 artikler ble inkludert (Artikkel I).

Studie II var en hermeneutisk fenomenologisk intervjustudie som utforsket erfaringer med inkludering i kroppsøving blant barn med nedsatt funksjonsevne og deres foreldre. Basert på intervjuer med 15 barn (ni gutter og seks jenter) og 26 foreldre (10 fedre og 16 mødre), undersøkte Artikkel II hvordan barna og foreldrene erfarte sosial og pedagogisk inkludering i ulike kroppsøvingssettinger. Datamaterialet i Artikkel III utforsket foreldrenes erfaringer med kroppsøvingsrelatert hjem-skolesamarbeidet. I begge artiklene ble tematisk analyse benyttet for å belyse essensen og variasjonen i deltakernes erfaringer med inkludering i kroppsøving. Studie III var en tverrsnittsspørreundersøkelse som utforsket sammenhengen mellom erfart fysisk, sosial og pedagogisk inkludering og individuelle, mellommenneskelige



og kontekstuelle faktorer blant barn med nedsatt funksjonsevne (Artikkel IV) og deres foreldrene (Artikkel V). Med utgangspunkt i målorienteringsteori og selvbestemmelsesteori utforsket Artikkel 4 sammenhengen mellom barns erfaringer med sosial og pedagogisk inkludering i kroppsøving, oppfattet motivasjonsklima, grad av fysisk inkludering, samt barns motivasjon og behovstilfredstillelse (N= 64). Den analytiske tilnærmingen som ble brukt var fuzzy kvalitativ komparativ analyse. Artikkel V undersøkte sammenhengen mellom foreldrenes (N=72) tilfredshet med sosial og pedagogisk inkludering i PE og individuelle, mellommenneskelige og kontekstuelle faktorer. Modelleringsmetodene som ble benyttet var lineær regresjon og kvantil regresjon (QR).

## **Resultat and diskusjon**

Ved å benytte en flermetodisk tilnærming belyste denne avhandlingen kompleksiteten i fysisk, sosial og pedagogisk inkludering i kroppsøving som erfart av barn med nedsatt funksjonsevne og deres foreldre. Studie I indikerte at til tross for økt forskning på inkludering av barn med funksjonsnedsettelse i kroppsøving er kunnskapen om hvordan fremme et inkluderende kroppsøvingsfag fortsatt begrenset. Tidligere forskning har konsentrert seg om kroppsøvingslærernes perspektiver samt læreres holdninger til inkludering i kroppsøving. Begrenset forskning eksisterer på opplevelser av barn med nedsatt funksjonsevne og deres foreldre. Basert på kunnskapsgapene identifisert i Studie I, ble fokuset i Studie II og III avgrenset til inkludering i kroppsøving som erfart av barn med nedsatt funksjonsevne og deres foreldre.

Studie II belyste kompleksiteten og nyansene i erfaringene med inkludering i kroppsøving blant barna og deres foreldre. Analysen i Artikkel II genererte fire temaer: (a) fysisk inkludering i kroppsøving; (b) pedagogisk inkludering og ekskludering i kroppsøving; (c) sosial inkludering og ekskludering i og utenfor kroppsøvingstimene; og (d) tvungen ekskludering. Temaene belyste kompleksiteten av og forandringer i inkludering som erfart av barn og foreldre, samt hvordan barna navigerte ekskluderende situasjoner i kroppsøvingstimene. Resultatene viste at barn med nedsatt funksjonsevne fortsatt er i fare for marginalisering i kroppsøving og flere barn mottar ikke den kroppsøvingen de har rett på.

Utforsking av foreldres erfaringer med kroppsøvingsrelatert hjem-skolesamarbeid genererte fem temaer (Artikkel III): a) manglende kroppsøvingsrelatert informasjon i hjem-skolesamarbeidet; b) foreldrenes erfaringer med hvordan motstridende forventninger mellom seg selv og skolen hemmet samarbeid; c) betydningen av oppfattet kompetanse og kontinuerlig systematisk kommunikasjon; d) foreldrenes involvering i skolebaserte aktiviteter;

og e) foreldrenes navigeringsstrategier for å sikre tilpasset opplæring. Funnene viser hvordan mangel på skolerutiner som sikrer systematisk kroppsøvningsrelatert hjem-skolesamarbeid begrenser foreldrenes evne til å ta informerte beslutninger når det gjelder deres barns utdanning. Funnene belyser også foreldres arbeid i å sikre kvalitet i kroppsøvingstilbudet deres barn mottar.

Studie III belyste sammenhengen mellom erfart fysisk, sosial og pedagogisk inkludering og individuelle, mellommenneskelige og kontekstuelle faktorer blant barn med nedsatt funksjonsevne og deres foreldre. Analysene av kontekstuelle faktorer i Artikkel VI indikerte to inkluderende kroppsøvningsklimaer: et fysisk inkluderende og mestringsorientert læringsklima, og et fysisk inkluderende, autonomistøttende og lavt prestasjonsorientert læringsklima. Funnene indikerer at fysisk inkludering kroppsøving ikke er tilstrekkelig for å sikre sosial og pedagogisk inkludering og at et mestringsorientert læringsklima ser ut til å være et robust inkluderende læringsklima. Konfigurasjonene av barnas målorientering, motivasjonsregulering og tilfredsstillelse av de tre psykologiske behovene innen læringsklimaene indikerte fire ulike veier til sosial og pedagogisk inkludering i kroppsøving. Samlet indikerte veiene at barn med ulike grad av tilfredsstillelse av behovet for kompetanse og autonomi kunne føle seg sosialt og pedagogisk inkludert så lenge de erfarte tilfredsstillelse av behovet for tilhørighet, var oppgaveorienterte samt skåret lavt på amotivasjon.

Videre viste resultatene fra artikkel V at foreldrenes tilfredshet med sosial inkludering i kroppsøving var assosiert med deres holdninger til inkludering i kroppsøving, oppfattet kroppsøvningsrelatert informasjonsdeling, barnets type funksjonsnedsettelse og grad av fysisk inkludering. Foreldre tilfredshet med pedagogisk inkludering i kroppsøving var assosiert med deres holdninger til inkludering, kroppsøvningsrelatert informasjonsdeling, og barns grad av funksjonsnedsettelse og grad av fysisk inkludering. QR-estimatene demonstrerte at forklaringsstyrken til foreldrenes holdninger og barns type funksjonsnedsettelse varierte med graden av foreldres tilfredshet.



## List of articles

- Article I      Wilhelmsen, T., & Sørensen, M. (2017). Inclusion of children with disabilities in physical education: A review of literature 2009-2015. *Adapted physical activity quarterly*, 34, 311 -337. doi: 10.1123/apaq.2016-0017

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- Article II      Wilhelmsen, T., Sørensen, M., & Seippel, Ø. (2018). "Inclusion is a nice word but...": *Physical education as experienced by children with disabilities and their parents*. Manuscript submitted for publication.

- Article III     Wilhelmsen, T., & Sørensen, M. (2018). Physical education-related home-school collaboration: The experiences of parents of children with disabilities. *European Physical Education Review*. Advanced online publication. doi: 10.1177/1356336X18777263

- Article IV     Wilhelmsen, T., Sørensen, M., & Seippel, Ø. (2018). Motivational pathways to social and pedagogical inclusion in physical education. *Adapted physical activity quarterly*. Advanced online publication. doi: 10.1123/apaq.2018-0019

- Article V      Wilhelmsen, T., Sørensen, M., Seippel, Ø., & Block, M.E. (2018). *Parental satisfaction with inclusion in physical education*. Manuscript submitted for publication.



## **Abbreviations**

AGT	Achievement goal theory
ADHD	Attention deficit hyperactivity disorder
ASD	Asperger spectrum disorder
BPN	Basic psychological needs
CFA	Confirmatory factor analysis
CFI	Comparative fit index
Con	Consistency
Cov.r	Raw coverage
Cov.u	Unique coverage
CP	Cerebral palsy
EFA	Exploratory factor analysis
fsQCA	Fuzzy qualitative comparative analysis
GC	General class
K06	Knowledge promotion reform of 2006
LSA	Learning support assistant
MICE	Multivariate imputation by chained equations
OLS	Ordinary least square regression
PE	Physical education
QCA	Qualitative comparative analysis
QR	Quantile regression
RAI	Relative autonomy index
RMSEA	Root Mean Square Error of Approximation
SDT	Self-determination theory
SG	Special group
SMRS	Standardised Root Mean Square Residuals
UNESCO	The United Nations educational, scientific and cultural organization



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## Chapter 1 | Introduction

Physical education (PE) is an important arena to support children's physical-motoric and social development (Bailey, 2005; Ommundsen, 2013). Yet, PE has been described as a particularly challenging educational arena for children with disabilities. Research consistently indicates that children with disabilities are at risk of social and pedagogical marginalisation and exclusion in PE (Bredahl, 2013; Coates & Vickerman, 2008; Grue, 2001; Pan, Tsai, & Hsieh, 2011; Qi & Wang, 2018; Svendby & Dowling, 2013). Children with disabilities are also found to be less physical active than their peers without disabilities (Lobenius-Palmèr, Sjöqvist, Hurtig-Wennlöf, & Lundqvist, 2018). Learning experiences in PE may be particularly important considering the limitations of participation in leisure time physical activities reported by children with disabilities and their parents (King, Petrenchik, Law, & Hurley, 2009). The mandatory nature of PE stresses the importance of learning environments that promote positive experiences and appreciation of the various abilities and interests represented within the group of learners.

Inclusion of children with disabilities in PE has gained increased recognition in the international research literature (Block & Obrusnikova, 2007; Qi & Ha, 2012). Despite these research efforts, our knowledge of what supports inclusion in PE is still in its infancy. While some research has explored inclusion in PE in Norway (e.g. Bredahl, 2013; Svendby, 2013), research in the Norwegian context is still scarce. On this note, the overall aims of this dissertation were to identify the gaps in the extant knowledge base on inclusion of children with disabilities in PE and to explore inclusion in PE as experienced by children with disabilities and their parents in Norway.

The research project was based on a parallel multimethod design (Morse, 2003) with three distinct studies leading to five articles (Articles I–V). To identify the gaps in the literature, Study I was a systematic review of the research from 2009 to 2015 (Article I). The review indicated that the perspectives of children with disabilities and their parents and the question of what it takes to support inclusion in PE have received scant attention (Wilhelmsen & Sørensen, 2017). In particular, more knowledge is needed about how children with disabilities experience their participation in PE and how it relates to their experiences with social and pedagogical inclusion.

Furthermore, scant research has investigated parental experiences with their children's PE provision and their involvement in PE-related home-school collaboration (Svendby, 2017; Wilhelmsen & Sørensen, 2017). For many children, quality learning in PE relies on

collaboration between a group of professionals, the parents and the individual children (Nilsen, 2017). The number of people involved may strain the way this collaboration is coordinated and affect the weight given to the parents' voice, making how parents experience the collaboration a pertinent issue. Thus, to better understand the social and pedagogical inclusion and exclusion mechanisms in PE, Study II and III explored the experiences of inclusion in PE of children with disabilities and their parents.

Study II was an inductive hermeneutic phenomenological interview study aimed at exploring inclusion in PE as experienced by children with disabilities and their parents (Van Manen, 1997, 2016). Based on this study, Article II explores the essential aspects of inclusion in PE as experienced by children with disabilities and their parents, while Article III explores parents' experiences with the PE-related home-school collaboration.

Study III was a cross-sectional survey study aimed at investigating the associations between intrapersonal, interpersonal and contextual factors and inclusion in PE. Article IV explores the associations between psychosocial aspects of PE and children's experiences with inclusion, and Article V explores the associations between parents' satisfaction with inclusion in PE and the children's and parents' contextual, intrapersonal and interpersonal factors.

The research project is framed within a socio-ecological perspective (Bronfenbrenner, 1979; 2005). This frame allowed investigation of the associations between multilevel factors and inclusion in PE using different methodological approaches. A socio-ecological perspective also guided our understanding of inclusion and disability. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2009) defined inclusion as the 'process of addressing and responding to the diversity of needs of all children, youth and adults through increasing participation in learning, culture and communities, and reducing and eliminating exclusion within and from education' (p. 8–9). UNESCO's broad definition emphasises the responsibility of educational systems to implement changes and modifications of content, approaches, structures and strategies to accommodate all children. Inclusion can be understood as both a process and an aim by which inclusion becomes 'a never-ending search to find better ways of responding to diversity' (Ainscow, 2005, p. 118) with the goal to achieving equity, social justice and opportunity for all. While inclusion in education relates to all learners, the lessons learned from research on groups of children at greater risk of marginalisation and exclusion can increase our knowledge of the inclusion processes in education and how schools can better relate to diversity among children.

Inspired by Goodwin, Watkinson and Fitzpatrick (2003), inclusive PE is defined as giving all children the opportunity to participate in regular PE with their peers while receiving

the supplementary aid and support services needed to take full advantage of the curriculum and the social, physical and academic benefits it aims to provide. Like previous studies, this dissertation distinguishes between the different dimensions of inclusion, namely organisational, physical, social and pedagogical inclusion (Dalen, 1994; Nes, Strømstad, & Skogen, 2004a; Nordahl & Sunnevåg, 2013; Qvortrup, 2012; Sørensen & Kahrs, 2006).

Organisational inclusion relates to how school structures, policies, cultures, leadership, practices and collaboration among stakeholders facilitate inclusion at the institutional level. Physical inclusion is the degree to which children with disabilities are physically present in a general PE setting as opposed to receiving a segregated PE programme. Contemporary research consistently acknowledges that inclusion is more than mere placement (Lundeby & Ytterhus, 2011; Pijl, 2007; Wendelborg & Tøssebro, 2011). However, considering that many children with disabilities attending general education spend much time out of class (Tøssebro, Engan, & Ytterhus, 2006), a better understanding of how physical inclusion relates to feelings of being socially and pedagogically included is important.

Social inclusion refers to the interaction between children and their peers, between children and their teachers, and the experience of belonging to the group. The social dimension is a key issue in inclusive education (Wendelborg & Tøssebro, 2011) and is often underlined by parents as an important criterion of educational quality (Pijl, 2007). The importance of having friends, feeling supported and being a legitimate participant in physical activities is also emphasised by children with disabilities themselves (Klavina & Block, 2008; Seymour, Reid, & Bloom, 2009; Spencer-Cavaliere & Watkinson, 2010). Unfortunately, children with disabilities are still at a greater risk of being socially excluded than their peers without disabilities (Pijl, 2007; Qi & Wang, 2018; Wendelborg & Tøssebro, 2011).

Pedagogical inclusion relates whether or not the way PE is organised appreciates the diversity of abilities, cultures and backgrounds of children, as well as the degree to which the content and learning strategies of PE promote children's learning and engagement in the activities (Nes et al., 2004a; 2004b). The four dimensions should not be interpreted as discrete entities but as inter-reliant dimensions that may interact differently depending on interpersonal, intrapersonal and contextual factors.

Research traditions have different preferences in their terminology and models of understanding disability (Peers, Spencer-Cavaliere, & Eales, 2014). This dissertation uses people-first terminology and a respectful language that does not define people by their impairments. Based on an interactional approach to disability, disability is understood as 'the

outcome of the interaction between individual and the contextual factors – which include impairment, personality, individual attitudes, environment, policy, and culture’ (Shakespeare, 2006. p. 58). This approach emphasises the multifaceted phenomenon of disability. In line with an ecological perspective, disability is understood as a product of individual, social and contextual conditions (Simplican, Leader, Kosciulek, & Leahy, 2015). The interactional approach to disability was developed as a response to two competing models: the medical and the social models of disability. Although a medical understanding of disability has contributed considerably to our knowledge of physical activity among people with disabilities – particularly in rehabilitation research – the model has been criticised for focusing on an individuals’ physical or mental deficits instead of the extent to which society excludes people with disabilities (Shakespeare, 2006). Furthermore, the social model of disability has been powerful in advocating societal change and adaptations (Oliver, 1996). However, the emphasis on social barriers and the downplaying of individual impairment have been criticised for contextual essentialism, and the impairment/disability distinction restricts our understanding of people’s everyday experiences (Shakespeare, 2006). It is not only the type or degree of impairment or social barriers and oppression that dictate the experience of disadvantage. The interactional approach recognises neglected aspects of disability, such as personal attitudes, experiences of the body and motivation, as well as the interdependency between the child and his/her environment (Shakespeare, 2006). This is pertinent because people with similar disabilities in similar contexts may experience the same situation very differently.

Chapter 2 presents the theoretical framework of the research project. Chapter 3 provides a brief introduction to the history of inclusive education and PE in Norway, reviews previous research and identifies the knowledge gap on inclusion in PE. Chapter 4 presents the overall aims of the project and the specific research questions guiding the three studies. Chapter 5 describes the design of the research project and the methods used in the three studies. Chapter 6 presents the main results of the five articles. In Chapter 7 the results are merged and compared in a general discussion of the contributions of the three studies in answer the overall research questions of the dissertation. Finally, the chapter discusses the strengths and limitations of the research, addresses its practical implications, and ends with a brief conclusion and suggestions for future research.

## Chapter 2 | Theoretical framework

The aim of this chapter is to describe the theoretical framework guiding the research project. The research project was designed using an ecological framework. An ecological frame of ‘how it all connects’ support an interdisciplinary and integrated focus on the phenomenon of inclusion in PE and disability and acknowledges the interdependency of intrapersonal, interpersonal, and contextual conditions at different levels (Bronfenbrenner, 1979; 2005; Shakespeare, 2006). The ecological framework also made it possible to incorporate theoretical tenets (i.e. from achievement goal theory (AGT) and self-determination theory (SDT)) employed in Study III to understanding how the psychosocial learning environment is associated with children’s experiences of inclusion in PE.

### **An ecological framework of inclusion in physical education**

Several ecological frameworks have been used in previous education and health research (Bronfenbrenner, 1979; McLeroy, Bibeau, Steckler, & Glanz, 1988; Sallis, Bauman, & Pratt, 1998). This thesis used Bronfenbrenner’s (1979; 2005) ecological framework. In this framework, human being are believed to be in constant states of reciprocity with the environment, and behaviour is believed to influence and be influenced by multiple levels of factors (Bronfenbrenner, 1979). The chosen framework allowed for consideration of intrapersonal characteristics (i.e. psychological and physiological characteristics), interpersonal relations, proximal and distal environmental factors as well as educational policies at the macro level. This dissertation did not attempt test whether the hypotheses purposed by the framework were empirically sound; rather the perspective functioned as a frame to present the data and relations between different aspects of inclusion in PE explored in the three studies.

In his initial work on the ecology of human development and in his later work on the bioecological perspectives on human development, Bronfenbrenner distinguished between micro-, meso-, exo-, macro- and chronosystems (Bronfenbrenner, 1979; 2005). In brief, microsystems are systems in which a child participates in face-to-face interaction and can be described as patterns of activities, roles and interpersonal experiences by the child in specific settings. A child is a part of different microsystems (e.g. a football team, PE, and the family) that directly influence the child.

The interrelations between two or more microsystems are referred to as mesosystems. The term ‘mesosystem’ recognises that the children’s development in one microsystem does



not occur in isolation but should be understood as a result of the interaction between the different microsystems in which the child is involved. The mesosystem focused on in this dissertation is the PE-related home-school collaboration, which relates to the communications between home and school involving both formal and informal collaboration, such as formal meetings and informal conversations between parents and teachers. Parents' involvement in education bridges two important developmental arenas for children, namely home and school (Nokali, Bachman, & Votruba-Drzal, 2010). Parental involvement refers to the parents' interaction with the school personnel, school activities and their children at home (Hill & Tyson, 2009). The strength of the linkage between home and school depends on both the quality and the number of links between them. A multiple-linked mesosystem between home and the PE setting, for example a three-person linkage of child-parent-PE teacher, is believed to be more supportive for the child's development than a solitary two-person link between the child and the PE teacher. Parents are important advocates for children's life in school and beyond, and their involvement has proven to be particularly important for engagement in school and leisure time activities by children with disabilities (Kermit, Tharaldsteen, Haugen, & Wendelborg, 2014; Ytterhus, Wendelborg, & Lundeby, 2008). Article III and V investigate more closely how this link relates to inclusion in PE.

Exosystems are systems in which the child does not participate but which influence or are influenced by changes in the microsystems. The exosystems of interest in this dissertation are the school administration and leadership, collaboration between the school personnel, and collaboration between the school personnel and health practitioners. Note that the latter aspect can be regarded as interpersonal relations on a mesolevel, depending on the child's presence in the related microsystems along with the supplementary link (Bronfenbrenner, 1979).

The macrosystem refers to the culture as whole which frames the ideology underlying the three lower-order systems (Bronfenbrenner, 1979). The macrosystem can be thought of as a societal blueprint that frames a particular culture or subculture (Bronfenbrenner, 1994). For PE, the important blueprints would be the current educational culture and policy, specifically the national education K06 curriculum, which form the societal context the research project is positioned within. Although the microsystem at the centre of this dissertation is the PE setting, the articles also explore the interrelations between the home (Articles III and V) and PE, and the overall school setting (particularly in Articles II and III). Finally, the chronosystem encompasses individual or environmental consistencies or changes of over time (Bronfenbrenner, 1994).

In his later work, Bronfenbrenner (2005) introduced the Process-Person-Context-Time model, which emphasises the role the person plays in his or her development. *Process* relates to the factors that could explain the associations between specific aspects of the context (e.g. culture or social class) or intrapersonal attributes (e.g. gender or disability) and an outcome. Bronfenbrenner further distinguished between proximal and distal processes to distinguish between “enduring forms of interaction in the immediate environment” (Bronfenbrenner & Morris, 1998, p. 996), in contrast to factors that influence a child’s development more indirectly. *Person* relates to the individual attributes that people bring with them into a social setting. These attributes can be divided into three: demands (e.g. personal attributes such as gender, disability and age, which may initiate a response directly because of the expectations they form), resources (e.g. mental and emotional resources that do not necessarily initiate an immediate response but one that may be induced by the demands attributes) and force (e.g. differences in temperament, motivation, and persistence). With this distinction, Bronfenbrenner (2005) recognised that two children may have similar impairment and skill level, but their involvement and development trajectories may differ according to their motivation and persistence as well as the developmental context (Tudge, Mokrova, Hatfield, & Karnik, 2009). A focus in this dissertation is on how children’s different motivational attributes and the perceived motivational aspects of the psychosocial learning climate are associated with their experiences of social and pedagogical inclusion by employing tenets of AGT and SDT (i.e. Article IV). The *context* aspect of the PPCT model relates to the differences in the levels (micro – macro), as previously described. *Time* is the final element of the PPCT model and relates to micro-time (what occurs during an activity or interaction); meso-time (the consistency of activities and interactions over extended time); and macro-time (the historical context in which any activity or interaction takes place).

### **Psychosocial learning climate in physical education**

According to the Norwegian Educational Act (§9a), all pupils have the right to a good physical and psychosocial climate that promotes health, well-being and learning. The term psychosocial learning climate recognises the close connection between the psychological aspects of our experience, for example, the relations between our thoughts, emotions and behaviour, and our social experiences, including our relationships, traditions and culture.

The relations between the perceived motivational climate and the constructs of motivation orientation, motivation regulation and the satisfaction of psychological needs have

consistently been identified as salient psychosocial features of the classroom environment that can enhance or hinder the quality and effectiveness of learning (Jaakkola, Wang, Soini, & Liukkonen, 2015; Velayutham & Aldridge, 2012). In an attempt to better understand the relations between children's motivational attributes, the perceived motivational climate and their experiences of social and pedagogical inclusion in PE, this dissertation combined tenets from AGT and SDT.

### *Achievement goal theory*

AGT is a socio-cognitive theory emphasising human beings as active participants in decision-making (Roberts, 2012). The present understanding of AGT is based on an integrated perspective in which the motivational dispositions and the climate are perceived to be a part of the same theoretical framework (Nicholls, 1979; Roberts, 2012). A basic assumption in AGT is that 'an individual is an intentional, rational, goal-directed organism and that achievement goals govern achievement behaviour in achievement contexts' (Roberts, 2012, p. 8). The energising construct of the motivational process is the demonstration or development of competence (Roberts, 2001; 2012).

### *Concepts of ability and goal involvement*

Central to AGT is that in achievement contexts, people use two different goal perspectives depending on the concept of ability employed (Nicholls, 1989). An undifferentiated concept of ability does not differentiate between effort and ability in achievement behaviour. An example of this is a child's belief that a person who tries harder than others at a task is smarter or more skilled, independent of their actual performance; hence, the child equates effort with ability. On the other hand, a child employing a differentiated concept of ability would recognise the effect of effort as constrained by ability (Nicholls, 1989). Nicholls (1989) argued that children initially have an undifferentiated concept of ability and that the development of a differentiated concept of ability is a significant landmark in early adolescence. Based on their concept of ability, people assess the criteria for success. Achievement behaviour based on undifferentiated behaviour is termed task involvement. Being task involved means the goal of participation is mastery, improvement and learning, and the evaluation of ability is self-referenced. Achievement behaviour based on a differentiated concept of ability is referred to as being ego involved. The goal of ego-involved achievement behaviour is to be better than others, and the criteria for success is other-referenced (Roberts, 2001).

*Motivation orientations*

While goal involvement is highly dynamic, task- and ego-orientation refer to relatively stable individual differences of proneness to the two types of involvement (Nicholls, 1989). Based on socialisation through task- and ego-involvement contexts, people become predisposed to being ego- or task-involved (Roberts, 2012). Predispositions can come from experiences at home or previous experiences with physical activity participation. However, goal orientations can be subject to change.

Task and ego orientation have been demonstrated to be orthogonal in the sense that individuals can be both ego and task oriented to one degree or another (Roberts, 2012). An example may be a child that is highly task involved in learning the fundamentals of a new skill, but highly ego involved when putting the skill into practice in a competitive setting. Thus, people can be both ego and task involved depending on the situation (Nicholls, 1989). Earlier research has shown that individuals with either high task- and high-ego orientation or high task- and low-ego orientation have the most adaptive motivational profiles (Roberts, 2012). The crucial aspect seems to be to know when it is appropriate to be task- or ego involved (Roberts, 2012).

*Motivational climate*

Motivational determinants in the climate affect a participant's state of involvement. AGT distinguishes between mastery climate and performance climate. A mastery climate refers to a motivational climate that privileges the criteria of success as they involve the task, and the focus is on self-referenced learning and mastery rather than outperforming others. In contrast, a performance climate is described as an environment in which the criteria for success and failure are normative and other-referenced (Roberts, 2012). Participants' interpretation of situational clues or the criteria of success is believed to impact their achievement behaviour, cognition and affective response (Roberts, 2012). Thus, a mastery climate promotes task involvement by the participants and a performance climate promotes ego involvement.

*Self-determination theory*

SDT is an organismic theory that maintains that personal experience, seen in the way people interpret events and the perceived relation of events to their basic psychological needs, serves as an important determinant of human behaviour (Ryan & Deci, 2008). SDT emphasises humans' inherent tendencies to develop an increasingly elaborated and unified 'sense of self', marked by psychological (autonomy) and interpersonal (homonomy) integration (Ryan &

Deci, 2002). These innate tendencies are believed to be influenced by social-contextual factors that either support or impede growth (Ryan & Deci, 2000). SDT is comprised of four sets of mini-theories, each focussing on its own phenomenon (Ryan & Deci, 2008).

#### *Basic psychological needs*

SDT distinguishes between three basic psychological needs to describe environments that support or thwart psychological growth, namely autonomy, competence and relatedness (Ryan & Deci, 2002). Competence can be defined as ‘feeling effective in one’s ongoing interaction with the social environment and experiencing opportunities to exercise and express one’s capacities’ (Ryan & Deci, 2002, p. 7). It is the need for competence that is believed to lead individuals to seek optimal challenges and enhancement of skills in line with their perceived abilities (Ryan & Deci, 2002). Relatedness refers to ‘feeling connected to others, to caring for and being cared for by those others, to have a sense of belongingness both with other individuals and by one’s community’ (Ryan & Deci, 2002, p. 7) while autonomy concerns the feeling of being ‘the origin or source of one’s own behaviour’ (Ryan & Deci, 2002, p. 8). These concepts comprise the *Basic Psychological Needs* mini-theory and can be summarised in three points: (1) basic psychological needs define the universal nutrients that cross the dimensions of development and culture; (2) based on peoples’ satisfaction of basic psychological needs, motives, aspiration and goals can be evaluated; and (3) interpersonal and intrapersonal variations in wellness can be described by the function of needs satisfaction (Ryan & Deci, 2008).

#### *Autonomy supportive climate*

The satisfaction or thwarting of basic psychological needs is contextually conditioned (Deci & Ryan, 2000). The *Cognitive Evaluation* mini-theory argues that interaction and communication (e.g. feedback) that promote feelings of competence during an activity can enhance intrinsic motivation based on the assumption that they satisfy the need for competence and give rise to a sense of autonomy (Ryan & Deci, 2000). Autonomy support from teachers is believed to positively influence basic needs satisfaction and subsequent autonomous motivation (Edmunds, Ntoumanis, & Duda, 2007; Mageau & Vallerand, 2003). To promote an autonomy-supportive climate, the PE teacher should be engaged, respectful of children’s perspectives, provide information rich feedback on children’s competence, and promote choice and initiative within a structured learning environment (Edmunds et al., 2007; Hastie, Rudisill, & Wadsworth, 2013). In comparison, controlling environments in which behaviour is controlled by self-imposed pressure, feedback based on normative evaluation,

external rewards or punishment is likely to generate perceptions of incompetence and undermine children's intrinsic motivation (Hein & Koka, 2007). In this climate, engagement in tasks or a specific behaviour is dependent on the contingency of the extrinsic reinforcement.

#### *Motivation regulation*

SDT extends the traditional distinction between intrinsic and extrinsic motivation by proposing that a continuum is formed by intrinsic motivation and varied forms of extrinsic motivations based on the variety of reasons or goals that give rise to an action (Ryan & Deci, 2000; 2008; Spray, Wang, Biddle, & Chatzisarantis, 2006). At the far left of the continuum, *amotivation* refers to situations where a person lacks an intention to act. Amotivation in PE may be a result of not valuing PE or a belief that taking part in PE will not end in a desirable outcome. *External regulation* relates to actions aimed at satisfying external demands or obtaining external rewards. Next is *introjected regulation*, which is still quite controlling and relates to actions guided by feelings of guilt, anxiety or pride (Ryan & Deci, 2000). A child with *identified regulation* motivation in PE identifies with the regulation experienced and acknowledges the personal importance of attendance. Last and most autonomous of the extrinsic motivational forms is *integrated regulation*, in which the regulation is in line with the individual's needs and values and is accepted as one's own. Lastly, *intrinsic motivation* represents the prototype of self-regulation promoting human growth, in which children take part in PE because they appreciate the subject and enjoy the activities. For reasons of parsimony, several studies have used the relative autonomy index as a continuous measure to distinguish between different qualities of motivation on a continuum from more controlled (external and introjected regulation) motivations towards more autonomous (identified and intrinsic regulation) motivations (Deci & Ryan, 2000; Grolnick & Ryan, 1987; Ommundsen & Kvalø, 2007).

#### *Combining motivational frameworks*

The differences between AGT and SDT can be explained by the diverging perspectives of what drives motivation behaviour (Roberts & Treasure, 2012; Ryan & Deci, 2002). SDT is driven by an organismic explanation of what drives behaviour and emphasises basic psychological needs as important constructs in its theoretical framework. In contrast, AGT assume that beliefs, perceptions and thoughts govern human action. A pitfall in combining constructions from theories with different assumptions can be conceptual inconsistency unless

the differences are taken into careful consideration in the analysis process. Despite different basic assumptions, theorists from both camps (Deci & Ryan, 2000; Duda, 2013; Nicholls, 1989) have proposed links between the two theories. Some scholars have even suggested a conceptual overlap between AGT and SDT constructs (Deci & Ryan, 2000; Ntoumanis, 2012; Spray et al., 2006; Standage, Duda, & Ntoumanis, 2003). As noted previously, AGT and SDT aim to explain the relations between perceived climate, individual motivational attributes and positive or negative outcomes (Deci & Ryan, 2000; Nicholls, 1989; Roberts, 2012). Deci and Ryan (2000) also argued that intrinsic motivation and task involvement correspond when applied to the achievement domain.

No single theory has been able to explain motivation in its entirety (Wang & Biddle, 2007). Although related, the two theories tap into different dimensions of achievement behaviour. Motivational regulation taps into the locus of causality – the reasons why an individual performs an activity and whether these reasons are more or less self-determined. AGT, on the other hand, taps into the achievement goals of behaviour based on perceptions of criteria of success and failure. It is the distinctiveness of the tenets that makes combining them fruitful, and the interaction between them can enhance our understanding of the mechanisms involved in inclusion in PE (Wang & Biddle, 2007).

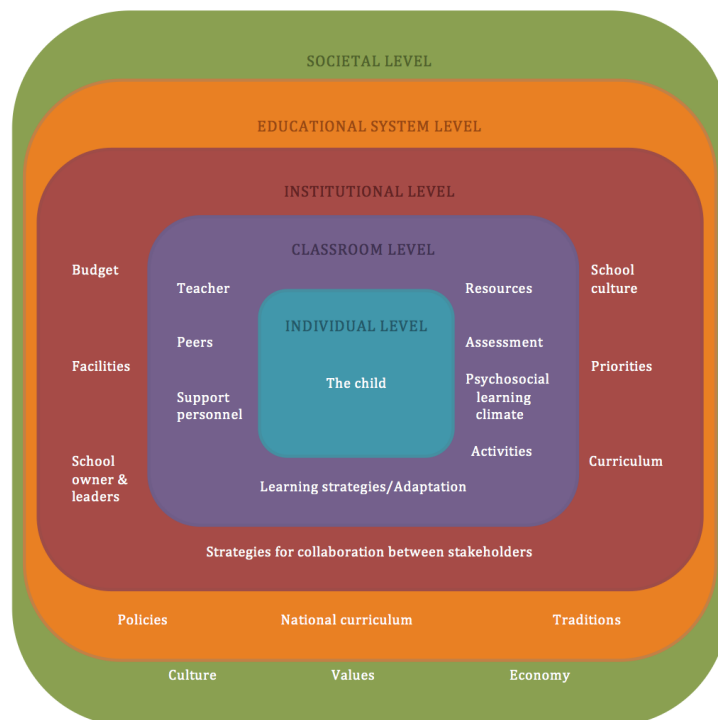
Emergent empirical support for combining tenets from the two theories is apparent in sport (Duda, 2013; Spray et al., 2006) and PE (Cox & Williams, 2008; Jaakkola, et al., 2015; Standage et al., 2003). Previous findings indicate a positive relationship between task orientation and more self-determined motivation and a positive relationship between ego orientation and less self-determined motivation (Parish & Treasure, 2003). Standage et al., (2003) found that an autonomy-support climate and (to a lesser extent) perceptions of a mastery climate positively impacted mediating variables such as the satisfaction of autonomy, competence, and relatedness on children's self-determined motivation in PE. Using cluster analysis, Wang and Biddle (2001) identified five distinct clusters based on child characteristics (goal orientation, sport ability beliefs, perceived autonomy, amotivation and perceived competence) with different physical activity levels and physical self-worth. Moreover, a latent profile analysis of homogenous attributes of perceived motivational climates (e.g., mastery, performance, autonomy-supportive, and relatedness-supportive) in PE identified five clusters that influenced enjoyment in PE differently (Jaakkola, et al., 2015). However, more knowledge is needed to understand how various configurations of motivational climates and motivational attributes influence children's experiences with PE.

### **Ecological model of the influential aspects of inclusion in physical education**

The ecological model in Figure 1 captures the multilevel of potential influential aspects of inclusion of children with disabilities in PE. The model is based on extensive review of the previous research on inclusion in PE of children with disabilities (Block & Obrušnikova, 2007; Coates & Vickerman, 2008; 2013; Haegele & Sutherland, 2015; Hutzler, 2003; O'Brien, Kudláček, & Howe, 2009; Qi & Ha, 2012; Wilhelmsen & Sørensen, 2017) and on inclusive education in general (Berg & Nes, 2007; Booth & Ainscow, 2002; Dyson, Howes, & Roberts, 2002; Haug & Backmann, 2007; Skaalvik & Skaalvik, 2013; Tant & Watelain, 2016). The ecological model is inspired by the work of Bronfenbrenner (1997; 2005) and Mcleroy et al. (1988). However, the different levels of the models has been adapted to the influential factors on inclusion in PE. The meso-relation between home and school is incorporated within the institutional aspect “strategies for collaboration between different stakeholders”. Other levels of analysis could also be incorporated, such as additional micro-systems (e.g. the children’s involvement in community sports).

The purpose of the model is three-folded: (1) to systematise the relevant literature; (2) to make the potential influential aspects of inclusion in PE more accessible for practitioners; and (3) to frame the aspects of inclusion touched upon in this dissertation. Article I touches upon all levels of the model. Articles II–V explore different aspects of the three inner levels of the model, while the two outer levels serve as the contextual background.





**Figure 1** An ecological model of the influential aspects of inclusion in physical education

The model emphasises that the multilevel of inclusion and that inclusion in PE is always historically and culturally contextualised by its own educational ideology, politics and rhetoric. The individual child is here understood as an active agent influencing and being influenced by factors at different systemic levels. The model posits a reciprocal relationship between the child's dis/abilities and environment in line with the interactional approach to disability (Shakespeare, 2006). This perspective is supported by studies showing that children's opportunities to socially interact with peers are determined by their individual disabilities, but also by the degree to which they have access to peer interaction and the overall educational policy and curriculum (Wendelborg, 2010a).

## Chapter 3 | Context and previous research

This chapter aims to review the research literature relating to inclusion of children with disabilities in PE in order to identify the gaps in current knowledge. The chapter is systematised according to the levels of Figure 1. The literature included in Article I will not be reviewed below (i.e. inclusion in PE literature from 2009–2015) but studies before 2009 and after 2015 and relevant studies of inclusion from the general education setting are included.

### Societal and educational system level

This section briefly introduced the societal and educational system-level of factors in the Norwegian educational system and serve at the contextual background of the study. Due to scant PE-related research at this level, the research reviewed below relies heavily on literature on inclusion in general education.

The Norwegian educational system encompasses 10 years of compulsory elementary education for children aged six to 16 (seven years in primary school and three years in secondary school). The majority of the schools are public, and only 3.6% of children attend private schools. Recent statistical data indicate that 8% of children receive special education, of which 70% are boys (Statistics Norway, 2016).

#### *Historical introduction of inclusion in Norwegian education*

The history of inclusive education in Norway dates back to the Integration Reform of 1975, which integrated the *Special School Act* and the *Primary and Lower Secondary School Act* (Hausstatter & Thuen, 2014). In 1969, the Blom Committee, led by Knut Blom, was established to develop legislation on special education to be incorporated in the educational legislation of 1969 (NOU, 1995:18). The Blom Committee supported the integration of special and general education legislation as well as integration criteria such as belonging in a social community (i.e. social inclusion), participation in the common benefits of education and joint responsibility for tasks and commitments (i.e. pedagogical inclusion).

Before the Reform of 1975, the education of children with disabilities was largely governed by an ideology of segregation and organisational differentiation; children with disabilities were often enrolled in special institutions based on their primary disability (Hausstatter & Thuen, 2014). With the reform of 1975, children with disabilities were given the opportunity to attend local schools with special educational assistance, and the

institutionalisation of children by type of disability was recognised as problematic (Sjøvik, 2002). The focus was moved from organisational differentiation to internal pedagogical differentiation and a one-track model of inclusive education (Imsen & Volckmar, 2014; Wendelborg & Tøssebro, 2008). What has been referred to as ‘the era of integration’ was governed by an ideology of normalisation (also referred to as mainstreaming) and lasted until the introduction of the national education curriculum of 1997 (L97).

The L97 was the first reform that introduced the term inclusion and was a marker for change towards a more inclusive ideology in Norwegian education (Hausstatter & Thuen, 2014; Nes, et al., 2004a). The change reflected international policies, such as the Salamanca statement on special needs education of 1994 (UNESCO, 1994). The change in terminology from integration to inclusion can be traced to dissatisfaction with the emphasis on school placement and assimilation as a sign of successful integration while disregarding the quality of education that ‘mainstreamed children’ received. This line of thought considered children educated in special schools as segregated, whereas children with disabilities in mainstream schools were referred to as integrated (Farrell, 2000). With the term ‘inclusion’, the emphasis was on children’s right to attend their local schools and the quality of education they received. The L97 was a detailed national curriculum that clearly stated its process aims and what should be taught at different grades. The starting age of school for children was lowered from seven to six, which increased compulsory education from 9 to 10 years of schooling. Against the trend of neoliberal education policy seen in other countries, the L97 did not specify its outcome objectives (Imsen & Volckmar, 2014).

After the millennium, Norwegian education received increased criticism following the first publication of the PISA (Programme for International Student Assessment) study in 2000, with Norway scoring ‘barely above average among numerous OECD countries’ (Imsen & Volckmar, 2014, p. 41). With the introduction of international comparative tests of educational quality such as PISA, Norwegian educational policy became increasingly influenced by international agencies like the Organisation of Economic Co-operation and Development and the European Union. A new direction in Norwegian education was announced following the election of a centre-right wing coalition government in 2001. The result was a new reform with neoliberal underpinnings – the Knowledge Promotion Reform (K06) launched in 2006. By the time of implementation, a left-wing coalition was in place, and K06 received seemingly unified political approval. The focus of the reform was development of three core skills: reading, writing and mathematics. Learning outcomes were introduced as loosely defined result-oriented and competence-based outcomes to be achieved

at the end of grades four, seven and ten, and a national system for quality assessments and national tests was introduced to monitor progress (Imsen & Volckmar, 2014; Prøitz, 2015). Few governmental implementation guidelines were developed, and through a decentralised educational system, the responsibility of transforming and implementing policy into practice was delegated to school owners and agents of local schools (Prøitz, 2010).

One of the controversies in the reform process was the question of children's legal rights to special education (Strømstad, Nes, & Skogen, 2004; White Paper No. 30, 2003–2004). The moderate camp emphasised that all children should have the opportunity to attend their local school but that they should also have the right to attend special education if they did not benefit from the education in the local school. The more radical camp argued that children's rights to special education should be replaced with a stronger emphasis on school owners' obligation to provide all pupils with education adapted to their needs and that the special education system should be abolished (Strømstad et al., 2004). The latter argument was rejected in the development of the white paper on culture for learning (White Paper No. 30, 2003–2004). Instead, children's right to special education was maintained with an emphasis on inclusive and adapted education (in Norwegian: *tilpasset opplæring*)<sup>1</sup>, as well as the reduced use of segregated special education (Buli-Holmberg & Nilsen, 2010; White Paper No. 30, 2003–2004). Furthermore, the white paper '... and no one left behind. Early intervention for lifelong learning' (White Paper No. 16, 2006–2007) emphasised the need for early intervention to prevent the (re)construction of social inequality through education.

Several concerns were raised about the autonomy of schools to implement this policy and the ambiguity surrounding the rights of children to adapted education versus their rights to special education. One concern was the (re)production of disparity in the quality of the education that children received in different schools (Grue, 2001). As long as schools were not required to include all children and create an inclusive school culture, inclusion risked being arbitrary and dependent on individual teachers or parents fighting for their children's rights (Tideman-Andersen, 2004). Imsen and Volckemar (2014) emphasised that 'it remains unclear how far this right [adapted education] is extended in practice and whether individual parents can demand "tailored" teaching for their children' (p. 48).

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<sup>1</sup> Adapted education is a tool that can be used to promote inclusion in PE. Adapted education, in a narrow sense, relates to the adaptation strategies and methods directed at the individual pupil, whereas a broad understanding of adapted education relates to the educational strategies directed at the group and communal level, such as educational strategies aimed to alter the learning environment (Haug & Bachmann, 2007).

Norwegian schools serve an increasingly heterogeneous population, and the educational system needs to better understand how to cater to this diversity (Karseth & Møller, 2014). Statistical data from Statistics Norway (2012) on people with physical disability, work and education showed the need for more knowledge of inclusion in education. In brief, 64% of people with physical disability were unemployed, compared with 13% of the general population. Furthermore, 64% of people with physical disabilities had elementary school as their highest level of education, compared with 17% for the overall population. Additionally, the unemployment rate of people with physical disabilities who started their education in the 1980s and those with physical disabilities who started their education in 1970s was practically the same.

Furthermore, a recent expert group initiated by the Norwegian Ministry of Education indicated that the special pedagogy system for children in need of adapted education was both exclusionary and dysfunctional (Nordhal, et al., 2018). Exclusionary strategies for adapted education were often identified, and the organisation and content of adapted education often led to marginalised learning and lack of belonging within the peer group. Furthermore, many children were taught by school personnel without the proper qualifications (Nordhal, et al., 2018). These studies suggest that the challenge of inclusion in Norwegian education is far from being resolved.

#### ***Norwegian physical education curriculum***

The overall aims of PE as presented in K06 are (a) ‘bildung’ (*danning* in Norwegian)<sup>2</sup> and identity shaping, (b) sensing, experiencing, learning and creating through bodily movements, (c) learning fair play and respect for others, (d) experiencing enjoyment and mastery of physical activity, (e) forming positive perceptions of the body and the self, (f) evaluating the culture of bodily ideals and movements that can influence self-esteem, health, nutrition, exercise and lifestyle, (g) understanding the relations between effort, goals and achievement, as well as the factors that influence motivation for physical activity and exercise, (h) developing competencies through a broad sample of games, activities and the safe enjoyment of outdoor activities and nature, (i) challenging the children physically, (j) providing

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<sup>2</sup> The German word ‘bildung’ is often used in English literature to describe the Norwegian term *danning*; it refers to the process of uniting individuals and culture in a rich and harmonious interplay. (<https://www.uv.uio.no/english/research/subjects/bildung/>)

motivation for lifelong physical activity, (k) safeguarding traditional and alternative movement activities, and (l) enabling the adaptation of PE to children's abilities.

The national PE curriculum also identifies the following physical activity focuses for different grade levels: a broad-spectrum of activities in different movement environments for grades 1–4, sports and outdoor life for grades 5–7 (*friluftsliv* in Norwegian) and sports, outdoor life, exercise and lifestyle for grades 8–10. The activity arenas specified are broad so that they can be adjusted to diverse interests, school cultures and the resources available within the community. The activities should include organised activities, free play, experimentation with different movements, and different games and activities both outdoors and indoors. The PE curriculum also identified between 15 and 18 relatively broad competence-based aims to be achieved by the end of grades 4, 7 and 10.

When K06 was first introduced, effort was removed as an assessment criterion in PE. However, after an evaluation of PE initiated by the Norwegian Education Directorate (Lyngstad, Flagestad, Leirhaug, & Nelsvik, 2011), the national PE curriculum was revised, and effort was again reintroduced in 2012. Grading in PE is first introduced in secondary school (grades 8–10) and is based on the assessment of three factors: effort, progress and abilities. Furthermore, to strengthen the focus of assessment for learning instead of assessment of learning, K06 emphasised both process assessment and final assessment (Leirhaug & Annerstedt, 2015).

According to the Education Act § 5-1, pupils who are not able to benefit from general education are entitled to special education. Regardless of children's placement, the decision on special education must be based on the children's needs and not the lack of resources. Special educational provision requires an individual educational programme (IEP) for pupils. With the introduction of K06, schools reported an increased use of special education and diagnostics for individual children (Mathiesen & Vedøy, 2012) and recent statistics indicate that the number of children receiving special education has increased by 34% in the period from 2004/2005 to 2015/2016 (Ministry of Education, 2015). One reason for this increase may be changes in national reporting criteria for special education (Wendelborg, 2010a). However, reports on special education indicate several important influencers in the national curriculum, such as an increased focus on learning outcomes and international and national tests (Mathiesen & Vedøy, 2012).

The factors affecting the inclusion of children with disabilities in PE at this level have received limited attention in the previous research (Smith & Thomas, 2006). However,

research indicates that cross-pressures and ambiguities in the national curriculum influence the inclusion of children with disabilities in PE (Smith & Thomas, 2006; Svendby, 2013). A recent discourse analysis of national PE curriculums in England and Norway also suggested that the national PE curriculums inadequately appreciate the diversity among the group of pupils by privileging white, Eurocentric knowledge in which pupils are constructed as universal, normative and contingent (Dowling & Flintoff, 2018).

### **The institutional level**

#### ***School owners and leaders***

Previous research has identified school owners and leaders as important institutional agents for the implementation of change in schools. A systematic review found that schools that are effective in promoting participation by all pupils were characterised by the presence of school leaders committed to inclusion and to leadership styles that encouraged leadership among the personnel (Dyson et al., 2002). School leaders are responsible for ‘mobilizing and influencing others to articulate and achieve school's shared intentions and goal’ and serve as the main decision-makers about priorities in school economy and resources when conflicting interests emerge (Firestone & Riehl, 2005, p. 14). Despite the decisive role of school leadership in supporting inclusion and equality in education, the link between school leadership and inclusion in PE has largely been overlooked in the literature (Block & Obrusnikova, 2007; Qi & Ha, 2012).

#### ***Local school cultures***

According a review by Dyson et al. (2002), inclusive schools are collectively oriented and characterised by an inclusive school culture with an ethos of respect of difference and commitment by the school staff to quality of education for all pupils. However, consensus and commitment to inclusion in the local school is always a product of the negotiation of policy and practice between the stakeholders involved. School personnel negotiate the tensions and contradictions between the standards of the local schools and the inclusion agenda in national and local policies (Ainscow, Booth, & Dyson, 2006; Arnesen, Nilsen, & Leirhaug, 2013). In Norway, the importance of the negotiation and interpretation of governmental instruments within local school cultures was amplified with the introduction of K06, which increased the focus on school leadership, autonomy, distribution of accountability, competition among schools, learning outcomes and parental choice (Karseth & Møller, 2014; Møller, 2009). As result of increased school autonomy, the inclusion of children with disabilities has been

played out differently in different local communities and schools (Møller, 2009; Wendelborg, 2010a).

#### *Collaboration among different stakeholders*

Collaboration between different stakeholders is a trademark of schools characterized as effective in promoting inclusive education (Dyson et al., 2002). Systematic collaboration between team members, for example, PE teachers, adapted PE (APE) consultants and learning support assistants (LSAs), has been shown to facilitate the inclusion of children with disabilities in PE (Qi & Ha, 2012); conversely, a lack of collaboration between stakeholders can result in suboptimal participation arrangements in schools for children with disabilities (Hemmingsson, Gustavsson, & Townsendt, 2007).

Parents are important stakeholders in education (Nordahl, et al., 2018). Parental involvement with schools has been shown to influence children's academic performance (Hattie, 2009). Norwegian home-school collaboration studies have found that parents generally trust the educational system (Nordahl & Skilbrei, 2002). Although the reports demonstrated extended information sharing, few opportunities were available for dialogue, discussion and co-determination (Nordahl, 2000). Barriers identified were school cultures that exclude parents' perspectives, lack of knowledge of parental rights and responsibilities, hectic schedules of parents and school personnel, parents' lack of competence to make pedagogical decisions, parents' feelings of inferiority, and lack of school resources (Nordahl & Skilbrei, 2002). Furthermore, research from general education has indicated that parents of children with and without disabilities generally have positive attitudes towards inclusive education (de Boer, Pijil, & Minneart, 2010). However, some parents of children with disabilities were concerned about their child's emotional development in general education and the adequacy of resources in the general educational setting (Elkins, van Kraayenoord, & Jobling, 2003; Leyser and Kirk, 2004; 2011).

On the other hand, research on parental involvement and perspectives on PE and PE-related home-school collaboration is scarce (Svendby, 2017). A recent study showed that strategies for PE-related home-school collaboration were important for efficient inclusion in PE (Elnan, Kristensen, & Østerlien, 2017); however, PE-related home-school collaboration has been portrayed as underdeveloped (Svendby, 2017) and parents' satisfaction with their communication with the PE teachers seemed to depend upon the child's degree of physical inclusion (Lee, Haegele, & Chang, 2017). Nevertheless, a study by An and Goodwin (2007) indicated that parents valued their child's participation in PE and provided instrumental



support to teachers. Concerns raised by the mothers were safety, equipment, accessibility and instrumental support from the school personnel (An & Goodwin, 2007). Research by Goodwin and Ebert (2018) also illuminated the hidden parental labour involved in locating suitable, inclusive community physical activity programmes for children with disabilities.

#### ***Local Curriculum***

A Norwegian study indicated that the assessment of children's performance in PE is, to a large degree, dependent on the individual teacher and the local criteria plan for assessment and grading (Leirhaug & MacPhail, 2015). Increased focus on international and national tests, different quality expectations, and the large number of aims in the national curriculum have been experienced by many teachers as making it harder to facilitate deep learning and find the time needed for all children to reach the aims specified (Haug, 2016; Mathiesen & Vedøy, 2012; NOU, 2015:8).

#### ***Facilities***

Lack of a standard universal design for general schools also presents possible barriers to physical, social and pedagogical inclusion. While new school buildings are generally built with a universal design in mind, people with physical disabilities still find it hard to manoeuvre around some of the older buildings, and physical infrastructure and facilities are still experienced as a barrier for children with physical disabilities (Norwegian handicap organisation, 2005).

### **The classroom level**

#### ***Teachers***

Considerable literature has focused on teachers' attitudes towards the inclusion of children with disabilities in PE (Hutzler, 2003, Qi & Ha, 2012). A recent review of the literature found teachers' attitudes were influenced by the child's intrapersonal characteristics (i.e. the type and degree of disability), teachers' intrapersonal characteristics (i.e. gender, previous experience with children with disabilities, academic preparation and perceived competence) and interpersonal conditions (i.e. the support available from the school) (Hutzler, 2003; Block & Obrusnikova, 2007; Qi & Ha, 2012). Barriers mentioned were the lack of in-service training and inadequate preparation. Positive attitudes towards the inclusion in PE among pre-service teacher were associated with female teachers, higher perceptions of competence, years of higher education and having majored in PE (Qi & Ha, 2012). Studies of pre-service teacher

training programmes found that inclusive practices and experience of teaching were sources for learning (O'Brien, Kudláček, & Howe, 2009). Recent studies have also explored the implementation of online educational programmes for pre- and in-service PE teachers (Healy, Block, & Judge, 2014; Kwon & Block, 2017; Sato & Haegele, 2017)

### ***Peers***

Positive attitudes by non-disabled peers have been associated with female pupils and previous experience with children with disabilities, while negative experiences have been associated with an unstructured exposure to children with disabilities and among children in higher-grade levels (Qi & Ha, 2012). Intervention studies in PE have shown mixed results of interventions directed at disability awareness of and attitudes towards children with disabilities by the peer group (Block & Obrusnikova, 2007; Hutzler, 2003; Qi & Ha, 2012).

A recent review also indicated that children without disabilities who were unfamiliar with inclusive approaches felt confused, reluctant, embarrassed and self-conscious in their participation in inclusive PE settings (Ruscitti, Thomas, & Bentley, 2017). One argument against inclusion found in the literature has been a fear that inclusion of children with disabilities may negatively influence the quality of PE lessons for children without disabilities (Block & Obrusnikova, 2007). Block & Obrusnikova (2007) noted that modifications changing the nature of a game or considerably reducing its pace may be perceived as negative by children without disabilities. However, inclusion of children with disabilities does not seem to negatively affect the motor performance and engagement of children without disabilities (Block & Obrusnikova, 2007; Qi & Ha, 2012).

### ***Resources and support personnel***

Adaptive PE specialists, special pedagogues, LSAs and peer tutors are often used to facilitate inclusion in PE (Block & Obrusnikova, 2007; Qi & Ha, 2012). However, their role in facilitating inclusion is debated in the literature. LSAs have been found to support social interaction with peers and participation in activities, but they can also hinder or serve as a replacement for social interaction with peers (Causton-Theoharis & Malmgren, 2005; Tews & Lupart, 2008). LSAs have also found to be used as substitutes for the PE teacher whereby the teacher delegates the responsibility for a particular child's PE to a LSA (Block & Obrusnikova, 2007). This is of concern, considering that LSAs often do not have any formal teaching training (Block & Obrusnikova, 2007; Nordahl, et al., 2018). Peer tutoring and collaborative learning strategies have been used as positive support for inclusion in PE to

build motor performance, motor engagement and social interaction between tutors and the children being tutored (Block & Obrusnikova, 2007; Qi & Ha, 2012). A study of the experiences of children with physical disabilities receiving help in PE have also indicated that peer tutoring, instrumental support and mobility assistance were experienced as supportive and reinforced self-reliance if they were perceived as caring, facilitated successful participation (Goodwin, 2001). However, being helped could also be experienced as self-threatening if it reinforced dependency or relative inferiority or if it was experienced as unnecessary. Another source of support of adaptive PE specialists employed at individual schools or as consultants within a school district (Block & Obrusnikova, 2007).

#### ***Psychosocial learning climate, assessment, learning strategies and adaptation***

Few studies have explored the associations between the psychosocial learning climate and children's experiences with inclusion in PE (Block & Obrusnikova, 2007; Qi & Ha, 2012). An inclusive mastery-climate intervention targeting children's motivation suggested that a mastery-oriented learning climate aided learning for children with and without disabilities (Valentini & Rudisill, 2004). One study exploring cooperative learning in which instruction was given in small groups found that the capacity of children without disabilities to include children with disabilities was dependent on context and pedagogical factors (Grenier, Dyson, & Yeaton, 2005). Another recent study explored the relations between self-ratings of PE-teachers' teaching skills, environmental prerequisites and classroom climate, student-perceived PE self-efficacy, student aptitude for PE participation and physical and socio-cognitive functional skills (Bertills, Granlund, Dahlström, & Augustine, 2018). The study found that for children with disabilities, the classroom climate was more significant to PE-related self-efficacy for children with disabilities than it was to their peers without disabilities. A reciprocal relationship between children's socio-cognitive skills, participation and self-efficacy were found. The results also indicated that better teaching skills (as self-assessed by the teachers) benefited most children without disabilities but not the children with disabilities.

#### **The individual level**

Children with disabilities have shown significantly less motor engagement than their peers without disability in PE (Block & Obrusnikova, 2007; Qi & Ha, 2012). Research indicates a general lack of accommodation, and large class-sizes make accommodation particularly hard to facilitate (Block & Obrusnikova, 2007). Research suggests that it is common for children with disabilities to be withdrawn from PE to do segregated activities if the children were

unable to integrate themselves in the planned activities in lesson (Fitzgerald, 2005; Smith, 2004). Children with disabilities have also been found to be involved to a lesser extent than their peers in traditional team games in PE (Fitzgerald, Jobling, & Kirk, 2003; Smith, 2004). For some children, restricted participation, together with negative perception of their bodies and capabilities, can have a detrimental influence on their self-esteem and confidence (Fitzgerald, 2005). Segregation and peer-lead exclusion from activities can also enhance feelings of social isolation (Fitzgerald, 2005).

The distinction between good PE days and bad PE days, as suggested by Goodwin and Watkinson (2000), provides a constructive way to understand inclusion in PE as a continuing process towards social justice and equality. Good days for children with disabilities were described as days when they felt they belonged to the group, when they were able to benefit from the programme, and when they were able to participate skilfully in the activities (Goodwin & Watkinson, 2000). Seymour et al. (2009) furthermore observed that positive interaction in PE could lead to friendships among children with and without disabilities. However, research indicates that positive social interaction with peers without disabilities continues to be a challenge in PE (Place & Hodge, 2001; Qi & Wang, 2018).

Children have described bad days as days when they experienced social isolation or restricted participation and when their competence and participation were questioned (Goodwin & Watkinson, 2000). Other negative experiences described in the literature are being ridiculed, bullied, experiencing failure and feeling different, sad, angry or embarrassed (Block & Obrusnikova, 2007; Haegele & Sutherland, 2015). Findings also showed that some children spent more time with LSAs and teachers than their same-aged peers (Haegele & Sutherland, 2015). Children has also been found to be reluctant to disclose a hidden disability to their PE teacher for fear of marginalisation or exclusion from the class (Moola, Fusco, & Kirsh, 2011).

### **Summary of the knowledge gap**

The research reviewed suggests that the focal stakeholder perspective included in many of the studies is the PE teacher. While research into children's perspectives on inclusion in PE is gaining ground, the children's 'voice' in the research is still marginal. Few studies have included the school parental perspective. Subsequently, our knowledge on PE-related home-school collaboration and parental satisfaction with inclusion in PE is scant. Knowing the importance of the home-school linkage on children's learning in school (Hattie, 2009), this

gap in knowledge is concerning. Other perspectives that have received slight attention is the perspectives of school administrative personnel, PE teacher educators, and other support personnel, such as LSAs, special educational needs coordinators, adaptive PE teachers, and physiotherapists.

In large, the research reviewed has generally explored PE in a vacuum without taking into account the complexity and multilevel factors that may influence inclusion in PE. Schools are open systems influenced by multifaceted factors and research projects adopting a holistic ecological perspective are warranted. Furthermore, in the Norwegian context, the historical perspectives of inclusion of children with disabilities in PE are missing in previous research. This gap complicates analysis of how changes at the chronosystem level may influence inclusion in PE at the local schools.

Finally, while considerable research have considered attitudes towards inclusion in PE among teachers and children without disabilities, our understanding of how the psychosocial climate is associated with children's experiences of inclusion in PE is scarce. Few studies have explored the relations between individual attributes, perceived psychosocial learning climate and children experiences of inclusion in PE.

This dissertation contributes to our knowledge of inclusion of children with disabilities in PE by (1) providing a review of the contemporary research that informs our current knowledge and by describing the gaps of research in detail (Article I); (2) exploring inclusion in PE through the experiences of children with disabilities and parents (Article II); (3) investigating how the psychosocial aspects of PE and degree of physical inclusion are associated with children's experiences with social and pedagogical inclusion in PE (Article IV); and (4) exploring parents experiences with PE-related home-school collaboration and their satisfaction with inclusion in PE (Articles III and V).

## Chapter 4 | Aims and research questions

The overall aim of this dissertation was to identify the gaps in the extant knowledge base on inclusion of children with disabilities in PE and explore inclusion in PE as experienced by children with disabilities and parents in Norway. The specific aims and research questions are described for each study below.

### Study I

Study I was a systematic literature review. The aim was to compile, organise, and analyse the body of literature on inclusion of children with disabilities in PE from January 2009 to December 2015 (aim I/Article I). The research question was:

- I. Which stakeholder's perspectives, main themes, methodological trends, and country of data collection are salient in research on inclusion of children with disabilities in PE?

### Study II

Study II employed qualitative research methods. The study was a hermeneutic phenomenological interview study aimed at exploring in depth the phenomena of inclusion in PE as experienced by children with disabilities their parents (aim II/Article II). The questions guiding this part of the research project were:

- II. How is social and pedagogical inclusion in various PE settings experienced by children with disabilities and their parents?

The second aim was to better understand the PE-related home-school collaboration as experienced by parents of children with disabilities (aim III/Article III). The research questions in focus were:

- III. How do parents of children with disabilities experience the PE-related home-school collaboration?
  - a. Which conditions do parents experience as promoting or inhibiting home-school collaboration
  - b. How do parents experience their involvement efforts to secure quality of PE?

### Study III

Study III employed quantitative research methods. The study used a cross sectional survey to explore the associations between the experiences of physical, social and pedagogical inclusion

and intrapersonal, interpersonal, and contextual factors among children with disabilities (the child survey) and their parents (the parental survey).

The first aim of the study was to explore what combination of psychosocial learning climate and psychological attributions supports social and pedagogical inclusion in PE as experiences by children with disabilities (aim IV/Article IV). The research question in focus was:

- IV. What motivational pathways supports social and pedagogical inclusion in PE among children with disabilities?

The second aim was to explore the associations between intrapersonal, interpersonal, and contextual factors and parents' satisfaction with social and pedagogical inclusion in PE (Article V/aim V). This study was guided by the research questions:

- V. What are the associations between intrapersonal, interpersonal and contextual factors and parents' satisfaction with social and pedagogical inclusion in PE?
- a. Are there differences between parents' satisfaction with dimensions of inclusion as to parental and child characteristic?
  - b. How is parents' with social and pedagogical inclusion in PE associated with their attitudes towards inclusion in PE, and perceived home-school collaboration associated, and children's degree of physical inclusion?
  - c. Does the explanatory strength of the independent variables vary according to the degree of satisfaction with inclusion in PE among the parents?

## Chapter 5 | Methodology

### Research design and philosophical positioning

The research project was designed as a parallel multimethod design. In contrast to mixed-method designs, multimethod designs incorporate studies that are complete in themselves and the results of each study inform the 'conceptual scheme' of the overall research questions (Morse, 2003, p.199). The multimethod design allowed us to collect both quantitative and qualitative data simultaneously, analyse and present the data separately, and finally, to merge and compare how the results contribute in answering the overall research question of the research project (Creswell, 2015; Morse, 2003). Figure 2 illustrates the design and overall procedures of the research project.

Multimethod and mixed-method designs have gained interest in the research literature. This has often triggered by the recognition that the phenomenon of interest is too complex to be captured by one methodological approach (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). Nevertheless, the foundations for multi and mixed-method research are still contested (Teddlie & Tashakkori, 2003). The concerns are often related to philosophical positioning (Hathcoat & Meixner, 2017). Within the incompatibility thesis, quantitative and qualitative methods are often displayed as mutually exclusive and impossible to combine (Teddlie & Tashakkori, 2003). Researchers taking on this position argue that the problem is not necessarily at the level of practice, but the epistemology underlying the study (Hathcoat & Meixner, 2017; Howe, 1988).

In line with the compatibility thesis this dissertation maintain that combining quantitative and qualitative methods if fruitful and oppose the statements that methodological tools are necessarily paradigmatic specific or that the use of both qualitative and qualitative approaches necessitates paradigmatic incoherence (Hathcoat & Meixner, 2017; Howe, 1988; Gage, 1989; Martin, 2011). The diverse paradigmatic, analytical and interpretative approaches observed in previous interview studies in PE research support our claim (Wilhelmsen & Sørensen, 2017). Our research interests and questions are often well served with the use of multimethods. However, reflexivity is needed to attend to the ontological and epistemological dimensions underpinning the research (Danermark, Ekstrom, Jakobsen & Karlsson, 2002).



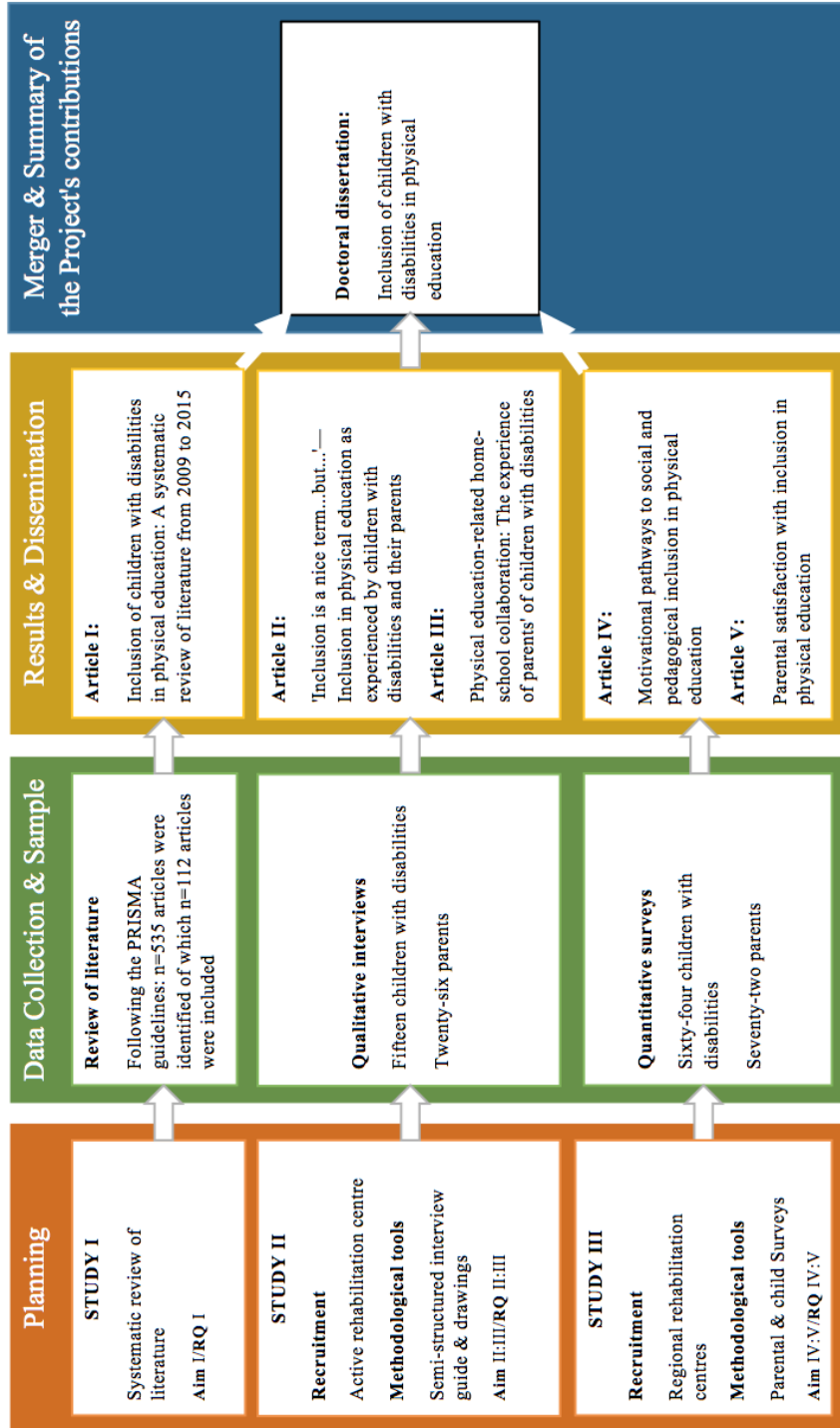


Figure 2 Parallel multimethods design

The philosophical stand underpinning this research project is critical realism grounded on the works of Roy Bhaskar and Margaret Archer (Archer, et al., 2016; Danermark et al., 2002; Gorski, 2013). Within what has been termed the ‘paradigm wars’ the polarisations between positivism versus hermeneutics, quantitative versus qualitative, universalism versus particularism are often stressed (Denzin & Lincoln, 2011). Critical realism take on a ‘both and’ approach in contrast to the ‘either-or’ dualistic approach (Danermark et al., 2002).

Critical realism is based on a *ontological realism* and asserts that there is a world out there that is observable and that much of reality exists independent of human consciousness (Archer et al., 2016). As to how researchers gain knowledge about the world critical realism embraces *epistemic relativism* (Archer, et al., 2016). First, knowledge about the world is always culturally, socially and historically situated. Second, knowledge is always articulated from a specific standpoint, which makes knowledge contextually and conceptually dependent. Critical realists hold that it is possible to improve our knowledge about the world over time. However, all attempts to gain knowledge about the world has its limitation. There is no absolute source of knowledge, there is no value free inquiry, multiple realities exist and the realities described in research is always ‘someone’s reality’ (Racher & Robinson, 2002).

In research breadth often come at the cost of depth and vice versa. This warrants both intensive qualitative and extensive quantitative methods of inquiry (Archer, et al., 2016; Danermark et al., 2002). As shown in Figure 2, our choice of research design is based on the complementary strength thesis. The design allowed us to provide different perspectives on the phenomenon of inclusion in PE and to obtain information on different level of data (Morse, 2003). The three first articles in this dissertation are exploratory and aimed to compile, organise, and analyse research on inclusion of children with disabilities in PE (Article I) and to explore the inclusion in PE phenomenon as experienced by children and parents (Article II and III). The qualitative design of Study II allowed us to explore the complexity of the lived experiences of inclusion in PE among the children and their parents. The two last articles are deductively driven and explore specific sub mechanisms of inclusion in PE (Article IV and V). The quantitative design of Study III allowed us to explore overarching patterns and associations between selected variables and the participants’ experiences of inclusion in PE. I first describe the common methodological components of the overall research project before describing the procedures of the three studies separately. Chapter 6 presents the main results from the Articles I-V separately, before the findings are merged, compared and discussed in

Chapter 7. As will be shown, the knowledge gained from looking at the findings from the articles combined is greater than the sum of the parts.

### **Recruitment decisions**

The initial research design was structured as a sequential multimethod research project. The first phase was planned as a survey of inclusion in PE as experienced using a preselected national representative sample of families with children diagnosed with disability or chronic illness in the UngKan2 study (N=249, Kolle, Hansen, & Anderssen, 2012, see Appendix I for ethical approval). The second phase was to conduct qualitative case studies of 2-4 schools experienced as more or less inclusive based on the results from the survey. However, getting in touch with families was proven far more challenging than anticipated. Of the 249 families that had agreed to be contacted for follow-up studies in the UngKan2 study, 9 % answered the survey of which majority of the children was diagnosed with asthma. Thus, in our second attempt, a convenience and purposive criteria-based sample approach was used, in which children with disabilities and their parents were informed about the project through a letter in collaboration with regional rehabilitation centres or verbally in formal parental meetings at one rehabilitation centre specialised in adapted physical activity. The final recruitment procedures are described more in detail in Study II and Study III below.

However, difficulties in recruitment of children with disabilities in research are not uncommon and I believe the dilemma merits some reflection (Bredahl, 2013; Van Amsterdam, Knoppers, & Jongmans, 2015). There are no Norwegian records of children with disabilities enrolled in the different elementary schools (only numbers of children receiving special education). If we were to start a new process of probability sampling at the school level to recruit families for the project, it would be difficult to anticipate the number of children *with disabilities* we would be able to recruit and we would again risk a sample of children with low variability in terms of type and degree of disability. Another risk with recruitment at school level could be a biased sample based on the perceived importance and success of inclusion in PE by the local school leaders. Thus, collaborating with rehabilitation centres in the recruitment process enabled us to get in touch with families already linked to health services because of the child's disability.

We do not have the exact response rate of the participants in the surveys. However, efforts were initiated to better understand why some families did not want to participate in the study. The reasons for non-participation based a small questionnaire delivered together with

the inclusion in PE surveys were: (a) the survey was too difficult to answer for my child (n=16); (b) our child did not want to participate (n=9); (c) we as parents do not want to participate (n=6); and (d) we do not want our child to participate (n=4). Thus, the main reason reported was the gap between task difficulties represented by the survey and the children's cognitive abilities. This was expected because the research invitation was not restricted in terms of degree of disability. Such a criterion may be extremely hard to facilitate without any prior knowledge of the particular child. Such restriction may also invoke paternalistic protectionism and uncalled-for exclusion (Iacono, 2006). Thus, the final decision was the individual participants to make. The results above emphasise the importance of using multiple methods and various mediums of communication and exchange of meanings in our research with children (Clark, 2005; Clark & Moss, 2001). Other participation barriers mentioned in the conversations with parents were hectic days, severe illness among family members, and everyday logistics. Parents also described being invited to partake in several research projects. Thus, families with children with disabilities may receive more requests for participating in research projects, health projects, doctor-patient interviews/conversations, and service evaluations than the overall population. This may elicit research fatigue, especially if repeated engagements in research do not lead to any change (Clark, 2008).

### **Ethical considerations**

The permission to conduct the research project was obtained from the Norwegian Data Protection Official for Research, and the project was carried out in accordance with the agency's requirements (Appendix I). In line with the United Nations Convention of the Rights of the Child, this project recognises children's rights to participate in the research process and emphasises children as experts in their own lives, with the competence to skilfully communicate their experiences using a range of languages and methods (Clark & Moss, 2001).

In an attempt to both foresee and prevent plausible ethical challenge, we used several strategies to safeguard the participant's rights throughout the project (Ennew, et al., 2009). Research participants have the right to receive information that enables them to make an informed decision on whether or not to take part in the research and the information should clearly state that all participation is voluntary and that they can opt out of the project throughout the research process (NESH, 2006). However, access to do research with children is often mediated through parents or other carers acting as gatekeepers. While unequal power

relations are present in all research with humans, children's access to participation is to a greater extent influenced by perception of their competence and vulnerability—particularly children with disabilities (Kittelsaa, 2010; Powell & Smith, 2009). In the information to parents, we emphasised the importance of children's right to make their own decisions of participation in an attempt to encourage parents to let their children take part in the decision of participation (Powell & Smith, 2009). We also provided a separate invitation letter to the children (Appendix II). The letter clearly indicated that the children had the right to refuse or withdraw from the study at any time, without being asked why or it being held against them in any way (Christensen & Prout, 2002). Drafting an information letter is often a balance of saying all that is needed; yet keeping it concise so that the participants are not overwhelmed by the amount of information. Thus, a complementary strategy was to create a webpage with information on the project and contact information to the researchers involved. The informed consent of children and their parents were collected before data gathering (Appendix III).

It was important for us to provide various mediums of communication and exchange of meanings in our research with children (Clark, 2005; Clark & Moss, 2001). Thus, the data in this research project are based on field notes, interviews, drawings and surveys.

In the information about the interview, we indicated that we preferred to interview the children with disabilities and their parents separately – but that the final decision should be based on the child preferences. We also emphasised that parents should attempt to inform the children about the purpose of the interview before they ask whether or not they would like to take part. We briefly explained the purpose of the interviews at the start of each interview to make sure that the participants—especially the children— were informed about the process and their participatory rights before they agreed to take part. Participants were told that they could end the interview at any time without having to explain why. While no children asked to end the interview, some interviews were shortened because the interviewer could sense that the child was tired. This was particularly the case in some of the interviews performed in the afternoon. To preserve participations anonymity we summarised the information for the group of participants and used pseudonyms (Article II & III).

In the surveys, the parents and children were asked to indicate that they were informed about the aims of the research project, their participatory right, and that all participation was voluntary. Based on previous experiences we also know that some parents choose to limit the focus on their child's disability to protect them from differentness and stigmatisation. Thus, in an effort to reduce the focus on disability in the child survey we only introduced questions about type and degree of disability in the parental survey.

## Study I

### *Approach and procedures*

Our structured review of inclusion of children with disabilities in PE is presented in Article I. Based on the PRISMA guidelines (Moher et al., 2009) we performed a structured review of the research literature in the period 2009-2015. The inclusion criteria specified that the articles had to be (a) based on an original empirical study, (b) containing descriptions of method, (c) published in English or Scandinavian languages, (d) focused on inclusion of children with disabilities in general and adapted PE or school-based sport, (e) published in peer-reviewed journals from January 2009 to December 2015, and (f) not described in previous research reviews. The index systems searched were Web of Science, SPORTDiscus, and PsycINFO. An additional search was conducted in ORIA and two relevant journals were manually searched for eligible articles. The search string used was [(inclus\* OR integration OR mainstream\* OR adapt\*) AND (disability OR “special needs”) AND (“physical education” OR “school sport” OR “school based sport”)].

The search yielded 535 articles. First, duplicates were deleted (n = 112 articles excluded). Second, based on the criteria—(a) through (f)—aforementioned, the second author and I independently included or excluded articles sequentially. Screening articles for suitability based on title and abstract resulted in the exclusion of 249 articles. The articles that we were uncertain about were included in the next step. Next, we screened the remaining 174 articles in full, of which 74 articles were excluded. The selection process was followed by a discussion of discrepancies between the two (six articles) and final agreement on which of the articles to include or exclude (one article was excluded). The selection based on full-text screening resulted in the inclusion of 100 articles. An additional ten articles were identified by a manual search of the reference lists of all included articles, and two extra articles were included based on feedback from reviewers in the reviewing process. Finally, 112 articles were included in the analysis.

### *Analysis*

The analysis and categorisation of the research contribution was guided by a stakeholder perspective (Clarkson, 1995; Mitchell, Agle, & Wood, 1997). The results were based on descriptive statistics and thematic analyses of the main themes in the research contribution. Based on previous work by Hutzler (2003) and Zitomer & Goodwin (2014), the quality assessment of studies were employed by assigning points based on predefined criteria that

aimed to be paradigmatically sensitive. Based on the assigned points, we calculated a percentage score. Fifty percent or less were considered low scores, 51-75% medium scores, and 76%-100% high scores.

## Study II

### *Approach and procedures*

#### *The hermeneutic phenomenological approach*

Van Manen (2016) emphasises phenomenology as a method aimed at grasping the essential meaning of structures of people's everyday experiences. Phenomenology is concerned with the world as we immediately experience it—pre-reflectively, in contrast to how we theorise or conceptualise it (Van Manen, 2015). The intention of this study was to stay close to the participants' experiences in an effort to better understand the various experiences inclusion in PE may evoke. Lived experiences, cognitions, emotional, embodied, and implicit understandings are always socially, culturally, politically and existentially shaped (Van Manen, 2016). Through a process of phenomenological description and reflection this study aimed to identify the meaning and essences of these lived experiences and its relations to the meanings of inclusion in PE (Rich, Graham, Taket, & Shelley, 2013; Van Manen, 2016). Hermeneutic is often described as investigating the process of interpretation and underlines that the phenomenon of interest is always meaningfully interpreted (Rich et al., 2013). In practice, there are no clear boundaries between description and interpretation (Finlay, 2009). It is the focus on discursive language and sensitive interpretation makes the analysis and descriptions of the lived experiences possible and intelligible (Van Manen, 2016).

An important aspect of phenomenological research is the method referred to as *reduction* (Van Manen, 2014). According to Van Manen (2016), the method of reduction consists of two moves that complement each other. The first move *epoche* (or bracketing) is based on Husserl's phenomenology and refers to the suspension of the natural attitudes and taken-for granted beliefs of science by taking up a questioning attitude (Van Manen, 2014; 2016). The second move is to bracket our self as researchers and ask: How does this experience appear in consciousness or show itself in lived experienced? One way of bracketing is to narrate from lived experiences, without making judgements on the factuality of the experience, but rather participate in the narrations: "so this is how you experienced it" (Lindseth & Norberg, 2004). Bracketing in this sense does not mean putting our preunderstanding in brackets, but to bracket our judgement about the factual. Van Manen

(2014) argued that taking on a phenomenological approach to research requires a continuous critical and rigorous reflexivity to ‘lead back’ to the question or phenomenon of interests. On this note, the phenomenological approach provided a sensitive research approach to understand and describe the nuances and complexities of inclusion in PE as experienced by children with disabilities and their parents.

### *Procedures*

Purposeful, maximum variation, and criteria-based sampling was used to recruit participants (Patton, 2002). We recruited children with disabilities and their parents for the interviews with the intention of including those with various experiences in PE-related collaboration with the school (Van Manen, 1997). The main criterion was that the children had a disability or special educational needs (i.e. not necessarily diagnosed with as disability) and attended general elementary school. We also wanted to include girls and boys with various type and degree of disability. The families were recruited and informed about the research project and their participatory rights during their three-week stay in a rehabilitation centre specialising in adapted physical activity for children and adults with disabilities. The interview process took six months, which included five field trips to the rehabilitation centre, each lasting between two and four days. The first author conducted the interviews in the rehabilitation centre in between the daily activities or in the evenings.

### *Quality criteria*

In keeping with the idea that phenomenological texts are ‘ultimately ambiguous and never complete’ (Van Manen 2016, p.351), I suggest five criteria in which the quality of the research procedures, scholarly treatment of the sources, and the trustworthiness of the analysis may be judged, namely a) the ethical treatment of participant and material (which is previously elaborated on), b) the level of reflexivity, c) coherence, and d) the originality of insight (Van Manen, 2016; Zitomer & Goodwin, 2014).

Within the phenomenological approach, reflective research practice is often seen in relations how our preconceptions relates to the research throughout the research process (Tufford & Newman, 2010). Not as an attempt to bracket preconceptions, but to better understand them in an attempt to be able to refrain from judgements. In the initial stages of the interview study I teamed up with young women who was the leader of a youth disability organisation and wrote what Widerberg (2001) referred to as memory work (i.e. reflective writing on our own experiences from PE). The aim was to tune in on my own personal



experiences with PE, my physical habitus, and the preconceptions that I brought with me into the project. As a former pupil in PE, as a LSA, as a teacher—and now as a researcher exploring inclusion of children with disabilities in PE— I have accumulated both experiences and knowledge about inclusion in PE, but I am inexperienced with inclusion in PE from the perspectives of a child with disabilities or as a parent of a child with disabilities. Our discussions on our memory work served as an awareness process for me, promoting awareness of what I brought with me into the project, but it also contributed to positioning myself as an insider and outsider in relations to the particular phenomenon, and as reflections on specific identity markers—in my case non-disabled white Norwegian middleclass female researcher.

I also kept a reflective journal throughout the research process. The journal served as an audit trail of memos, logs and notes and enabled me to keep track of the rational for alterations made within the project and to reflect on my own experiences and assumptions as the project advanced (Zitomer & Goodwin, 2014). I also kept reflective field notes during the interview process, which allowed me to ‘revisit’ and reflect upon my own experiences and observations during my field trips as well as the interaction between the child, the parents and myself before and during the interviews. These field notes proved to be particularly important in the interpretation of the interviews in which the children took part (Article II). Particularly, in terms of the challenge of navigating power relations, the flow of conversations, and the balance of recognition in the interviews with both the child and the parent present. The journal and field notes also facilitated deeper levels of reflections across the stages of the research process, from the planning process to the final draft of the dissertation (Tufford & Newman, 2010).

Participants were, in an email sent out to the parents, invited to take part in member reflections by reviewing, commenting on or adding information to their interview transcripts (Smith & McGannon, 2017). To protect secure handling of the data, the invitation stated that they could respond to the email if they wanted me to forward a copy of the transcribed interviews. No participants accepted this offer.

Coherence in research is often judged by the consistency of the epistemological and ontological claims and decisions made from the start to the finish of the research project (Smith & McGannon, 2017; Zitomer & Goodwin, 2014). Critical realism and phenomenology may at first sight seem incongruent. However, phenomenology has been described as an approach applicable within different paradigms ranging from postpositivism to constructivism (Racher & Robinson, 2002). With a closer look at particularities within the phenomenological

literature, such as the universality of the essence of a phenomenon as argued by van Manen (1997) and the existence of reality before our consciousness, Racher and Robinson (2002) argued, and I concur, that there are overlap in the underlying philosophies that offer a research position within this intersect.

The processes of analysis and interpretation were a move between the original audio files, transcribed interviews, child drawings and field notes. The coherency of the individual articles was also explored by a colleague's critical review of drafts of the articles, the thematic structure and the presentation of the results (Smith & McGannon, 2017).

In an attempt to contribute with original insights on inclusion in PE, the aims of the studies were developed based on extensive review of the literature. Furthermore, in the string of articles and the dissertation's general discussion I have attempted to contribute to the discussion on inclusion in PE by writing in dialog with previous research as well as to encouraging continued conversations by raising new questions (Pelias, 2011; Zitomer & Goodwin, 2014).

### ***Participants***

Twenty-five families participated in the interview study. Fifteen children with disabilities (nine boys and six girls) and 26 parents (10 fathers and 16 mothers) attended the interviews. Article II is based data from all the interviews (i.e. both children and their parents). Data in Article III is limited to the parental accounts in the interviews.

All children were enrolled in general elementary schools (i.e. 20 children in primary schools and five children in secondary schools). Regarding class placement, 20 children attended a general class (GC) in a general school, and two children in a GC attended segregated PE. Five children belonged to a special group (SG) in a general school and did not participate in PE with their peers in the GC. Among the families participating in the interviews seven children were diagnosed with cerebral palsy (CP), five with Down syndrome, four with physical disabilities, three with learning disabilities, two with Asperger spectrum disorder (ASD) and four with other disabilities, such as visual impairment or an unspecified diagnosis.

Among the parents, six parents reported general or vocational high school as their highest level of education; two reported one to three years of higher education and 10 reported over three years of higher education (seven did not indicate their educational levels). In three families, one or both parents were born in another country.

### *Data gathering*

#### *Interviews*

A semi-structured interview guide was developed based on earlier research on inclusion in PE and home-school collaboration (Nordahl, 2000; Svendby, 2013; Wilhelmsen & Sørensen, 2017). The overall themes in the interview were: (a) children's placement in PE, (b) children's experiences with PE, having friends and feelings of being a legitimate participant in the activities, and (c) parents' experiences of their child's provision of PE and the collaboration with school. The semi-structured interview guide is presented in Appendix IV. The data set Article III was limited to all instances in the interviews where the topic of home-school collaboration was discussed (Braun & Clarke, 2006).

The interviews were recorded and transcribed verbatim. In two interviews the first author used notes to log the conversation because the child preferred to conduct the interview without being recorded. The interviews with children with disabilities and their parents were conducted either together or separately depending on the participants' preferences (12 interviews with both children and parent(s), thirteen interviews with only the parent and three interviews with only the child). The interviews were conducted while the parents and children were attending a three-week stay at the rehabilitation centre. At the start of the interviews, the study's aims and the participants' rights were explained again. Each participant signed an informed consent form. The interviews lasted between 25 and 60 minutes depending on the time available of the participants, the length of participants' response and children's level of energy during the interviews. The interviews were transcribed verbatim.

#### *Field notes*

The first author took field notes after each interview and at the end of each day. The field notes were particularly important on three occasions. They provided indispensable information in the analysis of the interviews that were not recorded (two interviews), the reflection of the rapport in the interviews, and notes on the informal conversations with parents and children. One situation especially enriching was the parental meetings in which the first author presented the research project for potential participants. In these meetings several discussions on inclusion in PE materialised. These meetings have left a mark on the analysis—in particular in the last theme presented in Article II.

*Drawings*

We also introduced drawings in the interviews as a possible medium for children to express themselves. The drawings is a part of the data material in Article II. Freehand drawing has been promoted as valuable method for children to express themselves through different 'voices', and forms of participation in research (Bland, 2018; Clark, 2005; Goodwin & Watkinson, 2000). Children were invited to draw a situation from PE that had made an impression on them. Afterwards we talked about the experience re-presented in the drawing. In two interviews the drawings provided access to more meaningful data than the verbal representations and served as medium to express the things not easily put in words by the children (Bland, 2018)

*Analysis*

Thematic analysis was used Article II & III in order to capture both the essence and the nuances of the experiences with inclusion in PE (Van Manen, 1997). However, the analytical approach differed slightly in two articles.

In Article II, the analysis was a movement between a holistic and line-by-line reading of the transcribed interviews and field notes in search for essential aspects of inclusion in PE as experiences by children and parents (Van Manen, 1997). The experiential aspects were logged for each interview. Next, we analysed patterns among the aspects covered in the interviews in search of subthemes and overarching themes (Van Manen, 2016). We re-read the interviews to search for additional aspects that may have been missed, and to assess whether to reconstruct the thematic structure. The final structure is described in Chapter 6. In the re-presentation of participants' experiences we use anecdotes and pseudonyms. We constructed the anecdotes by refining and removing extraneous details in the transcripts (Crowther, Ironside, Spence, & Smythe, 2017). The anecdotes are not indented to be representative and should be read as 'plausible example of a possible human experiences' (Van Manen, 2016, p.227). The anecdotes represent different and sometimes conflicting experiences. Similarly to Dowling and Flintoff (2011), we see these conflicts as fruitful points of departure. When seen together the variations of experiences may provide a better understanding of the complexity of experiences that inclusion in PE may invoke. The drawing presented in Article II was selected because it offered a richer re-presentation of a particular experience than the transcribed interviews.

In Article III, the aim of exploring crucial aspects of PE-related collaboration guided our focus on the essence of the parents' experiences. We first listened to the audio files, then

closely read and re-read the transcribed interviews and field notes to be familiar with our material. We used MAXQDA 12 (MAXQDA, 1989-2018) to help us structure our data analyses. Our search for common themes and essential phrases was guided by the research questions, so we sought out phrases that were particularly essential to understand the parents' experiences with PE-related home-school collaboration. We evaluated how each text brought a particular experience into view (Van Manen, 2016). A particular focus was on what conditions were described as promoting communication and collaboration with school and what conditions were experienced as inhibiting collaboration. By using a selective reading approach (Van Manen, 1997), the essential phrases were coded for each interview to log what aspect of the home-school collaboration that particular piece captured. We kept a list of all the codes throughout the process. Next, we analysed patterns among the coded phrases in search of overarching themes that provided examples of the meaningful aspects of the parents' reflections on PE-related home-school collaboration (Van Manen, 2016). The first draft of the thematic structure was then used when re-reading all interviews to search for additional subthemes that may have been missed in our selective reading and coding, as well as to evaluate whether to reorganise the thematic structure (Braun & Clarke, 2006).

### **Study III**

#### ***Approach and procedures***

A cross-sectional design was used in this study. To contact the children and their parents we used a purposeful convenience and criteria-based sampling (Patton, 2002; Palinkas, et al., 2015). Children with disabilities and their parents were informed about the project through a letter in collaboration with regional rehabilitation centres or verbally in formal parental meetings at one rehabilitation centre specialised in adapted physical activity. The criteria were that the child with disabilities was enrolled in general Norwegian elementary school. The participants were given the option of responding to an online or a hard copy version of the survey (Appendix V). For the online version, we used SurveyXact with which the university had a data handling agreement. Parents were encouraged to assist their children if needed.

#### ***Quality criteria***

Two criteria are often referred to in the discussions of the quality and rigour of quantitative studies and analysis, namely reliability and validity. We aimed to use scales that have been validated in previous research. However, due to limited research in the PE context on some aspects (i.e. scales on different dimensions of inclusion in PE, home-school collaboration,

parental attitudes towards inclusion) included in the surveys some of the items/scales used in Article IV and V were adapted from scales used in general educational setting. In the process of developing the child and parental surveys we consulted an expert with extent research and practical experience in working with children with disabilities to evaluate the face validity of the items and the appropriateness of the survey as a whole.

The parental and child survey were also piloted with the help of 30 fourth grade and seventh grade pupils and their parents at a general elementary school. In the child survey we tested different scales to measure children's motivational orientation and psychological basic need satisfaction. The scales intended to measure the same dimensions of motivational orientation were highly positively correlated (Pearson correlation  $>.93$ ) and the scales showed satisfactory internal consistency (i.e.  $\alpha >.89$ ). The psychological basic need satisfaction measures showed low positive correlation (i.e. Pearson correlation  $.31$  to  $.45$ ). The measures showed satisfactory internal consistency (i.e.  $\alpha >.70$ ), with the exception of the Perceived Competence subscale of the Intrinsic Motivation Inventory ( $\alpha >.51$ ) modified to the PE (Standage, et al., 2003; 2006). In an effort to reduce the length of the survey, the scales with the fewest items were selected (Sørensen, Roberts, & Farholm, in review).

I also conducted a focus group with six of the children who had tested the questionnaire to further explore their experience with answering the questions and whether they found particular phrases difficult to understand. The teacher was requested to ask three boys and three girls in fourth grade, with different level of reading skills to attend the focus group. Smaller adjustments to the wording and the choice of pictures used in the child survey were made in accordance with the feedback from the children and the expert.

Another common challenge in research using surveys is missing data. To deal with missing data in the parental and child survey data used in Article IV and V we used multivariate imputation by chained equations (MICE, Van Buuren & Groothuis-Oudshoorn, 2011). The MICE procedures better account for statistical uncertainty than single imputation procedures (Azur, Stuart, Frangakis, & Leaf, 2011). One assumption of MICE analysis is that the data is missing at random, i.e. the probability of missingness on variable  $Y$  is dependent on values on other variables in the dataset, but not the value of  $Y$  in itself (Enders, 2010). To assess the missing mechanisms within the data we used Little's MCAR test, which indicated that the data tested in both the child and parental survey was likely to be missing completely at random, i.e. the missingness of  $Y$  is believed to be unrelated to other measured variables or to values of  $Y$  itself (Enders, 2010). Although the Little MCAR test results indicated that we

could proceed with a complete case analysis (i.e. no missing data imputation), we proceeded with the MICE analysis to prevent reduction of power. In brief, the MICE perform a series of regression models whereby each variable with missing values is modelled conditionally, and in accordance with its distribution (i.e. binary variables with logistic regression and continuous variables with linear regression), upon on the other variables in the selected dataset (Azur, et al., 2011).

In the analyses we employed several measures to test the reliability of the measures and analyses depending on the analytical approach. In both Article IV and V, internal consistency of the scales used were assessed by calculating Cronbach's alpha coefficients ( $\alpha$ ), with the use of the criterion value of  $>.70$ . All alpha coefficients were higher than the criterion value (with the exception of introjected regulation  $\alpha = .61$  used in the relative autonomy index in Article IV). The final QCA models in Article IV were also tested for parameter sensitivity and robustness with the use of the systematic procedures promoted by Skaaning (2011). The following criterion for model fit in the confirmatory factor analyses (CFA) in Article V were used: the model chi-square, Standardised Root Mean Square Residuals (SMRS)  $\leq .08$ ; the Comparative Fit Index (CFI)  $\geq .95$ ; Root Mean Square Error of Approximation (RMSEA)  $\leq .05$  for close fit,  $\leq .08$  for approximate fit, from  $.08$  to  $.10$  for mediocre fit, and  $\geq .10$  for poor fit, and evaluation of lower- and upper-bound RMSEA 90% confidence intervals (Byrne, 2012).

### ***Participants***

In Article IV, the participants were 64 children with disabilities (28 girls, 34 boys, and two did not report sex; 7-16 year of age,  $M = 13.23$ ,  $SD = 2.05$ ) attending Norwegian elementary school (Grade 2-10). Among them 33% had a physical disability, 28% had Cerebral Palsy (CP), 8% had a developmental disability, 5% a visual disability, 5% a learning disability (including attention deficit hyperactivity disorder (ADHD)), and 3% had ASD. According to parental reports, 6% of the children had high degree of disability, 28% had moderate disability, 42% had a mild degree of disability, and 6% reported having no disability (11 parents did not specify their child's type or degree of disability).

In Article V, 51 women (71%) and 21 men (29%) participated in the study. The age of the participants ranged from 33 to 56 (mean 45.22,  $SD 5.73$ ). The percentage of parents with higher education (71% with one or more years of University/University College education) was higher than in a recent nationally representative sample (Statistics Norway, 2017). The children's school grades ranged from grade 2 to 10 of which 40% of the children were

enrolled in primary school and 60% in secondary school. Among the children, 67% had a physical disability (including children with CP), 14% had a developmental disability, and 19% had other disabilities (including visual disability, learning disability, Autism Spectrum Disorder, ADHD). As to degree of disability, 7% of the children had high degree of disability, 39% had moderate disability, 46% had a mild degree of disability, and 7% reported having no disability. Two parents did not specify their child's degree of disability.

### ***Measures***

#### *Article IV*

*Social inclusion.* To measure social inclusion we designed a 12-item with a five point Likert type scale inspired by the Norwegian version of the Booth index of inclusion (Booth & Ainscow, 2002; Nes, et al., 2004a). We used Pearson correlation, principle component analysis and oblimin with Kaiser Normalisation rotation to identify the factor structure of the items (Tabachnick & Fidell, 2014). Items with correlation  $r=.30$  or less on the marker item (e.g., 'In PE, I feel like a part of the class') were excluded from the analysis (one item excluded). Using the pattern matrix, items loading  $.32$  on two or more factors were excluded (one item excluded). Next, the principal component analysis indicated two factors without cross-loadings (first factor had eight items and the second factor had two items). The eight-item factor was averaged to construct one scale measuring social inclusion ( $\alpha=.87$ ).

*Pedagogical inclusion.* A similar process was followed for the pedagogical inclusion scale inspired by the Norwegian version of the Booth index of inclusion (Booth & Ainscow, 2002; Nes, et al., 2004a). Five out of 12 items were deleted based on low correlations with the marker item (e.g., 'I learn something every PE lesson'). The factors analysis of the remaining seven items indicated one factor ( $\alpha=.78$ ).

*The Motivational climates.* We used a short Norwegian version of the Perceived Motivational Climate Questionnaire (Sørensen, et al., in review) to measure mastery climate and performance climate. Each subscale consisted of three items. Responses were made on a five-point Likert type scale ranging from very true (5) to not at all true (1) preceded by the stem: "My PE teacher thinks I am successful when..." An example item is: "...I learn new skills." Items from each subscale were averaged to construct a mastery climate scale ( $\alpha=.82$ ) and performance climate scale ( $\alpha=.89$ ).

*Autonomy support.* To assess children's perception of an autonomy supportive environment in PE we used the Learning Climate Questionnaire modified to PE (Standage et



al., 2006). The children answered on a five-point Likert type scale ranging from strongly agree (5) to strongly disagree (1) preceded by the stem "In the PE classes..." An item example is "...we feel that the PE teacher provides us with choice and options." Items were averaged to construct one scale ( $\alpha=.79$ ).

*Physical inclusion.* The item "how often do you take part in PE together with your peers" was used to measure physical inclusion. Responses were made on a five-point Likert type scale from never (1) to always (5).

*Motivational orientations.* We used a short Norwegian version of the Perception of Success Questionnaire to measure motivational orientations (Sørensen, et al, in review). Each subscale consists of three items. Responses were made on a five-point Likert type scale from very true (5) to not at all true (1), preceded by the stem: "In PE, I feel successful when..." An example item is: "...I am the best." Items from each subscale were averaged to construct a task orientation scale ( $\alpha=.82$ ) and an ego orientation scale ( $\alpha=.87$ ).

*Basic psychological needs satisfaction.* *Need satisfaction of autonomy* was assessed with a five items scale used in previous studies (Standage et al., 2003; 2006). Participants responded to the items (e.g. "In PE I have some choice over what I do") on a five-point Likert type scale ranging from strongly agree (5) to strongly disagree (1). Items were averaged to construct one scale ( $\alpha=.76$ ). *Need satisfaction of competence* was assessed using the five items Perceived Competence subscale of the Intrinsic Motivation Inventory modified to the PE (Standage, et al., 2003; 2006). Participants responded to the items (e.g. "I am satisfied with my performance in PE") on a five-point Likert type scale ranging from strongly agree (5) to strongly disagree (1). Items were averaged to construct one scale ( $\alpha=0.76$ ). *Need satisfaction of relatedness* was assessed using the acceptance subscale of the Need for Relatedness Scale modified to the PE setting by Standage, et al. (2003; 2006). Preceded by the stem: "With the other pupils in the PE classes I feel..." , participants responded to five items (e.g. "...supported") on a five-point Likert type scale ranging from strongly agree (5) to strongly disagree (1). Items were averaged to construct one scale ( $\alpha=.93$ ).

*Motivational regulations.* Motivational regulations were assessed with the use of an instrument devised by Goudas, Biddle, and Fox (1994). The Perceived Locus of Causality (PLOC) measures four subscales of motivational regulation: internal motivation ( $\alpha=.92$ ), identified regulation ( $\alpha=.92$ ), introjected regulation ( $\alpha=.61$ ), and external regulation ( $\alpha=0.75$ ), while the amotivation subscale was based on the Academic Motivational Scale ( $\alpha=.91$ ). Each subscale consisted of four items on five-point Likert scale ranged from very true (5) to not at all true (1) preceded by the stem "I take part in PE class..." Previous work has supported the

psychometric properties of the instrument (Goudas, Biddle, & Fox, 1994; Standage et al., 2003). For parsimony we computed an index of motivation regulation labelled the relative autonomy index (RAI) followed by the procedures suggested by Grolnick & Ryan (1987). The RAI form one continuous variable from less to more self-determined styles of motivation and studies have indicated that the RAI adequately assesses self-determination in school and sport (Grolnick & Ryan, 1987; Ommundsen & Kvalø, 2007). Amotivation was introduced as a separate condition in the analyses to measure lack of motivation for PE.

*Disability.* Parents were asked to describe the type and degree of their child's impairment. Based on our former experiences we know that some parents try to limit the focus on disability labels by not discussing diagnostic issues with their child. Thus, due to ethical considerations, we did not ask children themselves to specify their type or degree of impairment. Degree of impairment was measured in terms of no disability, low, moderate, to severe disability.

#### *Article V*

*Satisfaction with social inclusion.* To measure satisfaction with social inclusion we designed a 10-item scale with a five point Likert type scale inspired by the Norwegian version of the Booth index of inclusion (Booth & Ainscow, 2002). We explored the relations between items using Pearson correlation. First, items with correlation  $r \leq .30$  or less on the marker item (i.e. 'In PE, my child feels like a part of the class') were excluded from the analysis (three item excluded). Table 1 shows the frequency of response on the items in the satisfaction with social and pedagogical inclusion scales. A CFA of the remaining items supported the construct validity of the scale (Table 2). The eight items were averaged to construct one scale measuring satisfaction with social inclusion with sufficient reliability ( $\alpha = 0.84$ ).

*Satisfaction with pedagogical inclusion.* A similar process was followed for the pedagogical inclusion scale. One out of nine items were deleted based on low correlations with the marker item (i.e. 'In PE, my child get to use her abilities'). To test the factorial validity of the construct we use CFA and post hoc analyses to refit the construct. After deleting one item due to cross loading above 10.00, a CFA of the remaining items supported the construct validity of the scale (Table 2). The seven items were averaged to create one scale with sufficient reliability ( $\alpha = .81$ ).

*Demographic scale.* Participants completed a demographic scale indicating age, sex, education and birthplace (nation). Education was measured as follows: Primary school (1),

High school – skilled labour (2), High School - university preparation (3), 1-3 years of higher education at University/University College (4), more than 3 years higher education (5).

*The child's type and degree of disability.* Two measures were used for children's type and degree of disability. First, *the degree of disability* was measured: (1) none, (2) low, (3) moderate, and (4) high. Due to low response in the lowest categories we dummy coded the two scales (0=0-1, 1=2-3), whereas score 0 represents low degree of disability. Second, to identify type of disability parents were asked to describe the child's disability. The authors categorised children's type of disabilities into three categories (i.e. physical, developmental and other types of disabilities) based on the descriptions.

*Physical inclusion* was measured with two questions: How much time does your child spend in PE together with his or her peers without a disability? And how much time does your child spend in special PE groups? (The second item was reversed). The parent answered on a five point Likert type scale (5 = Always, 1 = Never. Missing= Do not know). An average score of the items were used as a measure for physical inclusion (Spearman's Rho = .64).

*Attitudes.* We used six items to measure parents' attitudes towards inclusion in PE. The items were preceded by the stem 'inclusion of children with disabilities in PE would...' (i.e., '...help children without disabilities to interact with children with disabilities'). The parent answered on a five point Likert type scale (5 = completely agree, 1 = completely disagree). The six items were averaged to create one scale with sufficient reliability ( $\alpha = .89$ ) and fit.

*PE-related home school collaboration.* To measure PE-related home-school collaboration we developed two scales based on previous studies on home-school collaboration in Norwegian elementary school (Nordahl, 2000) that the parents answered on a five point Likert type scale (5 = completely agree, 1 = completely disagree). The first scale measured *PE-related information from school* (i.e., 'I am very pleased with the amount of information about my child's development in PE shared by the school'). One item was deleted due to cross loading ( $mi = 16.26$ ). The four-item scale showed sufficient reliability ( $\alpha = .74$ ) and fit. The second scale measured *PE-related codetermination* with four items (i.e., 'I/we are rarely included in the discussions about my child social development'). The four-item scale showed sufficient reliability ( $\alpha = .71$ ) and fit (Table 2). Table 2 display the fit indices of the CFAs.

### **Analysis**

IBM SPSS statistics 24 and R 3.4.1 were used as platforms for the analyses. The raw data were investigated using descriptive statistics including frequency tables and scatter plots. To

handle missing values in the data we used the R package ‘mice: Multivariate Imputation by Chained Equations’ (Van Buuren & Groothuis-Oudshoorn, 2011).

In Article V, we used the R-package ‘QCAQUI’ (Thiem & Dusa, 2013) to perform the two-step fsQCA analyses (Schneider & Wagemann, 2006).

In Article V the main modelling approaches were ordinary least square regression (OLS) and quantile regression (QR). We used Lavaan R package to perform the CFAs (Rosseel, 2012). To investigate explore group differences in parents’ satisfaction with inclusion in PE we employed independent t-tests and one-way ANOVA. Bonferroni corrections were used for post hoc analyses. To explore associations between parents’ satisfaction with social and pedagogical inclusion and parents’ attitudes towards inclusion, and perceived PE-related home-school collaboration we used Pearson correlation and OLS. Lastly, to explore whether the explanatory strength of the independent variables vary according to the degree of satisfaction with inclusion in PE, we used QR. To perform the QR analyses we used the quantreg R package (Koenker, 2018). Both QCA and QR are described below as many readers may not be familiar with the approaches.

#### *Qualitative comparative analysis (QCA)*

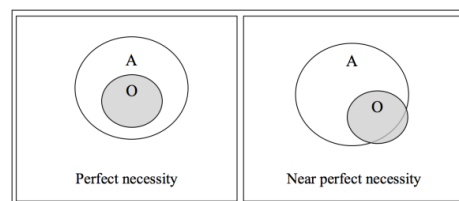
To be able to capture the complexity of the motivational mechanisms involved in inclusion in PE in we use a two-step fuzzy qualitative comparative analysis approach (fsQCA). QCA has been proven valuable in educational research and beyond (Cooper & Glaesser, 2011; Ragin, 2008; Thiem & Dusa, 2013). In the following, I introduce the basic concepts of fuzzy QCA (fsQCA) more in detail. For a briefer introduction see our description in Article IV. For information on the technicalities of the various analytical approaches within the QCA umbrella, I recommend Ragin (2008) and Schneider and Wagemann (2006).

FsQCA is a configurational comparative analytical approach exploring the combinations of causal condition that are necessary and/or sufficient to reach a particular outcome (Ragin, 2008). FsQCA is based on four underlying principles: 1) one condition may not display an effect on an outcome on its own, but only together with other conditions (i.e. conjunctive causation); 2) both the presence and absence of a condition may lead to the outcome dependent on the configuration (i.e. asymmetrical causation); 3) similar conditions can lead to different outcomes (i.e. multifinality), and 4) alternative pathways to the outcome are possible (i.e. equifinality). Thus, fsQCA permits the combination of different combination of conditions that are conducive to an outcome and different conditions may have opposite effects depending on the combination (Wagemann & Schneider, 2012). As an example,

children with different motivational attributes may experience inclusion in PE depending on the contextual conditions. For some children being highly ego oriented can be conducive for feeling included in PE if the need for competence is satisfied. While for the child who do not experience the satisfaction of the need for competence, being highly ego oriented can be detrimental. Yet again, if the child is task oriented as well as ego oriented, satisfaction of the need for competence may no longer influences experiences of inclusion. Such causal complexity is the heart of fsQCA, but is beyond the reach of traditional statistical inference.

*Calibration of variables into sets.* fsQCA is based on set theory in which the social phenomena is modelled in terms of set relations and the data is calibrated to consists of set memberships scores (Schneider & Wagemann, 2012). Whereas an earlier version of QCA (crisp QCA) required a binary classification of the conditions and outcomes, the more recent fsQCA allows for degrees of membership by assigning fuzzy membership scores. Fuzzy membership scores imply the degree to which different cases belong to a set/condition (including full membership, the point of crossover, and full non-membership) (Ragin, 2008). The calibration of thresholds is both a qualitative and a quantitative approach in that they are assigned on the basis of theoretical knowledge and empirical evidence (Ragin, 2008). Membership scores in the range 0.5 to 1 represent cases that are more “in” than “out” of a given condition, while the opposite is true for scores in the range 0 to 0.5. Score equal to 0.5 represent the point of maximum ambiguity and are thought of as neither “in” nor “out” of the condition. After the calibration, memberships in the different conditions are compared to identify necessity and sufficiency relations between the conditions and the outcome.

*Necessity relations.* In set theory, conditions and outcomes are either subset, supersets of equivalent sets of each other (Schneider & Wagemann, 2012). A necessary relation between a condition and an outcome represent superset relation. A condition is *necessary if*, whenever we see the outcome, *then* we also see the condition. A perfect necessary relation and a near perfect necessary relation is displayed in Figure 3 below where A is the condition and O is the outcome.

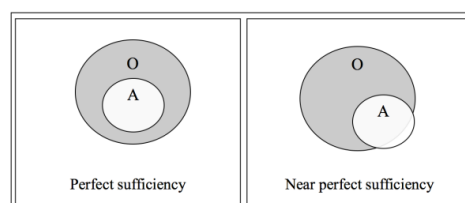


**Figure 3** Necessary relations between a condition (A) and an outcome (O)

An example is *if* every time children feel pedagogically included in PE they also report being

physically included, *then* physical inclusion is a necessary condition for pedagogical inclusion. Though, a child can be physically included without feeling pedagogically included.

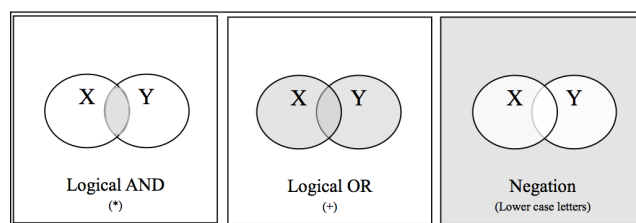
*Sufficiency relations.* A condition is sufficient *if* whenever we see the condition *then* we also see the outcome.



**Figure 4** Sufficiency relations between a condition (A) and an outcome (O)

An example of a sufficient configuration (i.e. when a combination of two or more conditions are sufficient, but not the individual conditions by themselves) is *if* every instance a child reports high perception of mastery climate and task orientation (MAS\*TAS), she also reports high perception of social inclusion (SI). *Then* mastery climate combined with task orientation is a sufficient configuration for social inclusion ( $SI \leq MAS * TAS$ ). However, we could still observe a child who feels socially included in PE, but with low perception of mastery climate and task orientation.

*Logic and Boolean algebra.* The underlying epistemology and mathematical models in QCA differs from traditional statistical inference, and the notations and tables require a different interpretation. QCA uses formal logic and Boolean algebra to express the relationships between conditions and the outcome. The three basic operators are: logical AND (\*) representing the intersection of conditions wherein the outcome is dependent on the concurrence of the conditions; logical OR (+) represents the union of conditions in which either of the conditions would lead to the outcome; and logical NOT in which negations of a conditions are denoted by replacing uppercase letters with lower case letters.



**Figure 5** Set theoretical operations

In the logical AND the minimum rule is applied, in which a case membership score in a

conjunction is determined by the minimum value of the case's membership across the sets that are combined. In logical OR the maximum rule is applied, in which a case membership score is calculated by the maximum value across the single components. In a logical negation calculation is based on subtracting a case's score of the presence of the condition from 1 (Schneider & Wagemann, 2012). If we take the example above and add a second sufficient path towards social inclusion, for example, an autonomy supportive climate AND negation of amotivation ( $AUS * \text{amo}$ ), the formula would read:  $SI \leq MAS * TAS + AUS * \text{amo}$ . The formula specifies two sufficient, yet distinct, paths towards social inclusion, namely mastery oriented climate for children who are task oriented OR an autonomy supportive climate for children who are not amotivated. Whether we can interpret the formula as causal paths needs to be theoretically determined (Ragin, 2008).

*INUS conditions.* QCA enables the identification of conditions that are 'insufficient but necessary part of a condition which itself is unnecessary but sufficient for the result (INUS)' (Mackie, 1965, cited in Ragin, 2008, p.154). In the fictitious formula above, all four conditions are INUS conditions. Take for example the MAS condition: MAS is an INUS condition because it does not yield the results on its own, but only in union with the TAS condition. Furthermore, the  $MAS * TAS$  union is a sufficient path, but not necessary given the existence of the alternative path  $AUS * \text{amo}$ . INUS conditions are phenomena beyond the reach of conventional statistical analysis (Ragin, 2008).

*Two-step fsQCA.* FsQCA is not free from the familiar problem of 'too many variables, too few cases' when used with 'real' data (Schneider & Wagemann, 2006, p.10). The first challenge is that when many conditions are introduced in a model, the results become overly complex. In a model introducing several conditions the results may consist of one or more path that includes some or all conditions, and some of the paths may capture only one case. This may make it difficult to interpret the paths in a theoretically sound way. The second challenge relates to limited diversity—'logically possible configurations of relevant conditions do not appear empirically' (Schneider & Wagemann, 2006, p.11). For example, with seven conditions 128 ( $2^7$ ) combinations are possible if the conditions are dichotomously coded, and with increased number of conditions the effect is exponential (Schneider & Wagemann, 2006). A small sample of cases does not guaranty that they would cover all the 128 possible combinations and much higher number than 128 cases would be required to cover all combinations. Thus, Ragin (2000 cited in Schneider & Wagemann, 2006, p.11) argued that 'in research reality, the presence of so-called logical remainders, i.e. logically possible but empirically not observed configurations is the rule rather than the exception'.

QCA forces the researcher to make explicit decisions on the logical remainders on whether or not to include or exclude them, with later, which one to include (Rihoux & Ragin, 2009).

The theoretically based division between remote and proximate conditions in the onset of the two-step fsQCA helps to avoid complex results and reduce the problem of limited diversity (Schneider & Wagemann, 2006). See Appendix VI for a graphical representation for the usefulness of two-step fsQCA. In the first step, we analysed the relations between the contextual conditions (i.e. motivational climates and physical inclusion) and perceived physical inclusion to identify different combinations of inclusive-supportive contexts. In the second step, we explored the combinations of individual attributes (i.e. motivational orientation, motivation regulation and satisfaction of basic psychological needs) within the inclusion-supportive climates that jointly lead to social and pedagogical inclusion in PE.

*Measures of fit.* The measure of consistency (con) indicates the degree to which cases with the outcome also exhibit the conditions and corresponds to the role of the p-value in statistical inference. Perfect consistency would imply that all cases with the same pattern of conditions would exhibit the outcome. However, perfect consistency is rare (Ragin, 2008). FsQCA enables quasi-sufficient relations by allowing a small number of cases to deviate from the patterns elucidated in the analysis (as indicated in Figure 4). As recommended by Ragin (2008), we allow limited inconsistency in the analysis with a minimum consistency score of 0.85. Raw coverage (cov.r) measures the degree to which the conditions in the solution formula explain all cases with the outcome and resembles to the  $R^2$  measure in regression analysis. Unique coverage (cov.u) measures the partitioning coverage of each configuration in the formula. Finally, the proportional reduction in consistency (PRI) measures the reduction in consistency if one configuration is left out of the model.

#### *Quantile regression (QR)*

QR was developed as an extension of the linear model for estimating rates of change in different parts of the distribution of an outcome variable (Koenker & Basset, 1978). It was initially introduced as a more robust regression analysis with less strict assumptions. For example, while a basic assumption in OLS is normal distribution of random errors, the estimates in QR have been termed semi-parametric in that no parametric distributional form is assumed for the random in errors. In contrast to OLS that minimise the distance between the observed values and the predicted values by the regression line, QR differentially weight the distances between the observed and predicted values before minimise the weighted distances. Differential weighting increase the power to detect differences in the upper and lower tails of



the distribution (Cook & Manning, 2013). Several studies use QR simply because it enables identification of information about distribution points of the outcome variable other than the conditional mean (Seippel, 2015). We used QR to examine whether the explanatory strength of the independent variables vary according to the degree of satisfaction with inclusion in PE on five selected quantile of the distribution (i.e. 0.10, 0.25, 0.50, 0.75, 0.90). The interpretation of the parameter estimates is the same in QR and OLS. They indicate rate of change adjusting for the effects of the other variables in the model, but in the QR models they are defined for the specific quantiles.

## Chapter 6 | Results and discussion: Article I-V

### Article I

#### **Inclusion of children with disabilities in physical education:**

##### **A review of literature 2009-2015.**

Wilhelmsen, T., & Sørensen, M. (2017)

#### *Objective*

Framed by a stakeholder approach, the aim of the structured literature review was to compile, organise, and analyse the body of research literature on inclusion of children with disabilities in PE from January 2009 to December 2015. The research question was: Which stakeholder's perspectives; main themes; methodological trends; and country of data collection are salient in research on inclusion of children with disabilities in PE?

#### *Result*

The search yielded 535 articles. After an extensive screening process following the PRISMA guidelines 112 articles were deemed eligible for inclusion in the review.

The educator perspectives were the most prominent in the literature reviewed (56%: n=63), followed by children's perspectives (28%), children and adults combined (6%, n=7), multiple adults (5%, n=6), parents (4%, n=4), and one explored policies (1%). Few studies included the perspectives of children with disabilities, parents, school administration and teacher-training providers.

The four largest themes were stakeholders' acceptance and attitudes towards inclusion of children with disabilities (18%, n=20), experienced and perception of inclusion in PE by various stakeholders (10%, n=11), initial teacher training and disability simulation (10%, n=11), and skill acquisition, mental health, physical fitness and activity (10%, n=11). In-service teachers' attitudes towards inclusion are still an important focus in the literature. Yet, attempts to influence attitudes have not resulted in consistent, positive behavioural outcomes and we still have little knowledge about the gap between stakeholders' attitudes/intentions to include children with disabilities and their actual behaviour in PE.

In terms of methodological trends, 56% (n=63) employed a quantitative approach, 38% (n=42) employed a qualitative approach, and 6% (n=7) a mixed method approach. The increased interest in qualitative research may indicate a legitimization of alternative voices and sensibilities in a field that traditionally has been governed by quantitative research.

The research originated from Europe (43%, n=48), North America (38%, n=42), Asia

(13%, n=14), Africa (2%, n=2), Oceania (2%, n=2), and South America (1%, n=1). The variety in country of data collection and the accumulative number of studies published on the topic indicates an increasing globalisation of the ideology of inclusive PE. Though, we still know little of the barriers and facilitators of inclusive PE beyond Europe and North America.

### ***Limitation***

Although the review gives a systematic overview of the breath of the research, the results should be read with caution for several reasons. First, the stakeholder perspective aided a coherent categorization of the research contributions reviewed. However, the perspective did not contribute with a logically connected system of general propositions that could explain inclusion in PE beyond identifying the saliency of the different stakeholder perspectives in the research (Abend, 2008). Second, in the attempt to synthesis the extant research, the review may have missed out on contextual, theoretical and methodological information important to interpret the results of the studies (Mallet, Hagen-Zanker, Slater, & Duvendack, 2012). Third, the articles were not uniform composed and unclear titles and abstract might have influenced the accuracy of the selection process. Fourth, the multidisciplinary and methodological richness challenged the assessment of quality and the synthesis of results of the articles.

## **Article II**

### **'Inclusion is a nice word... but...'**—**Inclusion in physical education as experienced by children with disabilities and their parents**

Wilhelmsen, T., Sørensen, M., & Seippel, Ø. (2018)

### ***Objective***

The aim was to better understand how children with disabilities and their parents experience social and pedagogical inclusion in various PE settings. The data was based on semi-structured interviews, field notes and drawings.

### ***Result***

The inquiry into the phenomenon on inclusion in PE as experienced by children with disabilities and their parents yielded three themes: (a) physical inclusion in PE, (b) pedagogical inclusion and exclusion in PE; (c) social inclusion and exclusion in PE and beyond; and (d) forced exclusion.

The children attending GC participated either in the general PE programme, a segregated PE programme (individually or in smaller groups with other children with disabilities), were exempted from PE, or moved in between general and segregated PE

activities. The children attending SG all participated in segregated PE programmes, either in smaller group activities with other children with disabilities or in individual PE programmes.

In terms of pedagogical aspects of inclusion in PE, the children emphasised the importance experiencing mastery of the activities involved, being met with high expectations and being treated 'as everyone else' in the class. When confronted with inadequately adapted activities or situations experienced as discomforting, children employed several avoidance strategies, such as self-selected exclusion of particular activities, 'cheating', and exemption from PE. Several children were also eager at not being treated differently and chose to push through difficult situations rather than to request assistance. The children also expressed ambiguous experiences with the PE teacher's initiatives to facilitate co-determination and participation in decision-making.

The theme social inclusion in PE and beyond illuminated how children and parents experienced PE to be an arena for social inclusion, belonging and strengthening social networks. The parents also reflected the how long absence from PE could make it more difficult to be included in the peer group. Experiences of social isolation were described in connection to unorganised physical activities such as recess. Several initiatives were implemented to support positive interaction with peers, with differing success.

Few systems were in place to secure inclusion in PE, and whether or not the child was included in PE seemed to be dependent on the local schools leadership and the individual teacher. The last theme illuminated the participants' experiences with forced exclusion. Some of the children and their parents had experienced a general educational system far from inclusive, which, for some, resulted in lack of belief in inclusive educational settings. Some parents had enrolled their child in schools that offered SG after experiencing increased socially isolation and marginalisation throughout primary school.

### ***Limitation***

Conducting the interviews with parents and children combined was both enriching and challenging. The combined interviews were enriching when children and parents reflected together on different PE situations, but were challenging when parents took on the role as talking for the child. The combined interviews also challenged the interviewer's capacity to negotiate the attention between the participants. It was beyond the study's scope to explore systematic differences between the type and the degree of children's disabilities, as well as intersections between socioeconomic background, gender and ethnicity. Researches into these relations in PE are scarce and further research is warranted.

**Article III****Physical education related home-school collaboration:  
The experiences of parents of children with disabilities**

Wilhelmsen, T., &amp; Sørensen, M. (2018)

***Objective***

The aim was to better understand the PE-related home-school collaboration as experienced by parents of children with disabilities. The research questions were: how do parents of children with disabilities experience the PE-related home and school collaboration?; Which conditions do parents experience as promoting or inhibiting home-school collaboration; and how do parents experience their involvement efforts to secure quality of PE? The data was based on semi-structured interviews and field notes.

***Result***

The inquiry into the PE-related home-school collaboration as experienced by parents generated five themes: 1) the lack of PE-related information in the home-school collaboration, 2) the parents' experiences of how contradictory expectations between themselves and the school personnel inhibited collaboration, 3) the importance of perceived competence and continuous systematic communication with the school and within the children's support team, 4) the parents' involvement in school-based activity, and 5) the parents' strategies of navigating the system to secure the necessary educational adaptations.

The first theme described the lack of PE-related information in the collaboration. While some parents perceived no news as good news or were more focused on academics than PE, the omission of PE-related information deprived them of the opportunity to support their children's learning in the subject and of their ability to make informed decisions.

The second theme points at how contradictory expectations could be detrimental for communication and collaboration between parents and schools. The parents' accounts often focused on the interaction between their children's abilities and proper adaptations to the learning environment. However, they experienced a different understanding of their child by the school, in line with a medical model of defectiveness and economic rationalisations.

The promoting conditions highlighted in the third theme were continuous systematic communication, trust in the competencies of the school personnel, and joint problem solving and collaboration among professionals. The responsibility group meetings constituted a valuable platform for interdisciplinary collaboration and continuous and systematic

communication. However, parents seldom recalled discussing work plans for PE in these meetings. LSAs were often excluded from the collaboration platforms.

To counteract perceived limitations in the school's initiative, the parents actively become involved in school events to secure their children's participation. The parents navigate the educational system by initiating direct contact with school inspectors and principals and inviting external professionals to join the conversation with the school personnel in order to advocate for changes. Furthermore, the parents felt that they constantly needed to monitor the resources allocated for their children.

### *Limitation*

The analysis of the PE-related home-school collaboration is based on the experiences of parents of children with disabilities. The results should be interpreted with this parental lens in mind. We recognise that recollection and reconstruction of past events are complex. Yet, it is the depth, ambiguity, variations and subtleties of these lived experiences that the study aimed to explore.

## **Article IV**

### **Motivational pathways to social and pedagogical inclusion in physical education**

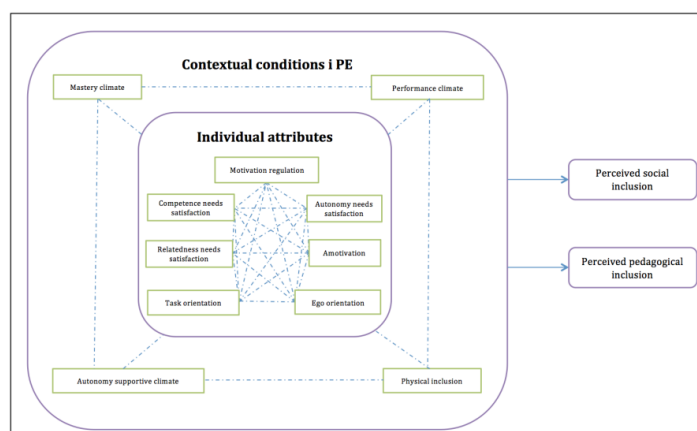
Wilhelmsen, T., Sørensen, M., & Seippel, Ø. N. (2018)

### *Objective*

The aim was to explore what motivational pathways support social and pedagogical inclusion in PE as experiences by children with disabilities.

### *Result*

Theoretically, we integrate tenets from AGT and SDT. Figure 6 depicts a graphical summary of the interplay of motivational conditions that we expected supported or hindered perceived inclusion in PE among the children with disabilities.



**Figure 6** Motivational tenets that may support or hinder social and pedagogical inclusion in PE

To capture the motivational complexity underlying children's experiences of inclusion in PE we used two-step fsQCA. The analyses of contextual conditions yielded two sufficient inclusion-supportive climates: *Social inclusion (SI)*  $\leq MAS*PHY + per *AUS*PHY$  and *Pedagogical inclusion (PI)*  $\leq MAS *PHY + per*AUS*PHY$ . For children with disabilities to feel socially and pedagogical included in PE they needed to be either *physically included and experience the climate as mastery oriented* (cov.u = 0.378 in the SI model, cov.u= 0.367 in the PI model), or *physically included and experiencing the climate as autonomy supportive and not performance oriented* (cov.u= 0.070 in the SI model, cov.u=0.075 in the PI model). Furthermore, the models indicated that physical inclusion was necessary, but not sufficient, condition for inclusion. The difference between social and pedagogical inclusion-supportive conditions were in the model fit—with the overall fit of the model for social inclusion (incl = 0.938, PRI = 0.923, cov.r = 0.848) performing slightly better than the model for pedagogical inclusion in terms of consistency (incl = 0.864, PRI = 0.799, cov.r = 0.898). As all configurations were theoretically sound and well supported by the empirical data, the inclusion-supportive conditions were included in the second step of the analyses.

The configurations of motivational attributes within the inclusion-supportive climates indicated four sufficient pathways to social and pedagogical inclusion.

**Table 1** Sufficient paths towards social and pedagogical inclusion in physical education

		Social inclusion			Pedagogical inclusion			
		MAS*PHY		per*AUS*PHY	MAS* PHY		per*AUS*PHY	
Individual attributions	TAS	◆	◆	◆	◆	◆	◆	◆
	EGO	n/a	◆	◆	~	n/a	◆	~
	AUT	◆	~	◆	◆	◆	~	◆
	COM	~	~	◆	n/a	~	~	n/a
	REL	◆	◆	◆	◆	◆	◆	◆
	RAI	◆	n/a	n/a	◆	◆	n/a	n/a
	AMO	~	~	~	~	~	~	~
	Model fit	Con.	0.864	0.865	0.906	0.867	0.850	0.851
	PRI	0.692	0.567	0.849	0.608	0.567	0.345	0.819
	Cov.r	0.389	0.267	0.577	0.599	0.416	0.285	0.623
	Cov.u	0.067	0.027	0.272	n/a	0.067	0.025	0.292
	n	11	4	18	15	11	4	18
	Paths	S1	S2	S3	S4	P1	P2	P3
						P4		

Note. ◆ = Membership in the condition, ~ = Nonmembership in the condition, n/a = Not applicable/not sufficient condition for the identified configuration, *SI\*MAS\*PHY* paths con.cut=0.85, con.=0.894, PRI=0.830, Cov.r.=0.699, n=37, multiple covered cases = 0; *SI\*per\*AUS\*PHY* paths con.cut=0.85, con.=0.867, PRI=0.608, Cov.r.= 0.599, n=37, multiple covered cases=0; *PI\*MAS\*PHY* paths con.cut.=0.85, con.=0.876, PRI=0.772, Cov.r.=0.744, n=37, multiple covered cases=0; *PI\*per\*AUS\*PHY* paths con.cut=0.85, con.=0.862, PRI=0.563, Cov.r.=0.606, n=37, multiple covered cases=0.

The inclusive-supportive context *physically inclusive, autonomy supportive and low performance-oriented climate* yielded one path that sufficiently explained social and pedagogical inclusion. While, the inclusion-supportive context *physical inclusive and mastery-oriented climate* appears more robust, in that it yielded three different motivational pathways, which allows children with different motivational profiles to feel included in PE.

The path with the largest coverage of children was within the physically inclusive and mastery-oriented climate and represented children that were task and ego oriented, low on amotivation, and experienced satisfaction of the need for autonomy, competence and relatedness. The different paths indicate that children with different levels of satisfaction of the needs for competence and autonomy could feel socially and pedagogically included as long as they were task oriented, low on amotivation and experiences satisfaction of the need for relatedness. This was the case for children both high and low on ego orientation, and in some paths, these relations were also independent of the level of autonomous motivation.

### Limitation

The analyses were based on convenience sampled cross sectional data, which limits the possibility for causal inference and to generalisation. Furthermore, in line with the asymmetrical assumptions of QCA, the article explored the necessary and/ or sufficient conditions for children to feel socially and pedagogically included, and did not make assumptions about factors that may lead to social and pedagogically exclusion or marginalisation. Please note that the children were enrolled in general schools and the majority of the children attended PE together with their peers to some degree. The findings



are limited to this population and do not say anything about the children who attend segregated PE programmes or who are completely excluded from PE.

## Article V

### Parental satisfaction with inclusion in physical education

Wilhelmsen, T., Sørensen, M., Seippel, Ø., & Block, M.E. (2018)

#### *Objective*

The aim was to explore the associations between intrapersonal, interpersonal, and contextual factors and parents' satisfaction with social and pedagogical inclusion in PE. The data was based on a convenience sample of 72 parents of children with diverse disabilities.

#### *Result*

In terms of physical inclusion in PE, children with severe degree of disability was less physically included than children with low degree of disability, and children with developmental disabilities were less included than children with other types of disabilities (i.e. visual disability, learning disability and ASD, and ADHD).

Based on OLS and QR the results indicated that the parents' satisfaction with social inclusion in PE was associated with their attitudes towards inclusion in PE, perceived PE-related information sharing and children's type of disability and degree of physical inclusion. The QR estimates further illuminated that the association between children's type of disability and parents' satisfaction with social inclusion in PE depended on their level of satisfaction. Specifically, parents of children with other types of disabilities were less satisfied with the social inclusion in PE than parents of children with physical disabilities. However, this association was not significant among the parents that were moderately or highly satisfied with the social inclusion in PE. This suggests that children's type of disabilities only contributed to explained variances of parental satisfaction with social inclusion among the parents the least satisfied.

Parents' satisfaction with pedagogical inclusion in PE was associated with their attitudes towards inclusion in PE, PE-related information sharing, and children's degree of disability and physical inclusion. The final OLS model also indicated a significant interaction between physical inclusion and degree of disability. The interaction indicated a linear relationship between physical inclusion and parental satisfaction with pedagogical inclusion among parents of children with low degree of disability. However, for parents' of children with severe degree of disability the relationship indicate a more complex picture in which the

parents of children with completely segregated or some degree of physical inclusion are the least satisfied. One interpretation is that children with severe degree of disability who were physically included only to some degree represent a group of children that fall *in-between*—not receiving a well-developed segregated adapted PE program nor receiving adequate accommodation in the general PE lessons.

Parent's attitudes were the only parental intrapersonal characteristic significantly associated with satisfaction with social and pedagogical inclusion in PE. Furthermore, the QR estimates indicated that the explanatory strength of the parental attitudes towards inclusion in PE varied with the degree of parents' satisfaction with social and pedagogical inclusion in PE. The OLS models further suggested that the parents' satisfaction with both social and pedagogical inclusion in PE was consistently associated with perceived PE-related information sharing. However, perceived PE-related co-determination was not significantly associated with parents' satisfaction with inclusion when controlled for the other variables and were left out of the final models.

### ***Limitation***

The use of convenience sample and cross sectional data restricts our ability to make causal inference. Second, the moderate sample size did not allow us to test the combined structural validity of the dimensions of inclusion. Further research is needed to tests the relations between the dimensions of inclusion in PE. Third, while parent's satisfaction with inclusion in PE is likely to be related to children's experience of inclusion, it is not necessarily in agreement with children's own satisfaction. Parental satisfaction is a desirable aim, but it should not be mistaken for measure of successful inclusion in PE. Finally, it is important to note that the disability groups are gross categorisations of children's main disability, and does not necessarily reflect the variation between and within the group of children as more specific categorisations would.



## Chapter 7 | General discussion

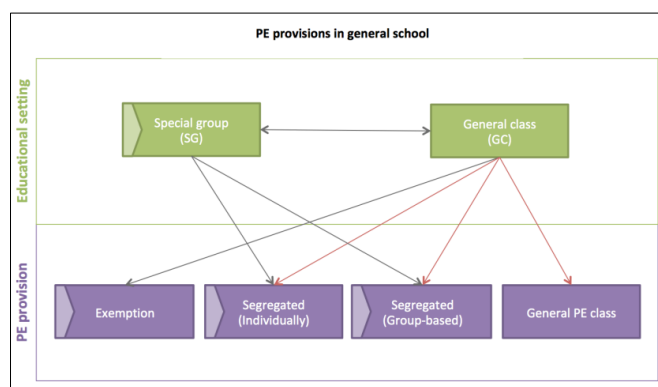
The overall aims of this dissertation were to identify the gaps in the extant knowledge base on inclusion of children with disabilities in PE and to explore inclusion in PE as experienced by children with disabilities and parents in Norway. In order to achieve these aims, the research project employed a multimethod design, in which three methodologically distinct studies resulted in five articles (Morse, 2003). Based on the knowledge gaps identified in the structured literature review (Article I), the focus of Articles II-V was narrowed down to inclusion in PE as experienced by children with disabilities and their parents. In answering the overall research questions of the dissertation, I discuss the contributions of the three studies in dialogue with relevant research and theory. The three first sections are organised according to the ecological framework (i.e. from the micro to the macro level). Lastly, I discuss the theoretical and methodological strengths and limitation of the studies, practical implication, and finally, the conclusion and suggestions for further research.

### **Micro relations: Inclusion at the physical education classroom level**

Every classroom consists of children with diverse attributes in terms of demands, resources, and force (Bronfenbrenner, 2005), and the PE settings must inevitably support learning for the diverse range of learners (Kershner, 2009; Bronfenbrenner, 2005). In this section I combine and discuss the main findings from the Articles II, IV and V to further illuminate physical, social and pedagogical inclusion in PE as experienced by children with disabilities and their parents.

#### ***Physical inclusion is necessary but not sufficient***

Although all children in study II and III attended general elementary schools there were large variation in terms of the PE provision they received. The variations in the PE provision and physical inclusion in general PE among the children are displayed in Figure 7 below.



Note. Study II included children receiving PE provisions as displayed by all arrows. Study III included children receiving PE provision as displayed by the red arrows.

**Figure 7.** The PE provision among the children in study II and III

The children in Study II were either enrolled in GC or SG. The children in GC participated either in the general PE programme, segregated PE programme (individually or in smaller groups with other children with disabilities), were exempted from PE, or moved in between general and segregated PE activities. The children enrolled in SG participated either in group activities with other children with disabilities or in individual programmes designed by a physiotherapist. On the other hand, the children included in study III were all in GC and physical included in general PE to some degree. However, some of the children moved in between individual or group based segregated activities and general PE classes as indicated by the red arrows in Figure 7. The interpretation of the following discussions should be made with these differences in mind.

The reasons why the children participated in partly or fully segregated PE programmes differed (Study II). Some children in GC had experienced that the school was not willing to implement the necessary adaptation that allowed them to participate or the children were perceived to be unable to benefit from the general PE programme. One mother also highlighted that her child experienced the adaptive measures implemented in general PE as disabling and constructing otherness. To protect her daughter from these forms of marginalisation and feelings of being a burden, the child was allowed to withdraw from PE.

For the children in SG, lack of physical inclusion in general PE was not necessarily based on the inclusiveness of the general PE lessons nor the children's interests or abilities to participate in general PE. Rather, the child's exclusion was experienced as a result of the interplay of institutional and organisational level of factors (i.e. segregated facilities and different timetables for the SG and GC) and the lack of collaboration, communication and

planning between the teachers in the two settings (Article III). Another barrier for physical inclusion in general PE was the teachers' lack of differentiated adaptation initiatives within the group of children in SG (i.e. if not all can attend, none will attend). These children received majority of their education, including PE, in segregated placement. These findings are supported by research indicating that despite educational policies emphasising an inclusive one-track educational system (Imsen & Volckmar, 2014), some children with disabilities are still isolated from their peers without disabilities to large degree (Wendelborg & Tøssebro, 2008; Rix, 2015).

Several children and parents also described restricted and exclusionary practices despite being physically included in general PE (Article II). In fact, findings from all the three studies indicated that physical inclusion was not sufficient to secure quality education in PE. The analyses of inclusion-supportive learning climates in PE (Article IV) indicated that it was *necessary* for children with disabilities to be more physically included than excluded in order to feel socially and pedagogically included in general PE, but being physically included in PE was not *sufficient* in itself. This is in line with previous research indicating that physical inclusion does not secure children's participation, experiences of mastery, or feelings of being a legitimate participant in the activities introduced, nor does it secure children's positive interaction with peers or feelings of friendship (Coates & Vickerman, 2008: 2010; Fitzgerald & Stride, 2012; Goodwin & Watkinson, 2000; Place & Hodge, 2001; Qi & Wang, 2018; Spencer-Cavaliere & Watkinson, 2010).

The statement that social and educational inclusion in PE necessitates physical inclusion may seem banal. However, as indicated in Study II, a common approach in adapted education is segregated teaching, with an overall aim of inclusion in the future. Such efforts may not be without value, but, as Nicholls (1979) reminded us, they do not alter the context or the contributing factors of inequality in education. How the school and teachers relate to adapted education in PE has a bearing on how bodies and abilities are recognised in practice (Evans, 2004). Several children and parents raised concerns about being experienced as a burden in PE (Study II). Exclusion sends strong message of lack of appreciation of diversity in PE and may influence children's understanding of their own body and abilities, their self-esteem, and feelings of inadequacy (Haegele & Zhu, 2018). In line with previous research, the children's experiences suggests that excluding children who challenge *status quo* in PE produce differentness and a narrow understanding ability/inability and (in)educability

rather than promoting optimal development for all children with different bodies and abilities (Evans, 2004; Giese & Ruin, 2018; Hodkinson, 2011).

Segregated teaching in PE can be seen as an individualised, rather than a holistic, approach to adaptive education and represents a remedial understanding of the problem (Davis & Watson, 2001; Giese & Ruin, 2018; Nordahl, et al., 2018). If we understand disability as the outcome of the interaction between individual attributes and contextual conditions, as in the interactional approach to disability (Shakespeare, 2006), it becomes important to explore how we can alter the way PE is taught in response to the needs and abilities represented within the group of children, rather than to exclude children who do not 'fit within' normative conceptions of ability (Fitzgerald, 2005). Furthermore, segregation and exclusive practises in PE may overestimate the differentness caused by the specific disability as well as the homogeneousness of the group of pupils without disabilities (Standal & Rugseth, 2015). Frequent use of segregated activities for particular children may also decrease the PE teachers' investment in facilitating inclusive PE programmes.

#### ***Psychosocial learning climate and inclusion in physical education***

The ways PE teachers design the lessons, give recognition and evaluate performance significantly influence children's perceived competence, effort, performance, persistence, commitment, and enjoyment (Braithwaite, et al., 2011; Ommundsen & Kvalø, 2007; Van den Berghe, Vansteenkiste, Cardon, Kirk, & Haerens, 2014). To better understand the mechanisms that support inclusion in PE, Article IV explored the associations between children's experiences of social and pedagogical inclusion, perceived motivational climate, physical inclusion and their motivational attributes. By employing tenets from AGT and SDT, the configurational analyses identified two social and pedagogical inclusion-supportive climates in PE, namely a *physically inclusive and mastery-oriented climate* or a *physical inclusive, autonomy supportive and low performance-oriented climate*. These inclusion-supportive climates are supported by previous research that found autonomy supportive and mastery oriented climates to positively influence children's experience of enjoyment, low levels of amotivation, and to aid learning among children with and without disabilities (Ommundsen & Kvalø, 2007; Spray et al., 2006; Valentini & Rudisill, 2004). Interestingly an autonomy supportive environment was not sufficient to promote social and pedagogical inclusion alone, but did so in combination with a physically inclusive and low performance-oriented climate.

The nature of learning and the accessibility of social comparison and judgements of children's bodies and abilities distinguish PE from other subjects in schools (Kerner,

Haerens, & Kirk, 2018). Within a performance-oriented PE environment normative conceptions of ability and construction of ideal bodies are inevitable (Fitzgerald, 2005; Nicholls, 1979). In such a climate, children's experiences of success would be dependent on outperforming their peers. Even though the PE teachers' support children's autonomy by being engaged and respectful of children's perspectives, and promoting children's choice and initiative (Edmunds et al., 2007; Hastie, Rudisill, & Wadsworth, 2013), children who do not live up to the success criteria promoted in the lessons, or fear that they may fail in certain task, may not feel pedagogically or socially included in PE even though autonomous involvement are supported. A performance-oriented climate may also hinder both social and pedagogical inclusion by not recognizing failure as a natural part of learning and by promoting rivalry within the peer group (Ommundsen, Roberts, Lemyre, & Treasure, 2003; Smith, Smoll, & Cummings, 2007). These contextual conditions do not promote appreciation of a diversity of bodies and abilities nor mastery experiences within a heterogeneous group of children. As indicated in Article IV, for children to feel socially and pedagogically included it seems particularly important to facilitate a mastery-oriented climate or to reduce the performance-oriented criteria in PE.

The experiences children shared in Article II may further illuminate the relation between experiences of autonomy and pedagogical inclusion in PE. In the interviews, children's reflections on pedagogical inclusion in PE was often seen in relation to being recognized as a legitimate part of the group, being listened to, consulted and being given choice in which activities to participate in. While experiences of recognition and being a legitimate participants in the activities introduced in PE was expressed in positive terms, children's experiences of consultation and participating in decision-making were ambiguous. The children's experiences showed that choices in activities did not necessarily promote feelings of autonomy and being consulted was not necessarily experienced as empowering. In fact, the children's experiences suggest that some forms of choices may inhibit experiences of autonomy for some children. Consulting children with disabilities about adaptive solutions *in situ* can construct differentness and being treated differently based on the child's impairment can be experienced as disabling, particularly if the help is not experienced as needed (Goodwin, 2001; Haegele & Zhu 2017). Such consultation can also be experienced as a transfer of responsibility that the child is not ready to embrace. Another example is being 'forced' to make a decision, when the child may find it hard to decide (Eide & Wingers, 2006).



The discussion above brings to light the complexity of related concepts such as children's co-determination, autonomy, and independence. This complexity is not only noticeable at the level of practice but also at the theoretical level – namely how we define these related but yet distinct concepts. In the adapted physical activity literature autonomy and independence is often used as synonyms or without clearly specifying the distinction. In SDT, satisfaction of autonomy related to self-organisation and the feeling of being the origin of one's behaviour (Ryan & Deci, 2008). As emphasised by Ryan and Deci (2006; 2008) satisfaction of autonomy does not equate independence nor being giving choices. Furthermore, the opposite of autonomy is not dependence but heteronomy, which means being controlled by forces that are experienced as alien or without self-endorsement. On the other hand, co-determination can be seen in relation to the recognition of children's voices and interest in decision-making. While previous research emphasise consulting children and allowing them to take part in decision-making and planning as important steps towards increased empowerment and positive experiences in PE (Coates & Vickerman, 2008; 2010), the experiences shared by the children underscore the importance of critical reflection on how children are included in decision-making in PE (Haug & Bachmann, 2007). These findings does not refute autonomy support, as this argumentation would equate autonomy support with that of the nature of decision-making (Ryan & Deci, 2006), but it does raise questions in terms of how some autonomy supportive initiatives may be experienced by children. The overall responsibility of planning and implementing an inclusive PE programme should be placed within the teacher team. In the interview study, the children clearly stated that they preferred that the PE teacher communicated the activities s/he had planned and that the lessons were planned according to the group of learners it was aiming to involve. On interpretation is that some children did not experience the structure needed to fully make use of the autonomy supportive initiatives (e.g. consultancy and co-determinacy initiatives). For further research, it would be interesting to follow up on the study by Sierens, Vasntenkiste, Goossens, Soenens and Dochy (2010) by exploring the synergistic relationship between perceived autonomy support, structure, and children's experience of social and pedagogical inclusion in PE.

In the interviews children also emphasised the importance of being met with high expectations and being treated 'as everyone else'. Being excluding or treated different because of their impairment was often experienced as disabling (Article II). Furthermore, the children emphasised the importance of experiencing mastery in PE. In their reflection around preferred activities in PE, the children's experiences were often related to the interaction

between perceived physical abilities and task difficulty, whereby they enjoyed the activities that they experienced mastery in. The findings resonates with research indicating that children tend to value activities that offers mastery experiences, while devaluing activities that they may not master (Wigfield et al., 2015). Article II also illuminate how children employed several avoidance strategies in PE, such as self-selected exclusion or exemption from PE. Such strategies can be interpreted as forms of resistance and may be a result of being confronted by inadequately adapted activities or children's fear of failure. These findings is supported by a previous study indicating that children's use of avoidance strategies are both sophisticated and deliberate actions of resisting oppressive situations in PE (Lyngstad, Hagen, & Aune, 2016). While self-selected exclusion and exemption may be in line with the child's wishes (Article II), it often leads to marginalised learning, whereby the children do not receive the same opportunity for meaningful instructions, personal development, and active participation as her/his peers (Pijl, 2007; Tripp, Rizzo, & Webbert, 2007).

Article IV also explored which combinations of individual attributes (i.e., task orientation, ego orientation, the satisfaction of autonomy, competence, and relatedness, RAI, and amotivation) within the inclusion-supportive climates that jointly supported perceptions of social and pedagogical inclusion in PE. Four sufficient configurations (further referred to as motivational paths) supported social and pedagogical inclusion within the two inclusion-supportive climates. Within the motivational paths the combination of task orientation, low amotivation, and satisfaction of the need for relatedness seemed to be particularly adaptive motivational attributes in PE. These findings are supported by previous research (Cox & Williams, 2008; Standage et al., 2003). The findings also indicated that satisfaction of all three basic psychological needs was not necessary for the children to feel social and pedagogically included in PE, as long as they were task oriented, low on amotivation and experienced satisfaction of the need for relatedness. This is essential considering that a large proportion of the children did not experience the fulfilment of the need for competence in PE (Article IV). One interpretation is that a mastery climate or absence of a performance climate reduces the importance of the need for competence satisfaction, because effort and learning is in focus instead of normative ability. Similarly, a previous study found that a mastery climate significantly enhanced the prediction of intrinsic motivation beyond that of perceived competence (Goudas & Biddle, 1994). The findings show the importance of exploring the underlying criteria of success promoted in PE, as is the focus in AGT. Measures of satisfaction of competence in SDT does not include this distinction.

It is also important to note that the children reported in average quite high level of social inclusion, but markedly lower levels of pedagogical inclusion (Article IV). Satisfaction of the need for relatedness was an important condition for both social and pedagogical inclusion. This is important considering that previous research suggest that social isolation and lack of positive social interaction with peers is a major challenge in PE (Place & Hodge, 2001; Qi & Wang, 2018). The children in the interviews (Article II) connected their social involvement in PE to the friendliness of the overall class culture, in and outside the PE lessons, while social isolation were more apparent in the experiences shared by children receiving segregated PE programmes. One reasonable interpretation may be that there is a reciprocal relationship between the children's social relationship with peers in and out of PE. If this is the case, further research is needed to explore how children's social interaction in PE influence and is influenced by the children's overall social relationship in and out of school.

#### *Child intrapersonal characteristics*

An aim of Article V was to explore how parents' satisfaction with physical, social and pedagogical inclusion in PE was associated with child intrapersonal characteristics. The findings indicated that parents of children with severe degree of disability reported that their child were less physically included than parents of children with low degree of disability, and children with developmental disabilities were less physically included than children with physical or other types of disabilities. These results are line with previous research in general education (Wendelborg & Tøssebro, 2011). This may indicate that children with developmental disabilities and/or severe degree of disability are at greater risk of exclusion in PE than children with other types of disabilities.

The association between children's type and degree of disability with parents' satisfaction with social and pedagogical inclusion in PE was not so clear-cut (Article V). Parental satisfaction with social inclusion was associated with children's type of disabilities, suggesting that parents of children with physical disabilities were more satisfied with the pedagogical inclusion in PE compared to parents of children with other types of disabilities. The gross categorisation of "other types of disabilities" includes children diagnosed with ASD and ADHD. Children with ADHD and ASD are often found to experience struggles in their social relationships (Kasari, Locke, Gulsrud, & Ratherham-Fuller, 2011; McQuade & Hoza, 2015) and particular patterns of behaviour among children with these forms of invisible or hidden disabilities may be misjudged as improper or disruptive if the PE teacher does not properly consider the children's needs. Interestingly, the QR estimates further suggested this

association was only significant at the lower level of the conditioned distribution of parental satisfaction with social inclusion in PE.

On the other hand, the interaction between parental satisfaction with pedagogical inclusion and the child's degree of disability and physical inclusion may suggest that children with severe degree of disability who were physically included only to some degree represent a group of children that fall *in-between*—not receiving a well-developed segregated adapted PE program nor receiving adequate accommodation in the general PE lessons. This form of individual adaptations may make it more difficult for the children to develop and sustain meaningful relationship with peers in PE. It may also increase the dependency on well-developed strategies for communication and planning among the teacher in charge of adapted and general PE. These educational transitions were often experienced as particularly challenging in terms of communication, planning and support (Study II). These findings contribute to previous research that has underscored the importance of home-school collaboration in educational transitions (Tso & Strnadová, 2017).

In the interviews, some parents described increased social isolation and bullying in primary school that led them to enrol their child in a school that offered SC in the transition from primary to secondary school (Article II). These parental accounts of increased social marginalisation throughout elementary school are in line with previous research indicating a decrease in social inclusion as the children with disabilities gets older (Wendelborg, 2010b). As also emphasised by Goodwin and Ebert (2018), parents may withdraw from inclusive settings if they experience that their child is being marginalised. In contrast to parental accounts in the interviews, no significant differences were found between parents of children in primary and secondary school in their satisfaction with social and pedagogical inclusion in PE in Article V. These finding may seem contradictory. However, one reason for this may be the difference in the sample included in the two studies. In study III parents who had made the choice of enrolling their child in schools with SC or parents' of children that were exempted from PE were not included. Longitudinal research following children with disabilities in the primary – secondary school transition is needed to further explore how these transitions influences physical, pedagogical, and social inclusion in PE.

### **Meso relations: Physical education-related home-school relations**

Home-school collaboration is an essential connection between two important developmental arenas for children, and collaboration between parents and school personnel is both desirable

and beneficial to children's learning (Bronfenbrenner, 1979; Hattie, 2009). However, PE-related home-school collaboration is scarcely explored in previous literature (Article I). In the interviews with parents, PE-related home-school collaboration emerged as an issue of particular importance. To better understand the phenomenon, Article III explored the parental experiences with the collaboration more in-depth. Measures of PE-related information sharing and PE-related co-determination was also included in Article IV to better understand how these meso relations were associated with parents' satisfaction with social and pedagogical inclusion in PE. The following discussion is divided in four sections: the information sharing and collaboration between parents and school; parental attitudes towards inclusion in PE; collaboration within the children's support team; and parental advocacy and involvement in PE.

#### ***Information sharing and collaboration between home and school***

In interviews, the parents' expressed being pleased with the general home-school collaboration but specified receiving limited information about PE through formal communication arenas (Article III). One interpretation for why PE was not prioritised in the communication with the school offered by the parents interviewed was the low status of PE in schools. The parents' experienced that the emphasis was on child's development in the core skills (i.e. reading, writing, and mathematics) and the child's development in PE was barely mentioned and often left out in the communication with school (Article III). The marginalisation of PE and children's learning and development in the subject is a concern consistently raised in the research literature (Kirk, 2005; Ommundsen, 2013; Svendby, 2013). The parents also reported having few opportunities talk to the PE teacher directly (Article III & V), which increased the dependency on the communication within the team of teachers.

The results from Article V indicated that parents' satisfaction with social and pedagogical inclusion in PE was consistently positively associated with PE-related information sharing. On the other hand, perceived PE-related co-determination was not associated with parents' satisfaction when controlled for perceived information sharing. It is reasonable to presume that PE-related codetermination would be related to the amount of PE-related information shared by the school. Thus, one reason might be that parents' have few opportunities to partake in PE-related decision-making due to the lack of PE-related information sharing. This interpretation is in line with the parental accounts in the interviews (Article III). To increase parents' opportunities to participate in informed decision-making, in

line with the aims in educational policies, the schools need to include PE-related information and discussions in the overall home-school collaboration.

Bronfenbrenner (1979) hypothesised that a child's potential for development within an arena is strengthened if the transition into the arena is accompanied by additional supportive links. In contrast, a situation in which child is the only connection between the PE setting and family life constitute a weak linkage and may be unfavourable for child's development in the subject. How lack of PE-related information can construct vulnerability of children's inclusion in PE is illuminated in Article III. Some parents were not aware of the adversity their children's experienced in PE before their attended the interview setting. Other parents became aware of exclusionary mechanisms in PE incidentally through second order social networks, such as after school programme teacher or through one of their child's classmates (Article III). This indicate, that while some parents perceived no news as good news or were more focused on the child's development in other subjects than PE (An & Hodge, 2013), the omission of PE-related information deprives parents of the opportunity to support their children's learning in the subject and of their ability to make informed decisions. Covert forms of exclusion as described by the children in interviews (Article II) are particularly hard to prevent without transparent and systematic communication between parents and the school. As highlighted by Rix (2015): "marginalisation in school is frequently a consequence of hidden processes or those which are rarely reflected upon" (p.15). A consequence of lack of awareness of what goes on in PE among parents may be that marginalisation of children with disabilities goes unchallenged or that parents are dependent upon their children to inform them if they experience adversity (Article III). Lack of school routines that ensure systematic PE-related collaboration with parents may reproduce social inequality and strike the children with parents who do not have the socio-economic resources to follow-up on the child's education the hardest (White Paper No. 16, 2006-2007).

#### ***Collaboration within the support team***

Because parents seldom had the opportunity to communicate with teacher in charge of PE, parents' insights into PE often depended upon the communication between the PE teachers, the special pedagogue, the physiotherapist and/or the assistant and contact teachers in charge of the home-school collaboration (Article III). The promoting conditions described by parents in the interview were: continuous systematic communication; trust in the competencies of the school personnel; and joint problem solving and collaboration among professionals.

If trust and perceived competence were intact, parents seldom questioned the planning or communication process initiated by the school. However, parents' participation in the meetings and in the educational planning processes was often restricted to overseeing the end results (Article III). Parents also seldom recalled discussing work plans for PE in these meetings. These findings raise concerns about the degree to which children's development in PE is discussed in the meeting as well as the degree to which school personnel acknowledge the expertise of parents and children in their planning.

Additionally, LSAs were often excluded from the collaboration platforms. This is of concern because for some children the LSA is the adult they spend most time with at school. With more opportunities to communication with parents, the LSAs also serve as an important link between the children's everyday life at school and home. The LSAs' in-depth knowledge of the child could be a valuable contribution in the planning process. Unfortunately, LSAs also represents the educational personnel with the lowest status, least power, and the least relevant educational background (Haug, 2014). LSAs would therefore likely benefit from the discussions within the support group.

These findings resonate with research exploring facilitators and barriers for inclusion in general schools, which found productive collaboration with parents and the development of a three-way collaborative partnership between support personnel, schools personnel and parents to be important factors for successful inclusion (Gibb, Tunbridge, Chua, and Fredericson, 2007). Increased communication with parents may be seen as time consuming for teachers. However, parents generally seemed pleased with the frequency of communication with the general teachers, but the existing formal communication platforms were not used efficiently. Thus, to include PE-related information sharing and discussions in the already existing communication platforms may be relatively easy for schools to implement without affecting the workload of teachers. In fact, these initiatives may limit the total workload by preventing conflict between parents and the school.

### ***Parental advocacy and involvement***

Although the school initiated PE-related collaboration was unwarrantably low, the parents were not passive (Article III). A large part of the initiatives to generate the support and the adaptations necessary to secure their children's rights and access to quality PE were in fact initiated by the parents themselves. This is in line with previous research (An & Hodge, 2013; Goodwin & Ebert, 2018; Bacon & Causton-Theoharis, 2013; Svendby, 2017). In order to advocate for change, the parents took part in school-based physical activity events, navigated

the educational system by initiating direct contact with school inspectors and principals and by inviting external professionals to join the conversation with the school personnel. Parents also expressed that they constantly needed to monitor the resources allocated for their children (Article III). In dialogue the work of Goodwin and Elbert (2018), these efforts serve as examples of the parents' hidden labour in their continued work to secure that their child receives equal opportunities for school-based physical activity as their peers.

These strategies may be productive solutions in the short term. However, they were often experienced as exhausting. Parents of children with disabilities often encounter practical challenges and stressful situations caused by the constant need to negotiate and navigate tensions between health practitioners and school personnel about support and assistance in school and beyond (Hodge & Runswick-Cole, 2008; Ytterhus, et al. 2008). Previous research indicate that families of children with disabilities often stretch their time and energy, and that mothers of children with disabilities more often work part time with shorter work hours than other mothers (An & Goodwin, 2007; Tøssebro, 2012). Our study contributes to the understanding of how poor PE-related home-school collaboration may add to the total amount of parental load (Article III).

#### *Parental attitudes towards inclusion in physical education*

We also wanted to explore how parental intrapersonal characteristics (i.e. sex, education and attitudes towards inclusion in PE) were associated with their satisfaction with social and pedagogical inclusion in PE (Article V). Parental attitude towards inclusion in PE was the only parental characteristic associated with satisfaction with social and pedagogical inclusion in PE. The parents reported very positive attitudes towards inclusion in PE. This is in line with previous research in general education (de Boer, Pijil, & Minneart, 2010). Furthermore, the findings suggested stronger associations between parents' attitudes towards inclusion in PE and their satisfaction with inclusion in PE among the parents the least satisfied with inclusion, other things being held equal.

The findings from the interviews may further illuminate these relations. In large this dissertation is framed by a positive perspective of inclusion, namely the recognition of the capacity of school systems "to create, maintain and police institutionalised notion of difference and responses to difference" (Rix, 2015, p. 19), and to meet the need of a diverse group of learners within the current educational system if difference is seen as legitimate and valued. However, some parents taking part in the interviews challenged the notion of the school's capacity for inclusion by suggesting that their child's needs was better served in



special educational settings (Article II). Some of the children and parents had experienced a general educational system far from inclusive, which resulted in lack of belief in inclusive educational settings. Based on negative experiences with inclusion several parents felt the need to resist the general education setting, either by choosing segregated PE programmes or segregated SC. One interpretation is that segregated placement serves as a safety net (Rix, 2015). Officially parents have the right to ‘choose’ the educational placement of their child. In fact, increased parental pressure for segregated special education has been identified as one of the drivers of the increase in numbers of children receiving special education (Mathiesen & Vedøy, 2012). However, as also emphasised by Rix (2015), this ‘choice’ does not guarantee that the aspirations of parents or their children will be delivered. If parents see their child suffer at school a reasonable question is whether such choices are forced decisions.

### **Macro-micro relations: Educational policies and school practice**

So far this chapter has outlined the dissertations findings on a micro and mesolevel of relations. However, as highlighted in the ecological model (Figure 1), PE does not exist in a vacuum. To better understand inclusion in PE we need to consider how PE is integrated in an institutional, societal and structural frame. The interrelationship between macro and microlevel of factors has been touch upon in Study I and II, but not discussed in detail. In this section I aim to further connect the discussions on inclusion in PE as experiences by children and their parents to possible institutional and societal level of factors.

Study II indicated that whether or not a child was included in PE were related to the school’s leadership, the individual teacher, and the culture for collaboration between stakeholders within the children support team and between home and school. This findings is supported by research in general and special education (Grue, 2001; Nordahl, et al., 2018). As previously indicated in Chapter 3, the K06 introduced few governmental guidelines of how inclusion in education should be implemented, and the responsibility of transformation and implementation of policy into practice is to large degree delegated to school owners and agents at the local schools (Bachmann & Haug, 2006; Prøitz, 2010). A recent evaluation of special educational system in Norway indicated that the national curriculum does not support the local schools and teachers’ choice of activities and adaptive measures (Nordahl, et al., 2018). The parents’ experiences of the devaluation of PE in the home-school collaboration as shown in Article III may also be interpreted as unintentional consequences of the political pressure on the core skills in the K06 (Ommundsen, 2013; Svendby & Dowling, 2013). The

current educational policies do not promote a holistic understanding of children development and learning school, in which some arenas of child education and development is prioritised over others. Findings from Study II indicate that there are no systems in place to secure the quality of inclusion in PE, and PE seems to fall under the radar in terms of schools effort to secure inclusive education. This is of concern for several reasons. First, the quality of inclusion in PE might differ considerably depending on the local school and its personnel, as indicated in Study II. Furthermore, the absence of inclusive systems heightens the importance of parental involvement in PE to secure their child's quality of education in the subject. Furthermore, the covert exclusion mechanisms as described by some children (Article II) may not be disclosed. This means that children are at risk of experiencing quite exclusive PE without parents knowing.

Based on the parents' accounts it seems that disagreements with school often were based on differing perspectives of what was the main cause of the child challenges (i.e. lack of proper adaptation vs. individualisation of the problem and economic rationalisations). As highlighted by Nordahl et al. (2018), a continuing systemic challenge is that additional resources is allocated if special education is needed, but no incentives are in place for supporting adapted education in an inclusive setting. This imbalance of incentives may strengthen an economical rationalisation among schools administrations in favour of special education (i.e. Article III). Allocation of resources between adapted education within the general classroom and segregated special education provision is a reoccurring dilemma in the research literature (Mathiesen & Vedøy, 2012).

### **Theoretical and methodological strengths and limitations**

This dissertation has employed several theoretical tenets and methodological approaches to better understand inclusion of children with disabilities in PE. In extension of the discussion above, I briefly discuss some of the tensions you inevitably encounter when employing multiple theories and methods in one project (see the individual articles for detailed information on limitation).

#### ***Multiple forms of theorisation***

By positioning the project within critical realism I attempted to move beyond the what-works maxim within the pragmatic positioning often promoted in mixed method research literature (Hathcoat & Meixner, 2017; Teddlie & Tashakkori, 2003). Critical realism encourages the use of plural methodological and theoretical tenets within a consistent philosophical

perspective (Danermark et al., 2002; Racher & Robison, 2002). Moreover, the socio-ecological perspective served as a general theoretical framework and framed inclusion in PE within a comprehensive and multileveled set of factors (Hedström & Udéhn, 2009).

The generality of the socio-ecological perspective makes it useful as a holistic frame of plausible influential factors; however, the generality often comes at the cost of depth and understanding of sub mechanisms of phenomena (Moore, Murphy, & Moore, 2011). In Study II, one of the aims was to better understand the range of experiences that inclusion in PE may invoke among children with disabilities and their parents. To be able to tune in on the lived experiences of inclusion in PE, I attempted to bracket the overall theoretical framework of the overall research project, as is in line with a hermeneutic phenomenological approach (Van Manen, 2016). In practice this meant bracketing the theoretical framework in the development of the interview guide and limiting the factual judgements in the analysis and interpretation of the data. However, the focus on physical, social, pedagogical dimensions of inclusion in PE were introduced in the interviews and in the interactional approach to disability guided the analysis of the data. Another important step that allowed the combination of the three studies was the design chosen. The multimethod design allowed me to implement and analyse the studies separately in order to fully appreciate the knowledge gained from employing different theoretical and methodological approaches in one project.

The complexity of a socio-ecological framework (i.e. considering information in regards to all spheres of the individual) also makes it difficult to apply reductionist principles in order to create an operational framework for a survey study. To explore particular mechanisms of inclusion in PE more in detail, I included additional theoretical tenets that I believed to be pertinent to better understand inclusion in PE (i.e. AGT and SDT in Article IV). Additionally, the introduction of fsQCA to explore the psychosocial mechanism in PE also complemented contemporary theoretical discussions. The fsQCA analyses supported the identification of complex relations between the different AGT and SDT tenets that are out of reach with the use of more traditional statistical approaches. For example, despite the emerging research combining tenets from AGT and SDT, the extent to which motivational constructs are interrelated are still not well understood (Wang & Biddle, 2007). For example, while an interactive approach in exploration of goal orientation is promoted due to its orthogonal nature, a comprehensive review of correlates of achievement behaviour indicated that more than 80% of the studies dealt with the effects independently (Biddle, Wang, Kavussane, & Spray, 2003). The configurational nature of fsQCA invites further explorations

how different combinations of the theoretical tenets support or hinders positive development, rather than to evaluate the independent effects of each tenet.

By comparing and discussing the findings from the three studies in the general discussion I have attempted to generate a more comprehensive and nuanced appreciation of inclusion in PE as experienced by children with disabilities and their parents as well as to contribute the relevant theoretical discussions that would not have been possible within a monomethod design. For example, inspired by the Norwegian version of the Booth index of inclusion (Nes et al., 2004a) we developed a scales to measure the children's experiences with social and pedagogical inclusion in PE from low to high levels of inclusion. While understanding inclusion in PE as a continuum of feeling more or less included assisted us in exploring the associations with other plausible influential aspects, it would be difficult to capture fluctuations and the complexity of experiences that the children shared in the interviews. Findings from Study II and III show how the two different methodologies can complement each other.

Exploratory and inductive research is often considered at “merely” descriptive, often undermined in favour of causal analysis (Gerring, 2012), which imply that descriptions are either unimportant or atheoretical research initiatives. In line with Gerring (2012), I contend that while thorough descriptions is crucial to theory development and causal explanation (i.e. describe in order to explain), it should also be valued as important independent research endeavour. Thorough descriptions of aspects of a complex phenomenon such as inclusion in PE are important to accumulate knowledge on questions such as what/how, when/whom and in what manner. To paraphrase Gerring (2012), without such research we would ultimately know less about the phenomenon we study and what we know would be less precise. While the hermeneutic phenomenological approaches do not aim for causal explanations (Van Manen, 2016), one should not ignore the causal potentialities of the descriptions in themselves (Gerring, 2012). In depth descriptions of particular incidences can provide important insights in the contextual and social mechanisms of inclusion as experienced by the participants.

### ***Multiple methodological approaches***

The multimethod design of the project enabled a more comprehensive picture of inclusion in PE than what would have been possible if we have chosen one method over the other (Powell, Mihalas, Onwuegbuzie, Suldo, & Daley, 2008; Thomas, Nelson, & Silverman, 2011). Each

method privileges some questions, aspects of analysis and knowledge over others, which combined complemented our understanding of inclusion of children with disabilities in PE. Study I guided the focus of Study II and III. In line with the chosen design, the qualitative study II and quantitative study III data gathering were parallel and analysed separately. However, the analysis and findings from the study II guided the research questions explored in study III. A sequential multimethod design (either qualitative-quantitative or quantitative-qualitative) would have allowed me to further build upon the findings from study II in the design of study III. For example by introducing questions regarding avoidance techniques in the child survey. Or in a quantitative-qualitative design, by selecting qualitative case studies based on findings from the survey. However, due to challenges in recruitment of participants, a sequential design was not applicable. A strength of the parallel multimethod design was that it allowed for multiple ways of being a part of the research project. The parallel design made it easier to adapt the research methods in terms of the participants' interests and abilities. This was particularly important for the children. For example, some children did not want to take part in the interviews, but were willing to answer the questionnaire. Other children did not want to, or were not able to answer the questionnaire, but were willing to take part in an interview.

Both Study II and III were cross-sectional studies based on purposive and criteria-based sampling. Generalisations should be made with these limitations in mind. However, this does not imply that no generalisation can be made. In dialogue with contemporary discussions in qualitative research, I further discuss three plausible types of generalizability, namely naturalistic, transferability, and analytical generalizability (Smith, 2018). Naturalistic generalizability relates to the familial resemblance the research bears to the readers' experiences and depends upon the degree to which the researcher provide the readers with adequate information on the participant's lived experiences and the context in which they took place. On the other hand, generalisation through transferability related to "what extent are the results transferable to other settings?" (Smith, 2018, p. 4). The support system for children with disabilities in PE and the way PE is organised varies greatly between countries. However, this is not to say that the findings from study II are not transferable to other contexts. The transferability of the results from study II depends upon whether the results are seen as experiences as relatable to the readers own situation or context. Smith (2018) also reminds us that analytical generalisation can also occur through concept or theoretical generalisation, in which the concepts and theories developed or re-examined in the research

has significance in other research. In analytical generalizability it is the concepts that are generalizable, not the specific context or population (Smith, 2018).

All self-reported information are shaped by the context of the self-reporting, and the participants' interpretation of what is being asked (Ryan & Deci, 2008). We did not measure social desirability in the child or parental survey. However, it is reasonable to presume that both parents and children may be less inclined to paint a better picture of the PE situation than they actually experience it. However, children may have inclined to refrain from sharing negative experiences in the interviews where both children and parents were present as an effort to protect their parents' feelings. The parents may have been less inclined to discuss particular challenging situations if their child was present in the interview. This dimension of protectiveness may have influenced the interviews depending on the degree to which the families had discussed potential unpleasantness in PE prior to the interviews. Furthermore, children's answers in the survey may have been influenced by the presence of parents depending on the degree of help they received in answering the survey.

Researchers on inclusion of children with disabilities in different domains have often relied on children's proxies, rather than to include the children themselves (Garth & Aroni, 2003). This choice is often justified by the argument that parents provide an accurate account of children's situation in school (Wendelborg, 2010a). Based on the lack of PE-related home-school collaboration found in study II, it is reasonable to question the depth of some parents' knowledge of their child's situation in PE. The degree to which parental accounts provided insight into inclusive and exclusive mechanisms in PE seemed to be conditioned on the degree to which families have discussed PE at home. In some interviews, the children and parents also shared quite different perspectives on inclusion. These findings support the need to seek both perspectives in research. The strength of triangulation of stakeholder perspective is not necessarily to validate the findings from different accounts, but that the different perspectives tap into different aspects and experiences of the same phenomenon.

Lastly, research on the relationship between inclusion in PE and disability necessitates a definition and/or categorisation of the participants in terms of type and degree of disability. Abberley (1992, cited in Shakespeare, 2006, p.32) emphasised an unavoidable circularity in the knowledge produced in such research highlighting that "the number found are an artefact of the definition used". Previous research has also indicated that the way we measure disability frame our results (Molden & Tøssebro, 2012). The diversity of the children's type and degree of disability is a strength of the study. Yet, it is important to note that the disability

groups are gross categorisations of children's main impairment, and does not necessarily reflect the variation between and within the group of children as well as more specific categorisations would. As an example, while CP have been categorised as a physical disability, several children with CP may also have cognitive difficulties. The construction of disability categories does not exclude the use of surveys, it only means that the results should be understood in the terms in which it was indent and within the definition of people with disability on which it relies (Shakespeare, 2006).

### **Practical implications**

The knowledge gained from this project may benefit PE teachers, parents, school administrators, PE teacher educators, health practitioners and policy makers in their efforts to promote learning for *all* pupils in PE. More importantly, *if* enhanced knowledge leads to enhanced efforts to secure inclusion in PE, *then* the findings may also benefit the children themselves, which, in the end, is the ultimate aim.

In line with previous research, this dissertation indicate schools and teachers needs to be better at adapting the physical, pedagogical and social PE environment to fit the needs of the group of children it aims to serve (Arnell et al., 2017; Grue, 2001). Inclusion in PE require optimal challenges within a learning climate that foster relatedness, task involvement, effort, self-referenced learning and recognises failing as a natural part of the learning process, and by so doing limit children's fear of failing and avoidance behaviour (Nicholls, 1989; Roberts, 2012). Promotion of a physical inclusive and mastery-oriented climate and/or physical inclusive and an autonomy supportive climate low on performance-orientation seem to be successful strategies for social and pedagogical inclusion in PE. A mastery climate seems to be a particular robust inclusion-supportive climate for children with different motivational profiles and abilities. Furthermore, the identification different paths towards inclusion among subgroups with similar motivational dispositions may enable segmentation strategies that will increase the effectiveness of interventions to promote inclusion in PE. Based on the children's experiences in Article II, a tactful PE teacher first and foremost knows the preferences and needs of the children, plans the lesson accordingly, does not discriminate based on normative ideals of body and abilities, clearly communicates and follows up on what to be expected of the children, adequately informs the children and parents about the PE programme, and knows when to adapt the lessons plans and when to include the children in decision-making

(Arnell et al. 2017; Giese & Ruin 2018; Goodwin & Watkinson 2000; Wilhelmsen & Sørensen, 2017).

Parental involvement in PE is an untapped resource in the home-school collaboration. Children with disabilities are often in contact with several health services and personnel such as physiotherapist, psychologists and occupational therapist in regards to inclusion in PE. To be able to facilitate an inclusion-supportive learning climate the teacher needs knowledge about the children's abilities and interest, and how to optimally build on, challenge, and include these abilities, interests and learning strategies within a climate that recognise the diversity within the group. This requires that the teacher have knowledge about the child's background, resources and life at home. Systematic PE-related collaboration with parents could serve as a source of security and support for the child, align the demands between the two arenas, and reinforce inclusion in PE. Continuity and flexibility in the PE-related communication may also lessen the workload of parents and teachers.

School resources are often constrained (Lake & Billingsley, 2000). The parents' experiences in Article III advance the understanding of how varying interests and expectations, if left unresolved, may lead to unproductive collaboration and impede inclusion in PE. These insights may sensitise professionals to be more aware of, prevent or respond better to the contradictory expectations that may arise in the collaboration with parents. Furthermore, increased PE-related home-school collaboration within the support team could strengthen the school administration and teachers' commitment to inclusion and enable them to recognise new possibilities with available resources.

This dissertation frames inclusion in PE in a multilevel system and portrays a network of relations of responsibility that extend the individual teachers. This is not to say that the PE teachers are not essential actors in inclusion in PE or that they cannot be creative with the resources at hand, rather that the teachers' practice and children's experiences in PE are influenced by factors outside the PE setting. In other words, the responsibility of securing inclusion in PE exceeds any individual actor. Inclusion in PE needs to build upon inclusive educational policies, and inclusive cultures and a community of practice at the local schools (Dyson et al., 2002). Without a system for inclusion that considers PE, the quality of education children with disabilities receive in PE will continue to be dependent on the individual PE teacher and the parents' initiatives and involvement.



## Conclusion and further research

This dissertation aimed to identify the gaps in the extant knowledge base on inclusion of children with disabilities in PE and to explore inclusion in PE as experienced by children with disabilities and parents in Norway. With the use of multimethod approaches, the findings provided insight into the complexity of physical, social and pedagogical inclusion in PE as experienced by children with disabilities and their parents.

In summary, Study I indicated that the knowledge of how to promote inclusion in PE is still limited despite increased research contributions on inclusion of children with disabilities in PE. Previous research had concentrated on the PE educators' perspectives and attitudes towards inclusion in PE among teachers. Limited research existed on the experiences of children with disabilities and their parents. Study II showed that children with disabilities are still at risk of marginalisation in PE and several children do not receive the PE provision they deserve. The findings indicated that there are no systems in place to secure the quality of inclusion in PE, and PE seems to fall under the radar in terms of schools effort to secure inclusive education. This dissertation show how lack of school routines that ensure systematic PE-related collaboration deprives parents of the opportunity to support their children's learning in the subject and of their ability to make informed decisions-making in terms of their child's education. The findings also provide insight into the parental labour involved in securing quality education in PE for their children with disabilities. Study III further illuminated the importance of PE-related information sharing in terms of parents' satisfaction with social and pedagogical inclusion. Finally all three studies indicated that physical inclusion in general PE was not sufficient to secure quality education in PE. As demonstrated by Study II, for children to feel socially and pedagogically included in PE they needed to experience the learning climate to be physically inclusive and mastery-oriented climate or a physical inclusive, autonomy supportive and low performance-oriented climate. Thus, a mastery climate seems to be a particular robust inclusion-supportive climate for children with different motivational profiles and abilities.

The experiences of children with disabilities and their parents raise several issues that warrant further research. Based on the findings from the three studies in this dissertation, I suggest further research in three areas.

- (1) Research on relations between psychosocial learning climate and inclusion in PE.  
Case studies of schools and prolonged observation of how children engage with learning activities, interact with peers and teachers, develop knowledge, skills and

understanding across the PE curriculum is needed. Investigation of inclusion in PE over time would strengthen our understanding of how children's learning process and experiences of physical, social and pedagogical inclusion and exclusion in PE may fluctuate depending on the school context and the situation.

- (2) Research on initial teacher training. Previous research indicates that PE teachers often feel unprepared to include children with disabilities in PE and would prefer additional training in adapted PE (Article I). Two approaches that seems to gain interest in the literature is Paralympic programmes for general PE students and online adaptive educational programmes for pre an in service PE teacher (Kwon & Block, 2017; Sato & Haegele, 2017). More research is needed to evaluate the effectiveness of such programmes. While such programme may be resource and time efficient, we also need to critically engage in research questions such as how are we, as teacher educators and the programmes that we design, able to support and prepare students to engage in thoughtfully adaptive teaching?
- (3) Research taking on a holistic and longitudinal exploration of the collaboration between significant stakeholders. Inclusion in PE does not occur in a vacuum. It takes place in the interaction between people in the gymnasiums, the local schools, communities, and within the current educational system. More research is needed on how the collaboration between the different stakeholders is facilitated within the municipalities and local schools, and the joint collaboration process as experienced by the children themselves, parents, and the different external (i.e. the physiotherapist, occupational therapist) and internal (PE teachers, general teacher, LSAs) para/professionals within the children's support team. This may sound overly complex, but this is the complexity that many children with disabilities and their parents have to navigate and negotiate.



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## Article I

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## **Article II**



1 **“Inclusion is a nice word but...”: Physical education as experienced by**  
2 **children with disabilities and their parents**

3

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14 **“Inclusion is a nice word but...”: Physical education as experienced by**  
15 **children with disabilities and their parents**

16 Research indicates that physical education (PE) is a particularly challenging  
17 arena for children with disabilities. Yet, children’s experiences are seldom  
18 explored in research on inclusion in PE. In this hermeneutic phenomenological  
19 interview study we explored the experiences of inclusion in PE of children with  
20 disabilities and their parents. Fifteen elementary school children with diverse  
21 disabilities and 26 parents participated in study. Thematic analysis of the  
22 interviews yielded four themes that structured the discussion: (a) physical  
23 inclusion in PE; (b) pedagogical inclusion and exclusion in PE; (c) social  
24 inclusion and exclusion in PE and beyond; and (d) forced exclusion. The themes  
25 illuminated the situational complexity and temporality of inclusion as  
26 experienced by children and parents and how children navigated exclusive  
27 experiences in PE. Based on the findings we raised questions in terms of what  
28 impact inclusive policies have had on PE practices.

29 Keywords: child perspectives; disability; exclusion; inclusion; parental  
30 perspectives; physical education

31 **Points of interest**

- 32 • PE seems to be a challenging arena for children with disabilities.
- 33 • In this study we explore the experiences of inclusion in PE of children with  
34 disabilities and their parents.
- 35 • Four main themes are discussed: (a) physical inclusion in PE; (b) pedagogical  
36 inclusion and exclusion in PE; (c) social inclusion and exclusion in PE and  
37 beyond; and (d) forced exclusion.
- 38 • The themes illuminated the situational complexity and temporality of inclusion  
39 as experienced by children and parents and how children navigated exclusive  
40 experiences in PE.

41 **Introduction**

42 Research consistently suggests that physical education (PE) is a challenging arena for  
43 children with disabilities (Arnell, Jerlinder, and Lundqvist 2017; Bredahl 2013; Coates  
44 and Vickerman 2008; Grue 2001; Schreuer, Sachc, and Rosenblum 2014; Svendby and  
45 Dowling 2013). Yet, knowledge about how inclusion in PE is experienced by children  
46 and their parents is still marginal in the extant literature (Wilhelmsen and Sørensen  
47 2017). To better understand the inclusive and exclusive social and pedagogical  
48 mechanisms in PE, this article focuses on inclusion in PE as experienced by children  
49 with disabilities and their parents.

50         Our understanding of disability relies on an interactional approach emphasising  
51 disability as “the outcome of the interaction between individual and the contextual  
52 factors – which includes impairment, personality, individual attitudes, environment,  
53 policy, and culture” (Shakespeare 2006, p.58). It is not only the extent and nature of  
54 impairments or the extent of social barriers and oppression that dictates experiences of  
55 disadvantage. Based on a phenomenological perspective (Van Manen 2015; 2016), the  
56 interactional approach to disability allows for explorations of contextually bound  
57 interpersonal encounters in PE as well as the meaning of these experiences.

58         Inspired by Goodwin, Watkinson, and Fitzgerald (2003) we define inclusion in  
59 as giving all children the opportunity to participate in general PE with their peers, with  
60 the aid and support service needed to take full advantage of the curriculum and the  
61 social, physical and academic benefits it aims to provide. The physical, the pedagogical  
62 and the social dimension of inclusion are considered in this study (Dalen 1994).  
63 Physical inclusion relates to the degree to which children with disabilities are physically  
64 present in a general PE setting. Previous studies indicate large variations in the PE  
65 provision children with disabilities receive (Coates and Vickerman 2008; Svendby  
66 2013). Yet, few studies have explored how the interrelations between children’s

67 experiences of physical, social and pedagogical inclusion.

68           Pedagogical inclusion reflects the degree to which PE is organised in a way that  
69 allows all children to use their abilities, promote their learning potential and engage in  
70 the activities. Common barriers identified in the literature are: limited modification to  
71 plans, poor management of ‘differentness’, normative ideals of ability, limited teacher  
72 training in adapted PE, confrontation with unfair competitive disadvantage, fear of  
73 injury, material barriers to inclusion, and help initiatives perceived as unnecessary,  
74 reinforcing dependency and inferiority (Asbjørnslett, Helseth, and Engelsrud 2013;  
75 Bredahl 2013; Coates and Vickerman 2010; Fitzgerald and Stride 2012; Goodwin,  
76 2001; Goodwin and Watkinson 2000; Healy et al. 2013; Svendby and Dowling 2012;  
77 Van Amsterdam, Knoppers, and Jongmans 2015). Positive experiences among children  
78 with disabilities has been described as: being allowed to take part in activities,  
79 experiencing mastery, feeling like a legitimate participant and help initiatives perceived  
80 as caring, facilitating successful participation and reinforcing self-reliance (Coates and  
81 Vickerman 2008; Goodwin, 2001; Goodwin and Watkinson 2000; Fitzgerald and Stride  
82 2012; Spencer-Cavaliere and Watkinson 2010).

83           Social inclusion in PE refers to the interaction between children and their peers  
84 in PE, between children and the teachers, as well as experiences of belonging to the  
85 group. Common barriers to social inclusion identified in the literature are:  
86 discrimination and bullying, feelings of embarrassment and being stared at, while  
87 positive social interaction is described as having friends, and feeling welcomed,  
88 supported and belonging (Coates and Vickerman 2008: 2010; Fitzgerald and Stride  
89 2012; Goodwin and Watkinson 2000; Healy et al. 2013; Spencer-Cavaliere and  
90 Watkinson 2010).

91            Research with parents indicate that parent’s experiences with PE is dependent on  
92 their perception of the PE teacher, their child’s PE placement, the provision of support  
93 staff, the appropriateness of the modifications their child received, and their  
94 communication with PE teachers (An and Hodge 2013; Chaapel et al. 2012; Lieberman,  
95 Haibach, and Wagner 2012; Perkins et al. 2013; Svendby and Dowling 2013). Previous  
96 research has often focused one dimension of inclusion without considering the relations  
97 between children’s experiences of physical (i.e. placement and participation), social and  
98 pedagogical in inclusion in PE. Thus, the research question in focus is how is social and  
99 pedagogical inclusion in various PE settings experienced by children with disabilities  
100 and their parents?

#### 101 **Method**

102 A hermeneutic phenomenological interview study was employed as it provided the  
103 sensitive approach needed to explore the inclusion in PE as experienced by children  
104 with disabilities and their parents (Van Manen, 2016). Thus, the lived experiences of  
105 inclusion in PE is the starting point, but we also explore the meaning of these lived  
106 experiences for our understanding of inclusion. The methodological steps draw upon the  
107 work of Max Van Manen (1997; 2016). The approach is hermeneutic in nature in that it  
108 focuses on text interpretation (i.e. transcribed interviews). It is the focus on discursive  
109 language and sensitive interpretation that makes the analysis and descriptions possible  
110 and intelligible (Van Manen 2016).

#### 111 ***Participants***

112 Purposeful criteria based sampling was used to recruit participants (Patton 2002). We  
113 recruited participants at a rehabilitation centre specialised in physical activity for  
114 children with disabilities. The main criteria were that the child with a disability was

115 enrolled in general primary or secondary schools. We wanted to include both mothers  
116 and fathers, and boys and girls with various disabilities with the intention of including  
117 participants with various experiences with PE (Van Manen 1997).

118           Fifteen children with disabilities (nine boys and six girls in the age of 8-15) and  
119 26 parents (10 fathers and 16 mothers) attended the interviews. Within the families  
120 participating in the interviews seven children were diagnosed with cerebral palsy (CP),  
121 five with Down syndrome, four with physical disabilities, three with learning  
122 disabilities, two with Asperger spectrum disorder (ASD) and four with other disabilities,  
123 such as visual impairment or an unspecified diagnosis. Six parents reported general or  
124 vocational high school as their highest level of education; two reported one to three  
125 years of higher education and 10 reported over three years of higher education (seven  
126 did not indicate their educational levels). In three families, one or both parents were  
127 born in another country.

## 128 ***Data gathering***

### 129 *Interviews*

130 A semi-structured interview guide was developed based on earlier research within the  
131 field (Svendby 2013; Wilhelmsen and Sørensen 2017). The overall themes in the  
132 interview were: (a) children's placement in PE, (b) children's experiences with the  
133 activities and organisation of PE, their interaction with peers, teacher and  
134 paraprofessionals in PE and (c) parents' experiences of their child's provision of PE and  
135 the collaboration with school. The interviews were recorded and transcribed verbatim.  
136 In two interviews the first author used notes to log the conversation because the child  
137 preferred not to use a recorder. The interviews were conducted either with the child and  
138 the parent together or separately depending on the participants' preferences (12

139 interviews with both children and parent(s), thirteen with only the parent and three with  
140 only the child). All interviews were conducted while the participants attended a three-  
141 week stay at the rehabilitation centre. The interviews lasted between 25 and 60 minutes  
142 depending on the time available of the participants, the length of participants' response  
143 and children's level of energy during the interviews.

#### 144 *Drawings*

145 We introduced drawings the interviews as a possible medium for children to express  
146 themselves. Freehand drawing, as a form or visually based data gathering, has been  
147 promoted as a valuable method for children to express themselves in research (Bland  
148 2017). Children were invited to draw a situation from PE that had made an impression  
149 on them or an activity they liked/disliked. Afterwards we talked about the experience  
150 re-presented in the drawing. In two interviews the drawings provided access to more  
151 meaningful data than the verbal representations and served as medium to express the  
152 things not easily put in words by the children (Bland 2017).

#### 153 *Field notes*

154 The first author conducted all interviews and took field notes after each interview and at  
155 the end of each day. The field notes were particular important on three occasions. They  
156 provided crucial information in the analysis of the interviews that were not recorded,  
157 they served as important records of reflections on the interaction between the  
158 participants in the interviews, and notes on the more informal conversations with  
159 parents and children during the field visits. One situation especially enriching was the  
160 parental meetings in which the first author presented the research project for potential  
161 participants. In these meetings several discussions on inclusion in PE materialised.

162 These meetings have left a mark on the analysis—in particular in the last theme  
163 presented in the findings.

#### 164 *Data analysis*

165 Thematic analysis was used to capture both the essence and the nuances of possible  
166 experiences with inclusion in PE (Van Manen 1997). The analysis was a movement  
167 between a holistic and line-by-line reading of the transcribed interviews and field notes  
168 in search for essential aspects of inclusion in PE as experiences by children and parents  
169 (Van Manen 1997). The experiential aspects were logged for each individual interview  
170 (see Table 1). Next, we analysed patterns among the aspects covered in the interviews  
171 in search of subthemes and overarching themes (Van Manen 2016). We re-read all  
172 interviews to search for additional aspects of inclusion, and to assess whether to  
173 reorganise the thematic structure. The final thematic structure is described in the results  
174 section, followed by an in-depth analysis of the themes.

175         In the re-presentation of participants’ experiences we use anecdotes and  
176 pseudonyms. We constructed the anecdotes by refining and removing extraneous details  
177 in the transcripts (Crowther et al. 2017). The anecdotes are not indented to be  
178 representative and should be read as ‘plausible descriptions of possible human  
179 experiences’ (Van Manen 2016: 227). The anecdotes represent different and sometimes  
180 conflicting experiences. Similarly to Dowling and Flintoff (2011), we see these conflicts  
181 as fruitful points of departure. When seen together the variations of experiences might  
182 provide a better understanding of the experiences that inclusion in PE might invoke.  
183 The drawing presented in the results was selected because it offered a richer re-  
184 presentation of a particular experience in PE than the transcriptions alone.

185 *Ethical consideration and trustworthiness*

186 The permission to conduct the study was obtained from the Norwegian Data Protection  
187 Official for Research, and the study was carried out in accordance with the agency's  
188 requirements. In line with the United Nations Convention on the Rights of the Child  
189 (UNCRC 1989) we recognise children as active agents and experts in their own lives,  
190 with competencies to skilfully communicate their experiences using a range of  
191 languages and methods (Clark 2005; Clark and Moss 2001). However, access to the  
192 children was mediated through parents. We informed the parents that we preferred to  
193 interview the children and parents separately, but the final decision should be based on  
194 the child's preferences. Parents were asked to inform the children about the purpose of  
195 the interview. To make the information more accessible for the children we also drafted  
196 a separate information letter for them. The purpose of the interview and the participants'  
197 rights was also explained at the start of each interview. Children were told that they  
198 could opt out at any time without having to explain why. While no children asked to end  
199 the interview, some interviews were shortened because the child was tired.

200 We employed several measures to ensure the trustworthiness of the study and  
201 analyses. A reflective journal was kept throughout the research process and reflective  
202 field notes were taken during the interview process (Zitomer and Goodwin 2014).  
203 Participants were also given the option to review, comment on or add information to  
204 their interview transcripts (Smith and McGannon 2017). No family accepted this offer.  
205 We listened to the original audio files to double check our representation of the  
206 anecdotes and the experiences based on the interview transcripts. Finally, a colleague  
207 critiqued our study by reviewing drafts of the text (Smith and McGannon 2017).



208 **Findings**

209 The inquiry into inclusion in PE as experienced by children with disabilities and their  
210 parents yielded four themes in which this section is composed: (a) physical inclusion in  
211 PE; (b) pedagogical inclusion and exclusion in PE; (c) social inclusion and exclusion in  
212 PE and beyond; and (d) forced exclusion. Table 1 display the main themes, and the  
213 related subthemes and codes: TABLE 1 IN HERE.

214 The three first themes are structured according to the three dimensions of inclusion in  
215 PE in which we aimed to explore. The last theme accounts for the children receiving a  
216 segregated PE programme and parents' critical voice on inclusive education. The  
217 subthemes capture the contextual and experiential differences among the participants.

218 ***Physical inclusion in PE***

219 Although all the children were enrolled in general schools, the organisational solutions  
220 provided for the children in the schools differed considerably. FIGURE 1 IN HERE.

221 As portrayed in Figure 1, the children were either enrolled in general class  
222 (n=20) or special groups (n=5). The children attending general class (GC) participated  
223 either in the general PE programme, a segregated PE programme (individually or in  
224 smaller groups with other children with disabilities), were exempted from PE, or moved  
225 in between general and segregated PE activities. The children attending special groups  
226 (SG) all participated in segregated PE programmes, either in smaller group activities  
227 with other children with disabilities or in individual PE programmes such as  
228 physiotherapy or swimming.

229 The reasons given for why the children participated in partly or fully segregated  
230 PE programmes differed (Study II). For some children, receiving segregated PE in  
231 smaller groups with children with disabilities came as result of being enrolled in a SG.  
232 In line with policies on the use of special education, the intention was to facilitate

233 flexible movement between SG and GC activities. Nevertheless, the parental accounts  
234 suggested that the children received majority of their education, including PE, in  
235 segregated placement. Few children in SGs had the opportunities to interact with  
236 children without disabilities and none of the children participated in general PE.  
237 According to the parents, few (if any) initiatives were taken by school to evaluate  
238 whether or not the child could be included in the general PE lessons with his or hers  
239 age-peers. In these cases the degree of physical inclusion was not described as based on  
240 the inclusiveness of the general PE lessons nor the children's interests or abilities to  
241 participate in general PE, but as a result of the interplay of institutional and  
242 organisational level of factors (i.e. segregated facilities and different timetables for the  
243 SG and GC) and the lack of collaboration, communication and planning between the  
244 teachers in the two settings. Another barrier for physical inclusion in general PE was the  
245 teachers' lack of differentiated adaptation initiatives within the group of children in SG.  
246 In other words, if all the children in SG were not able to attend general PE activities,  
247 none of the children from the group were allowed to attend. Some parents also feared  
248 that their child would lose the benefits of the segregated PE programme if they pushed  
249 for larger degree of physical inclusion in general PE.

250         Parental accounts of why children enrolled in GC received partly or fully  
251 segregated PE programmes or were exemption from PE were based in slightly different  
252 argumentation. Some children in GC had experienced that the school was not willing to  
253 implement the necessary adaptation that allowed them to participate or the children  
254 were perceived to be unable to benefit from the general PE programme. One mother  
255 also highlighted that her child experienced the adaptive measures implemented in  
256 general PE as disabling and constructing otherness. To protect her daughter from these

257 forms of marginalisation and feelings of being a burden, the child was allowed to  
258 withdraw from PE.

### 259 ***Pedagogical inclusion and exclusion in PE***

260 In the following we present anecdotes from children and parents related to the  
261 pedagogical dimension of inclusion in PE.

#### 262 *Experiencing mastery*

263 The children's experiences with activities were often related to the interaction between  
264 perceived physical abilities and task difficulty. The children's preferred activities  
265 endorsing a diversity of movements and activities that allowed the children to  
266 participate on equal terms as their peers such as dodge ball, dancing and obstacle  
267 course. In contrast, in the disliked activities the children's impairment was often  
268 experienced as a disadvantage. As described by Toby who used a wheelchair for  
269 mobility:

270 PE is my favourite subject because I love being active. My favourite activity is dodge ball,  
271 but I don't like strength training. I don't run as fast as the others do in sprints and things  
272 like, but that's ok—we don't have these activities that often. But I do keep up with the  
273 others in dodge ball! [Toby, physical disability, 7th grade]

274 Another aspects important for children's experiences of mastery and competency were  
275 related to being recognised by the PE teacher and the teacher's expectations towards the  
276 child. Sara explained:

277 I join in on most activities, but if there are activities I can't do they find other activities for  
278 me or I do the activities my physiotherapist gave me. However, in some situations the  
279 teacher says: 'Sara, you are not allowed to do this activity'. And I'm like: "can't I at least  
280 try?" Then the teacher says: "yes of course". After trying I'm like "maybe I should do  
281 another activity as you said"—because I want to try everything the others do. I think it  
282 stupid that people think I can't do something just because I have an impairment! Most of  
283 the times they know I can do everything the others can do. It is important for me that they  
284 know I'm not useless little kid. [Sara, physical disability, 5<sup>th</sup> grade]

285 It was important for the children to feel self-reliant, to master the activities introduced in  
286 PE and not to feel underrated by the teachers. The evaluation of personal performance  
287 relative to others was also described as relevant for the mastery experiences. For  
288 example, some children emphasised the joy of performing as good as or even better than  
289 their peers in specific activities.

290 *Compensating for lack of adaptation*

291 A recurrent situation described in the interviews was lack of adaptation in PE:

292 PE hasn't worked well. They have started with ball games. I guess it's a competence aim in  
293 PE, but some ball games are harder for children with visual disabilities than others. Robert  
294 has been taken out of PE for strength and balance training instead, because they believe he  
295 struggles with his balance. I feel his balance is being used as an excuse. It is easy to let the  
296 rest of the group play ball games when he is not there. So I had to talk to them. I don't want  
297 him to become more and more excluded. [Mother of Robert with visual disability, 3<sup>rd</sup>  
298 grade]

299 The mother experienced that the school mistakenly justified exclusion by ascribing the  
300 limitations to her son rather the context and educational practice. In this case, the result  
301 was segregated activities rather than alteration of the educational context.

302 The children and parents describe compensating for lack of adaptation in several  
303 ways, including avoidance strategies, self-selected exclusion or pushing through.

304 Perceived difficulties of task and lack of perceived competence could result in children  
305 not wanting to try an activity or asking if they could be excused from taking part.

306 David's father describes his son's avoidance behaviour:

307 I know there is quite a lot Davis doesn't master in PE. He solves it by sneaking away. Not  
308 ideal but... For him, it's easier to sneak away and doing something else, climb on the wall  
309 bars etc. It isn't fun when everybody else masters things and he doesn't. That's  
310 understandable. [Father of David with motoric development delay and ADHD, 3<sup>rd</sup> grade]

311 Elisa described another example of self-selected exclusion. Elisa attended 5<sup>th</sup> grade in  
312 general school and described having a constrained relationship with PE. Elsa's parents

313 had not reflected on PE before the interview, but seemed to be satisfied with Elisa  
314 attending PE with her peers. Yet, in the interview Elisa described PE as an arena in  
315 which she was physically but not pedagogically included:

316 Father: Elisa always has the same PE as the others.  
317 Elisa: No, sometimes I ask if I can be allowed to this and this.  
318 Mother: Because you think it's difficult?  
319 Elisa: Yes, very difficult, such as balance, gymnastics and handstands.  
320 I: When you ask the teacher if you can do something else, what do you do then?  
321 Elisa: I dance and jump around a bit.  
322 [Elisa, her mother and father, Ella has been identified with delayed learning and motoric  
323 development, 5<sup>th</sup> grade]

324 Later in the interview Elisa's mother adds: "The PE teacher just organises everyone in  
325 one group, and then the others just have to try to keep up as good as they can—then you  
326 see that some children can easily fall behind". Elisa's case portrays a subtle form of  
327 functional exclusion in which she is physically included in PE, but does not  
328 meaningfully participate in the activities introduced in the lesson (Tripp, Rizzo, and  
329 Webbert 2007).

330 One mother explained it was important for them to allow her daughter with CP  
331 to be exempted from PE to prevent feelings of otherness and being a burden:

332 It's more appropriate to use time on physiotherapy instead of PE. My daughter has no  
333 opportunity to compete in grade 8 on the same terms as her peers. She doesn't want special  
334 treatment or to stand out from the group. It can be a burden for a child to always be the one  
335 that needs to be given special consideration or to always be the reason why the class cannot  
336 have regular PE. This is important to consider—especially in terms of development of self-  
337 esteem, identity and belonging. It's important to be flexible on what and when, and not  
338 always having to being included. [Mother of a daughter with CP, 8<sup>th</sup> grade]

339 Faced with a learning environment that does not recognise the needs of the individual  
340 learner some children and parents might choose a coping strategy such as self-selected  
341 exclusion or exemption from PE, which might preserve feelings of being protected from  
342 unpleasant situations. However, it also counteracts social and academic learning and  
343 development (Urguhart 2009).

344 Another compensation was trying harder and *pushing through* in an effort to  
345 adapt to the values and practices introduced in the lessons. These children drew on their  
346 own resources to compensate for inadequacy in the learning environment (Urquhart  
347 2009; Svendby 2013). Sara was one of the children who pushed through the activities  
348 even though they were not adapted adequately. In answering the question of what she  
349 disliked in PE Sara explained: “It’s probably that I get so exhausted afterwards. I’m a  
350 bit like it’s enough now!” Some activities demanded a lot of energy from the children,  
351 both mentally and physically. Without adequate rest some children experienced being  
352 so exhausted they had stay home from school the next day.

### 353 *Ambiguity of co-determination*

354 Children described few opportunities to take part in decision-making in PE.  
355 Furthermore, their experiences with co-determination were ambiguous. One opportunity  
356 for co-determination was pupil lead lessons:

357 The PE teacher is good. Based on her plans for the lesson she sometimes asks me if the  
358 activities work for me. Right now we have a PE project where we are in charge of planning  
359 and implementing our PE lesson in smaller groups. [Toby, physical disability, 7<sup>th</sup> grade]

360 While Toby enjoyed the diversity of activities that the pupil-lead lessons provided,  
361 children might also experience choice of activities as stressful:

362 We have started now with pupils being in charge of the lesson. Some pupils have planned  
363 what we will be doing in PE, while the others should just do what they’re told. It is not  
364 good when we have to choose, since it is kind of hard for me to choose, really. [Kyle, ASD,  
365 6<sup>th</sup> grade]

366 Adjusting to others without sufficient information on the activity introduced might be  
367 experienced as demanding. The PE context can be a very stimulating sensory setting  
368 (Healy et al. 2013). Knowing what to expect allowed Kyle to focus on the task at hand.  
369 Too extreme alterations in routines without preparation could be experienced as so

370 overwhelming that Kyle would remove himself completely from the situation.

371 Being consulted could also be experienced as constructing differentness. As

372 described by Daniel:

373 The PE teacher asks too much! It is extremely annoying! She always asks in the beginning  
374 of the lesson. She walks over to me and says like: 'today we are having these and these  
375 activities, is that ok with you?' [Daniel, physical disability, 8<sup>th</sup> grade]

376 Daniel highlighted how being the only one asked every time was experienced as

377 disabling. Sensitive to how special treatment could construct differentness, several

378 children emphasized they would like to be treated as everyone else. Consulting children

379 *in situ* can also be experienced as being forgotten or as transferring the responsibility of

380 finding an adequate solution to the child. Erica described how she would get anxious if

381 she was not adequately informed:

382 I wish they could tell me their plans when they inform the class. Like if they have ordered a  
383 taxi or thing like that, so I can calm down and the children will be happy that I can attend.  
384 And not like: "We are having a fieldtrip", and I'm like "what am I supposed to do? Am I  
385 allowed to join in or am I staying at school or is my mum driving me?" And the teacher is  
386 like "what to do with you?" I don't like that. It is the schools responsibility when I'm at  
387 school. [Erica, physical disability, 8<sup>th</sup> grade].

388 Accordingly, experiences with lack of adaptation and preparation could evoke feelings

389 of vulnerability and anxiousness.

### 390 ***Social inclusion and exclusion in PE and beyond***

391 Children and parents described PE as an arena for developing friendships, belonging

392 and strengthening social networks, but also negative experiences such as name-calling

393 and social isolation. Experiences of friendships and social relations with peers were

394 often described in relations to the companionship and closeness within the class of

395 children and participation in activities in PE and recess with or without the support of

396 LSAs. The parents and children also described several strategies employed by the

397 school to strengthen positive social relationship for the individual child.

398 *Social interaction with peers in PE and recess*

399 Toby's father elaborated on the importance of companionship among the boys in class,  
400 having a legitimate role in activities and being able to solve disagreements among  
401 themselves.

402 You are in a very nice class. There has never been any discussion when you play football  
403 with the guys in recess. Then it is always like "Toby you are the goalkeeper right?" If  
404 somebody else tries to be the goalkeeper the other boys would carry him off the field. Even  
405 though you cannot run as fast as they can, you always find a solution together. [Toby's  
406 father, physical disability, 7<sup>th</sup> grade]

407 Positive peer interaction and friendship among the children within the class was also  
408 emphasised by Sara: "They are all my friends really. We are a closely connected class.  
409 I believe most children have many friends." Physical inclusion in PE was emphasised as  
410 important to strengthen a sense of belonging. Roberts' mother elaborates:

411 Robert has to be taken out of class, but as little as possible. Because the more he is out of  
412 the class the harder it is to be included in the community within the group of children. The  
413 most important thing is to develop a sense of belonging within the group. Then we can start  
414 thinking academics. Because we know if he is not socially included he will not be able to  
415 put in any effort or learn. [Roberts' mother, visual disability, 3<sup>rd</sup> grade]

416 Children often described PE as an arena where they could have fun with peers. Absence  
417 from PE was described a risk factor for increased social isolation.

418         Several of the children received support by a LSA. While assistance support  
419 staff was often described in positive terms, it could also limit the child's interaction with  
420 peers. In one interview the father served as translator for his daughter Mary with CP  
421 who used sign language. The father expressed being pleased with the school, but had  
422 not reflected on PE before the interview. However, throughout the interview Mary  
423 described feeling lonely both in recess and PE. The limited social interaction with peers  
424 in PE was portrayed well by Mary's drawing of her favourite activity in PE, namely  
425 dancing: FIGURE 2 IN HERE.



426           As portrayed by the drawing the dancer at the left was the special pedagogue,  
427 the middle dancer was Mary and the right dancer was the LSA. Dancing was Mary's  
428 favourite activity, but also the only activity Mary recalled from PE. Through the  
429 drawing Mary was able to describe both the reoccurrence and the segregated nature of  
430 the activity, while also portraying the feeling of social isolation from her peers.

431           The children in the study described having friends in and out of the PE setting.  
432 Yet, some parents' were concerned about the 'authenticity' of the child's friendships in  
433 terms of closeness and mutuality of the relations in that several children did not play  
434 with schoolmates after school hours. Struggles with friendships and close peers  
435 relations became more visible in parents description of unorganised school activities  
436 such as recess. A mother of a boy in a wheelchair described: 'My son didn't want to  
437 bring his raincoat to school. He said he didn't need it because he spent all his time alone  
438 underneath the shed in recess.' Lack of assistance and the prolonged time it took for  
439 some children to get outside and lack of support by peers or staff was also described as  
440 a risk for social isolation:

441 There is so much going on at the same time in recess and no one is there to be his eyes. So  
442 he uses a lot of time walking around trying to get an overview of the activities, and when  
443 he succeed the bell rings and it's time to go back into class. The days he didn't have time to  
444 play he says he had an ok day, but the days he has played he shines. "I have had a great  
445 day". The distance from having an ok day from having a great day is huge. [Roberts'  
446 mother, visual disability, 3<sup>rd</sup> grade].

#### 447 *Strategies for social inclusion*

448 Several initiatives were implemented in PE, and in school in general, to facilitate  
449 positive peer interaction, promote disability awareness and to prevent social isolation.

450 One strategy was to include activities in PE that would promote disability awareness:

451 They have had some relevant activities for Tommy in PE so the children could see how it's  
452 like for Tommy. A rule of thumb is that a child with CP uses approximately four times as  
453 much energy compared to a child without CP. So when all the children have run one round,

454 the other children have to run three additional rounds. Then they experience how tired  
455 Tommy is after the one round. [Tommy's father, CP, 2<sup>nd</sup> grade]

456 Another initiative was to allow a small number of children to attend the segregated  
457 activities developed for the individual child with disabilities. Erica describes one  
458 solution she was pleased with in primary, but that was not implemented in secondary  
459 school:

460 In primary we had made an arrangement so that everybody should be allowed to spend  
461 time with me inside. We wrote a list of two and two children—to create equal opportunities  
462 for all. Like, one child is allowed to attend today and another tomorrow, and it was equal  
463 for everybody. [Erica, physical disability, 8<sup>th</sup> grade]

464 In the interview, Erica recalled experiencing friendship and positive social interaction in  
465 with peers in primary school. However in secondary school, Erica experienced being  
466 more and more socially isolated without any effort by the school to support positive  
467 peer relations.

468 Another initiative was organised peer companionship. For example, Sara  
469 [physical disability, 5<sup>th</sup> grade] was a part of small group called the 'well-being leaders'  
470 in charge of organising physical activities in recess. Being a well-being leader role also  
471 created a platform for close friendships among the group of leaders that extend beyond  
472 the time spend within the role. Yet another initiative was to delegate responsibility to  
473 peers to spend time with and activate an individual child.

474 A while back, two and two children were given the responsibility to invite Andreas into  
475 play in recess. It worked well for a while, but some of the boys didn't like it. Andreas  
476 wanted to play games that the boys didn't like. But the girls were more caring. It worked  
477 for a while, but then the school dropped it. Now they try to find other children that he can  
478 play with. The result is that he plays with children younger than him. The school says he is  
479 included, but as parents we think it is more that could be done (Andreas's father, ASD, 6<sup>th</sup>  
480 grade).

481 Other initiatives were adaptation that benefited the entire group of children such as five  
482 minutes in-class physical activity breaks to promote concentration among the pupils and  
483 sign-language courses for the entire class.

484 ***Forced exclusion***

485 *Excluded but yearning entrance*

486 Some children did not participate in PE at all but received physiotherapy, therapeutic

487 swimming or used the time to practice other academic skills:

488 Erica: I don't have PE. I'm supposed to work on my French together with one of  
489 the teachers. But I don't want to. I would like to have someone to exercise  
490 with. But they don't adapt the lessons so I can attend. My PE teacher, she  
491 is in charge of the class. She cannot facilitate for me *and* for the rest of the  
492 class.

493 I: Really?

494 Erica: ...and we don't have any equipment at the school. There is no room for me  
495 to do my activities on my own inside the gymnasium. And I do some  
496 activities I don't want to show the other kids.

497 I: Would you like to attend PE together with your class?

498 Erica: Yes. There are many activities I would like to try, but I feel they don't let  
499 me. The PE teacher never asks me. I would like to play dodge ball for  
500 example. I don't care if the ball easily hits me, but I think its fun to laugh  
501 and things like that. I would like to be included. There is a lot I can do with  
502 my upper body and I can walk a bit without the wheelchair. The thing is  
503 the PE teacher will not let me try. But I know my own limits! [Erica,  
504 physical disability, 8<sup>th</sup> grade]

505 Emily and her parents had struggled a long time to have the school allow Emily to

506 attend PE with her peers without success.

507 Another example is Oscar who attends general class, but received segregated

508 PE. Oscar uses an electrical wheelchair for mobility. Oscar did not want to attend the

509 interview, but he agreed to his mother attending:

510 Oscar misses out on some hours because he attends therapy swimming. To rectify he works  
511 on his academics together with his assistant and his teacher when the others have PE. On  
512 the one hand, this solution works well but I asked Oscar what he would prefer—of course  
513 he would like to attend PE together with the others. PE is an arena where they develop  
514 social bonds and the children have fun together. So the solution is not ideal. The more I  
515 think about it the angrier I get. Maybe a solution would be that he attended PE once every  
516 month. Then they can do what they really want three times a month, and just once every  
517 month they could adapt the activities so he can join in but still have fun. We live in a small  
518 place and we know everybody, so we don't want the adapted measures to be a burden.  
519 [Mother of Oscar, 6<sup>th</sup> grade]

520 Both cases above raise questions of what bodies and abilities are recognised as educable

521 or rejected as uneducable within a general PE setting. The fear of being a burden in PE  
522 indicate a certain degree of internalisation of (in)educability, by being concerned that  
523 the child's presence would disturb or decrease the quality of education the children  
524 received. Yet, it is important to note that children with similar type and degree of  
525 disabilities received quite different PE provision, suggesting that different teachers and  
526 schools understood ability and educability of children differently.

527 *Inclusion on whose terms and to what cost?*

528 A question we were confronted with when talking to parents was: inclusion on whose  
529 terms and to what cost? Inclusive education is often focused on the right for children to  
530 attend the local general school. However, some children and parents experienced that  
531 the local school was not sufficiently prepared or inclined to provide sufficient quality  
532 education for the individual child.

533 Inclusion is a nice word and works well in some settings, but it is not always easy in  
534 practice. They call themselves the school with room for everyone. However, we have  
535 experienced that to be more of a slogan than systematised into practice. The nice words  
536 runs all the way to the school principle, but in practice the responsibility lies with the  
537 individual teachers and how she is able to implement it. There is no kind of system in place  
538 to safeguard it. [Father, son diagnosed with ASD, 6<sup>th</sup> grade].

539 Some parents chose to enrol their child in schools with special educational units in the  
540 transition from primary to secondary school if they experienced that the local school far  
541 from endorsed inclusive education. An argument was the experiences of increased  
542 marginalisation and social isolation. While parents attempted to advocate quality  
543 education for their child they saw their child suffer and became more and more socially  
544 excluded:

545 We have experienced that inclusion might not be the best in the long run. The last years of  
546 primary we saw the interest of the girls that used to look after Dorothy started to change.  
547 The gap became wider and wider at the years went by. Sure it's healthy for other kids to  
548 see that everybody is not alike. However, it was just too rough at times. It's easy for people

549 on the outside to support inclusion. But the world is not like that! You will not be included  
550 even though someone writes it on a piece of paper [Father, daughter with developmental  
551 disability, 8<sup>th</sup> grade].  
552

553 Based on negative experiences, particularly with social inclusion, several parents felt  
554 the need to allow the child to withdraw from PE or enrol the child in a school that  
555 offered special groups.

## 556 **Discussion**

557 In this article we explored the experiences of children with disabilities and their parents  
558 with physical, pedagogical and social inclusion. In the experiences shared, the children  
559 and parents illuminates how experiences of inclusion and exclusion in PE is manifested  
560 in actions, activities, consideration, communication, buildings, and institutions. In the  
561 following, we discuss the main findings in accordance with the overarching themes.

562         The large variation in physical inclusion and the PE provision that the children  
563 received indicate that despite the emphasis on a one-track educational system (i.e. the  
564 one school for all ideology) in Norway, some children with disabilities are still isolated  
565 from their peers without disabilities in PE to a large degree. These findings are  
566 supported by previous research describing similar segregation tendencies in PE and  
567 general education (Svendby and Dowling 2013; Wendelborg and Tøssebro 2008; Rix  
568 2015). Previous research has also indicated that PE was particularly prominent in terms  
569 of academic exclusion among young people with disabilities (Grue 2001). Part-time or  
570 full exclusion represents individualisation of the problem and a remedial approach to  
571 adapted education rather than adjusting and modify the educational context. In practice,  
572 this means not allowing the child to participate and succeed in general PE (Davis and  
573 Watson 2001; Giese and Ruin 2018). How the school and the individual PE teacher  
574 relate to adaptive education has a bearing on how bodies and abilities are recognised in

575 practice (Evans 2004). By excluding children who challenge *status quo* in PE schools  
576 produce differentness and a narrow understanding ability/inability that covertly label  
577 some children as uneducable, rather than promoting optimal development for all  
578 children with different bodies and abilities (Giese and Ruin 2018).

579         In relation to the pedagogical aspect of inclusion in PE, several of the children's  
580 stories can be interpreted as tales of recognition, or the lack thereof. In the experiences  
581 shared, children put into words their longing to be seen, not as a disabled child but as a  
582 legitimate part of the group of children. Their stories also illuminate the temporality of  
583 feeling included. While several children expressed that they enjoyed taking part in PE,  
584 they also reflected upon incidences in PE experienced as exclusive and disabling. Of  
585 particularly importance was the feelings of mastery of the activities involved, being met  
586 with high expectations and being treated 'as everyone else' in the class. When  
587 confronted with inadequately adapted activities or situations experienced as  
588 discomforting, children describe employing several avoidance strategies. Avoidance  
589 strategies can be seen as forms of resistance and children's use of these coping  
590 strategies can be both sophisticated and deliberate actions of resisting oppressive  
591 situations in PE (Lyngstad, Hagen, and Aune 2016). Self-selected exclusion from  
592 particular activities, 'cheating', and exemption from PE are examples of avoidance  
593 behaviour among the children. When faced with heterogeneous abilities and preferences  
594 among the groups of pupils, segregation may seem like an effective solution. It might  
595 even be in line with the child's own wishes. However, avoidance behaviour is often a  
596 result of negative experiences of discrimination or fear of failure, which may cause low  
597 self-confidence and feelings of inadequacy (Coates and Vickerman 2008; Haegle and  
598 Sutherland 2015; Ommundsen 2001). Avoidance behaviour and self-selected exclusion  
599 might also lead to marginalised learning, whereby the children do not receive the same

600 opportunity for meaningful instructions, personal development and active participation  
601 as her/his peers (Tripp et al. 2007).

602 Children's attempt to push through can be interpreted as another form of  
603 resistance spiked by a fear of being treated differently. However, seeing lack of  
604 adaptation as a challenge and pushing through can increase the risk of fatigue and  
605 attrition injury. In this sense, both avoidance behaviour and pushing through are  
606 counterproductive solutions in the long run. It is important to better understand why and  
607 when this behaviour is elicited as avoidance behaviour may indicate inadequate  
608 adaptation and planning and a climate that does not recognise all bodies as equally  
609 valuable on their own terms.

610 Listening to children and allowing them to take part in decision-making is  
611 emphasised as important steps towards inclusion and empowerment in PE (Coates and  
612 Vickerman 2008). This study contributes to the literature by illuminating the complexity  
613 and contextual dependence of the pedagogical practice of recognition and co-  
614 determinacy in education. As indicated by the children, choice of activities does not  
615 necessarily promote autonomy and being consulted is not necessarily experienced as  
616 empowering. Asking children about adaptive measures in situ can also construct  
617 differentness. Being treated differently based on one's impairment can be experienced  
618 as disabling, particularly if the help is not experienced as needed. This resonates well  
619 with previous research (Davis and Watson 2001; Goodwin 2001; Haegele and Zhu  
620 2017). Children are aware of the disabling nature of being singled out by their  
621 impairment and how being overprotected undermines their abilities. Consultation as a  
622 form of facilitating co-determination can also represent a transfer of responsibility.  
623 Another example provided by the children is being 'forced' to make a decision, when

624 the child may find it hard to decide (Eide and Wingers 2006). This underscores the  
625 importance of critical reflection on how children are included in decision-making in PE.

626         While having friends was expressed by children as important, experiences of  
627 social inclusion in PE was often seen in relation to the overall companionship among  
628 the pupils within the class. This dimension of inclusion emphasise the importance of the  
629 overall social climate within the class. In the interviews PE was narrated as an important  
630 arena to strengthen the social bonds within the group of children. Being excluded from  
631 PE can create loneliness and otherness by not being allowed to take part in the activities  
632 and experiences the other children in the class shared (Grue 2001). As also indicated in  
633 previous research, physical competence in activities valued among the peer group may  
634 promote acceptance within the group of children (Bailey 2005). Several parents also  
635 reflected on a tendency for increased social isolation as the children grew older.

636         The last themes indicates how inclusion, or rather segregation and exclusion, of  
637 children with disabilities is related to an organisational level of conditions. Some of the  
638 children and their parents had experienced a general educational system far from  
639 inclusive, which for some resulted in lack of belief in inclusion. Responses from the  
640 school were at times obviously exclusive in the forms of ‘we are not able to adapt PE  
641 adequately’. Sometimes the responses were more disguised as ‘segregated adaptive  
642 activities would be in the best interest of the child’ or by not making any adjustments  
643 but rather relying on the children to adapt to the teaching. Similar responses has also  
644 been narrated by Svendby (2013). Whether the child was included in PE seemed to  
645 depend on the local schools’ leadership and the individual teacher. Lack of structures to  
646 support teachers in their work towards inclusion in PE shifts the responsibility to the  
647 individual teacher (Grue 2001). Dependency on individual teachers without inclusive  
648 policies or culture at the schools is a weak and vulnerable form of organisational



649 inclusion. Within the Norwegian educational system, parents have the right to ‘choose’  
650 the educational placement of their child. However, some parents describes that seeing  
651 their child suffer made them question inclusion on whose terms and to what cost. The  
652 participants’ accounts of increased social marginalisation throughout elementary school  
653 are line with previous research (Wendelborg 2010).

654         The study has several limitations. The combined interviews challenged the  
655 interviewer’s capacity to negotiate the attention between the participants. The combined  
656 interviews were enriching when children and parents reflected together on different PE  
657 situations but the interviews were challenging when parents were speaking for the child.  
658 Furthermore, it was beyond the study’s scope to explore systematic differences between  
659 the type and the degree of children’s disabilities, as well as intersections between  
660 socioeconomic background, gender and ethnicity. Research into these relations in PE is  
661 scarce and further research is warranted.

## 662 **Conclusion and further research**

663 This study explored how children with disabilities and their parents experience social  
664 and pedagogical inclusion in various PE settings. The experiences of children with  
665 disabilities and their parents raise several issues that warrant further research. While  
666 inclusion has gained status in international and Norwegian educational policies, it is still  
667 questionable what impact inclusive policies have had on PE practices. While this study  
668 has contributed to the literature by illuminating the complexity and contextual  
669 dependence of physical, social and pedagogical inclusion in PE, more research is  
670 needed to better understand how schools and teachers can adapt the learning  
671 environment to fit the needs of the group of children it aims to serve (Arnell et al. 2017;  
672 Grue 2001; Haug Bachmann 2007). In line with previous research this study indicate  
673 strong links between pedagogical practices, segregation, and a narrow and normative

674 understanding of ability, educability and performance in PE (Evans 2004; Grue 2001;  
675 Hodkinson 2012; Imsen and Volckmar 2014; Svendby and Dowling 2013). A step  
676 closer to inclusion in PE would be to acknowledge the competencies and expertise of  
677 children and parents both in practice and in research. A better understand of how  
678 children with disabilities prosper in different the PE settings are worth considering in  
679 more detail in future research. Such research might help our understanding of why some  
680 learners choose to exclude themselves and help teachers to interpret events, to  
681 intervene, and to plan educational programmes more effectively (Urguhart 2009).

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857 FIGURES AND TABLES

858 Table 1 Overview of the themes and subthemes

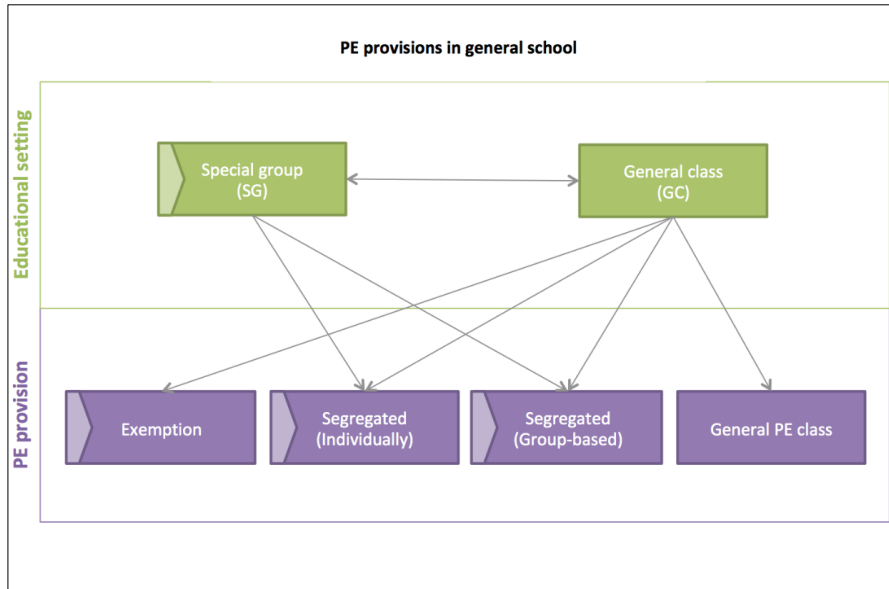
<b>Main themes</b>	<b>Subthemes</b>
Physical inclusion in PE	Placement
Pedagogical inclusion and exclusion in PE	Experiencing mastery Compensating for lack of adaption The ambiguity of co-determination
Social inclusion and exclusion in PE and beyond	Social interaction with peers in PE and recess Strategies for social inclusion
Forced exclusion	Excluded but yearning entrance Inclusion on whose terms and to what cost?

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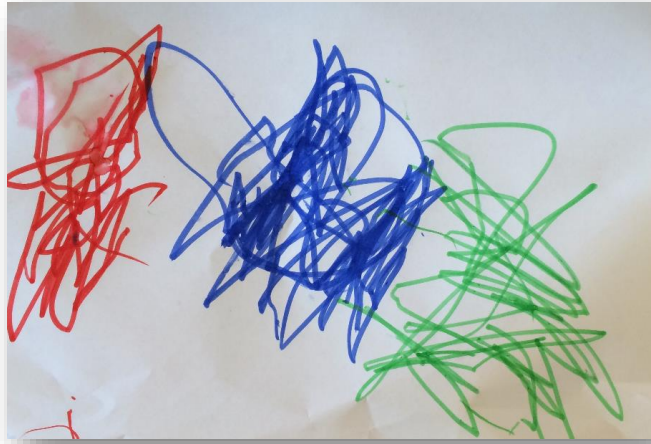


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863 Figure 1 Variations in PE provisions among the children

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867 Figure 2 Tre dancing ladies

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### **Article III**



# Physical education-related home–school collaboration: The experiences of parents of children with disabilities

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## Abstract

In this hermeneutic phenomenological study, we describe the physical education (PE)-related home–school collaboration as experienced by parents of children with disabilities. We further explore which conditions parents experienced as either promoting or inhibiting the collaborative relationship and how they became involved in school activities to secure quality education in PE. The data consisted of 25 semi-structured interviews with parents of children with disabilities. Inductive thematic analysis generated five themes: (1) lack of PE-related information; (2) contradictory expectations; (3) competence and continuous systematic communication; (4) involvement in school-based activity; and (5) navigating the system. PE was often absent in the formal collaboration between home and school. The conditions emphasised as inhibiting collaboration were lack of information, contradictory expectations, conflict over resources and short-sighted planning. The promoting conditions were continuous systematic communication, trust in the competencies of the school personnel, and joint problem solving and collaboration among professionals. The study illuminates the ways in which parents informally involved themselves in their children's education and their use of various strategies to promote participation and quality in PE.

## Keywords

Disability, home–school collaboration, inclusion, parental involvement, physical education

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## Introduction

Parental involvement in education and home–school interdependence have been of substantial interest for policy and research (Bakken and Elstad, 2012; Epstein, 2011). However, limited research has focused on home–school collaboration related to physical education (PE) as experienced by parents of children with disabilities (Wilhelmsen and Sørensen, 2017). In this article, we seek to explore PE-related home–school collaboration from the perspectives of parents of children with disabilities enrolled in Norwegian elementary schools.

Quality in teaching primarily depends on effective communication and interaction among various individuals (Epstein, 2011). For many children, quality learning in PE depends on successful collaboration among multiple professionals with a diverse base of knowledge, authority, values, expectations, motivation and interpretation (Wilhelmsen and Sørensen, 2017). Some examples of people involved in PE at the institutional level are pupils, teachers, school administrators and parents. The adaptation of the educational setting for children with disabilities often involves additional professionals (e.g. health practitioners) in both the local institution and the municipality. An increase in the number of people involved may strain the coordination of the collaboration and affect the weight of the voice of parents, making how parents experience the collaboration a particularly pertinent issue.

In this article, *home–school collaboration* relates to the overall communication between home and school and involves both formal and informal collaboration, such as meetings, emails and conversations between parents and teachers. *Parental involvement* refers to the parents' interaction with the school personnel, school activities and their children at home, aimed at promoting academic learning (Hill and Tyson, 2009). Current educational policies highlight that home–school collaboration should build on reciprocal respect and recognition of the shared responsibility between home and school. Parents have the right to receive PE-related information, so they can support their children's learning in the subject (The Norwegian Directorate for Education and Training, 2015).

The Norwegian education reform of 2006 introduced substantial policy changes inspired by neoliberalism (The Norwegian Directorate for Education and Training, 2015). Research shows that an increased focus on the core skills (writing, reading and mathematics), competence-based outcome measurements and, subsequently, the demand for teachers to document learning outcomes have drawn attention away from other subjects, such as PE and other practical aesthetic subjects (Ommundsen, 2013). This neoliberal landscape observed in Norway and beyond (Evans and Davis, 2017) makes PE-related home–school collaboration an interesting phenomenon for research. Ambiguities in the aims of the national curriculum have been found to complicate inclusion of children with disabilities in PE (Svendby and Dowling, 2013). Unforeseen outcomes have increased segregated teaching and dependence on coordinators of special educational needs and on learning support assistants (LSAs) (Haycock and Smith, 2010; Maher, 2010; Nordahl and Hausstätter, 2009; Svendby and Dowling, 2013). An increased focus on normative competence-based measures of children's achievements is considered incongruent with inclusive PE and the appreciation of diverse abilities in PE (Svendby and Dowling, 2013).

Norwegian home–school collaboration studies indicate that parents generally trust the educational system (Nordahl and Skilbrei, 2002). Although the reports demonstrate extended information sharing, few opportunities are available for dialogue, discussion and co-determination (Nordahl, 2000). Barriers to collaboration have been identified as school cultures that exclude parents' perspectives, lack of knowledge of parental rights and responsibilities, hectic schedules of

parents and school personnel, parents' lack of competence to make pedagogical decisions, parents' feelings of inferiority and lack of school resources (Nordahl and Skilbrei, 2002).

Parental perspectives constitute a minor part of researchers' knowledge about inclusion of children with disabilities in PE (Wilhelmsen and Sørensen, 2017). PE-related home–school collaboration is not an aim in itself but a tool to establish PE environments that foster learning and growth for all pupils in PE. Previous research on PE-related parental involvement has revealed several challenges, including underdeveloped partnerships between home and school characterised by conflicts and experiences of not being heard (An and Hodge, 2013; Svendby, 2017; Svendby and Dowling, 2013). On the other hand, successful collaboration has been characterised as open, ongoing, frequent and reciprocal communication between home and school (Chaapel et al., 2012; Perkins et al., 2013; Svendby, 2017). Some barriers identified are lack of communication with the PE teacher (Chaapel et al., 2012; Perkins et al., 2013), rudimentary collaboration between school and health personnel, and low status of PE in schools (MacMillan et al., 2015; Svendby, 2017). Parents also report having to advocate for their children's rights, promote disability awareness and initiate collaboration with the school (An and Goodwin, 2007; An and Hodge, 2013; Svendby, 2017). The majority of these cited studies have explored the experience of parents of children with specific disabilities and focused on parents' experiences with PE in general, while the collaboration with the school has only been briefly mentioned (except Svendby, 2017). Thus, this study contributes to the literature by providing in-depth descriptions of how parents of children with different disabilities have experienced PE-related home–school collaboration. A deeper knowledge of the phenomenon may assist the people involved to act more mindfully and tactfully in certain situations (Van Manen, 1997).

## Method

This hermeneutic phenomenological interview study (Van Manen, 1997, 2016) is part of a research project exploring the inclusion of children with disabilities in PE from the perspectives of children and their parents, using multiple methods (Morse, 2003). Each study was planned and conducted separately to gain a better understanding of different dimensions of inclusion in PE. Our study aims to describe and provide a better understanding of the phenomenon of PE-related home–school collaboration as experienced by parents of children with disabilities. In the interviews, PE-related and general home–school collaboration emerged as an issue of particular importance for the parents. Combined with the absence of this issue in the extant inclusive PE research, this study's rationale is based on the parents' emphasis on the lack of formal PE-related home–school collaboration and the parental load experienced by some in their attempts to secure quality PE for their children.

Van Manen (2016) emphasises *phenomenology* as a method to break through the taken-for-granted aspect of people's everyday experiences, with the aim of grasping the essential meaning of structures. *Hermeneutic phenomenology* means that the focus on discursive language and sensitive interpretation makes the analysis and descriptions possible and intelligible (Van Manen, 2016). The use of semi-structured interviews allowed us to explore the phenomenon as experienced by the parents. Several research questions guided our study. One of the overall aims of the interviews was to explore how parents of children with disabilities experienced PE-related home–school collaboration. To enhance the understanding of parents' experiences, two additional research questions guided our analyses. First, which conditions do parents experience as either promoting or



inhibiting home–school collaboration? Second, how do parents experience their involvement in and efforts to secure quality in PE?

### *The participants*

We recruited parents for the interviews with the intention of including those with various experiences in PE-related collaboration with the school (Van Manen, 1997). The main criterion was that each parent had a child with a disability who was enrolled in a general primary or secondary school. We also wanted to include mothers and fathers of both boys and girls with various disabilities. The families were recruited and informed about the research project, and their participatory rights, during their three-week stay in a rehabilitation centre specialising in adapted physical activity for children and adults with disabilities.

We summarised the information about the parents for reasons of confidentiality and anonymity. Mothers ( $n = 16$ ) and fathers ( $n = 10$ ) of elementary school children with disabilities participated in the 25 interviews. Six parents reported general or vocational high school as their highest level of education, two reported one to three years of higher education and 10 reported over three years of higher education (seven did not indicate their educational levels). In three families, one or both parents were born in another country. Regarding class placement, 20 children attended a general class (GC) in a general school, and two children in a GC attended segregated PE. Five children belonged to a special group (SG) in a general school and did not participate in PE with their peers in the GC. Seven children were diagnosed with cerebral palsy (CP), five with Down syndrome, four with physical disabilities, three with learning disabilities, two with Asperger spectrum disorder (ASD) and four with other disabilities, such as visual impairment or an unspecified diagnosis.

### *Data gathering*

Based on previous research on home–school collaboration and inclusive PE (Nordahl, 2000; Svendby and Dowling, 2013; Wilhelmsen and Sørensen, 2017), we developed a semi-structured interview guide to explore overall placement in PE, parental experiences with PE and PE-related home–school collaboration. An example of a question is ‘Can you describe your communication with school about PE related themes?’ Follow-up questions were related to what was discussed, why the topic was brought up, when and where, and with whom the parents communicated. The data set in this article was based on all instances in the data where the topic of home–school collaboration was discussed (Braun and Clarke, 2006).

*Interviews.* At the start of the interviews, the study’s aims and the participants’ rights were explained again. Twenty-seven parents (two parents participated in one interview) agreed to participate. However, one mother opted out after the interview. Each participant signed an informed consent form. The interview process took six months, which included five field trips to the rehabilitation centre, each lasting between two and four days. The first author conducted the interviews in the rehabilitation centre in between the daily activities or in the evenings. The duration of each interview ranged between 25 and 60 minutes (32 minutes on average) and they were recorded and transcribed verbatim. The interviews were conducted in Norwegian. The authors translated the citations presented in the results.

*Field notes.* The first author took field notes after each interview and at the end of each day. The notes consisted of preliminary reflections on the setting, interactions and conversations in the interviews, as well as conversations with parents outside of the interview settings.

### *Data analysis*

To capture both the essence and the nuances of the parents' experiences with PE-related home-school collaboration, we used inductive thematic analysis (Braun and Clarke, 2006; Van Manen, 1997). The aim of exploring crucial aspects of PE-related collaboration guided our focus on the essence of the parents' experiences.

We first listened to the audio files, then closely read and re-read the transcribed interviews and field notes to be familiar with our material. We used MAXQDA 12 (MAXQDA, 1989–2018) to help us structure our data analyses. Our search for common themes and essential phrases was guided by the research questions, so we sought out phrases that were particularly essential to understand the parents' experiences with PE-related home-school collaboration. We evaluated how each text brought a particular experience into view (Van Manen, 2016). A particular focus was on what conditions were described as promoting communication and collaboration with school and what conditions were experienced as inhibiting collaboration. By using a selective reading approach (Van Manen, 1997), the essential phrases were coded for each interview to log what aspect of the home-school collaboration that particular piece captured. We kept a list of all the codes throughout the process. Next, we analysed patterns among the coded phrases in search of overarching themes that provided examples of the meaningful aspects of the parents' reflections on PE-related home-school collaboration (Van Manen, 2016). The first draft of the thematic structure was then used when re-reading all interviews to search for additional subthemes that might have been missed in our selective reading and coding, as well as to evaluate whether to reorganise the thematic structure (Braun and Clarke, 2006). The final thematic structure is briefly described in the results section followed by an in-depth analysis of the themes.

### *Ethical considerations and trustworthiness*

Permission to conduct this interview study was obtained from the Norwegian Data Protection Official for Research and the study was carried out in accordance with the agency's requirements. In this article, we apply first person terminology, except in quote excerpts from the interviews where we retain the parents' own words when talking about their children. We employed several measures to ensure the trustworthiness of our procedures and analyses. A reflective journal was kept throughout the research process and reflective field notes were taken during the interview process (Zitomer and Goodwin, 2014). Regarding the participants' reflections (Smith and McGannon, 2017), they were given the option to review, comment on or add information to their interview transcripts. No parent accepted this offer. We listened to the original audio files to double check our presentation of the quotations and the life experiences based on the interview transcripts. A colleague critiqued our study by reviewing the drafts of the text, the thematic structure and the presentation of the results (Smith and McGannon, 2017). Nevertheless, according to Van Manen (2016: 351), phenomenological texts are 'ultimately ambiguous and never complete', and based on the underlying criteria of phenomenological writing, our text may be assessed by our 'suspension of personal or systemic bias, its originality of insight, and its scholarly treatment of the sources' (347).

## Results

Our inquiry into the PE-related home–school collaboration as experienced by parents of children with disabilities generated five themes. The themes described are: (1) the *lack of PE-related information* in the home–school collaboration; (2) the parents’ experiences of how *contradictory expectations* between themselves and the school personnel inhibited collaboration; (3) the importance of perceived *competence and continuous systematic communication* with the school and within the group of professionals in the children’s support team; (4) the parents’ *involvement in school-based activity* with the aim of securing their children’s participation and learning in PE; and (5) the parents’ strategies of *navigating the system* to secure the necessary educational adaptations, such as building relationships with influential gatekeepers and monitoring allocated resources. The conditions experienced as either promoting or inhibiting home–school collaboration are presented throughout the results section and summarised in the discussion section.

### *Lack of PE-related information*

PE-related home–school collaboration does not exist in a vacuum but is a phenomenon integrated to different degrees into the overall home–school collaboration. The parents in the study were generally pleased with the overall home–school collaboration but specified receiving limited information about PE through formal communication arenas, such as weekly newsletters and parental conversations in both GC and SG settings. A father reflected on the absence of PE-relevant information in his communication with the school:

We know very little, practically nothing. So, what they do . . . I know they swim, but what they do in PE, I have no idea. I have no clue. (Father of a girl with Down syndrome, SG)

While the weekly newsletters often informed the parents about specific goals and upcoming activities in the other subjects, PE-related information was often limited to the PE location (i.e. outdoors or indoors). The parents pointed out few possibilities to communicate with PE teachers because the contact teacher was seldom in charge of PE. One mother described PE as the forgotten chapter in the communication between home and school.

One parent’s interpretation of the limited PE-related information from school was the devaluation of PE as a subject: ‘It’s like it’s not a proper subject in a way. It’s awful’ (mother of a girl with a physical disability, GC). The inadequacy of PE-related communication was perceived in relation to the emphasis on ‘core’ subjects and skills such as writing, reading and mathematics, and the child’s development in mathematics, Norwegian and English was often prioritised. For some parents, this position aligned with their own perception of the most important aspect of their children’s development:

My daughter uses four to five times as much time on her homework [compared with her peers]. We just have to push her through it. The agreement is now that we leave out non-core subjects and focus on math, Norwegian and English. The other [subjects] just have to go as they go. (Father of a girl with a learning disability, GC)

Several parents described discussing subject-specific goals in the responsibility group meetings, often related to developing or re-evaluating an individual educational plan (IEP). PE was seldom

mentioned in the meetings or incorporated in the IEP, independent of the degree or the type of disability or class placement.

Most parents conveyed their high trust in the educational system and in the teachers' competence to secure their children's quality education in the school subjects, including PE:

I have sort of trusted the school. I haven't tried to dig into it that much. But the teacher has called me and said that my son is doing well and that he enjoys it. (Mother of a boy with CP, GC)

Several parents interpreted the lack of information about PE as indicative of successful inclusion. Based on their high trust in the teachers' professionalism and competence, many parents did not question the limited information they received. They were confident that the teachers would inform them if something was not working. The parents' interpretation that no news was good news was often evident when they were satisfied with their children's overall school situation or level of activity:

He enjoys school. There is an LSA. He is doing well. I see progress in the academic stuff, slowly but surely. He enjoys playing football and hockey, and he is attending swimming. He is active, so I haven't thought that much about PE. (Mother of a boy with Attention Deficit Hyperactivity Disorder, GC)

As illustrated in the preceding quotation, parental satisfaction was not necessarily based on information confirming whether proper adaptation in PE was secured. In some situations, the parents first became aware of how the lack of PE-related information hindered their ability to help their children when they learned about adversity:

The physiotherapist visited one of the other children in PE when she observed my daughter sitting in tears because she was not given the opportunity to participate. The teacher did not have control over the situation. It was a large group of children, all running around, playing in the small gym. Then the ball started rolling. The physiotherapist took control and started collaboration with the teacher. We did not know about it. My daughter is not one of those who come home and tell [me] that 'PE is not adapted well enough for me'. That is not something children do. (Mother of a girl with a physical disability, GC)

### *Contradictory expectations*

A common theme in the parents' reflections involved contradictory expectations between themselves and the school personnel. There were different understandings about the children and their needs and competencies. Moreover, financial considerations presented by the school personnel collided with the parents' more rights-based considerations. The following quotation embodies such contradictory expectations:

I told the responsibility group that we had been on a skiing trip, and he was among the best in skiing. He got a real boost of self-esteem. And the inspector looked at me and said, 'About that, we should maybe evaluate how long he should attend this school'. I was stunned because we had never thought about special school. But I thought, I'll just keep quiet and listen to what the others have to say about it. And the special pedagogue and the LSA – they hadn't thought about it. It was not the case that he wasn't good enough. He is a very able boy that can do a lot, but it needs to be facilitated so that he experiences mastery. It is here that I feel that the inspector and the principal sit there and decide without taking him

as an individual into consideration. Rather, they think, ‘How should we get these personnel puzzles to add up?’ (Mother of a boy with CP, GC)

In the preceding situation, the mother encountered a perception about her own child that did not correspond with her view. She perceived the inspector as emphasising her child’s limitations, while she focused on the boy’s strengths and recognised inadequate adaptation as the limiting factor. Some parents also described the contradictions between their emphasis on the individual child’s needs and rights versus the school personnel’s universal and economic rationalisation when implementing inclusive measures in school. Such contradictions were often perceived as the sources of several conflicts. One mother narrated her experience of the school’s resistance to her daughter attending PE with her peers:

Adaptation is needed. That would have made it possible for her to attend PE. But it’s that *will* to make it possible, you know. They put that responsibility on the parents. ‘You have to understand that there are many who need this and this’. But I cannot say that I ‘understand’ this. I have to fight for the things – [for] my child. Of course, I understand that the resources have to be distributed among x number of pupils, but they have two handicapped there, two wheelchair users in that school. I think – they have to adapt PE so that she could attend. (Mother of a girl with a physical disability, GC)

While the parents often experienced resistance from the school as being due to inflexibility and unwillingness to change, the resistance often took the form of economic rationalisation. A father stated: ‘It is a bit like in business; they will listen to a certain point, then it all boils down to resources, priorities’ (father of a girl with a learning disability, GC). Many parents promoted the need for PE teachers’ and LSAs’ additional training in adapted physical activity. However, the parents often faced resistance from the school administration because of inadequate resources. Such arguments were often experienced as the end of their influence and negotiation with the school.

Sensitive to the resource issue, the parents empathised with the personnel situation, but such thinking made it more important for them to safeguard their children’s rights:

I understand that they have a lot to do, that there are many children and that they cannot do it equally well for all children. That is why we have to work, all the way, towards the goals I think are important – for the things important for my child. (Mother of a child with ASD, GC)

### *Competence and continuous systematic communication*

While not directly related to the PE context, many aspects of the general home–school collaboration were described as functioning well, and the underlying conditions that made it possible were indicated. The parents stressed the importance of productive and flexible dialogues on a regular basis in collaboration with the schools:

We take things as they come. We keep contact through email if needed. They are also good at sending text messages about various things. And I am also one of those who nag if there is something I’m not pleased with. So, I get what I want most of the time. (Mother of a boy with CP, GC)

Some parents also emphasised continuous communication between home and school in relation to the children’s learning in PE:

The PE programme has been developed with our assistance in the support group. There's been a dialogue from the beginning. We meet with the school's responsibility group three times a year to discuss how the various [actors] should adapt [their educational practices]. (Father of a boy with ASD, GC)

Although the parents wanted more PE-related information via formal communication arenas, most parents were pleased with the frequency of communication. One of the most important communication platforms for the parents was the responsibility group meeting. In these meetings, the different professionals included in a child's support team discussed appropriate development aims and how to adapt the educational environment accordingly. However, PE was seldom discussed. Moreover, the responsibility meetings were the privilege of the parents of children with IEPs. This was not the case for all parents in this study. In some instances, the parents were invited to actively participate in the support team:

They have to include parents, the physiotherapist or the occupational therapist to get a holistic programme. There is seldom enough competence beyond the purely academic. In these situations, we say, 'We have to fix this; we need this', or 'We recommend this'. They are quite responsive when we raise these issues. It hasn't been a problem to come and say, 'This could be a possibility'. (Father of a girl with Down syndrome, SG)

The degree to which the parents felt the need to influence the school situation often depended on the perceived level of competence and collaboration within the support team. Many parents were pleased with the transparency of the process and the opportunity to inspect the work developed by the school:

In collaboration with the school they develop the plans, and we get to look through them. Then we have the opportunity to comment. They are the ones who know what's best. (Father of a girl with Down syndrome, SG)

The parents often appreciated quality, flexibility and continuity in the information shared between the teachers and themselves, between the teachers and the support team, as well as in major transitions. These could be transitions from a daycare institution to primary school or from primary to secondary school. Teacher turnover was often experienced as a disruption in the collaboration:

We have been unlucky. [My daughter had] different teachers the first three years. When there is a change of teachers, we have to start all over again. In a sense, we have been heard. But we have to make sure that we are heard several times throughout. (Mother of a girl with a physical disability, GC)

Due to the turnover of teachers without a systematic debriefing and flow of information, the parents advocated for their children's needs repeatedly. The lack of communication between the teachers and external professionals also compelled the parents to serve as the main links between the school personnel, physiotherapists and physicians. One mother recalled how the lack of appropriate competence among the school personnel led her to be more assertive and to intervene to ensure adequate adaptation:

In primary school, new teachers came in without any previous experience with children with Down syndrome. We felt that we had to give them advice on what to do. I think it affected their self-esteem that we should tell them what to do, you know, because they were insecure. This was a difficult period. But the teachers in the secondary school are very attentive. They are confident. It's very difficult if they are not. (Mother of a girl with Down syndrome, GC)

The parents' perceived lack of competence or discontinuity in planning and information sharing on the progress in school made them feel overwhelmed with the amount of involvement needed to secure their children's rights:

I am a teacher and a clerk; therefore, I have the opportunity and resources to do the work, but I often think of those poor parents who have another background that doesn't exactly help them out in these situations. (Mother of a boy with a physical disability, GC)

Short-sighted planning and the lack of recognition of the children's needs served as major barriers to inclusion. This issue was especially difficult for the children enrolled in an SG or not attending PE with their peers in a GC. One related challenge was the lack of inclusion of LSAs in the planning process and meetings within the support team:

I have also fought to have the LSA attending the meetings. She is the one who sees him every day. However, it has not been easy to accomplish. They argued that they could write a report for her to read, and then, that problem was supposed to be solved. (Mother of a boy with CP, GC)

### *Involvement in school-based activity*

The parents narrated several ways that they were involved in informal PE-related home-school collaboration. They contributed by driving their children to and from the venues of segregated PE activities (e.g. swimming and physiotherapy during school hours), helping out during school-based physical activities, suggesting and planning possible adaptations, inviting health professionals to speak in the school, as well as mentally and physically preparing their children for PE. For example, a father took time off from work to attend a physical activity in school so that his son could participate with his classmates, using a sitski.

The parents generally welcomed the school's questions and requests. However, they found it problematic when inclusive measures depended on their involvement and willingness to help the school, rather than the personnel's own encouragement and initiative. Several parents recollected requests to assist the school by driving their children to the venues of school-initiated physical activities:

They often try me first, and I'm one of those who often say, 'Sure, we have to make this happen'. Then I think, 'Hello! Isn't it the school's job to organise this?' Sometimes I back off and say that I have a meeting or don't have time. They accept no for an answer, but then I often feel bad. Why do they ask the parents? Don't they understand that I've enough to deal with? Now I don't work anymore; I'm at home 100%. (Mother of a boy with a physical disability, GC)

A mother recalled her constant suggestions on ways to improve the quality of PE for her son:

We have to come up with ideas. We suggested increasing the length of swimming, not only playing. Last year, he swam 500 metres at the rehabilitation centre. He mastered it there. Thus, it is possible. Nothing really works by itself. When the class is going on a trip, we have to be attentive to make sure that he is allowed to join it. We have to be proactive. (Mother of a boy with CP, SC)

The constant need to advocate for inclusion and monitoring of the school's implementation of inclusive measures was experienced as exhausting. For some parents, the school's insensitivity to their children's needs forced them to develop specific routines. The following example involved a mother of a boy diagnosed with ASD. She tried to communicate her son's needs for preparation, information sharing and communication with the teachers:

I end up doing it myself. We try to take the sting out of unpleasant situations by preparing as much as possible beforehand. For example, dressing him in the tracksuit before he goes to school and driving him all the way to the gym entrance so that he doesn't have to use energy on these things. And talk about things beforehand. All those things that make everyday activities a bit easier. (Mother of a boy with ASD, GC)

Another initiative of the parents, or the children themselves, was to share specific diagnostic information with the school personnel, the other parents or the other pupils to promote knowledge, awareness and acceptance:

One period was hard. There was so much tension in the group of girls, and they [the other girls] had more than enough with themselves and their own positions. So then, we went in, had one of those girl talks, informed them and showed videos about Down syndrome and things like that. Just continuously sharing information. My daughter also shared information in the parental meeting. (Mother of a girl with Down syndrome, GC)

### *Navigating the system*

The parents described various strategies they used to navigate the educational system in order to fulfil their children's needs. One approach was to identify and cultivate positive relationships with influential gatekeepers, such as principals, teachers, other parents and pupils. Several parents contacted the school administration (e.g. the inspector or the principal), rather than the teachers or the LSAs, if they needed information or wanted to suggest educational adaptations. One reason for doing so was the parents' recognition of the principal's role as administrator of the school resources: 'They are the ones who sit on the resources and have the ability to distribute these things' (mother of a boy with CP, GC). Another reason was the perceived lack of competence within the teacher team:

The principal is fantastic. Without him, I don't know how it would have been. If I come with ideas, he starts the process. I probably could ask to talk to the teacher. She would absolutely have listened and taken it seriously. It is more like . . . I feel that he has more competence. The principal is older than she is, and I think that he has more experience. (Mother of a boy with a physical disability, GC)

In some situations, the parents felt that the school personnel did not listen or take the situation seriously and that their own voice lacked the leverage needed in negotiating with the school



personnel. One strategy was to include external professionals in their communication with the schools:

I have included the physio- and occupational therapist in the collaboration with the school. Because they can put pressure on them – both the teachers and the principal. In these situations, I have been like: ‘Can you come with me?’ Just to have someone on your side. The physiotherapist often interrupts the conversation and says: ‘What about PE?’ Then we can start to talk about it. Then the teachers are the ones on thin ice. Thus, I have pushed for having them with me in the meetings. I have also included the school nurse because of her [the daughter’s] health situation so that she [the nurse] can also be an advocate. (Mother of a girl with a physical disability, GC)

Another parental strategy to navigate the system was to monitor the allocated resources that their children received. A common topic of dispute between the parents and the school was the use of special pedagogical resources and the allocated time with the LSA:

My daughter went to a large primary school, and it was exhausting to follow up with the school about the things that we had agreed on – the resolutions, the allocated time with LSAs and things like these. We had to be watchdogs all the time. Suddenly, we heard that another pupil in the class had a LSA, and it was the same LSA. My daughter had a 100% LSA, while he had 35%. I said: ‘Why haven’t we been informed?’ They had forgotten. And then I said: ‘But it doesn’t add up. It totals 135%. How is that possible?’ However, they did the calculations a bit differently . . . (Father of a girl with Down syndrome, SG)

Even when the parents were pleased with the amount of support that their children received, they constantly had to monitor the school’s use of the resources:

The first year, he had quite a large amount of special pedagogical resources, and we said that it worked really well. We were pleased. Then it became less and less, until it became unwarrantably small. He got an additional diagnosis. So, he had three diagnoses. At the same time, the resources were cut in half, compared with what he originally had. Then we had to tell them that: ‘this, as we experience it, is not right’. That’s probably a feeling that many parents are left with – that you can never show that you are satisfied. (Father of a boy with ASD, GC)

The preceding excerpts show how some parents constantly had to stay alert and monitor the use of allocated resources to prevent the immediate pressures in the school from making the school juggle the resources to the disadvantage of their children.

## **Discussion and implications**

The data provide insights into the involvement in and experiences with PE-related home–school collaboration from the perspective of parents of children with disabilities. Our findings contribute to the knowledge of the phenomenon by making more explicit some of the conditions emphasised as either promoting or inhibiting successful collaboration, while preserving the ambiguity in the lived experience of PE-related home–school collaboration. These are important contributions, considering the absence of information about parents’ experiences in the extant research (Wilhelmsen and Sørensen, 2017).

The first three themes related to the parents’ experiences with PE-related home–school collaboration and the conditions that either promoted or inhibited successful collaboration. The

conditions experienced as inhibitors were the lack of information, contradictory expectations and conflict over resources, as well as short-sighted planning of the educational programme. Collaborations are essentially relational and depend on information sharing and shared expectations (An and Hodge, 2013). The parents' recollections show how the absence of these conditions could be disadvantageous for PE-related home-school collaboration. The first theme described the lack of PE-related information in the collaboration. The parents' experiences of PE and the devaluation of PE in the home-school collaboration may be an unintentional consequence of the political pressure on core skills (Maher, 2016; Ommundsen, 2013; Svendby and Dowling, 2013). While some parents perceived no news as good news or were more focused on academics than PE (An and Hodge, 2013), the omission of PE-related information deprived parents of the opportunity to support their children's learning in the subject and of their ability to make informed decisions.

The second theme indicated that contradictory expectations could be detrimental for communication and collaboration between parents and schools. The parents often contrasted their understanding of the source of the problem – as the interaction between their children's abilities and the proper adaptations to the learning environment – with the school personnel's understanding of their children which was perceived as in line with a medical model of defectiveness and economic rationalisations (Bacon and Causton-Theoharis, 2013). School resources are often constrained, and schools may grapple with constraints on time, personnel and other resources (Lake and Billingsley, 2000). The parents' experiences advance the understanding of how varying interests and expectations, if left unresolved, may lead to unproductive collaboration and impede inclusion in PE by allowing economic rationalisation to govern the quality of education rather than the consideration of the children's competencies and needs (Hodge and Runswick-Cole, 2008). These insights may sensitise professionals to be more aware of, prevent or respond better to contradictory expectations that may arise in collaboration with parents.

The promoting conditions highlighted in the third theme were: continuous systematic communication; trust in the competencies of the school personnel; and joint problem solving and collaboration among professionals. Suitable adaptation in the general educational practice relies on collaboration among professionals, parents and individual children (Nilsen, 2017). Many parents of children with an IEP experienced the responsibility group meetings as a valuable platform for interdisciplinary collaboration, and continuous and systematic communication. If trust and perceived competence were intact, parents seldom questioned the planning or communication process initiated by the school. However, parents' participation in the meetings and in the educational planning processes were often restricted to overseeing the end results and parents seldom recalled discussing work plans for PE in these meetings. These findings raise concerns regarding the degree to which school personnel acknowledge the expertise of parents and children in their planning. Additionally, LSAs were often excluded from the collaboration platforms. This is concerning because for some children the LSA is the adult they spend most time with at school. The LSAs' in-depth knowledge of the children could be a valuable contribution in the planning process. LSAs often lack formal education in general or special pedagogy (Maher, 2016) and would likely benefit from the discussions within the support group.

Parental involvement in school affairs and their efforts to generate the support and the adaptations necessary to secure the quality of PE were the focus of the last two themes. Although the PE-related collaboration initiated by the school was unwarrantably low, the parents were not passive. To counteract perceived limitations in the school's initiative several parents actively participated in school life to secure their children's rights and access to quality PE (Bacon and Causton-Theoharis, 2013). Similar to previous research findings, a large part of parental

involvement was initiated by the parents themselves (An and Hodge, 2013; Svendby, 2017). The parents navigated the educational system by initiating direct contact with school inspectors and principals and inviting external professionals to join the conversation with the school personnel in order to advocate for changes (Bacon and Causton-Theoharis, 2013). Furthermore, the parents felt they constantly needed to monitor the resources allocated for their children. While these strategies may be productive solutions in the short term, they were often experienced as exhausting. In line with previous research, parents often described managing the relationship with health and school personnel as challenging aspects of parenting a child with a disability (Hodge and Runswick-Cole, 2008). Previous research indicates that families of children with disabilities often stretch their time and energy, and that mothers of children with disabilities more often work part-time with shorter work hours than other mothers (An and Goodwin, 2007; Tøssebro, 2012). Our study contributes to the understanding of how poor PE-related home–school collaboration may add to the total amount of parental load. A better understanding of families’ situations, combined with systematic and continuous collaboration with parents, could optimise schools’ adaptation initiatives, while reducing the load of individual families.

The findings have several implications for teachers and other practitioners in their collaboration with parents. Parents reported adequate formal communication platforms, but they were not sufficiently used for PE-related information sharing. Previous research indicates that PE teachers often feel unprepared to include children with disabilities in PE and would prefer additional training in adapted PE (Crawford, 2011; Rybová and Kudláček, 2013). Parents’ knowledge about their children and the children’s abilities are untapped resources in PE-related home–school collaboration. Continuity and flexibility in the dialogue may lessen the workload of both parents and teachers. Furthermore, increased PE-related home–school collaboration within the support team could strengthen the teachers’ and the school administration’s commitment to inclusion and enable them to recognise new possibilities from available resources.

### *Limitations and future research*

Several limitations apply to this study. We base our analysis of the PE-related home–school collaboration on the experiences of parents of children with disabilities. The results should be interpreted with this parental lens in mind. We recognise that recollection and reconstruction of past events are complex. Nonetheless, this study aimed to explore the depth, ambiguity, variations and subtleties of these lived experiences. It was beyond the study’s scope to explore systematic differences between the type and the degree of children’s disabilities, as well as intersections between socioeconomic background, gender and ethnicity and perspectives on PE-related home–school collaboration. More research is needed on the joint collaboration process as experienced by the children themselves and the different professionals within the children’s support team, as well as the relations between experiences with PE-related home–school collaboration and parents’ satisfaction with their children’s PE provision.

### **Conclusion**

We have offered new insights into the varied experiences regarding PE-related home–school collaboration of parents of elementary school children with disabilities. The parents’ descriptions indicate the absence of PE in the formal collaboration between home and school. The conditions inhibiting collaborative relationships were the lack of information, contradictory expectations,

conflict over resources and short-sighted planning. The promoting conditions included continuous systematic communication, trust in the competencies of the school personnel, and joint problem solving and collaboration among professionals. Moreover, the parents' narrations illuminated how they informally involved themselves in their children's education and their use of different strategies to promote participation and quality in PE. Parents are primarily responsible for their children's development and well-being. To ensure that parents are equipped to make informed decisions on behalf of their children, school personnel must systematically and continuously share information and encourage dialogue with parents regarding their children's development in all subjects.

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**Article IV**





# Motivational Pathways to Social and Pedagogical Inclusion in Physical Education

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This article is focused on how combinations of motivational attributes and motivational climates support social and pedagogical inclusion in physical education among children with disabilities. Theoretically, the authors integrate tenets from achievement-goal theory and self-determination theory. To capture the motivational complexity underlying children's experiences of inclusion in physical education, they use a 2-step fuzzy qualitative comparative analysis. The analyses of contextual conditions yielded 2 sufficient inclusion-supportive climates, namely a physically inclusive and mastery-oriented climate or a physical inclusive, autonomy-supportive, and low performance-oriented climate. The configurations of motivational attributes in the inclusion-supportive climates indicated 4 sufficient pathways to social and pedagogical inclusion. The path with the largest coverage of children was in the physically inclusive and mastery-oriented climate and represented children who were task and ego oriented and low on amotivation and experienced satisfaction of the need for autonomy, competence, and relatedness.

**Keywords:** achievement-goal theory, children with disabilities, inclusive education, QCA, self-determination theory

What does it take to support inclusion in physical education (PE)? This is an important question given the globalization of the inclusive PE ideology, yet it has received scant attention in previous literature (Wilhelmsen & Sørensen, 2017, with the exceptions of Dunn & Dunn, 2006; Obrusnikova & Dillon, 2012; Pan, Tsai, Chu, & Hsieh, 2011; Valentini & Rudisill, 2004). In this study, we employ tenets from achievement goal theory (AGT) and self-determination theory (SDT) to explore what motivational pathways support social inclusion (SI) and pedagogical inclusion (PI) in PE as perceived by children with disabilities.

Combining tenets from AGT and SDT allow us to explore relations between theoretically distinct aspects of the motivational processes that we posit are essential to understanding inclusion in PE. Despite differences in basic assumptions

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of what drives human behavior in achievement contexts—for example, perceived motivational climate and goal orientations (AGT: Roberts, 2012) versus satisfaction of innate psychological needs (SDT: Deci & Ryan, 2000), extensive research has shown the value of combining the two theories (Cox & Williams, 2008; Duda, 2013; Ommundsen & Kvalø, 2007; Spray, Wang, Biddle, & Chatzisarantis, 2006; Standage, Duda, & Ntoumanis, 2003).

A challenge of studying the motivational mechanisms involved in inclusion in PE is the potential complexity of associations: many factors are involved, they can be combined in different ways, and several pathways to the same outcome may exist. To be able to capture this complexity, we use a two-step fuzzy qualitative comparative analysis (QCA; see “Method” section). Using QCA allowed us to uncover motivational pathways linked to both contextual conditions (i.e., motivational climates and degree of physical inclusion) and individual attributes (i.e., psychological needs satisfaction, motivation orientation, and motivation regulation) that support inclusion in PE. QCA is well suited for grasping complex and asymmetric relations compared with traditional statistical inference, which has been commonly used in the literature (Braithwaite, Spray, & Warburton, 2011; Ragin, 2008; Van den Berghe, Vansteenkiste, Cardon, Kirk, & Haerens, 2014).

The question we wish to answer is “what motivational pathways support social and pedagogical inclusion in PE among children with disabilities in PE?” From a theoretical standpoint, the integration of AGT and SDT tenets using a QCA approach is a useful contribution to our base of knowledge because it may lead to a new, and perhaps enriched, understanding of the diverse psychological processes involved in PE. From a practical standpoint, the enhanced knowledge may help us understand how teachers can facilitate a learning climate that promotes inclusion for *all* children.

In the following sections, we define and describe our understanding of inclusion in PE. Second, based on previous research, we show how AGT and SDT tenets promote a comprehensive understanding of the motivational processes involved inclusion in PE. Given the novelty of QCA in sport science research, we introduce the main concepts of QCA in the “Method” section. Results are presented in two steps. First, we focus on the contextual conditions that might support inclusion in PE before we introduce the individual motivational attributes in the second step. Finally, we sum up and discuss our findings, possible implications, and strengths and weaknesses of the study.

## Inclusion in PE

We understand inclusion as a multidimensional phenomenon and distinguish between SI, PI, and physical inclusion (Dalen, 1994). SI refers to the interaction between children and their peers, between children and the teachers in class, as well as the children’s experiences of belonging to the group. Studies on inclusion in PE have consistently shown the importance of a learning environment that promotes positive interaction, and children with disabilities have stressed the importance of having friends, feeling supported, and being a legitimate participant in physical activities (Klavina & Block, 2008; Seymour, Reid, & Bloom, 2009; Spencer-Cavaliere & Watkinson, 2010).

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The pedagogical dimension of inclusion reflects the degree to which the organization of PE allows all children to use their abilities, and promotes children's learning potential and engagement in the activities. Finally, *physical inclusion* relates to the degree to which children with disabilities participate in PE with peers. Contemporary research consistently acknowledges that inclusion is more than mere placement. However, we postulate that SI and PI depends on the degree of physical inclusion. The three dimensions are not discrete entities, but interrelated dimensions. They may interact differently dependent on the interaction between individual and contextual motivational conditions.

### **Contextual Conditions: Perceived Motivational Climates in PE**

Three motivation climates (i.e., mastery, performance, and autonomy-supportive climates) serve as the contextual conditions in the analysis in addition to physical inclusion. The distinction between mastery and performance climates is from the sociocognitive AGT framework (Roberts, 2012). In a mastery climate, the PE teacher emphasizes mastery of task and effort as a criteria of success, mistakes as an essential part of learning, and self-referenced learning (Braithwaite et al., 2011). One assumption in AGT is that teachers' promotion of effort and improvement supports children's perceptions of ability as a dynamic entity that improves with effort. In contrast, a performance climate fosters normative understandings of ability and other-referenced criteria for success and failure (Roberts, 2012). A PE teacher promotes a performance climate by underlining social comparison and interpersonal competition, by punishing mistakes, and by providing differentiated feedback based on a normative understanding of ability. A performance climate is believed to create PE contexts that celebrate mastery experiences for the few, specifically for the children who are able to outperform their peers. Because experiences of success would depend on continuous outperformance, a performance climate creates a vulnerable situation even for the children with high normative ability. The focus on normative ability in PE may also impede positive peer relations and lead to rivalry and devaluation of diversity (Obrusnikova & Dillon, 2012). Previous studies support the association between perceived mastery climate and positive correlates such as enjoyment, task orientation, and confidence in sport and PE, and the link between a performance climate and negative correlates such as anxiety, boredom, and ego orientations (Ntoumanis & Biddle, 1999). Furthermore, a meta-analysis of motivational interventions in PE indicated small positive effects for participants in mastery climate contexts, with the largest effects being behavioral outcomes (i.e., skill development, health, and fitness), followed by affective (i.e., enjoyment) and cognitive (i.e., confidence, learning strategies, perceived climate, and task orientation) outcomes (Braithwaite et al., 2011).

Self-determination theory is based on the assumption that innate psychological needs are the basis of our self-motivation and optimal functioning and that the satisfaction or thwarting of these needs is contextually conditioned (Deci & Ryan, 2000). Autonomy support from teachers is believed to positively influence basic needs satisfaction and subsequent autonomous motivation (Edmunds, Ntoumanis, & Duda, 2007; Mageau & Vallerand, 2003). To promote an autonomy-supportive

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climate, the PE teacher should be engaged, respectful of children's perspectives, provide information-rich feedback on children's competence, and promote choice and initiative within a structured learning environment (Edmunds et al., 2007; Hastie, Rudisill, & Wadsworth, 2013). In comparison, controlling environments in which behavior is controlled by self-imposed pressure, feedback based on normative evaluation, external rewards, or punishment is likely to generate perceptions of incompetence and undermine children's intrinsic motivation (Hein & Koka, 2007). In this climate, engagement in tasks or a specific behavior is dependent on the contingency of the extrinsic reinforcement.

Previous research has found several links between tenets from AGT and SDT. A common link is between mastery climate and more self-determined motivation and performance climate and less self-determined motivation (Ommundsen & Kvalø, 2007; Parish & Treasure, 2003; Standage et al., 2003). For example, a study found perceived mastery climate and autonomy support to positively influence intrinsic motivation and negatively influence amotivation in PE, and perceptions of performance climate were positively associated with amotivation (Ommundsen & Kvalø, 2007). Furthermore, an experimental study found that children in autonomy-supportive environment, regardless of their achievement involvement, experienced greater enjoyment, performed better, and persisted longer at the task than children in the controlling communication condition (Spray et al., 2006). With this in mind, we expected that perceived mastery and autonomy-supportive climates would support perceptions of SI and PI in PE among children with disabilities, whereas a perceived performance climate would impede inclusion.

### **Individual Attributes: Motivation Orientations, Basic Psychological Need Satisfaction, and Motivation Regulations**

The individual attributes believed to influence children's experiences of SI and PI are their motivation orientation (i.e., task and ego orientation) and their basic psychological need satisfaction (i.e., satisfaction of autonomy, relatedness, and competence, their motivational regulations, and amotivation for PE).

Within AGT, predispositions for task and ego involvement are referred as task and ego orientation (Nicholls, 1989). Goal orientations are posited as dynamic entities and children's experiences at home, through sport, or other arenas can influence their personal goal orientations in PE. Research has shown that the most adaptive motivational attributes are either high task and high ego orientation or high task and low ego orientation (Roberts, 2012). Perceived ability is believed to interact with task and ego goals. For a task-oriented child focused on self-referenced learning, perception of ability may be less relevant for engagement in a task. In contrast, an ego-oriented child who perceives herself high on ability and likely to outperform others may be more prone to engage in a task where success is believed to be demonstrative of high normative ability. Whereas an ego-oriented child with low perceptions of ability may refrain from taking part, or self-handicap, if the perceived likelihood of outperforming others is low, or if demonstration of low normative performance is perceived as a failure (Nicholls, 1989; Parish & Treasure, 2003).

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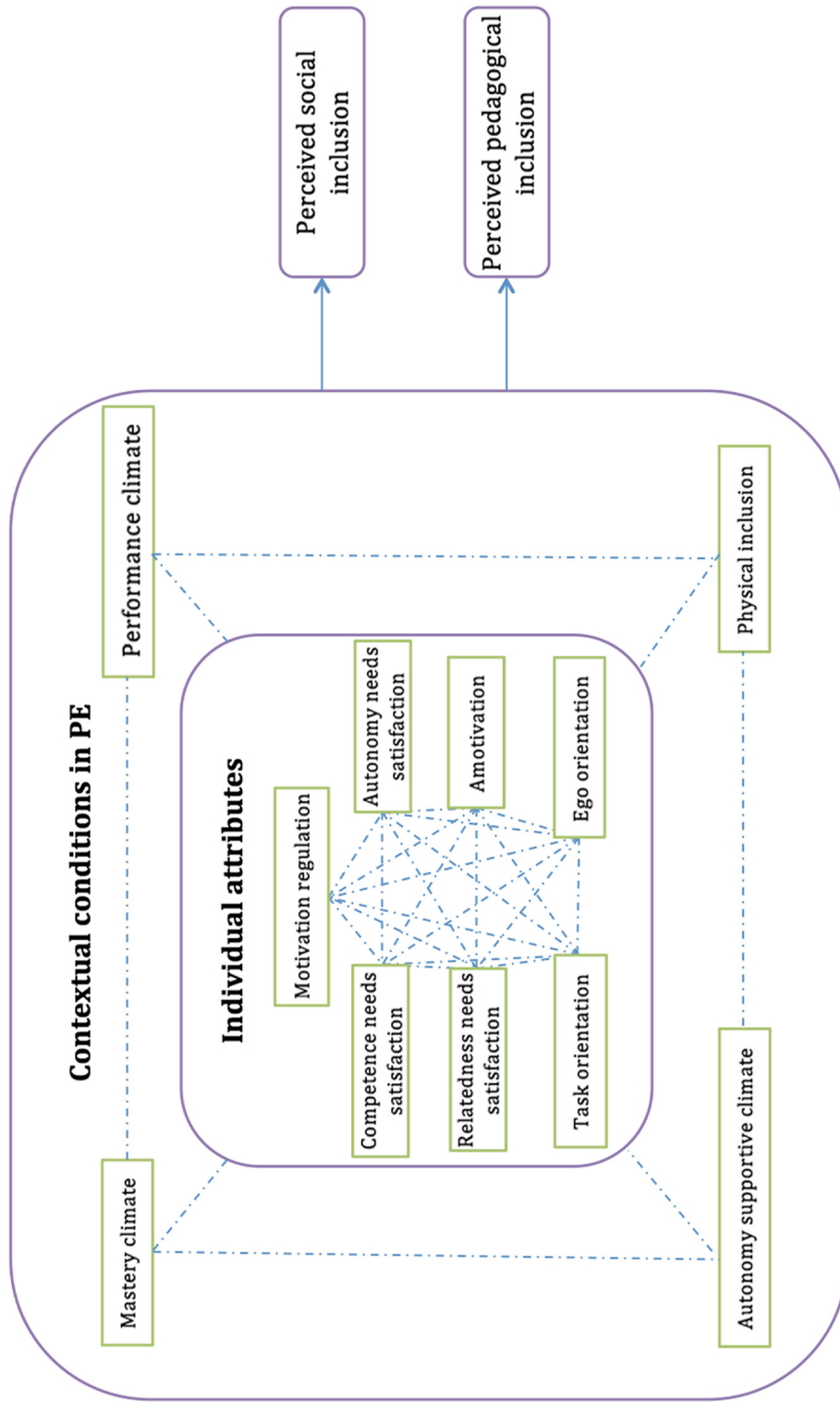
In SDT, how we interpret the perceived relation of situations to our basic psychological needs serve as important determinants of human behavior (Deci & Ryan, 2000). The fundamental psychological needs are autonomy, relatedness, and competence. The need for autonomy concerns the feeling of being “the origin or source of one’s own behavior” (Ryan & Deci, 2002, p. 8). The need for relatedness concerns the feeling connected to and accepted by others, and the feeling of belonging within a group or community (Ryan & Deci, 2002). The need for competence can be defined as “feeling effective in one’s on-going interaction with the social environment and experiencing opportunities to exercise and express one’s capacities” (Ryan & Deci, 2002, p. 7). Satisfaction of the need for competence is believed to lead to individuals seeking challenges aligned with their capacities and to strive for enhancement of those skills. According to the subtheory of basic psychological needs, the extent of needs satisfaction dictates the level of self-determined motivation (Deci & Ryan, 2000). Previous findings show that fulfilment of basic needs leads to enhanced enjoyment in PE (Ommundsen & Kvalø, 2007).

Self-determination theory extends the traditional distinction between intrinsic and extrinsic motivation by proposing that a continuum is formed by intrinsic motivation and varied forms of extrinsic motivations based on the reasons that give rise to an action (Deci & Ryan, 2000). In this study, the motivation regulation toward engaging in PE was measured with the relative autonomy index (RAI; Grolnick & Ryan, 1987), which distinguishes between different qualities of motivation on a continuum from more controlled (external and introjected regulations) motivations toward more autonomous (identified and intrinsic regulations) motivations (Deci & Ryan, 2000; Grolnick & Ryan, 1987). In addition, amotivation measured the degree to which a child lacks motivation and intentions to act in PE.

Theorists from both camps (Deci & Ryan, 2000; Duda, 2013; Nicholls, 1989) have proposed links between the two theories despite different basic assumptions. As previously indicated, both AGT and SDT emphasize the relations between perceived climate, individual motivational attributes, and positive or negative outcomes (Deci & Ryan, 2000; Nicholls, 1989; Roberts, 2012). Previous findings indicate a positive relationship between task orientation and more self-determined motivation, and a positive relationship between ego orientation and less self-determined motivation (Parish & Treasure, 2003). Moreover, a latent profile analysis of homogeneous attributes of perceived motivational (e.g., mastery, performance, autonomy supportive, and relatedness supportive) climates in PE identified five clusters that influenced enjoyment in PE differently (Jaakkola, Wang, Soini, & Liukkonen, 2015). However, we need more knowledge on how various configurations of motivational climates and motivational attributes influence children’s experiences with PE.

Figure 1 depicts a graphical summary of potential configurational relations between motivational climates, motivational attributes, and perceived SI and PI in PE. Figure 1 presents the interplay of motivational conditions that we expect support or hinder perceived inclusion in PE. With four contextual conditions and seven individual attributes, there are 142 possible pathways  $((2^k - 1) + (2^k - 1) = n)$ , and the question is which of these are conducive to inclusion. QCA helps us study various pathways, and once the motivational paths are identified, it is possible to specify and explain the combination of contextual conditions and individual attributes that support SI and PI in PE.

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**Figure 1** — Motivational tenets that might support or hinder social and pedagogical inclusion in PE. PE = physical education.

Based on the underlying principles of QCA, three ideas are central to our modeling: (a) alternative pathways to SI and PI are possible (i.e., equifinality); (b) one condition may not display an effect on children's perceptions of inclusion on its own, but only together with other conditions (i.e., conjunctural causation); and (c) both the presence and absence of a condition might lead to SI and PI, depending on the configuration (i.e., asymmetrical causation).

## Method

### Participants and Procedures

The participants were 64 children with disabilities (28 girls, 34 boys, and two did not report sex; 7–16 years of age,  $M = 13.23$ ,  $SD = 2.05$ ) attending Norwegian elementary schools (Grade 2–10). Among them 33% had a physical disability, 28% had cerebral palsy, 8% had a developmental disability, 5% a visual disability, 5% a learning disability (including attention deficit hyperactivity disorder), and 3% had autism spectrum disorder. According to parental reports, 6% of the children had a high degree of disability, 28% had moderate disability, 42% had a mild degree of disability, and 6% reported having no disability. (Eleven parents did not specify their child's type or degree of disability.)

A cross-sectional design was used in this study. We initially attempted to contact children and their parents through a school-based national representative sample. However, the response rate and the diversity of disabilities among the children were low. (There was 9% response rate, and the majority of the children had asthma.) Thus, in our second attempt, we used a convenience sample approach. Children with disabilities and their parents were informed about the project through a letter in collaboration with regional rehabilitation centers or verbally informal parental meetings at one rehabilitation center specialized in adapted physical activity. Children were given the option of responding to an online or a hard copy version of the survey. For the online version, we used SurveyXact (Århus, Denmark) with which the Norwegian School of Sport Sciences had a data handling agreement. Parents were encouraged to assist their children if needed. The Norwegian Center for Research Data approved the study. Both parents and children signed an informed consent form with information about the project and their participatory rights.

### Measures

**Social Inclusion.** To measure SI, we designed a 12-item with a 5-point Likert type scale inspired by the Norwegian version of the Booth Index of Inclusion (Booth & Ainscow, 2002). We used Pearson correlation, principal component analysis, and oblimin with Kaiser normalization rotation to identify the factor structure of the items (Tabachnick & Fidell, 2014). Items with correlation  $r = .30$  or less on the marker item (e.g., "In PE, I feel like a part of the class") were excluded from the analysis (one item excluded). Using the pattern matrix, items loading  $.32$  on two or more factors were excluded (one item excluded). Next, the principal component analysis indicated two factors without cross-loadings. (The first factor had eight items, and the second factor had two items.) The eight-item factor was averaged to construct one scale measuring SI (Kaiser-Meyer-Olkin = 0.87,  $\alpha = .87$ , 56% of variance).

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**Pedagogical Inclusion.** A similar process was followed for the PI scale inspired by the Norwegian version of the Booth Index of Inclusion (Booth & Ainscow, 2002). Five out of 12 items were deleted based on low correlations with the marker item (e.g., “I learn something every PE lesson”). The factors analysis of the remaining seven items indicated one factor (Kaiser-Meyer-Olkin = 0.77,  $\alpha = .78$ , 46% of variance).

**Motivational Climates.** We used a short Norwegian version of the perceived motivational climate in sport questionnaire (Sørensen, Roberts, & Farholm, 2018) to measure mastery climate and performance climate. Each subscale consisted of three items. Responses were made on a 5-point Likert type scale ranging from 5 (*very true*) to 1 (*not at all true*) preceded by the stem: “My PE teacher thinks I am successful when . . .” An example item is: “. . . I learn new skills.” Items from each subscale were averaged to construct a mastery climate scale ( $\alpha = .82$ ) and performance climate scale ( $\alpha = .89$ ).

**Autonomy Support.** To assess children’s perception of an autonomy-supportive environment in PE, we used the learning climate questionnaire modified to PE (Standage, Duda, & Ntoumanis, 2006). The children answered on a 5-point Likert type scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*) preceded by the stem “In the PE classes . . .” An item example is “. . . we feel that the PE teacher provides us with choice and options.” Items were averaged to construct one scale ( $\alpha = .79$ ).

**Physical Inclusion.** The item “how often do you take part in PE together with your peers” was used to measure physical inclusion. Responses were made on a 5-point Likert type scale from 1 (*never*) to 5 (*always*).

**Motivational Orientations.** We used a short Norwegian version of the perception of success questionnaire to measure motivational orientations (Sørensen et al., 2018). Each subscale consists of three items. Responses were made on a 5-point Likert type scale from 5 (*very true*) to 1 (*not at all true*), preceded by the stem: “In PE, I feel successful when . . .” An example item is: “. . . I am the best.” Items from each subscale were averaged to construct a task orientation scale ( $\alpha = .82$ ) and an ego orientation scale ( $\alpha = .87$ ).

**Basic Psychological Needs Satisfaction.** *Need satisfaction of autonomy* was assessed with a 5-item scale used in previous studies (Standage et al., 2003, 2006). Participants responded to the items (e.g., “In PE I have some choice over what I do”) on a 5-point Likert type scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*). Items were averaged to construct one scale ( $\alpha = .76$ ). *Need satisfaction of competence* was assessed using the 5-item Perceived Competence subscale of the Intrinsic Motivation Inventory modified to the PE (Standage et al., 2003, 2006). Participants responded to the items (e.g., “I am satisfied with my performance in PE”) on a 5-point Likert type scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*). Items were averaged to construct one scale ( $\alpha = .76$ ). *Need satisfaction of relatedness* was assessed using the acceptance subscale of the Need for Relatedness Scale modified to the PE setting by Standage et al. (2003, 2006). Preceded by the stem: “With the other pupils in the PE classes I feel . . . ,” participants responded to five items (e.g., “. . . supported”) on a 5-point Likert type

scale ranging from 5 (*strongly agree*) to 1 (*strongly disagree*). Items were averaged to construct one scale ( $\alpha = .93$ ).

**Motivational Regulations.** Motivational regulations were assessed with the use of an instrument devised by Goudas, Biddle, and Fox (1994). The perceived locus of causality measures four subscales of motivational regulation: internal motivation ( $\alpha = .92$ ), identified regulation ( $\alpha = .92$ ), introjected regulation ( $\alpha = .61$ ), and external regulation ( $\alpha = .75$ ), whereas the amotivation subscale was based on the Academic Motivational Scale ( $\alpha = .91$ ). Each subscale consisted of four items on 5-point Likert scale ranged from 5 (*very true*) to 1 (*not at all true*) preceded by the stem “I take part in PE class . . .” Previous work has supported the psychometric properties of the instrument (Goudas et al., 1994; Standage et al., 2003). For parsimony, we computed an index of motivation regulation labeled RAI followed by the procedures suggested by Grolnick and Ryan (1987). The RAI form one continuous variable from less to more self-determined styles of motivation and studies have indicated that the RAI adequately assesses self-determination in school and sport (Grolnick & Ryan, 1987; Ommundsen & Kvalø, 2007). Amotivation was introduced as a separate condition in the analyses to measure lack of motivation for PE.

**Disability.** Parents were asked to describe the type and degree of their child’s impairment. Based on our former experiences, we know that some parents try to limit the focus on disability labels by not discussing diagnostic issues with their child. Thus, due to ethical considerations, we did not ask children themselves to specify their type or degree of impairment. Degree of impairment was measured in terms of no disability, low, moderate, and severe disability.

## The QCA Approach

Qualitative comparative analysis is a relatively new analytical approach proven valuable in educational research and beyond (Cooper & Glaesser, 2011; Ragin, 2008; Thiem & Dusa, 2013). The main aims of QCA are (a) to unravel causal complexity by examining cases that share combinations of conditions to see if they also share the same outcome and (b) to interpret relations between the conditions and the outcome in terms of necessity and/or sufficiency (Schneider & Wagemann, 2006). Next, we introduce the basic concepts of QCA. We recommend Ragin (2008) for in-depth descriptions.

**Necessity Relations.** A condition is *necessary if*, whenever we see the outcome, *then* we also see the condition. An example is *if* every time children feel pedagogically included in PE they also report being physically included, *then* physical inclusion is a necessary condition for PI. However, it is possible for a child to be physically included without feeling pedagogically included. Another example is all pregnant people are women (necessarily), but not all women are pregnant.

**Sufficiency Relations.** A condition is sufficient *if* whenever we see the condition *then* we also see the outcome. An example of a sufficient *configuration* (i.e., when a combination of two or more conditions are sufficient, but not the individual

conditions by themselves) is *if* every instance a child reports high perception of mastery climate and task orientation (MAS\*TAS), she also reports high perception of SI. *Then* mastery climate combined with task orientation is a sufficient configuration for (SI ← MAS\*TAS). However, we could still observe a child who feels socially included in PE, but with low perception of mastery climate and task orientation.

**Logic and Boolean Algebra.** The underlying epistemology and mathematical models in QCA differ from traditional statistical inference, and the notations and tables require a different interpretation. QCA uses formal logic and Boolean algebra to express the relationships between conditions and the outcome. The three basic operators are: logical OR (+) represents the union of conditions in which either of the conditions would lead to the outcome; logical AND (\*) represents the intersection of conditions wherein the outcome is dependent on the concurrence of the conditions; and logical NOT in which negations of a conditions are denoted by replacing uppercase letters with lowercase letters. If we take the example above and add a second path toward SI, an autonomy-supportive climate AND negation of amotivation (AUS\*amo), the formula would read SI ← MAS\*TAS + AUS\*amo. The formula specifies two sufficient, yet distinct, paths toward SI, namely mastery-oriented climate for children who are task oriented OR an autonomy-supportive climate for children who are not amotivated. Whether we can interpret the formula as causal paths need to be theoretically determined (Ragin, 2008).

**INUS Conditions.** QCA enables the identification of conditions that are “insufficient but necessary part of a condition which itself is unnecessary but sufficient for the result (INUS)” (Mackie, 1965 as cited in Ragin, 2008, p. 154). In the fictitious formula above, all four conditions are INUS conditions. For example, take the MAS condition: MAS is an INUS condition because it does not yield the results on its own, but only in combination with the TAS condition. Furthermore, MAS\*TAS is a sufficient path, but not necessary given the existence of the alternative path AUS\*amo. INUS conditions are phenomena beyond the reach of conventional statistical analysis (Ragin, 2008).

**Fuzzy QCA.** While an earlier version of QCA (crisp QCA) required a binary classification of the conditions and outcomes, the more recent fuzzy QCA (fsQCA) allows for degrees of membership by assigning fuzzy membership scores. Fuzzy membership scores imply the degree to which different cases belong to a set/condition (including full membership, the point of crossover, and full nonmembership; Ragin, 2008). The calibration of thresholds is both a qualitative and a quantitative approach in that they are assigned on the basis of theoretical knowledge and empirical evidence (Ragin, 2008). Membership scores in the range 0.5–1 represent cases that are more “in” than “out” of a given condition, whereas the opposite is true for scores in the range 0–0.5. Score equal to 0.5 represents the point of maximum ambiguity and are thought of as neither “in” nor “out” of the condition. After the calibration of the variables, memberships in the different conditions are compared to identify necessity and sufficiency relations between the conditions and the outcome.

**Two-Step fsQCA.** In an effort to reduce the complexity of the results and to reduce the challenge of limited diversity (i.e., logical possible configurations of conditions that do not appear empirically), we approach the fsQCA in two steps. In a two-step fsQCA, conditions are divided into two groups based on differences in proximity (Schneider & Wagemann, 2006). In this study, the conditions are divided into contextual conditions (motivational climates and physical inclusion) and individual attributes (motivational orientation, motivation regulation, and satisfaction of basic psychological needs). The two groups of conditions are introduced in the analyses in two steps. In the first step, we analyze the relations between the contextual conditions and perceived inclusion to identify different combinations of inclusive-supportive contexts. In the second step, we explore the combinations of individual attributes within the inclusion-supportive climates that jointly lead to SI and PI in PE.

**Measures of Fit.** The measure of *consistency* (con) indicates the degree to which cases with the outcome also exhibit the conditions and corresponds to the role of the  $p$  value in statistical inference. Perfect consistency would imply that all cases with the same pattern of conditions would exhibit the outcome. However, perfect consistency is rare (Ragin, 2008). fsQCA supports quasi-sufficient relations by allowing a small number of cases to deviate from the patterns elucidated in the analysis. As recommended by Ragin (2008), we allow limited inconsistency in the analysis with a minimum consistency score of 0.85. *Raw coverage* (cov.r) measures the degree to which the conditions in the solution formula explain all cases with the outcome and resembles the  $R^2$  measure in regression analysis. *Unique coverage* (cov.u) measures the partitioning coverage of each configuration in the formula. Finally, the *proportional reduction in consistency* (PRI) measures the reduction inconsistency if one configuration is left out of the model.

## Data Analyses

We used IBM SPSS Statistics 24 (IBM Corp., Armonk, NY) and R 3.4.1 (R Core Team, Vienna, Austria) as platforms for the analyses. To handle missing values in the data, we used the *R* package “Multivariate Imputation by Chained Equations (MICE)” (Van Buuren & Groothuis-Oudshoorn, 2011). To perform the two-step fsQCA analyses (Schneider & Wagemann, 2006), we used the *R* package “QCAQUI” (Dusa, 2007, 2013). We tested the models for parameter sensitivity and robustness with the use of the systematic procedures promoted by Skaaning (2011).

## Results

### Descriptive Statistics

Mean, minimum score, maximum score, and configuration thresholds of the outcome and antecedent conditions are shown in Table 1. The descriptive statistics give an overview of all variables introduced in the analyses before the calibration into set relations. Lower and upper thresholds of the conditions are based on the 0 and 100 percentiles. The crossover threshold is the 3 (*middle score*) in the 5-point

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**Table 1 Descriptive Statistics of the Outcome and Antecedent Conditions**

Conditions	Code	Mean	Minimum	Maximum	LT/CT/UT
Outcome					
social inclusion	SI	4.24	1.50	5.00	1.50/3.00/5.00
pedagogical inclusion	PI	3.50	1.43	5.00	1.43/3.00/5.00
Context					
mastery climate	MAS	3.84	1.00	5.00	1.00/3.00/5.00
performance climate	PER	2.75	1.00	5.00	1.00/3.00/5.00
autonomy support	AUS	3.59	1.00	5.00	1.00/3.00/5.00
physical inclusion	PHY	4.63	1.00	5.00	1.00/3.00/5.00
Individual					
task orientation	TAS	4.56	1.33	5.00	1.33/3.00/5.00
ego orientation	EGO	3.43	1.00	5.00	1.00/3.00/5.00
need for autonomy	AUT	3.83	1.00	5.00	1.00/3.00/5.00
need for competence	COM	3.37	1.00	5.00	1.00/3.00/5.00
need for relatedness	REL	4.13	1.20	5.00	1.20/3.00/5.00
relative autonomy index	RAI	2.52	-9.25	10.25	-9.00/0.00/9.00
amotivation	AMO	1.91	1.00	5.00	1.00/3.00/5.00

*Note.* LT = lower threshold; CT = crossover threshold; UT = upper threshold.

Likert scale, which represents maximum ambiguity (i.e., the crossover point from more in than out of the set). One exception is the RAI (ranged -9.25 to 10.25). For RAI, the Score 0 represents the crossover between more controlled motivation and more autonomous motivation, -9 the lower threshold, and 9 the upper threshold. Table 2 shows the frequency of cases after the configurations. The majority of children (89%, 48/9) experienced high levels of SI in PE and 70% (46/2) experienced PE as pedagogically inclusive (PI). More children were physically included (PHY) than excluded in PE, and a large proportion of the children experienced the PE climate to be mastery oriented (MAS) and autonomy supportive (AUS). Furthermore, the majority of children were highly task oriented (TAS) and experienced satisfaction of need for relatedness (REL) and autonomy (AUT) in PE, although 39% (2/19) did not experience satisfaction of the need for competence.

### First Step: Analyses of Relationships Between Motivational Climates and Inclusion

Truth tables for the two outcomes were constructed by grouping cases with similar configurations of the contextual conditions and indicating the outcome (OUT) associated with each configuration. The aim of the truth table is to examine cases that share similar conditions to see if they also share the same outcome (Ragin, 2008). To increase the robustness of the analyses, the minimum frequency of cases within a configuration was set to two, thus, excluding all configurations covering only one case. Table 3 shows five configurations with consistency above 0.85 for

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**Table 2 Frequency of Cases by Membership Score**

Condition	≤LT	>LT<CT	=CT	<UT>CT	≥UT	Distinct value
Outcome						
SI	1	3	3	48	9	19
PI	1	10	5	46	2	22
Contextual						
MAS	3	11	4	29	17	12
PER	13	18	6	21	6	13
AUS	1	14	5	42	2	21
PHY	2	1	1	11	49	5
Individual						
TAS	1	0	1	29	33	8
EGO	3	19	4	20	18	13
AUT	1	10	1	48	4	16
COM	2	19	4	36	3	20
REL	1	7	2	33	21	15
RAI	1	14	1	45	3	40
AMO	28	24	2	6	4	14

*Note.* LT = lower threshold, CT = crossover threshold; UT = upper threshold; SI = social inclusion; PI = pedagogical inclusion; MAS = mastery climate; PER = performance climate; AUS = autonomy support; PHY = physical inclusion; TAS = task orientation; EGO = ego orientation; AUT = need for autonomy; COM = need for competence; REL = need for relatedness; RAI = relative autonomy index; AMO = amotivation.

**Table 3 Truth Tables of the Contextual Conditions for Inclusion in PE**

<i>n</i>	MAS	PER	AUS	PHY	Social inclusion			Pedagogical inclusion		
					OUT	Con.	PRI	OUT	Con.	PRI
18	1	1	1	1	1	0.996	0.995	1	0.990	0.983
11	1	0	1	1	1	0.987	0.980	1	0.979	0.954
7	0	0	1	1	1	0.965	0.937	1	0.963	0.885
6	1	1	0	1	1	0.993	0.987	1	0.955	0.840
6	1	0	0	1	1	0.973	0.949	1	0.960	0.864

*Note.* Consistency cutoff = 0.85, number of cases cutoff = 2, *N* = 48. MAS = mastery climate; PER = performance climate; AUS = autonomy support; PHY = physical inclusion; OUT = outcome; Con. = consistency; PRI = proportional reduction in consistency.

both SI and PI (i.e., a minimum of 85% of the cases with the outcome also exhibit the conditions). All configurations display high consistency (>0.97). The first two configurations represent the majority of the children in the analyses. The first configuration represents children who are physically included (PHY) in PE and

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who perceive the climate to be both performance (PER) and mastery oriented (MAS), as well as autonomy supportive (AUS) ( $n = 18$ ). The next configuration represents physically included children who perceived the climate to be mastery oriented and autonomy supportive, but low on performance orientation ( $n = 11$ ).

The analyses of necessity relations, depicted in Table 4, identified the contextual conditions present whenever children perceive the PE climate as inclusive.<sup>1</sup> Several of the necessary configurations are combined with the logical OR (+) operator, also referred to as union in which at least one of the conditions needs to be present for children to feel included in PE. As Table 4 shows physical inclusion was the only single contextual condition that met the criteria of necessity for both SI and PI in PE. This supports our assumption that perceived PI and SI necessitates that children are more physically included than excluded.

For SI, the following four configurations indicated that both a mastery-oriented and an autonomy-supportive climate promote SI in union with each other or with a low performance-oriented climate. Necessary relations between contextual conditions and PI yielded four additional unions, in which two unions included the presence of a performance climate; and two unions included low mastery climate or low physical inclusion.<sup>2</sup> Identification of necessity relations does not rule out that a necessary configuration can be present without the child

**Table 4 Necessity Relations Between Motivational Climates and Inclusion in Physical Education**

	Con.	Cov.r	Negations	Con.	Cov.r
SI					
PHY	0.935	0.872	Phy	0.124	0.732
MAS+per	0.935	0.868	mas+PER	0.160	0.971
MAS+aus	0.858	0.901	mas+AUS	0.265	0.916
MAS+AUS	0.903	0.914	mas+aus	0.222	0.873
per+AUS	0.870	0.886	PER+aus	0.259	0.994
PI					
PHY	0.952	0.772	Phy	0.144	0.739
MAS+per	0.961	0.776	mas+PER	0.182	0.959
MAS+PER	0.865	0.838	mas+per	0.322	0.812
mas+AUS	0.866	0.876	MAS+aus	0.407	0.923
MAS+aus	0.903	0.824	mas+AUS	0.305	0.917
MAS+AUS	0.948	0.834	mas+aus	0.259	0.882
MAS+phy	0.885	0.816	mas+phy	0.309	0.898
per+AUS	0.932	0.825	PER+aus	0.285	0.951
PER+AUS	0.882	0.898	per+aus	0.401	0.896

*Note.* Consistency cutoff = 0.85, coverage cutoff = 0.6, number of cases cutoff = 2. SI = social inclusion; PI = pedagogical inclusion; MAS = mastery climate; PER = performance climate; AUS = autonomy support; PHY = physical inclusion; PRI = proportional reduction in consistency; con. = consistency; cov.r = raw coverage.

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feeling included. To identify sufficient conditions for children to feel included, we need to explore sufficiency relations.

With the use of Boolean minimization, we reduced the complexity of the truth tables (Table 3) to produce a formula for minimal sufficient configurations of the outcomes. The minimization of the contextual conditions indicated a model consisting of two sufficient configurations for both SI and PI:

$$SI \leftarrow MAS * PHY + per * AUS * PHY$$

$$PI \leftarrow MAS * PHY + per * AUS * PHY$$

For children with disabilities to feel socially and pedagogical included in PE, they need to be either *physically included and experience the climate as mastery oriented* (cov.u=0.378 in the SI model, cov.u=0.367 in the PI model), or *physically included and experiencing the climate as autonomy supportive and not performance oriented* (cov.u=0.070 in the SI model, cov.u=0.075 in the PI model). Furthermore, the models indicate physical inclusion as necessary, but not sufficient condition for inclusion. The difference between SI- and PI-supportive conditions were in the model fit—with the overall fit of the model for SI (incl=0.938, PRI=0.923, cov.r=0.848) performing slightly better than the model for PI in terms of consistency (incl=0.864, PRI=0.799, cov.r=0.898). As all configurations were theoretically sound and well supported by the empirical data, the inclusion-supportive conditions were included in the second step of the analyses.

## Second Step: Relationship Between Inclusion-Supportive Climates and Individual Attributes

In the second step, we explored which combinations of individual attributes (i.e., task orientation, ego orientation, the satisfaction of autonomy, competence, and relatedness, RAI, and amotivation) within the inclusion-supportive climates that jointly supported perceptions of SI and PI in PE. The results after the Boolean minimization are shown in Table 5. Table 5 illustrates the sufficient paths toward inclusion in PE. Each path indicates the combination of contextual conditions and individual attributes supportive of SI and PI among children with disabilities. Table 5 exemplifies several strengths of the QCA approach. First, fsQCA allowed us to identify various pathways to inclusion in PE. The results indicated four inclusion-supportive paths for both SI and PI that differed slightly in model fit for the two outcomes. For example, take the paths S3/P3 with the largest coverage of children within the MAS\*PHY climate, these paths comprise the group of children who were task and ego oriented, low on amotivation, and experienced satisfaction of the need for autonomy, competence, and relatedness

Second, fsQCA allowed us to explore whether conditions on their own or in combinations were sufficiently associated with inclusion in PE. Table 5 indicates that all paths consisted of the intersection of six or more attributes. In line with a multifaceted understanding of inclusion in PE, no single condition was sufficient to explain satisfaction with SI or PI on their own, only in combination with other conditions.

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**Table 5 Sufficient Paths Toward Social and Pedagogical Inclusion in Physical Education**

	Social inclusion				Pedagogical inclusion			
	MAS*PHY		per*AUS*PHY		MAS*PHY		per*AUS*PHY	
Individual attributions								
TAS	♦	♦	♦	♦	♦	♦	♦	♦
EGO	n/a	♦	♦	~	n/a	♦	♦	~
AUT	♦	~	♦	♦	♦	~	♦	♦
COM	~	~	♦	n/a	~	~	♦	n/a
REL	♦	♦	♦	♦	♦	♦	♦	♦
RAI	♦	n/a	n/a	♦	♦	n/a	n/a	♦
AMO	~	~	~	~	~	~	~	~
Model fit								
Con.	0.864	0.865	0.906	0.867	0.850	0.851	0.900	0.862
PRI	0.692	0.567	0.849	0.608	0.567	0.345	0.819	0.563
Cov.r	0.389	0.267	0.577	0.599	0.416	0.285	0.623	0.606
Cov.u	0.067	0.027	0.272	n/a	0.067	0.025	0.292	n/a
<i>n</i>	11	4	18	15	11	4	18	15
Paths	S1	S2	S3	S4	P1	P2	P3	P4

*Note.* ♦ = membership in the condition; ~ = nonmembership in the condition; n/a = not applicable/not sufficient condition for the identified configuration. SI\*MAS\*PHY paths: con.cut = 0.85, con. = 0.894, PRI = 0.830, cov.r = 0.699, *n* = 37, multiple covered cases = 0. SI\*per\*AUS\*PHY paths: con.cut = 0.85, con. = 0.867, PRI = 0.608, cov.r = 0.599, *n* = 37, multiple covered cases = 0. PI\*MAS\*PHY paths: con.cut = 0.85, con. = 0.876, PRI = 0.772, cov.r = 0.744, *n* = 37, multiple covered cases = 0. PI\*per\*AUS\*PHY paths: con.cut = 0.85, con. = 0.862, PRI = 0.563, cov.r = 0.606, *n* = 37, multiple covered cases = 0. MAS = mastery climate; AUS = autonomy support; PHY = physical inclusion; TAS = task orientation; EGO = ego orientation; AUT = need for autonomy; COM = need for competence; REL = need for relatedness; RAI = relative autonomy index; AMO = amotivation; PRI = proportional reduction in consistency; cov.u = unique coverage; cov.r = raw coverage; con.cut = consistency cutoff; con = consistency.

Third, both the presence and absence of a condition supported inclusion in PE dependent on the different motivational pathways. An example is how the presence (see paths S1/P1, S3/P3, and S4/P4) and absence (see S2/P2) of the need satisfaction of autonomy (AUT) was a supportive condition for inclusion in PE depending on the path.

If we look at the paths combined, we see that three attributes promoted SI and PI in all configurations, namely task orientation, satisfaction of relatedness, and low levels of amotivation. All other variables were INUS conditions (i.e., insufficient but necessary part of a condition which itself is unnecessary but sufficient for the result). For example, take the need for competence satisfaction (COM) in path S3. First, S3 children's satisfaction of competence was an insufficient attribute to explain SI in itself (TAS, EGO, AUT, REL, and amo were also required), yet it was a necessary condition within S3. Second, S3 was a

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sufficient, but not necessary, path given that presence of the paths S2 and S3 that also supported SI. The INUS conditions exemplify that inclusion in PE is seldom a result of independent conditions—which is a common assumption in traditional statistical inference—rather the significance of a condition often depends on the co-occurrence of other conditions.

The paths S1–S3 and P1–P3 within the physically inclusive and mastery-oriented climate indicated that children with high or low competence need satisfaction experienced SI and PI in PE dependent on the configuration with other attributes. S1/P1 indicated that children experiencing low competence satisfaction experienced SI and PI if they were task oriented, autonomously motivated, low on amotivation, and experienced the needs satisfaction of autonomy and relatedness. Ego orientation was an irrelevant attribute in these paths, which indicate that children high and low on ego orientation could experience inclusion as long as the other attributes were present. S2/P2 indicated that the children with disabilities who did not experience satisfaction of competence and autonomy still experienced being socially and pedagogically included if they were task and ego oriented, low on amotivation, and the need for relatedness was secured. The third paths in the physical inclusive and mastery-oriented climate, S3/P3 represent the children that were task and ego oriented, low on amotivation, and experienced satisfaction of all three basic needs. Moreover, children's motivational regulation was irrelevant for the children with the motivational profiles described in S2/P2, and S3/P3.

The second inclusion-supportive context comprised of the physically inclusive, autonomy-supportive, and low-performance orientation climate yielded one path for both necessary and sufficient for SI and PI (S4/P4). Within this climate, children experienced SI and PI if they were task oriented, not ego oriented, intrinsically motivated, low on amotivation, and experienced satisfaction of the need for autonomy and relatedness.

### Sensitivity Analyses and Robustness of the Results

Qualitative comparative analysis have recently been critiqued for parameter sensitivity (Skaaning, 2011). To test for parameter sensitivity, we performed several sensitivity analyses of the models by changing (a) the crossover threshold of calibration of the outcomes (2.9, 3.1); (b) the consistency cutoff (0.8, 0.90) in the analyses; and (c) the frequency of cases (1, 3) linked to the configurations (Skaaning, 2011). The tests indicated that the contextual analyses were robust, but the final models introducing the individual attributes were more sensitive to changes in consistency and frequency thresholds. One solution could be to increase the consistency threshold to 0.90. This would result in two paths instead of four for both SI and PI, with the paths being more robust to change in frequency thresholds. However, consistency threshold of 0.9 is not compelling because it would decrease the coverage score of the models significantly (Ragin, 2008). Furthermore, allowing paths with one case decreases the robustness of the solutions in most models. As a result, we kept the cutoff of minimum two cases for the configurations and the consistency threshold of 0.85. This is well within the range of consistency scores often used in fsQCA.<sup>3</sup>

## Discussion

The two-step fsQCA analyses indicated two sufficient inclusion-supportive contextual conditions and four sufficient motivational paths toward SI and PI.

### Contextual Conditions That Foster SI and PI in PE

This study indicates that for children to feel socially and pedagogically included, it is necessary for them to be more physically included than excluded from the PE lessons, but physical inclusion is not sufficient by itself. For SI and PI to be achieved, children also need to experience the climate to be either mastery oriented or autonomy supportive and low on performance orientation. These findings are in line with both AGT and SDT and complement previous research that found both autonomy supportive and mastery-oriented climates to positively influence children's experience of enjoyment and low levels of amotivation (Ommundsen & Kvalø, 2007; Spray et al., 2006), and aid learning for children with and without disabilities (Valentini & Rudisill, 2004).

A new finding is that an autonomy-supportive environment does not promote SI and PI alone but does so in combination with a physically inclusive and low performance-oriented climate. Normative conceptions of ability and valuation of an ideal body and motor competence are inevitable in performance-oriented competitive environments (Fitzgerald, 2005; Nicholls, 1979). These contextual conditions do not promote appreciation of diversity or mastery experiences within a heterogeneous group of children. Thus, for children to feel socially and pedagogically included, it seems particularly important to facilitate a mastery-oriented climate or to reduce the performance-oriented criteria in PE.

In addition, common approaches to special education and adapted PE are least restrictive environment approaches and segregated teaching with an overall aim of inclusion in the future. Such efforts might not be without value, but, as Nicholls (1979) reminded us, they do not alter the PE context or the contributing factors of inequality in motivation and education. If we understand disability as the outcome of the interaction between individual attributes and contextual conditions, as in the interactional approach to disability (Shakespeare, 2006), it becomes important to explore how we can alter the way PE is taught in response to the needs and abilities represented within the group of children, rather than to exclude children who do not "fit within" normative conceptions of ability (Fitzgerald, 2005).

### SI- and PI-Supportive Paths in PE

The inclusive-supportive context *physically inclusive, autonomy-supportive, and low performance-oriented climate* yielded one path that sufficiently explained SI and PI. While the inclusion-supportive context *physical inclusive and mastery-oriented climate* appears more robust, in that it yielded three different motivational pathways, which allows children with different motivational profiles to feel included in PE.

In line with previous research, we found that the combination of task orientation, low amotivation, and relatedness need satisfaction were adaptive motivational attributes in PE (Cox & Williams, 2008; Standage et al., 2003).

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The different paths indicate that children with different levels of satisfaction of the needs for competence and autonomy could feel both socially and pedagogically included as long as they were task oriented, low on amotivation, and experiences satisfaction of the need for relatedness. This was the case for children both high and low on ego orientation, and in some paths, these relations were also independent of the level of autonomous motivation. In other words, satisfaction of all three basic psychological needs was not necessary for children to feel included in PE. This is essential when we consider that a large proportion of the children in this study did not experience the fulfilment of the need for competence or autonomy in PE. One interpretation is that a mastery climate or absence of a performance climate reduces the importance of the need for competence satisfaction because effort and learning are in focus instead of normative ability.

The different paths also enrich our understanding of the orthogonal nature of ego and task orientation. In the paths identified in Table 5, we see that children—both ego and task oriented or only task oriented—experienced SI and PI within a physically inclusive and mastery-oriented climate. This supports studies that emphasized high task and high ego orientation, or high task and low ego orientation as adaptive motivational attributes (Roberts, 2012).

In terms of practical implication, the TARGET approach (*task, authority, recognition, grouping, evaluation, and time*) attributed to Epstein (1987) and recommended by Ames (1992), can provide guidance for modifying learning climates that accommodate diversity in PE (Valentini & Rudisill, 2004). To promote feelings of inclusion, the *tasks* should be mastery-oriented, give sufficient *time* for children to learn and execute the tasks, and allow for task novelty and variation. Effort and progress should be the salient ingredients in *recognitions* and *evaluations* (Ames, 1992; Roberts, 2012). In terms of the *grouping* and the importance of satisfaction of relatedness found in this study, children with disabilities may benefit from more opportunities to collaborate, and form positive peer relationships in PE. Finally, in line with the *authority* structure to provide children with optimal challenging activities, the PE teacher should provide choices guided by children's interests and abilities in a structured environment (Ames, 1992; Deci & Ryan, 2000).

### Limitations of the Study

Several limitations apply to this study. The analyses are based on convenience sampled cross-sectional data, which limits the possibility for causal inference and to generalization. It would be interesting to follow a group of children with disabilities, and their peers and teachers, longitudinally to further explore the relations between alterations in the PE settings and the children's degree of participation, the motivational processes, and its influence of children's feelings of inclusion. Furthermore, in line with the asymmetrical assumptions of QCA, this study explores the necessary and/or sufficient conditions for children to feel socially and pedagogically included and does not make assumptions about factors that might lead to social and pedagogically exclusion or marginalization. Please note that the children in this study were enrolled in general schools, and the majority of the children attended PE together with their peers to some degree. Thus, this study is limited to this population and does not say anything about the children who attend segregated PE programs or who are completely excluded from PE.

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## Theoretical Implications

fsQCA supported the identification of previously unexplored complex relations between the different tenets that might complement contemporary theoretical discussions. First, the second contextual inclusion-supportive climate indicated for children to feel socially and pedagogically included in PE is not enough that the climate is autonomy supportive—it also needs to be low on performance orientation. Thus, the achievement goal climate, and subsequently the applied criteria of success, seems to be of particular importance for creating inclusion-supportive climates in PE.

Second, SDT postulates that the degree of basic psychological needs satisfaction, especially the need for competence and autonomy, dictates the level of self-determined behavior (Deci & Ryan, 2000; Standage et al., 2003). With this in mind, we could expect that children with high level of basic needs satisfaction would exhibit high level of autonomous motivation. However, one path (S3/P3) to both SI and PI indicated that the level of autonomous motivation was not applicable in the configuration where children experienced satisfaction of all three psychological needs. In other words, children with both controlled and autonomous motivations experienced satisfaction of the need for autonomy, relatedness, and competence dependent on the motivational climate and the presence of other individual attributes such as their motivational orientation and level of amotivation. This does not invalidate the satisfaction of the three basic needs as a possible sufficient pathway for autonomous motivation, but it suggests that there may be alternative pathways to autonomous motivation that do not depend on the satisfaction of all three psychological needs. To explore the complex asymmetrical and equifinality of motivational processes further, we recommend that several studies retain a QCA approach, alone or in combination with more traditional statistical analyses.

## Conclusion

The findings contribute to our understanding of how PE teachers can foster motivational climates that promote SI and PI for a diverse group of children. First, it is necessary for children to be physically included to feel socially and pedagogically included in PE. Second, the introduction of a mastery-oriented climate and/or an autonomy-supportive climate, low on performance orientation seems to be successful motivational strategies for SI and PI in PE. A mastery climate seems to be a particular robust inclusion-supportive climate for children with different motivational profiles and abilities. The findings illustrate the practical and theoretical value of applying fsQCA to explore motivational pathways in PE using tenets from AGT and SDT.

## Notes

1. Necessary conditions are identified if the individual's membership score in the condition is equal to or higher than the individual's score on the outcome.
2. We tested for paradoxical relations in which the presence of a condition/configuration, as well as its negation (its absence), explain the outcome. No paradoxical relations emerged based on consistency scores far below the threshold (0.85).
3. Results of the sensitivity and robustness tests are available upon request.

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**Article V**



1 **Parental satisfaction with inclusion in physical education**

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## 11 **Parental satisfaction with inclusion in physical education**

12 Scarce knowledge exists on parental satisfaction of inclusion of children with  
13 disabilities in physical education (PE). This study explored how parents'  
14 satisfaction with inclusion in PE is associated with parental and child  
15 interpersonal and intrapersonal characteristics. Seventy-two parents of children  
16 with disabilities participated in the survey study. Based on ordinary least square  
17 regression (OLS) and quantile regression (QR) the results indicated that the  
18 parents' satisfaction with social inclusion in PE was associated with their attitudes  
19 towards inclusion in PE, perceived PE-related information sharing and children's  
20 type of disability and degree of physical inclusion. Parents' satisfaction with  
21 pedagogical inclusion in PE was associated with their attitudes towards inclusion  
22 in PE, PE-related information sharing, and children's degree of disability and  
23 physical inclusion. Furthermore, the QR estimates indicated that the explanatory  
24 strength of parental attitudes towards inclusion in PE varied with the degree of  
25 parents' satisfaction with social and pedagogical inclusion in PE. Practical and  
26 methodological implications of the findings are discussed.

27 **Keywords:** disability, inclusion, parents, physical education, satisfaction.

## 28 **Introduction**

29 In this study, we explore parents' satisfaction with inclusion in physical education (PE).  
30 Research consistently show that parents' involvement in and attitudes towards  
31 education is essential for children's participation and learning in school (Hattie 2009;  
32 Fan and Chen 2001). Parents also seem to play a vital role as advocates for the  
33 participatory rights of children with disabilities in physical activity in school and  
34 beyond (An and Goodwin 2007; Svendby 2017; Wilhelmsen and Sørensen 2018). Yet,  
35 the parental perspective on inclusion of children with disabilities in PE have received  
36 scarce attention in previous research (Wilhelmsen and Sørensen 2018).

37 Inspired by Goodwin, Watkinson, and Fitzgerald (2003), we define inclusion in  
38 PE as giving all children the opportunity to participate in general PE with their peers,

39 with the aid and support service needed to take full advantage of the curriculum and the  
40 social, physical and academic benefits it aims to provide. We distinguish between three  
41 distinct but interrelated dimensions of inclusion, namely physical, social, and  
42 pedagogical inclusion (Dalen 1994). Being allowed to take part in the activities with  
43 peers is often emphasised as the lowest level but an important first step of inclusion (Pijl  
44 2007). In this study, we explore how physical inclusion— the degree to which children  
45 with disabilities are physically present in a general PE setting as opposed to receiving  
46 their PE away from the general setting—relates to parents satisfaction with social and  
47 pedagogical inclusion.

48         Social inclusion refers to the interaction between children and their peers,  
49 between children and the teachers in class, as well as the children’s experiences of  
50 accept and belonging to the group. The social dimension is a key issue in inclusive  
51 education (Wendelborg and Tøssebro 2011) and is often emphasised among parents as  
52 an important criteria of educational quality (Pijl 2007). The importance of having  
53 friends, feeling supported, and being a legitimate participant in activities are also  
54 stressed by children themselves (Seymour, Reid, and Bloom 2009; Spencer-Cavaliere  
55 and Watkinson 2010; Klavina and Block 2008). Unfortunately, children with disabilities  
56 are still at larger risk of being socially excluded than their peers (Pijl 2007; Wendelborg  
57 and Tøssebro 2011).

58         The pedagogical dimension of inclusion reflects whether the organisation of PE  
59 appreciates diversity of abilities and promotes children’s learning potential and  
60 engagement in the activities. Even though inclusion has been a guiding principle in  
61 Norwegian education for several decades, research indicate that children with  
62 disabilities are less active in structured and unstructured social and academic activities

63 in the classroom and PE compared to their peers (Eriksson, Welander, and Granlund  
64 2007; Svendby and Dowling 2013).

65 Parents' involvement in education bridges two important developmental arenas  
66 for children, namely home and school. Previous research indicates that the home-school  
67 interaction may influence the child's motivation for schoolwork, learning, social skills,  
68 and school attainment (Nokali, Bachman, and Votrauba-Drzal 2010). By building on an  
69 ecological perspective often used in physical activity research (Sallis, Bauman, and  
70 Pratt 1998) we combine intrapersonal (parental gender, education and attitudes and  
71 children's type and degree of disability), interpersonal (perceived home-school  
72 collaboration), and organisational (the child's school grade and degree of physical  
73 inclusion) factors to better understand parents' satisfaction with social and pedagogical  
74 inclusion in PE. In line with an ecological perspective and an interactional approach to  
75 disability, disability is here understood as "the outcome of the interaction between  
76 individual and contextual factors" (Shakespeare 2006, 58).

77 Research from general education indicates that parents generally have positive  
78 attitudes towards inclusion (de Boer, Pijil, and Minneart 2010). Although several  
79 parents of children with disabilities raised concerns about their child's emotional  
80 development in general education, adequacy of resources, and an overall concerns that  
81 the child's need would not be secured (Elkins, van Kraayenoord, and Jobling 2003;  
82 Leyser and Kirk 2011). Few studies have explored attitudes towards inclusion in PE  
83 among parents of children with disabilities. We postulate that parental attitudes towards  
84 inclusion will contribute to explain the variance observed in parents' satisfaction with  
85 inclusion in PE.

86 An interpersonal factor previously associated with parental perception of  
87 inclusion in PE is the communication with PE teachers, the amount of PE-related

88 information and codetermination within the home-school collaboration (An and Hodge  
89 2013; Chaapel et al. 2012; Perkins et al. 2013; Svendby 2017; Wilhelmsen and  
90 Sørensen 2018). Combined, these studies indicate that the PE-related home-school  
91 collaboration is underdeveloped compared to other school subjects and with few  
92 opportunities for parents to communicate with the PE teacher. Parents have reported  
93 less satisfaction with the teachers' communication, qualifications and support when  
94 their child was fully physical included in PE compared to non-fully included (Lee,  
95 Haegele, and Chang 2017). While Lee, Haegele and Chang (2017) explored parents'  
96 satisfaction with the PE and APE teachers, no study has systematically investigated the  
97 association between parents' satisfaction with social and pedagogical dimensions of  
98 inclusion in PE. A better understanding of parents' satisfaction with social and  
99 pedagogical inclusion in PE may assist the implementation, quality and sustainability of  
100 inclusion in PE.

101         To address the gap we aimed to identify the associations between parents'  
102 satisfaction with social and pedagogical inclusion in PE and child intrapersonal  
103 characteristics (e.g. the child's type and degree of disability, gender or school grade),  
104 parental intrapersonal characteristics (e.g. education, gender, and their attitudes towards  
105 inclusion in PE), and parent's perspectives on PE-related home-school collaboration.  
106 Three research questions have guided the study. First, are there the differences in  
107 parents' satisfaction with social and pedagogical inclusion in terms of parental and child  
108 intrapersonal characteristics? Second, how is parents' satisfaction with social and  
109 pedagogical inclusion in PE associated with their attitudes towards inclusion in PE,  
110 perceived PE-related home-school collaboration, and children's degree of physical  
111 inclusion? Third, does the explanatory strength of the factors described above vary with  
112 the parents' degree of satisfaction with inclusion? We believe that more information on



113 how the different factors are associated with different subgroups of parents depending  
114 on their level of satisfaction might help teachers to tailor their collaboration efforts  
115 accordingly.

## 116 **Method**

### 117 *Participants*

118 Participants included 72 parents of children with disabilities who attend general PE in  
119 Norwegian public schools. The sample was comprised of 51 women (71%) and 21 men  
120 (29%). Age of the participants ranged from 33 to 56 (mean 45.22, SD 5.73). The  
121 percentage of parents with higher education (71% with one or more years of  
122 University/University College education) was higher than in a recent nationally  
123 representative sample (Statistics Norway 2017). The children's school grades ranged  
124 from grade 2 to 10 of which 40% of the children were enrolled in primary school and  
125 60% in secondary school. Based on parental self-reported measures, 67% of the  
126 children had a physical disability, 14% had a developmental disability, and 19% had  
127 other disabilities (including visual disability, learning disability, Autism Spectrum  
128 Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD)). The parents  
129 characterised the degree of the child's disability as follows: 7% as a severe degree of  
130 disability, 39% as a moderate disability, 46% as a low degree of disability, and 7%  
131 reported having no disability. Two parents did not specify their child's degree of  
132 disability.

### 133 *Outcome variables*

#### 134 *Satisfaction with social inclusion*

135 To measure satisfaction with social inclusion we designed a 10-item survey using a five

136 point Likert-Scale inspired by the Norwegian version of the Booth index of inclusion  
137 (Booth and Ainscow 2002). We explored the relations between items using Pearson  
138 correlation. First, items with correlation  $r=0.30$  or less on the marker item (i.e. 'In PE,  
139 my child feels like a part of the class') were excluded from the analysis (three item  
140 excluded). Descriptive statistics of the items included in the scales are available upon  
141 request. A confirmatory factor analysis (CFA) of the remaining items supported the  
142 construct validity of the scale (Table 1). The eight items were averaged to construct one  
143 scale measuring satisfaction with social inclusion with sufficient reliability ( $\alpha=0.84$ ).

#### 144 *Satisfaction with pedagogical inclusion*

145 A similar process was followed for the pedagogical inclusion scale. One out of nine  
146 items were deleted based on low correlations with the marker item (i.e. 'In PE, my child  
147 get to use her abilities'). To test the factorial validity of the construct we use CFA and  
148 post hoc analyses to refit the construct. After deleting one item due to cross loading  
149 above 10.00, a CFA of the remaining items supported the construct validity of the scale  
150 (Table 1). The seven items were averaged to create one scale with sufficient reliability  
151 (Cronbach's  $\alpha=0.81$ ).

#### 152 ***Independent variables***

##### 153 *Demographic scale*

154 Participants completed a demographic scale indicating age, sex, education and  
155 birthplace (Nation). Education was measured as follows: Primary school (1), High  
156 school – skilled labour (2), High School - university preparation (3), 1-3 years of higher  
157 education at University/University College (4), more than 3 years higher education (5).

158 *The child's type and degree of disability*

159 Two measures were used for children's type and degree of disability. First, parents were  
160 asked to indicate the their child's degree of disability by answering the question: 'Would  
161 you describe your child's disability as mild (1), moderate (2), severe (3), or the child has  
162 no disability (0)'. Due to low response in the lowest categories we dummy coded the  
163 two scales (low (none/mild) degree=0:1; high (moderate/severe) degree=2:3). Second,  
164 to identify type of disability parents were asked to describe the child's disability. The  
165 authors categorized children's type of disabilities into three categories (i.e. physical,  
166 developmental and other types of disabilities) based on the descriptions.

167 *Physical inclusion*

168 Physical inclusion was measured with two questions: How much time does your child  
169 spend in PE together with his or her peers without a disability? And how much time  
170 does your child spend in special PE groups? (The second item was reversed). The parent  
171 answered on a five point Likert type scale (5 = Always, 1 = Never. Missing= Do not  
172 know). An average score of the items were used as a measure for physical inclusion  
173 (Spearman's Rho = 0.64).

174 *Attitudes towards inclusion in PE*

175 We used six items to measure parents' attitudes towards inclusion in PE. The items were  
176 preceded by the stem 'inclusion of children with disabilities in PE would...' (i.e., '...help  
177 children without disabilities to interact with children with disabilities'). The parent  
178 answered on a five point Likert type scale (5 = completely agree, 1 = completely  
179 disagree). The six items were averaged to create one scale with sufficient internal  
180 consistency (Cronbach's alpha =0.89) and fit (Table 1).

181 *PE-related home school collaboration*

182 To measure PE related home-school collaboration we developed two scales based on  
183 previous studies in Norwegian elementary school (Nordahl 2000). The parents answered  
184 on a five point Likert type scale (5 = completely agree, 1 = completely disagree). The  
185 first scale measured PE-related information from school (i.e., 'I am very pleased with  
186 the amount of information about my child's development in PE shared by the school').  
187 One item was deleted due to cross loading ( $mi = 16.26$ ). The four-item scale showed  
188 sufficient internal consistency (Cronbach's  $\alpha = 0.74$ ) and fit. The second scale  
189 measured PE-related codetermination with four items (i.e., 'I/we are rarely included in  
190 the discussions about my child social development'). The four-item scale showed  
191 sufficient internal consistency (Cronbach's  $\alpha = 0.71$ ) and fit. Table 1 display the fit  
192 indices of the CFAs. TABLE 1 IN HERE.

193 *Procedures*

194 A cross-sectional design was used in this study. Initially we attempted to contact  
195 families with children with disabilities through a school-based national representative  
196 sample. However, the response rate and the diversity of disabilities among the children  
197 were low (9 % response rate and a majority of the children were diagnosed with  
198 asthma). Thus, in our second attempt we used a convenience sample approach. Parents  
199 were informed about the project through postal letter sent out in collaboration with  
200 regional rehabilitation centres or verbally in parental meetings at one rehabilitation  
201 centre specialised in adapted physical activity. Parents were given the option of  
202 responding to an online or a hardcopy version of the survey. For the online version, we  
203 used SurveyXact in which the university had a data handling agreement. The  
204 Norwegian Centre for Research Data approved the study and parents signed an

205 informed consent form.

## 206 *Data analyses*

207 IBM SPSS statistics 24 and R 3.4.1 were used as platforms for the analyses. The data  
208 were investigated using descriptive statistics. Little's MCAR test indicated that the data  
209 was missing completely at random (Chi-Square = 2260.432, DF=3016, Sig=1.000). To  
210 handle missing values in the data we used the R package 'mice: Multivariate Imputation  
211 by Chained Equations' (Van Buuren and Groothuis-Oudshoorn 2011).

212 For the satisfaction with social inclusion variable (skewness=-1.29,  
213 kurtosis=1.79), qqplot, the Kolmogorov-Smirnov test and the Shapiro-Wilk test  
214 indicated that the distribution deviated from a comparable normal distribution (Field,  
215 2009). For the satisfaction with pedagogical inclusion (skewness=-0.38, kurtosis=-0.41)  
216 only the Shapiro-Wilk test was significant. Based on Durban-Watson tests (M1=1.934,  
217 M2=1.961), covariance matrix, VIF and tolerance statistics, and extreme case,  
218 histogram, normal pp plots, plots of standardized residuals and predicated values  
219 indicated that both models met the assumptions of OLS. However, due to skewed  
220 outcome variable and medium-sized sample, the results are based on bootstrapped  
221 estimates (Field 2009).

222 Using the Lavaan R package (Rosseel 2012), we performed confirmatory factor  
223 analyses to verify the factor structure of the continuous measures. The model chi-square  
224 coupled with the alternative fit indices the comparative fit index (CFI), the standardised  
225 root mean square residuals (SRMR), and the root mean square error of approximation  
226 (RMSEA) were used to evaluate fit of scales (Byrne 2012). However, the RMSEA  
227 measures should be interpreted with caution due to sample size and the low degree of  
228 freedom in some of the CFAs (Kenny, Kaniskan, and McCoach 2015).

229 To investigate the first and second research question we employed independent  
230 t-tests and one-way ANOVA (Bonferroni corrections were used for post hoc analyses),  
231 pearson correlation and ordinary least square regression (OLS). Lastly, to explore third  
232 research question, we used quantile regression (QR). To perform the QR analyses we  
233 used the quantreg R package (Kroenker 2018).

234 As many readers may be unfamiliar with QR, we briefly describe the modelling  
235 approach (see Koenker and Bassett (1987) for a more technical discussion). QR was  
236 developed as an extension of the linear model for estimating rates of change in different  
237 parts of the distribution of an outcome variable (Kroenker and Basset 1978). QR was  
238 initially introduced as a more robust regression analysis with less strict assumptions.  
239 However, previous research often use the method mainly because is enables  
240 identification of information about distribution points of the outcome variable other than  
241 the conditional mean (Seippel 2015). We used QR to examine whether the explanatory  
242 strength of the independent variables varied according to the degree of satisfaction with  
243 inclusion in PE on five selected quantile of the distribution, namely the 0.10, 0.25, 0.50  
244 (median), 0.75 and 0.90 quantiles. QR allowed us to analyse different points in the  
245 conditional distribution of satisfaction with inclusion, and thus, go beyond only  
246 analysing averaged trends in the data as provided in the OLS modelling. The  
247 interpretation of the parameter estimates is the same in QR and OLS. They indicate rate  
248 of change adjusting for the effects of the other variables in the model, but in the QR  
249 models they are defined for the specific quantiles.

## 250 **Results**

251 In average, the parents reported very positive attitudes towards inclusion in PE (mean  
252 4.77). In contrast, the parents' satisfaction with PE-related information (mean 2.85) and

253 PE-related co-determination (mean 2.56) were quite low. Table 2 indicates the range,  
254 mean and standard deviation of the independent variables. TABLE 2 IN HERE.

255         Looking at the outcome variables in Table 3, the parents' satisfaction with social  
256 inclusion (mean 4.00) and pedagogical inclusion (mean 3.80) was relatively high, yet  
257 slightly lower than the 0.50 quantile for both outcomes. For social inclusion, the 0.10  
258 quantile represents low satisfaction, the 0.25 quantile represents neutral satisfaction, and  
259 the 0.50-0.90 quantiles represent high satisfaction. For pedagogical inclusion, the 0.10  
260 quantile represents low satisfaction, the 0.25-0.50 quantiles represent neutral  
261 satisfaction, and the 0.75-0.90 quantiles represent high satisfaction. TABLE 3 IN  
262 HERE.

263 ***Differences in intrapersonal characteristics and satisfaction with inclusion in***  
264 ***PE***

265 Independent t-tests yielded no group differences between mothers and fathers, parents  
266 with higher or lower educational level, having a son or daughter, or having children in  
267 primary or secondary schools.

268         Figure 1 display boxplots of the differences in parental satisfaction with social  
269 and pedagogical inclusion and the children's degree of physical inclusion based on the  
270 children's type and degree of disability. FIGURE 1 IN HERE. Boxplot (a), (b) and (c)  
271 indicate the relations between type of disability and the dimensions of inclusion. One-  
272 way ANOVA and post hoc analyses indicated that the only significant ( $p < 0.05$ )  
273 difference were between the child's type of disability and degree of physical inclusion  
274 in PE. As indicated by Boxplot (c), children with developmental disabilities were less  
275 physically included in PE than children with other types of disabilities. Furthermore, as  
276 indicated in the Boxplot (d) and (e), no significant group differences were found in  
277 terms of degree of disability and parents' satisfaction with social or pedagogical

278 inclusion. However, as displayed in Boxplot (f), independent t-tests indicated that  
279 children with low degree of disability were more physically included in PE (mean =  
280 4.75, SD=0.62) than children with high degree of disability (mean=4.01, SD=1.32). It  
281 seems that there were group difference in terms of the children's type and degree of  
282 disability on to levels of physical inclusion, but not parents' satisfaction with social and  
283 pedagogical inclusion.

284 Table 4 displays the correlations between the continuous variables. All variables  
285 were significantly and positively associated with social and pedagogical inclusion. We  
286 also see a strong association between parents' satisfaction with social and pedagogical  
287 inclusion, and moderate associations between physical and social inclusion and physical  
288 and pedagogical inclusion (Cohen 1992). These results support our assumption that the  
289 dimensions of inclusion in PE are interrelated. TABLE 4 IN HERE. All independent  
290 variables correlated moderately or stronger with the outcome variables, and majority of  
291 the correlations between the independent variables were low, except the moderate  
292 strength association between the two home-school collaboration (Cohen 1992).

### 293 *Satisfaction with social inclusion*

294 In this section, we present the OLS and QR estimations of the relations between  
295 parents' satisfaction with social inclusion and their attitudes towards inclusion in PE,  
296 PE-related information, and children's type of disability and physical inclusion.  
297 Children's degree of disability and PE-related co-determination did not contribute to the  
298 model. The variable was removed for reasons of parsimony. TABLE 5 IN HERE. The  
299 OLS model of parents' satisfaction with social inclusion indicated positive associations  
300 with their attitudes towards inclusion, perceived PE-related information sharing and the  
301 child's degree of physical inclusion. The association with children's type of disability



302 indicated that parents of children with other types of disabilities were less satisfied with  
303 social inclusion in PE compared to parents of children with physical disabilities.  
304 Combined, the variables explained 55 % of the variance in parents' satisfaction with  
305 social inclusion. FIGURE 2 IN HERE. Figure 2a show the QR estimates for attitudes  
306 towards inclusion, Figure 2b the QR estimates for PE-related information sharing, and  
307 Figure 2c the QR estimates for type of disability (Others) on parental perception of  
308 social inclusion, when controlled for the other variables. The points represent the 0.10,  
309 0.25, 0.50, 0.75 and 0.90 QR estimates—filled when significant at  $p < 0.05$  and open  
310 when insignificant. The horizontal line represent the OLS estimate—black when  
311 significant at  $p < 0.05$  and grey when insignificant.

312 Figure 2a indicate that both the strength and significance of the associations  
313 between parent's attitudes and satisfaction with social inclusion varied according to the  
314 degree of satisfaction among the parents. The QR estimates indicate that the positive  
315 effect of parents' attitudes towards inclusion decrease with increased satisfaction.  
316 However, the association was insignificant at 0.25 quantile. Similarly, Figure 2b  
317 indicate that the importance of PE-related information decrease with increased parental  
318 satisfaction with social inclusion.

319 Figure c suggests some noteworthy differences across different points on the  
320 condition distribution of parent satisfaction with social inclusion. The QR estimates of  
321 type of disability indicate that the difference in satisfaction of social inclusion among  
322 parents of children categorised as other types of disabilities and parents of children with  
323 physical disability is only significant at the lower level of the distribution. This  
324 information is lost in the OLS model. Thus, comparing the results from the OLS model  
325 and the QR estimates in Figure c indicates that the OLS model overestimates the

326 influence of type of disability among the parents that are satisfied with social inclusion  
327 in PE.

### 328 *Pedagogical inclusion*

329 TABLE 6 IN HERE. The final OLS model explained 58 % of the variance of parents'  
330 satisfaction with pedagogical inclusion. The OLS analysis indicated positive  
331 associations between parents' satisfaction with pedagogical inclusion and their attitudes  
332 towards inclusion, and perceived PE-related information sharing with the school. We  
333 also see a significant negative interaction between physical inclusion and degree of  
334 disability on parents' satisfaction with pedagogical inclusion. Parents' experiences of  
335 PE-related co-determination and children's type of disability were not significantly  
336 associated with parent satisfaction with pedagogical inclusion when controlled for the  
337 other variables and were left out of the model.

338 Figure 3a display the interaction effect. For parents of children with low degree  
339 of disability the dotted line indicate a positive linear relationship between physical  
340 inclusion and parents' satisfaction with pedagogical inclusion. Yet, for parents of  
341 children with high degree of disability (whole line), the relationships indicate a distinct  
342 depression in satisfaction with pedagogical inclusion when the child is physically  
343 included to some degree, and a similar decline in satisfaction for children partly to fully  
344 physically included in PE. FIGURE 3 IN HERE. Considering the effect of attitudes  
345 towards inclusion across quantiles in Figure 3b, we see that the only significant  
346 association between attitudes and satisfaction with pedagogical inclusion was at the  
347 lower bounds of the distribution (0.10- 0.50 quantiles). Though insignificant, the  
348 estimates of the higher quantiles in the distribution suggest that the effect of attitudes

349 towards inclusion decrease with increased parental satisfaction with pedagogically  
350 inclusion.

351 The PE-related information sharing variable displayed in Figure 3 c indicate that  
352 the results from the QR parallel the relations indicated by the OLS model. In other  
353 words, the strength and significance of the associations between PE-related information  
354 and satisfaction with pedagogical inclusion are similar across the quantiles measured.

### 355 **Discussion**

356 The aim of this study was to identify the associations between parents' satisfaction with  
357 social and pedagogical inclusion in PE and parental characteristics (e.g. education,  
358 gender, their attitudes towards inclusion in PE), child characteristics (e.g. type and  
359 degree of disability, gender, school grade), and parents' perspectives on PE-related  
360 home-school collaboration. To answer the research question we applied OLS and QR  
361 analyses. In accordance with socio-ecological perspectives, multiple levels of factors  
362 influenced parents' satisfaction with inclusion in PE. Furthermore, the relevance of the  
363 different factors depended upon the degree of satisfaction among the parents. In the  
364 following, the associations between parents' satisfaction with social and pedagogical  
365 inclusion in PE and interpersonal, intrapersonal and contextual factors are discussed  
366 more in detail.

#### 367 *The interaction between child intrapersonal characteristics and physical* 368 *inclusion*

369 In terms of degree of physical inclusion, we see that children with high degree of  
370 disability were less physically included than children with low degree of disability, and  
371 children with developmental disabilities were less included than children with physical  
372 or other types of disabilities. These results are line with research findings from general

373 education showing that children with intellectual disability and high degree of disability  
374 were more often taken out of the general classroom (Wendelborg and Tøssebro 2011).  
375 The degree to which children were physically included was also significantly associated  
376 with parents' perception of pedagogical inclusion in PE. Thus, partly or fully segregated  
377 PE programmes might hinder children in gaining access to the same physical and  
378 academic benefits as their peers. Partly segregated PE also may decrease the amount of  
379 effort PE teachers invest in inclusive PE programmes and subsequently the child's  
380 learning in PE. Similarly, the positive association between parents' satisfaction with  
381 social inclusion and children's degree of physical inclusion indicate that the degree of  
382 participation in the PE may influence children's opportunity to develop positive  
383 relations with peers and teachers. This is in line with findings from general educational  
384 settings (Pijl 2007; Wendelborg and Tøssebro 2011).

385         Furthermore, the OLS results indicate that the children's type and degree of  
386 disability were associated with parents' satisfaction with social and pedagogical  
387 inclusion in PE differently. We found no significant association between the child's  
388 degree of disability and parents' satisfaction with social inclusion. However, the final  
389 regression models indicated that there were differences in terms of the children's type of  
390 disability among the parents least satisfied with social inclusion in PE. Specifically,  
391 parents of children with other types of disabilities (i.e. visual disability, learning  
392 disability and ASD, and ADHD) were less satisfied with the social inclusion in PE than  
393 parents of children with physical disabilities. However, this association was not  
394 significant among the parents that were moderately or highly satisfied. These findings  
395 differ slightly from previous research, which found that parental reports of children's  
396 social participation with peers were not directly influenced by type or degree of

397 disability, but indirectly via physical inclusion and educational support (Wendelborg  
398 and Tøssebro 2011).

399         The interaction between children's degree of disability and physical inclusion  
400 and its association with parents' satisfaction with social inclusion indicated a linear  
401 relationship between physical inclusion and parental satisfaction among parents of  
402 children with low degree of disability. However, for parents' of children with high  
403 degree of disability the relationship indicate a more complex picture in which the  
404 parents of children with completely segregated or some degree of physical inclusion are  
405 the least satisfied. One interpretation is that children with high degree of disability who  
406 were physically included only to some degree represent a group of children that fall in-  
407 between—not receiving a well-developed segregated adapted PE program nor receiving  
408 adequate accommodation in the general PE lessons. This in-between educational  
409 arrangement might increase the dependency on well-developed strategies for  
410 communication and planning among the teacher in charge of adapted and general PE.  
411 Based on previous research we see that these educational transitions are often perceived  
412 as particularly challenging in terms of communication, planning and support (Tso and  
413 Strnadová 2017; Wilhelmsen and Sørensen 2018).

414         The practical implications of the findings warrant further reflections. First, PE  
415 teachers need to appreciate that children with different types of disabilities have  
416 different needs in terms of social competence, friendship and interpersonal relations.  
417 Frequent social interaction does not necessarily lead to positive peer interaction and  
418 some children might not increase their social competence or acceptance without support  
419 from teachers or peers (Place and Hodge 2001; Wendelborg and Tøssebro 2011).  
420 Secondly, partly segregated PE program, often in the form of physiotherapy or  
421 rehabilitation training, may create an in-between situation that negatively influence the

422 coherency and progress in the child's learning. However, more research is needed to  
423 better understand how moving in between segregated and general PE setting may  
424 influence children's participation and learning in PE.

425 ***Parents' intrapersonal characteristics***

426 In line with previous research in general education, the parents reported very positive  
427 attitudes towards inclusion in PE (de Boer, Pijil, and Minneart 2010). Parent's attitudes  
428 were the only parental intrapersonal characteristic significantly associated with parents'  
429 satisfaction with social and pedagogical inclusion in PE. Given that parents play a large  
430 role in deciding the educational placement of their child, positive attitudes towards  
431 inclusion are an important factor for realising inclusion in PE. Differences in the  
432 association between attitudes and satisfaction with pedagogical inclusion indicate that  
433 parental attitudes might be of more concern among the parents with low and neutral  
434 satisfaction with pedagogical inclusion, than among parents with high satisfaction.

435 ***Interpersonal characteristics: PE-related information and co-determination***

436 Parents' satisfaction with social and pedagogical inclusion in PE was consistently  
437 associated with parents' perceptions of the PE-related information sharing. These  
438 findings emphasise the importance of PE-related information sharing between home and  
439 school. Based on the percentages of parents wanting more opportunities to talk to the  
440 PE teacher, it is reasonable to assume that strengthened PE-related information sharing  
441 could enhance parental engagement in and their satisfaction with inclusion in PE.

442 In terms of practical implications, parents, with their expert knowledge on their  
443 children's skills and abilities in different physical activity settings, represents an  
444 important resource for the PE teachers. Parents are dependent upon the school to receive  
445 information about their child's enjoyment and development in PE in order to make

446 informed decisions on behalf of their child. The insignificant relations between  
447 perceived PE-related co-determination and parents' satisfaction with inclusion in PE  
448 may indicate that parents opportunities to get involved in their child's education in PE is  
449 limited. These findings resonates well with previous research (Perkins et al. 2013;  
450 Svendby 2017; Wilhelmsen and Sørensen 2018). Alternative explanations may be that  
451 parents do not expect to be consulted in PE-related matters. More attention to PE-  
452 related communication can enhance PE teachers' insight into the children's need and  
453 make them more prepared to support the development of the children with different  
454 abilities within the larger group of children.

455 *Strengths and limitations of the study and suggestions for further research*

456 This study illuminates relations about which we have scarce knowledge. The QR  
457 allowed us to explore the strength of the associations between antecedences of parents'  
458 satisfaction with inclusion in PE at different points of the conditional distribution. This  
459 is important considering that increased understanding of how intrapersonal,  
460 interpersonal and contextual factors influence parental satisfaction with inclusion in PE  
461 depending on their initial degree of satisfaction might facilitate tailored educational  
462 interventions.

463         However, the results from this study should be interpreted with caution. First,  
464 the use of convenience sample of parents and cross sectional nature of the data restricts  
465 our ability to make causal inference. Second, limitation in sample size did not allow us  
466 to test the combined structural validity of the dimensions of inclusion in PE. Thus,  
467 further research is needed to tests the relations between the dimensions of inclusion in  
468 PE.

469           Secondly, although parents of children of disabilities are likely to know more  
470 about their child's everyday life in school compared to other parents (Ytterhus,  
471 Wendelborg, and Lundeby 2008), this might not be the case in term of the PE setting.  
472 Based on the parents' reports on the amount of PE-related information they receive  
473 from school it is also reasonable to question parents awareness of what goes on in PE,  
474 and subsequently how meaningful the distinction between social and pedagogical  
475 inclusion are for the parents. Thus, while parent's satisfaction with inclusion in PE  
476 likely relates to children's experience of inclusion, it is not necessarily in agreement  
477 with the child's own satisfaction with inclusion. Parental satisfaction with inclusion in  
478 PE is a desirable aim, but it should not be mistaken for measure of successful inclusion  
479 in PE. For example, sociometric studies has shown to present a more sombre picture of  
480 friendship in class compared to the perspectives of teacher and parents (Pijl 2007).

481           Finally, categorisation of disability is problematic. Previous research clearly  
482 indicate that the way we measure disability influences our results (Molden and Tøssebro  
483 2012). The diversity among parents in terms of the children's type and degree of  
484 disability is a strength of the study. Yet, it is important to note that the disability groups  
485 are gross categorisations of children's main disability, and may not reflect the variation  
486 between and within the group of children as well as more specific categorisations  
487 would. As an example, while cerebral palsy (CP) have been categorised as a physical  
488 disability, several children with CP might also have cognitive difficulties. We need  
489 more research that explore the complex interrelations between intrapersonal,  
490 interpersonal and contextual factors in order to secure optimal social and academic  
491 development in inclusive PE settings for all children.



492 **Conclusion**

493 This study explored the associations between parents' satisfaction with inclusion in PE  
494 and intrapersonal, interpersonal and organisational factors. Parents' satisfaction with  
495 social inclusion in PE was associated with parental attitudes towards inclusion in PE,  
496 perceived PE-related information sharing and children's type of disability and degree of  
497 physical inclusion, while parents' satisfaction with pedagogical inclusion in PE was  
498 associated with parents' attitudes towards inclusion in PE, PE-related information  
499 sharing, and children's degree of disability and physical inclusion. Finally, changes in  
500 explanatory strength of the individual variables depending on parents' satisfaction with  
501 inclusion indicate that increased focus on PE-related information sharing between home  
502 and school would be an important first step to improve parents' satisfaction with  
503 inclusion in PE. A better understanding of these relations might contribute to enhance  
504 the quality of instructions and inclusion of children with disabilities in PE.

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618 Tables and Figures

619

620 Table 1 Fit indices of the confirmatory factor analyses

	$\chi^2$ (df)	p	CFI	SRMR	RMSEA [90% CI]
Satisfaction with social inclusion	13.79 (20)	0.85	1.00	0.04	0.00 [0.00,0.05]
Satisfaction with pedagogical inclusion	22.34 (14)	0.07	0.95	0.06	0.09 [0.00,0.16]
Attitudes towards inclusion i PE	12.26 (9)	0.20	0.99	0.04	0.07 [0.00,0.16]
PE-related information	1.98 (2)	0.37	1.00	0.03	0.00 [0.00,0.23]
PE-related codetermination	2.27 (2)	0.32	1.00	0.04	0.04 [0.00,0.24]

621

622

623 Table 2 Range, mean and standard deviation of parent and child characteristics

	Range	Mean	SD
<i>Intrapersonal parental variables</i>			
Sex (Female)	0 : 1	0.29	0.46
Education (High school or lower)	0 : 1	0.71	0.46
Attitudes towards inclusion	2.33 : 5.00	4.76	0.48
<i>Intrapersonal child variables:</i>			
Sex (female)	0 : 1	0.58	0.49
Degree of disability (low)	0 : 1	0.47	0.50
Type of disability			
Physical (reference)	0 : 1	0.67	0.47
Developmental	0 : 1	0.14	0.35
Other	0 : 1	0.19	0.40
<i>Interpersonal variables:</i>			
PE-related information	1 : 5	2.85	1.00
PE-related co-determination	1 : 4.75	2.56	0.78
<i>Context variables:</i>			
School Grade (primary)	0 : 1		
Physical inclusion	1 : 5	4.40	1.07

624

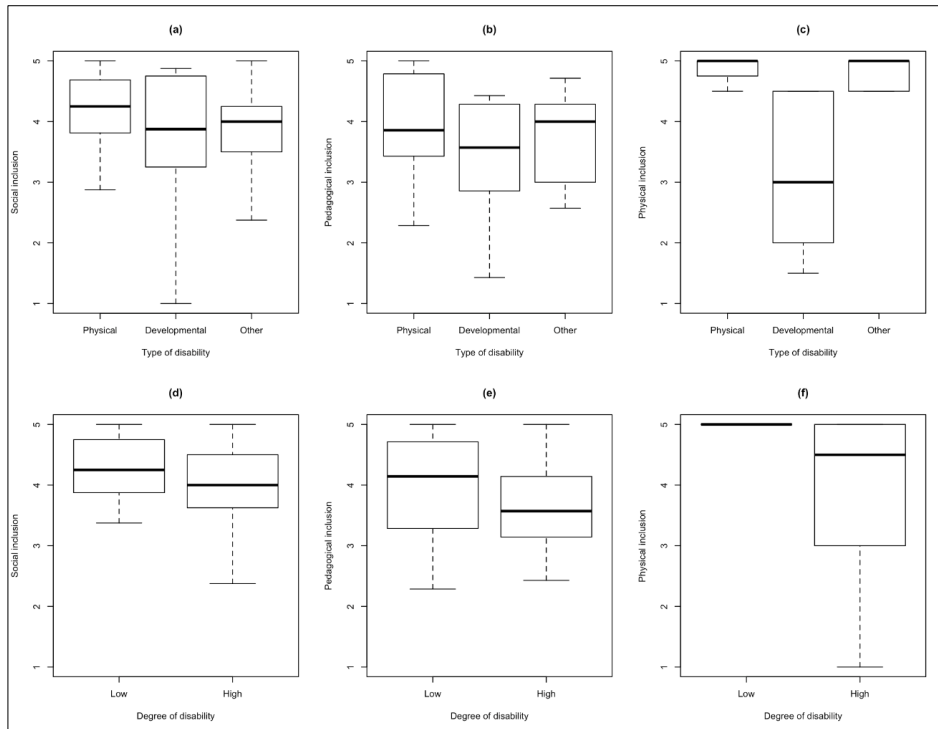
625

626 Table 3 Quantiles, range, mean and standard deviation of outcome variables, n=72

	0.10	0.25	0.50	0.75	0.90	Range	Mean	SD
Satisfaction with social inclusion	2.54	3.75	4.13	4.63	4.96	1.50:5	4.00	0.84
Satisfaction with pedagogical inclusion	2.61	3.29	3.86	4.43	4.96	1.20:5	3.80	0.83

627

628



630

631 Figure 1a-c: Boxplots of median and standard deviations of type of disability on the  
 632 inclusion outcomes.

633 Figure 1d-f: Boxplots of median and standard deviations of degree of disability on the  
 634 inclusion outcomes.

635

636



637 Table 4. Pearson correlation between the continuous variables

	1	2	3	4	5
1. Social inclusion					
2. Pedagogical inclusion	.814*				
3. Physical inclusion	.325*	.390*			
4. Attitudes	.424*	.278*	.108		
5. PE-related information	.538*	.643*	.129	-.015	
6. PE-related codetermination	.416*	.412*	.030	.199	.456*

Pearson correlation. P<0.05\*.

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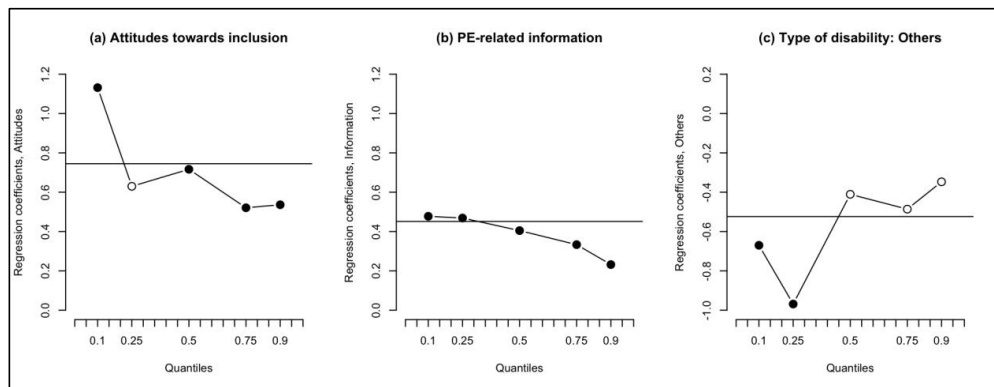
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643

644 Table 5 Final model of social inclusion. OLS and QR.

	OLS	Quantiles				
		0.10	0.25	0.5	0.75	0.90
Intercept	-1.34	-3.75*	-1.30	-0.93	-0.06	-0.47
Attitudes	0.75*	1.13*	0.63	0.72*	0.52*	0.54*
PE-related information sharing	0.46*	0.48*	0.47*	0.41*	0.33*	0.23*
Developmental disability <sup>#</sup>	-0.28	-0.98	-0.30	-0.25	0.10	-0.02
Other type of disability <sup>#</sup>	-0.46*	-0.67*	-0.97*	-0.41	-0.48	-0.34
Physical inclusion	0.14*	0.13	0.21	0.12	0.21	0.21

645 Bootstrapped coefficient estimates.  $P \leq 0.05^*$ . OLS:  $R^2=0.58$ . Adjusted  $R^2=0.55$ . <sup>#</sup>Physical disability as  
 646 reference.  
 647

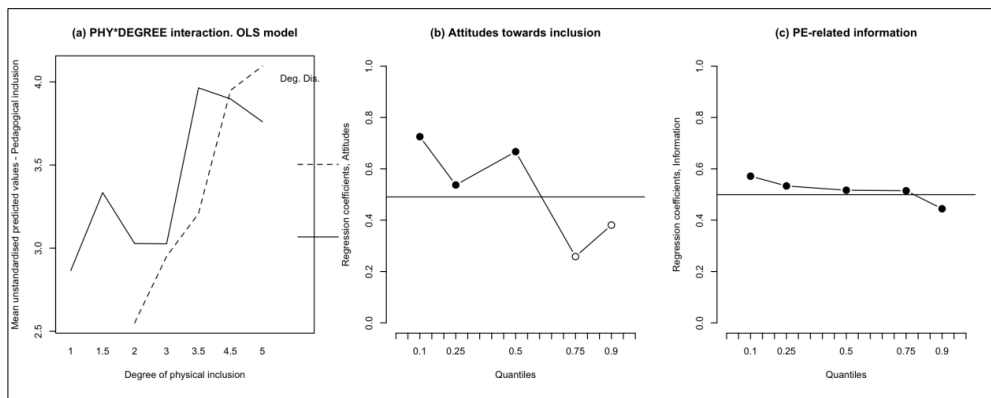


648  
 649 Figure 2a-c: Effects of (a) attitudes towards inclusion, (b) PE-related information, and (c) type of  
 650 disability (Others) on social inclusion. Quantile and OLS regression coefficients. QR:  
 651 Points and whole line—filled points=significant effects, open points=not significant.  
 652 OLS: whole line—black when significant, otherwise grey.  
 653  
 654  
 655

656 Table 6 Final model of pedagogical inclusion. OLS and QR.

	OLS	Quantiles				
		0.10	0.25	0.5	0.75	0.90
Intercept	-2.37*	-2.79	-2.73	-3.25	-0.88	-1.49
Attitudes	0.50*	0.73*	0.54*	0.67*	0.26	0.38
PE-related information	0.50*	0.57*	0.53*	0.52*	0.51*	0.44*
Degree of disability (low)	1.74*	0.49	1.38	1.22	1.49	2.71*
Physical inclusion	0.52*	0.18	0.48	0.56*	0.51*	0.61*
PHY*DEGREE	-0.40*	-0.09	-0.32	-0.32	-0.35	-0.55

657 Bootstrapped coefficient estimates.  $P \leq 0.05^*$ . OLS:  $R^2 = 0.62$ , Adjusted  $R^2 = 0.58$ . PHY=physical  
 658 inclusion. DEGREE=degree of disability.  
 659



660 Figure 3a: Effect of the interaction between physical inclusion and degree of disability in the OLS  
 661 model.  
 662

663 Dotted line = low degree of disability, whole line= high degree of disability.  
 664 Figure 3b-c: Effects of (b) attitudes towards inclusion, and (c) PE-related information on pedagogical  
 665 inclusion. Quantile and OLS regression coefficients. QR: Points and whole line—filled  
 666 points=significant effects, open points=not significant. OLS: whole line—black when  
 667 significant, otherwise grey.

668

Satisfaction with social inclusion	(1)	(2)	(3)	(4)	(5)	Mean	SD
Stem: In PE, ...							
(a)... I feel that my child's abilities are appreciated on PE	5	10	12	16	29	3.75	1.31
(b)... my child has good friends	2	6	6	18	40	4.22	1.09
(c)... my child feels like a part of the class	6	5	6	15	40	4.08	1.30
(d)... the children enjoy themselves	2	0	14	17	39	4.26	0.96
(e)... the teacher has worked hard at creating a climate that everybody experience as good	4	6	13	22	27	3.86	1.18
(f)... are all pupils equally valued	3	7	12	17	33	3.97	1.19
(g)... there is little bullying	6	9	11	21	25	3.69	1.30
(h) *... my child is bullied	9	1	5	11	46	4.17	1.37
Satisfaction with pedagogical inclusion							
Stem: In PE, ...							
(a)... the teacher are good at adapting the activities so that everyone can participate	9	3	13	18	29	3.76	1.36
(b)... my child get to use her abilities	0	9	11	23	29	4.00	1.03
(c)*... are there many activities in which my child cannot participate	13	10	13	15	21	3.29	1.48
(d)... she/he collaborates with the other pupils	8	1	11	13	39	4.03	1.33
(e)... the children learn a lot	1	2	21	29	19	3.88	0.89
(f)... I feel that my child get to use her abilities	2	8	18	20	24	3.78	1.12
(g)... the pupils collaborate a lot	6	2	12	28	24	3.86	1.17

Note: (1) Disagree, (2) Partly disagree, (3) Partly disagree/agree, (4) Partly agree, and (5) Agree. \*The responses on the item are reverse



## Appendix I





Terese Wilhelmsen  
Seksjon for coaching og psykologi Norges idrettshøgskole  
Postboks 4014 Ullevål Stadion  
0806 OSLO

Vår dato: 07.11.2013

Vår ref: 35576 / 3 / LT

Deres dato:

Deres ref:

## TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 20.09.2013. Meldingen gjelder prosjektet:

35576 *Inkluderende kroppsøvingsfag*  
*Behandlingsansvarlig Norges idrettshøgskole, ved institusjonens øverste leder*  
*Daglig ansvarlig Terese Wilhelmsen*

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, 31.03.2017, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Vigdis Namtvedt Kvalheim

Lis Tenold

Kontaktperson: Lis Tenold tlf: 55 58 33 77

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





Prosjektet omfatter en pilot (for testing av spørreskjema) og et hovedprosjekt. Deltakere i piloten skal ikke delta i hovedprosjektet.

Prosjektet er et delprosjekt til prosjekt "Nasjonalt overvåkingssystem fysisk aktivitet. Kartlegging av fysisk aktivitet og determinanter for fysisk aktivitet blant barn og unge i Norge - ungKAN2" (vår ref. 25870) som ble gjennomført i 2011.

Formålet med prosjektet er å få kunnskap om foreldre og elevers perspektiver på og opplevelse av inkludering av elever med sykdom eller nedsatt funksjonsevne i kroppsøvfingsfaget og om hva som er med på å fremme/hemme inkludering av elever med sykdom eller nedsatt funksjonsevne i kroppsøvfingsfaget.

Førstegangskontakten til utvalget opprettet av prosjektleder for prosjekt 25870, Elin Kolle.

Det gis skriftlig informasjon til elev og foresatte og det innhentes skriftlig samtykke fra begge for deltakelse. Personvernombudet finner informasjonsskrivene mottatt 31.10.2013 tilfredsstillende utformet i henhold til personopplysningslovens vilkår. Det innhentes også samtykke til at prosjektleder kan få tilgang til opplysninger innsamlet i prosjekt 25870.

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

Questback er databehandler for prosjektet. Personvernombudet forutsetter at det foreligger en databehandleravtale mellom Questback og Norges idrettshøgskole for den behandling av data som finner sted, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder på denne siden: <http://datatilsynet.no/verktøy-skjema/Skjema-maler/Databehandleravtale---mal/>

Datamaterialet anonymiseres ved prosjektslutt, 01.03.2017 ved at verken direkte eller indirekte personidentifiserbare opplysninger fremgår, verken hos Questback eller forsker. Adresser og logger slettes.

Foruten prosjektleder Terese Wilhelmsen vil også Elin Kolle, Norges idrettshøgskole, ha tilgang til innsamlede opplysninger.



Terese Wilhelmsen  
Seksjon for coaching og psykologi Norges idrettshøgskole  
Postboks 4014 Ullevål Stadion  
0806 OSLO

Vår dato: 16.07.2014

Vår ref: 39074 / 3 / SSA

Deres dato:

Deres ref:

## TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 20.06.2014. Meldingen gjelder prosjektet:

39074                      *Inkludering av ungdom med nedsatt funksjonsevne i kroppsøving*  
*Behandlingsansvarlig*    *Norges idrettshøgskole, ved institusjonens øverste leder*  
*Daglig ansvarlig*        *Terese Wilhelmsen*

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, 30.05.2017, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Vigdis Namtvedt Kvalheim

Sondre S. Arnesen

Kontaktperson: Sondre S. Arnesen tlf: 55 58 33 48

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, SVF, 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: 39074

Utvalget informeres skriftlig om prosjektet og samtykker til deltakelse.

Viser til telefonsamtale den 16.07.2014. Informasjonsskriv og samtykkeerklæring er noe mangelfullt utformet. Vi ber derfor om at følgende endres/tilføyes:

- at det legges til mer informasjon om hva foreldrenes/barnas samtykke til at skolen og kroppsøvlingslærers deltakelse innebærer for deres personvern
- at alt datamateriale vil anonymiseres innen prosjektslutt

Revidert informasjonsskriv skal sendes til [personvernombudet@nsd.uib.no](mailto:personvernombudet@nsd.uib.no) før utvalget kontaktes.

Det behandles sensitive personopplysninger om helseforhold.

Personvernombudet legger til grunn at forsker etterfølger Norges idrettshøgskole sine interne rutiner for datasikkerhet. Dersom personopplysninger skal sendes elektronisk eller lagres på mobile enheter, bør opplysningene krypteres tilstrekkelig.

SurveyXact er databehandler for prosjektet. Norges idrettshøgskole skal inngå skriftlig avtale med SurveyXact om databehandling.

SPSS om hvordan personopplysninger skal behandles, jf. personopplysningsloven § 15. For råd om hva databehandleravtalen bør inneholde, se Datatilsynets veileder: <http://www.datatilsynet.no/Sikkerhet-internkontroll/Databehandleravtale/>.

Forventet prosjektslutt er 30.05.2017. Ifølge prosjektmeldingen skal innsamlede opplysninger da anonymiseres. Anonymisering innebærer å bearbeide datamaterialet slik at ingen enkeltpersoner kan gjenkjennes. Det gjøres ved å:

- slette direkte personopplysninger (som navn/koblingsnøkkel)
- slette/omskrive indirekte personopplysninger (identifiserende sammenstilling av bakgrunnsopplysninger som f.eks. bosted/arbeidssted, alder og kjønn)

Vi gjør oppmerksom på at også databehandler (SurveyXact) må slette personopplysninger tilknyttet prosjektet i sine systemer. Dette inkluderer eventuelle logger og koblinger mellom IP-/epostadresser og besvarelser.



## MELDESKJEMA

Meldeskjema (versjon 1.4) for forsknings- og studentprosjekt som medfører meldeplikt eller konsejnsplikt (jf. personopplysningsloven og helseregistreloven med forskrifter).

1. Prosjektittel		
Titel	Inkludering av ungdom med nedsatt funksjonsevne i kroppsøving	
2. Behandlingsansvarlig institusjon		
Institusjon	Norges idrettshøgskole	Veig den institusjonen du er tilknyttet. Alle nivå må oppgis. Ved studentprosjekt er det studentens tilknytning som er avgjørende. Dersom institusjonen ikke finnes på listen, vennligst ta kontakt med personvernombudet.
Avdeling/Fakultet	Seksjon for coaching og psykologi	
Institutt		
3. Daglig ansvarlig (forsker, veileder, stipendiat)		
Fornavn	Terese	Før opp navnet på den som har det daglige ansvaret for prosjektet. Veileder er vanligvis daglig ansvarlig ved studentprosjekt.  Veileder og student må være tilknyttet samme institusjon. Dersom studenten har eksternt veileder, kan biveileder eller fagansvarlig ved studiestedet stå som daglig ansvarlig. Arbeidssted må være tilknyttet behandlingsansvarlig institusjon, f.eks. underavdeling, institutt etc.  NB! Det er viktig at du oppgir en e-postadresse som brukes aktivt. Vennligst gi oss beskjed dersom den endres.
Ettetnavn	Wilhelmsen	
Akademisk grad	Doktorgrad	
Stilling	Stipendiat	
Arbeidssted	Norges Idrettshøgskole	
Adresse (arb.sted)	Sognsveien 220	
Postnr/sted (arb.sted)	0806 Oslo	
Telefon/mobil (arb.sted)	46768938 /	
E-post	terese.wilhelmsen@nih.no	
4. Student (master, bachelor)		
Studentprosjekt	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
5. Formålet med prosjektet		
Formål	Formålet med på prosjektet er å utforske ulike faktorer som kan være med på å fremme eller hemme inkludering av elever med nedsatt funksjonsevne i kroppsøving ved utvalgte ungdomsskoler i Norge.	Redegjør kort for prosjektets formål, problemstilling, forskningsspørsmål e.l.  Maks 750 tegn.
6. Prosjektomfang		
Veig omfang	<ul style="list-style-type: none"> <li>• Enkel institusjon</li> <li>○ Nasjonalt samarbeidsprosjekt</li> <li>○ Internasjonalt samarbeidsprosjekt</li> </ul>	Med samarbeidsprosjekt menes prosjekt som gjennomføres av flere institusjoner samtidig, som har samme formål og hvor personopplysninger utveksles.
Oppgi øvrige institusjoner		
Oppgi hvordan samarbeidet foregår		
7. Utvalgsbeskrivelse		
Utvalget	Foreldre og ungdomsskoleelever med nedsatt funksjonsevne som er tilknyttet barnehabiliteringstjenesten i Norge.	Med utvalg menes dem som deltar i undersøkelsen eller dem det innhentes opplysninger om. F.eks. et representativt utvalg av befolkningen, skoleelever med lese- og skrivevansker, pasienter, innsatte.
Rekruttering og trekking	Rekruttering av ungdom og deres foreldre vil skje gjennom barnehabiliteringstjenestenesentrene i Norge (totalt 21 sentre).	Beskriv hvordan utvalget trekkes eller rekrutteres og oppgi hvem som foretar den. Et utvalg kan trekkes fra registre som f.eks. Folkeregisteret, SSB-registre, pasientregistre, eller det kan rekrutteres gjennom f.eks. en bedrift, skole, idrettsmiljø, eget nettverk.

Førstegangskontakt	Førstegangskontakt vil være initiert av ansatte barnehabiliteringsenterne. Ungdom og deres foreldre vil få utdelt informasjonsskriv om undersøkelsen med en link til spørreskjema. Vi vil ikke kunne få vite hvem som har blitt spurt om å delta før de har sagt seg villig til å delta i prosjektet.	Beskriv hvordan førstegangskontakten opprettes og oppgi hvem som foretar den.  Les mer om dette på våre temasider.
Alder på utvalget	<input type="checkbox"/> Barn (0-15 år) <input type="checkbox"/> Ungdom (16-17 år) <input type="checkbox"/> Voksne (over 18 år)	
Antall personer som inngår i utvalget	Antall personer som vil inngå i utvalget er vanskelig å estimere ettersom vi ikke har noen tall på antall ungdommer som er tilknyttet barnehabiliteringstjenesten i Norge, men ca 200 ungdommer og deres foreldre er forventet i utvalget.	
Inkluderes det myndige personer med redusert eller manglende samtykkekompetanse?	Ja <input type="radio"/> Nei <input type="radio"/>	Begrunn hvorfor det er nødvendig å inkludere myndige personer med redusert eller manglende samtykkekompetanse.
Hvis ja, begrunn		Les mer om Pasienter, brukere og personer med redusert eller manglende samtykkekompetanse
<b>8. Metode for innsamling av personopplysninger</b>		
Kryss av for hvilke datainnsamlingsmetoder og datakilder som vil benyttes	<input type="checkbox"/> Spørreskjema <input type="checkbox"/> Personlig intervju <input type="checkbox"/> Gruppeintervju <input type="checkbox"/> Observasjon <input type="checkbox"/> Psykologiske/pedagogiske tester <input type="checkbox"/> Medisinske undersøkelser/tester <input type="checkbox"/> Journaldata <input type="checkbox"/> Registerdata <input type="checkbox"/> Annen innsamlingsmetode	Personopplysninger kan innhentes direkte fra den registrerte f.eks. gjennom spørreskjema, intervju, tester, og/eller ulike journaler (f.eks. elevmapper, NAV, PPT, sykehus) og/eller registre (f.eks. Statistisk sentralbyrå, sentrale helseregistre).
Annen innsamlingsmetode, oppgi hvilken		
Kommentar		
<b>9. Datamaterialets innhold</b>		
Redegjør for hvilke opplysninger som samles inn	1. Liste over gruppe av variabler som er med i foreldrespørreskjema: 1.1 Bakgrunnsinformasjon Navn, alder, kjønn, fødeland, utdanning, beskrivelse av barnets funksjonshemming, barnets skoletilknytning, fysisk aktivitet målt i dager og timer. 1.2 Hovedfokus i spørreskjema Organisering av barnets undervisning (spesialundervisning etc.), perspektiver på barnets deltagelse i kroppsøving, opplevd inkludering i kroppsøving, holdninger til inkludering i kroppsøving, erfaringer med skole-hjem samarbeid. 2. Liste over variabler med i elevspørreskjema: 2.1 Bakgrunnsvariabler alder, kjønn, skoletrinn, fysisk aktivitet målt i dager og timer, fødeland. 2.2 Hovedfokus i spørreskjema Deltagelse i kroppsøving, opplevd hindring i kroppsøving, inkludering i kroppsøving, målorientering, motivasjon tilfredstillelse av grunnleggende psykologiske behov.	Spørreskjema, Intervju-temaguide, observasjonsbeskrivelse m.m. sendes inn sammen med meldeskjemaet.  NB! Vedleggene lastes opp til sist i meldeskjema, se punkt 16 Vedlegg.
Samles det inn direkte personidentifiserende opplysninger?	Ja <input type="radio"/> Nei <input type="radio"/>	Dersom det krysses av for ja her, se nærmere under punkt 11 Informasjonssikkerhet.
Hvis ja, hvilke?	<input type="checkbox"/> 11-sifret fødselsnummer <input type="checkbox"/> Navn, fødselsdato, adresse, e-postadresse og/eller telefonnummer	Les mer om hva personopplysninger er
Spesifiser hvilke	navn	NB! Selv om opplysningene er anonymiserte i oppgave/rapport, må det krysses av dersom direkte og/eller indirekte personidentifiserende opplysninger innhentes/registreres i forbindelse med prosjektet.

Samles det inn indirekte personidentifiserende opplysninger?	Ja ● Nei ○	En person vil være indirekte identifiserbar dersom det er mulig å identifisere vedkommende gjennom bakgrunnsopplysninger som for eksempel bostedskommune eller arbeidsplass/skole kombinert med opplysninger som alder, kjønn, yrke, diagnose, etc.  Kryss også av dersom IP-adresse registreres.
Hvis ja, hvilke?	nedsatt funksjonsevne/kronisk sykdom, skoletilhørighet, alder, etnisitet, kjønn	
Samles det inn sensitive personopplysninger?	Ja ● Nei ○	
Hvis ja, hvilke?	<input checked="" type="checkbox"/> Rasemessig eller etnisk bakgrunn, eller politisk, filosofisk eller religiøs oppfatning <input type="checkbox"/> At en person har vært mistenkt, siktet, tiltalt eller dømt for en straffbar handling <input checked="" type="checkbox"/> Helseforhold <input type="checkbox"/> Seksuelle forhold <input type="checkbox"/> Medlemskap i fagforeninger	
Samles det inn opplysninger om tredjeperson?	Ja ○ Nei ●	
Hvis ja, hvem er tredjeperson og hvilke opplysninger registreres?		Med opplysninger om tredjeperson menes opplysninger som kan spores tilbake til personer som ikke inngår i utvalget. Eksempler på tredjeperson er kollega, elev, klient, familielemm.
Hvordan informeres tredjeperson om behandlingen?	<input type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input type="checkbox"/> Informeres ikke	
Informeres ikke, begrunn		
<b>10. Informasjon og samtykke</b>		
Oppgi hvordan utvalget informeres	<input checked="" type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input type="checkbox"/> Informeres ikke	Vennligst send inn informasjonsskrivet eller mal for muntlig informasjon sammen med meldeeskjema.
Begrunn		NB! Vedlegg lastes opp til sist i meldeeskjemaet, se punkt 16 Vedlegg.  Dersom utvalget ikke skal informeres om behandlingen av personopplysninger må det begrunnes.  Last ned vår veiledende mal til informasjonsskriv
Oppgi hvordan samtykke fra utvalget innhentes	<input checked="" type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input type="checkbox"/> Innhentes ikke	Dersom det innhentes skriftlig samtykke anbefales det at samtykkeerklæringen utformes som en svarslipp eller på eget ark. Dersom det ikke skal innhentes samtykke, må det begrunnes.
Innhentes ikke, begrunn		
<b>11. Informasjonssikkerhet</b>		
Direkte personidentifiserende opplysninger erstattes med et referansenummer som viser til en atskilt navneliste (koblingsnøkkel)	Ja ● Nei ○	Har du krysset av for ja under punkt 9 Datamaterialets innhold må det merkes av for hvordan direkte personidentifiserende opplysninger registreres.
Hvordan oppbevares navnelisten/koblingsnøkkelen og hvem har tilgang til den?	Koblingsnøkkelen oppbevares på PC i nettverk tilhørende virksomheten. Den lagres på et annet område enn der det øvrige datamaterialet lagres. Området er passordbeskyttet og selve dokumentet med koblingsnøkkelen vil også være passordbeskyttet. PC lagres i låsbart rom. Underskrevne og veileder er de eneste med tilgang til området og til selve dokumentet.	NB! Som hovedregel bør ikke direkte personidentifiserende opplysninger registreres sammen med det øvrige datamaterialet.
Direkte personidentifiserende opplysninger oppbevares sammen med det øvrige materialet	Ja ○ Nei ●	

Hvorfør oppbevares direkte personidentifiserende opplysninger sammen med det øvrige datamaterialet?		
Oppbevares direkte personidentifiserbare opplysninger på andre måter?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Spesifiser		
Hvordan registreres og oppbevares datamaterialet?	<input type="checkbox"/> Fysisk isolert datamaskin tilhørende virksomheten <input checked="" type="checkbox"/> Datamaskin i nettverkssystem tilhørende virksomheten <input type="checkbox"/> Datamaskin i nettverkssystem tilknyttet Internett tilhørende virksomheten <input type="checkbox"/> Fysisk isolert privat datamaskin <input type="checkbox"/> Privat datamaskin tilknyttet Internett <input type="checkbox"/> Videoopptak/fotografi <input type="checkbox"/> Lydopptak <input type="checkbox"/> Notater/papir <input type="checkbox"/> Annen registreringsmetode	Merk av for hvilke hjelpemidler som benyttes for registrering og analyse av opplysninger.  Sett flere kryss dersom opplysningene registreres på flere måter.
Annen registreringsmetode beskriv		
Behandles lyd-/videoopptak og/eller fotografi ved hjelp av datamaskinbasert utstyr?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Kryss av for ja dersom opptak eller foto behandles som lyd-/bildeff.  Les mer om behandling av lyd og bilde.
Hvordan er datamaterialet beskyttet mot at uvedkommende får innsyn?	Koblingsnøkkel og øvrig datamaterialet vil lagres på separat område. Koblingsnøkkel vil bli passordbeskyttet. Veileder og underskrevne vil være de eneste med tilgang.	Er f.eks. datamaskintilgangen beskyttet med brukernavn og passord, står datamaskinen i et låsbart rom, og hvordan sikres bærbare enheter, utskrift og opptak?
Dersom det benyttes mobile lagringsenheter (bærbare datamaskin, minnepenn, minnekort, cd, ekstern harddisk, mobiltelefon), oppgi hvilke	Passordbeskyttet bærbar data. Gjennom denne maskinen vil underskrevne ha tilgang til øvrige datamaterialet. Det vil ikke være tilgang til koblingsnøkkelen på maskinen utenfor institusjonens nettverk.	NB! Mobile lagringsenheter bør ha mulighet for kryptering.
Vil medarbeidere ha tilgang til datamaterialet på lik linje med daglig ansvarlig/student?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	
Hvis ja, hvem?	Prosjektansvarlig og veileder - Professor Marit Sørensen	
Overføres personopplysninger ved hjelp av e-post/Internett?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	F.eks. ved bruk av elektronisk spørreskjema, overføring av data til samarbeidspartner/databehandler mm.
Hvis ja, hvilke?	SurveyXact. Norges Idrettshøgskole har inngått kontrakt med SurveyXact om databehandling.	
Vil personopplysninger bli utlevert til andre enn prosjektgruppen?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Hvis ja, til hvem?		
Samles opplysningene inn/behandles av en databehandler?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	Dersom det benyttes eksterne til helt eller delvis å behandle personopplysninger, f.eks. Questback, Synovate MMI, Norfakta eller transkriberingsassistent eller tolk, er dette å betrakte som en databehandler. Slike oppdrag må kontraksreguleres
Hvis ja, hvilken?	SurveyXact. Norges Idrettshøgskole har inngått kontrakt med SurveyXact om databehandling. SPSS	Les mer om databehandleravtaler her
<b>12. Vurdering/godkjenning fra andre instanser</b>		
Søkes det om dispensasjon fra taushetsplikten for å få tilgang til data?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	For å få tilgang til taushetsbelagte opplysninger fra f.eks. NAV, PPT, sykehus, må det søkes om

Kommentar		dispensasjon fra taushetsplikten. Dispensasjon søkes vanligvis fra aktuelt departement. Dispensasjon fra taushetsplikten for helseopplysninger skal for alle typer forskning søkes  Regional komité for medisinsk og helsefaglig
Søkes det godkjenning fra andre Instanser?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	F.eks. søke registereler om tilgang til data, en ledelse om tilgang til forskning i virksomhet, skole, etc.
Hvis ja, hvilke?	Barnhabiliteringstjenesten	
<b>13. Prosjektperiode</b>		
Prosjektperiode	Prosjektstart: 15.06.2014 Prosjektstutt: 30.05.2017	Prosjektstart Vennligst oppgi tidspunktet for når førstegangskontakten med utvalget opprettes og/eller datainnsamlingen starter.  Prosjektstutt Vennligst oppgi tidspunktet for når datamaterialet enten skal anonymiseres/slettes, eller arkiveres i påvente av oppfølgingsstudier eller annet. Prosjektet anses vanligvis som avsluttet når de oppgitte analyser er ferdigstilt og resultatene publisert, eller oppgave/avhandling er innlevert og sensurert.
Hva skal skje med datamaterialet ved prosjektstutt?	<input checked="" type="checkbox"/> Datamaterialet anonymiseres <input type="checkbox"/> Datamaterialet oppbevares med personidentifikasjon	Med anonymisering menes at datamaterialet bearbejdes slik at det ikke lenger er mulig å føre opplysningene tilbake til enkeltpersoner. NB! Merk at dette omfatter både oppgave/publikasjon og rådata.  Les mer om anonymisering
Hvordan skal datamaterialet anonymiseres?	All personidentifiserdata vil slettes. Og bare det anonymiserte dataene vil være tilgjengelig.	Hovedregelen for videre oppbevaring av data med personidentifikasjon er samtykke fra den registrerte.
Hvortfor skal datamaterialet oppbevares med personidentifikasjon?		Årsaker til oppbevaring kan være planlagte oppfølgingsstudier, undervisningsformål eller annet.
Hvor skal datamaterialet oppbevares, og hvor lenge?		Datamaterialet kan oppbevares ved egen institusjon, offentlig aktiv eller annet.  Les om arkivering hos NSD
<b>14. Finansiering</b>		
Hvordan finansieres prosjektet?	Prosjektet er finansiert av Norges Idrettshøgskole	
<b>15. Tilleggsopplysninger</b>		
Tilleggsopplysninger		
<b>16. Vedlegg</b>		
Antall vedlegg	5	





## Prosjektnr: 39074. Inkludering av ungdom med nedsatt funksjonsevne i kroppsøving

Linn-Merethe Rød <linn.rod@nsd.uib.no>

Mon 1/19/2015 3:08 PM

to: Terese Wilhelmsen <terese.wilhelmsen@nih.no>;

### BEKREFTELSE PÅ ENDRING

Viser til innsendt endringsskjema for prosjektet.

Personvernombudet har nå registrert at det skal gjennomføres spørreskjemaundersøkelse og fokusgruppeintervju med kroppsøvingslærere, samt individuelle intervju med foreldre og ungdom med nedsatt funksjonsevne. Informasjonsskrivene er godt utformet. Videre er det avklart at lærerne ikke skal uttale seg om identifiserbare elever, jf. e-post av 12.01.15.

Ta gjerne kontakt dersom noe er uklart.

--

Vennlig hilsen

Linn-Merethe Rød  
Seniorrådgiver

Norsk samfunnsvitenskapelig datatjeneste AS  
Personvernombud for forskning  
Harald Hårfagres gate 29, 5007 BERGEN

Tlf. direkte: (+47) 55 58 89 11  
Tlf. sentral: (+47) 55 58 81 80  
Faks: (+47) 55 58 96 50  
E-post: [Linn.Rod@nsd.uib.no](mailto:Linn.Rod@nsd.uib.no)  
[www.nsd.uib.no/personvern](http://www.nsd.uib.no/personvern)



## **Appendix II**



### Informasjonsbrev til elever

## Vil du være med på et forskningsprosjekt om inkludering i kroppsøvningsfaget?



Vi vil gjerne invitere deg til å delta i et intervju for å høre om dine erfaringer med kroppsøvningsfaget. Dine synspunkter er viktig!

### Hensikten med prosjektet

- ✓ Hensikten med denne delen av prosjektet er å lære mer om elevers erfaring om kroppsøvningsfaget.

### Hva innebærer deltakelse i undersøkelsen for deg?

Ved å delta i prosjektet vil du delta i et intervju som vil vare cirka en time. Hovedfokuset for intervjuet vil være erfaringer med kroppsøvningsfaget. Temaene vi vil snakke om er:

- din opplevelse av å delta i kroppsøving
- din opplevelse av læreren og læringsmiljøet i klassen
- din mulighet til å være med på påvirke hva som skjer i timene
- din erfaring med å delta i ulike aktiviteter
- vennskap og tilhørighet i klassen

### Vil noen få vite dine svar?

All deltagelse og informasjon vil bli anonymisert. Dette vil si at ingen på din skole, hjemme eller andre personer, uten om jeg og min veileder, vil kunne vite hva du har svart.

### Frivillig deltagelse

All deltagelse er frivillig og du kan trekke deg fra prosjektet uten å måtte begrunne dette valget.

Skriv under på samtykkeskjemaet som er vedlagt hvis du har lyst til å delta og ta med dette ved intervjuet. Hvis du har noen spørsmål er det bare å ta kontakt med Terese.

Med vennlig hilsen

.....

Terese Wilhelmsen

Terese Wilhelmsen  
Stipendiat v/Norges idrettshøgskole  
Tlf: 46768938  
E-post: [terese.wilhelmsen@nih.no](mailto:terese.wilhelmsen@nih.no)  
Forskningsassistent: Camilla Lyngen

Veileder: Marit Sørensen  
Professor v/Norges idrettshøgskole  
E-post: [marit.sorensen@nih.no](mailto:marit.sorensen@nih.no)



## **Appendix III**





Terese Wilhelmsen  
Stipendiat v/Norges Idrettshøgskole  
Tlf: 23262380 / 46768938  
E-post: terese.wilhelmsen@nih.no

Dato:

Kjære foresatte

### **Forespørsel om deltagelse i forskningsprosjektet: Inkludering i kroppsøvfaget**

Vi tar kontakt med dere i forbindelse med et forskningsprosjekt ved Norges Idrettshøgskole med sikte på å kartlegge hva som er med på hemme og/eller fremme inkludering av elever med nedsatt funksjonsevne i kroppsøvfaget. Forskning og rapporter fokusert på kroppsøvfaget har vist at elever med nedsatt funksjonsevne i økende grad møter segregerte undervisningsformer jo eldre de blir. Videre viser det seg at det er stor variasjon i inkludering som elever møter ute i skolen. Deltagere i prosjektet vil være barn med nedsatt funksjonsevne, deres foreldre, kroppsøvlærere og skoleledere ved utvalgte skoler.

#### **Hvem er invitert**

Denne invitasjonen er sendt ut til elever tilknyttet barnehabiliteringstjenestene i Norge.

#### **Hva innebærer deltagelse for deg og ditt barn?**

Både du og ditt barn vil besvare et spørreskjema vedrørende egne erfaringer med inkludering i kroppsøving. Ved deres tillatelse vil skoleledere/lærere ved barnas skoler inviteres til å delta i prosjektet ved en senere anledning, der skoleledere og kroppsøvlærere vil bli invitert til å besvare et spørreskjema om deres erfaringer med organisering av hjem-skole samarbeid og inkludering i kroppsøving. Deltagere fra skolen vil ikke få tilgang til informasjonen dere har gitt. Noen barn, foreldre og skoler vil kontaktes for oppfølgingsstudier. Disse deltagerne vil motta ny informasjon og deltagelsesforespørsel.

#### **Personvern**

All informasjon som gis vil bli anonymisert og lagret i tråd med konfidensialitetskravene til Personvernombudet for forskning. Informasjonen i spørreskjemaene er kun tilgjengelig for de som gjennomfører denne undersøkelsen og opplysninger vil ikke kunne spores tilbake til deg eller ditt barn. Kontaktinformasjon vil bli lagret forsvarlig innelåst under arbeidet med prosjektet og vil slettes ved ferdigstilling. Som deltager i prosjektet har dere mulighet til å besvare spørreskjemaet online via netjtjenesten SurveyXact. NIH har utarbeidet en avtale med SurveyXact for å forsikre oss om at deltageres personvern opprettholdes.

#### **Frivillig deltagelse**

Elever og foreldres erfaringer med inkludering innen kroppsøvfaget er viktig! Det er derfor svært viktig at så mange som mulig besvarer spørreskjemaet. Undersøkelsen tar ti minutter å besvare, men gir verdifull informasjon for prosjektet. Det er frivillig deltagelse. Du og ditt barn kan trekke dere fra undersøkelsen uten videre konsekvenser eller begrunnelse. Informasjonen dere har gitt vil da bli slettet. Alle deltagere vil etter ønske få tilgang til rapporter/artikler fra prosjektet etter ferdigstilling som er forventet 30. mai, 2017. All datamateriale vil anonymiseres innen prosjektslutt.

**Spørreskjema**

For å besvare spørreundersøkelsen, vennligst benytt linkene oppgitt under. Første link er til elevspørreskjema som ditt barn skal besvare. Det er flott hvis du kan bistå ditt barn med pålogging og eventuelt utfyllelse av spørreskjema og/eller forståelse av enkelte spørsmål hvis dette skulle trenge. Det er viktig at det er barnet selv som reflekterer over egne erfaringer og besvarer.

Den andre linken er til foreldrespørreskjema hvor vi ønsker å få kunnskap om foreldres perspektiver og erfaringer. Skriv inn oppgitt webadressen manuelt for å besvare spørreskjema.

**Link til elevspørreskjema:**

**Link til foreldrespørreskjema:**

**Tilpasning av spørreskjema**

Hvis spørreskjemaene trenger å gjennomgå eventuelle endringer for at du og ditt barn kan delta, vennligst ta kontakt slik at vi kan tilrettelegge spørreskjemaene. Dersom ditt barn ikke har forutsetninger eller ikke ønsker å delta, ber vi om at dere gir oss en kort tilbakemelding ved å følge denne linken: ...

Vi setter stor pris på deres deltagelse. Ta gjerne kontakt hvis du har noen spørsmål eller ønsker mer informasjon.

På forhånd tusen takk for hjelpen!

Med vennlig hilsen

.....  
Terese Wilhelmsen

Prosjektleder:  
Terese Wilhelmsen  
Stipendiat v/Norges idrettshøgskole  
Tlf: 23262380/46768938  
e-post: [terese.wilhelmsen@nih.no](mailto:terese.wilhelmsen@nih.no)

Prosjektansvarlig og veileder  
Marit Sørensen  
Professor v/Norges idrettshøgskole  
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E-post: [marit.sorensen@nih.no](mailto:marit.sorensen@nih.no)

Dato:

Kjære foresatte

### **Forespørsel om deltagelse i forskningsprosjektet om inkludering i kroppsøvningsfaget**

Dette prosjektet er en del av et større forskningsprosjekt: 'Et inkluderende kroppsøvningsfag' som gjennomføres ved Norges idrettshøgskole. Målet med prosjektet er å utvikle kunnskap om hvordan inkludering av barn og unge med nedsatt funksjonsevne i kroppsøving erfarer av foreldre, elever, lærere og skoleledere ved utvalgte norske skoler. Vi vet lite inkludering i kroppsøving i den norske skolen og det er derfor viktig å høre elever og deres foreldres egne erfaringer med kroppsøvningsfaget.

#### **Hensikten med delprosjektet**

Hensikten med denne delen av prosjektet er å undersøke foreldre og elevers erfaringer med kroppsøving ved:

- at foreldre og barn som har mulighet og lyst besvarer hvert sitt spørreskjema om inkludering i kroppsøving og
- ved å intervju noen foreldre og ungdom om deres opplevelse av kroppsøvningsfaget

#### **Hva innebærer deltakelse for deg og ditt barn?**

Du og ditt barn svare på hvert deres spørreskjema. Hvis ikke barnet har lyst eller mulighet til å besvare spørreskjema ønsker vi gjerne at foreldre fortsatt besvarer foresatte-spørreskjema. Hvis dere har mulighet og lyst vil du og ditt barn delta i hvert deres intervju som vil vare i cirka 30 minutter. Hovedfokuset for foreldreintervjuet vil være: hjem-skole samarbeid og erfaringer med inkludering i kroppsøvningsfaget.

Hovedfokuset for intervjuet med deres barn vil være elevens egne erfaringer med kroppsøvningsfaget. Temaer som vil bli tatt om er: elevens opplevelse av å delta i kroppsøving og læringsmiljøet i timene; opplevd elevmedvirkning i forhold til planlegging og organisering av timene; mulighet for deltagelse i de ulike aktiviteter og erfaring med tilrettelegging; sosialt samvær med andre elever i timene; opplevd deltagelse av turer med klassen etc.

#### **Personvern**

All informasjon som gis vil bli anonymisert og lagret i tråd med konfidensialitetskravene til Personvernombudet for forskning. Personidentifiserbar informasjon som samles inn er kun tilgjengelig for de som gjennomfører denne undersøkelsen og opplysninger vil ikke kunne spores tilbake til deg eller ditt barn. All informasjon som lagres vil anonymiseres og vil ikke kunne spores tilbake til deg eller ditt barn. Alle deltagere vil etter ønske få tilgang til rapporter/artikler fra prosjektet etter ferdigstilling som er forventet 30. mai, 2017.

#### **Frivillig deltagelse**

Det er frivillig deltagelse. Du og ditt barn kan når som helst trekke seg uten at det vil få videre konsekvenser.

#### **Informert samtykke**

Med dette inviterer vi dere til deltagelse i prosjektet og ber dere herved om tillatelse til å intervju deres barn om inkludering i kroppsøving. Vennligst fyll ut vedlagt samtykkeskriv. Samtykkeskjema leveres til Terese eller tas med til intervjuet.

Deres deltagelse vil være til stor hjelp. Har du spørsmål eller kommentar, ta gjerne kontakt!

Med vennlig hilsen

.....

Terese Wilhelmsen

---

## Samtykkeskjema

### Foresatte:

- Ja, jeg bekrefter herved å ha mottatt informasjon om prosjektet. Jeg/vi ønsker å delta i et foreldreintervju
- Jeg/vi lar min/vår datter/sønn delta i delprosjektet.

### Elev:

- Ja, jeg bekrefter herved å ha mottatt informasjon om prosjektet og mine rettigheter.
- Jeg ønsker å delta i prosjektet.

Vi er informert om at deltagelsen er frivillig og deltagerne kan avstå fra å svare på enkelte spørsmål, eller trekke seg fra deltagelse uten å oppgi grunn. Vi er også bekjent med at foresatte har rett til å trekke opplysninger om seg selv og sitt barn fra prosjektet.

.....  
Sted og dato

.....  
Foresattes underskrift

.....  
Elevens underskrift

**Ferdigutfyllt samtykkeskjema tas med til intervjuet.**

## **Appendix IV**



## **ELEVINTERVJU-GUIDE**

### **Litt generelt om barna**

#### **1) Jeg vil gjerne at vi starter intervjuet med at du forteller meg litt om deg selv?**

- a. Hvor gammel du er, skole og klasse du går i og hva du gjør ellers på fritiden?

### **Gymtimene**

#### **2) Hva syntes du om gymtimene?**

- a. Kan du fortelle meg litt om hvordan har du det i gymtimen?
- b. Hva er det du liker med gymmen?
  - i. Hva er din favoritt aktivitet i gymtimene?
  - ii. Hvorfor liker du akkurat denne aktiviteten?
- c. Er det noe du ikke liker med gymfaget?
  - i. Hvilken aktivitet liker du minst i gymtimene?
  - ii. Hvorfor liker du denne aktiviteten minst?

#### **3) Kan du fortelle meg litt om hva dere gjør i gymtimene på skolen?**

- a. Hvordan gjør lærerne det i timene, har dere ofte aktiviteter sammen med alle sammen eller deles dere inn i mindre grupper?
- b. Hvordan opplever du det når det er konkurranser i gymmen? (Som for eksempel stafett eller fotballkonkurranse der to lag spiller mot hverandre)

#### **4) Har du gym sammen med de andre klassen?**

- a. Er det noen ganger du ikke har gym sammen med klassen?
- b. Hva gjør du da?
- c. Noen ganger ikke gym sammen med klassen: Hvorfor har du ikke gym sammen med de andre i klassen?
- d. Hvem er du sammen med når du ikke har gym sammen med klassen?
- e. Hva trives du best med? Når du har gym sammen med resten av klassen eller med... / alene / mindre grupper?
- f. **Hvis du kunne bestemt akkurat hvordan gymtimene skulle organiseres, hvordan skulle de da vært?**

#### **5) Hvem er du mest sammen med på skolen?**

- a. Kan du fortelle meg litt om hvordan dere har det og hva dere gjør sammen?
- b. Går dere i samme klasse?
- c. Hvem er du mest sammen med i friminuttene?



- i. Hva gjør dere sammen i friminuttene?

**6) Hva med gymtimene: hvordan har du det sammen med de andre klassen der?**

- a. Hvem er det du er mest sammen med i gymtimene?
- b. Kan du beskrive din drømme lærer i gymtimene? Hvordan skulle han eller henne vært?**
- c. Hva opplever du gymlæreren din?
  - i. Hvem er gymlæreren din? Hvordan trives du sammen med gymlærerne din?
- d. Hva tror du er viktig for at alle skal ha det bra sammen i gymmen?

**7) I gymmen, gjør læreren din mye for å finne aktiviteter som alle elevene delta i?**

- a. (Er læreren flink til å tilrettelegge aktivitetene slik at alle elevene i klassen kan være med?)**
- b. Deltar du i alle aktivitetene i gymtimene?
  - i. Eventuelt: Hvilke aktiviteter deltar du ikke i?
  - ii. Kan du fortelle meg litt om hvorfor du ikke deltar i de aktivitetene?
- c. Føler du at du kan spørre læreren om hjelp hvis du føler du trenger det?
- d. Hvor mange voksne er det til stede i gymtimene?
  - i. Hvem er de voksne?
  - ii. Har du en assistent i skolen eller er den assistent i klassen?
- e. Hvordan legges det til rette i gymtimene for at du kan være med i alle aktivitetene?
- f. Kan du fortelle meg om en dag du ikke trivdes i gymtimen?
- g. Kan du fortelle om ett godt minne fra gymtimen?
- h. Kan du fortelle meg om et dårlig minne fra gymtimen?

**8) Innsats/prestasjon - Ungdomskolen: Hvordan settes lærerne karakterene i gymmen?**

- a. Hva er viktig for å få en god karakter i gymmen? / Hva vil det si å være god i gymmen?
- b. Hvordan opplever du tilbakemelding læreren i gymmen?
- c. Hvilke tilbakemeldinger får dere i timen?
- d. Er det noe du syntes er vanskelig å få til?
- e. Hvorfor syntes du akkurat dette er vanskelig?
- f. Kan du tenke deg noen måte du kunne unngått dette på?

**9) Hvem er det som bestemmer i gymtimene?**

- a. Får elevene noen ganger være med å bestemme i gymtimene?**
- b. Kan du fortelle om en situasjon der elever for være med å bestemme?

- c. Spør læreren noen ganger deg hva du vil i gymtimene?
  - i. Hvis dere skal på tur eller gjøre en spesiell aktivitet lytter læreren til hva du har lyst til?
- d. Hvis det var mulig, vil du ha større mulighet til å være med å bestemme i gymtimene eller at læreren skal spørre deg mer om hva du liker i gymtimene?

**10) Hva tror du er viktig for at alle elever skal liker seg (føler seg inkludert) i gymtimene?**

- a. Hva tror du kan være grunnen til at noen barn ikke trives i gymtimene?
- b. Hvis du kunne endret hva som helst med gymtimene, er det noe du ville endret?
  - i. Kan du fortelle meg litt om hvorfor du ville endret dette?
  - ii. Har du noen forslag på hvordan det kunne endres?

**11) Andre interesser**

- a. Har du en spesiell idrett du liker? Deltar du selv i en idrett? Hvilken? Hvorfor deltar du i akkurat denne idretten?

**12) Er det noe vi ikke har snakket i intervjuet som du syntes er viktig i gymmen?**



## **FORESATTEINTERVJU – GUIDE**

### **Generelt**

#### **1) Kanskje du kan fortelle meg litt om deg selv og ditt barn?**

- a. Arbeid, skole, barnets situasjon etc...

### **Opplevelse av inkludering i kroppsøvingfaget**

#### **2) Hvordan er din opplevelse av inkludering i gymtimene ved ditt barns skole?**

- a. Legges det til rette for at ditt barn kan delta i aktivitetene i sammen med andre elevene i klassen?
- b. I hvilken grad legges det til rette for at barna kan oppleve mestring basert deres egne utgangspunkt?
- c. Hva syntes om ditt barns læringsutbytte i gymtimene?
- d. Inkludering og tilpasset opplæring (deltagelse)
  - i. Foreldrenes erfaringer og meninger om inkludering/deltagelse/ekskludering/tilpasset opplæring vedrørende eget barn
  - ii. Påvirkningsfaktorer (hva fremmer/hemmer inkludering)?
- e. Behov for tilrettelegging
  - i. Pedagogisk, fysisk og praktisk
  - ii. Hjelp assistanse – konsekvenser
  - iii. Inkludering i skolen som en helhet
- f. Er du fornøyd med organiseringen som tilbys ved ditt barns skole?
- g. Hva ville du eventuelt at skulle endres?

#### **3) Hvordan fungerer det sosialt i skolen for ditt barn?**

- a. Hvilke aktiviteter driver han/hun med på fritiden?
- b. Sammen med medelever på fritiden?
- c. Hvordan fungerer det sosialt i gymtimene?

### **Hjem – skole samarbeid**

#### **4) Hvordan opplever du hjem-skolesamarbeidet tilknyttet til ditt barns deltagelse i gymtimene?**

- a. Hvilke informasjon får dere om hva som gjennomføres i gymtimene eventuelt hvordan det tilrettelegges i timene?
- b. Hvordan syntes du dialogen mellom deg som foreldre og lærerne fungerer?
  - i. Benytter de seg av dine erfaringer?
  - ii. Spør de deg om hjelp ved eventuelt tur etc?
- c. Hvordan syntes du generelt det tilrettelegges på skolen generelt?
  - i. Er dette et uttalt mål ved skolen?

- ii. Hvordan syntes du samarbeidet med kontaktlærer og administrasjon om inspektør/rektor fungerer ved skolen?
- d. Kunnskap, kompetanse, bidragsyttere, konsekvenser, nytteverdi

**Avslutningsvis**

- 5) Hva tror du er viktig for å få til god inkludering i gymtimene?**
- 6) Er det noe vi ikke har snakket i intervjuet som du syntes er viktig i forhold til gymtimene?**

## **Appendix V**



## ELEVUNDERSØKELSE – INKLUDERING I GYM (KROPPSØVING)

I denne undersøkelsen ønsker vi å lære av dine erfaringer med gymfaget. Det er frivillig å delta og du kan når som helst trekke deg fra undersøkelsen.



Det er spørsmål på begge sider av arket. Dersom du lurer på hva du skal gjøre så kan du kanskje spørre mor, far eller en annen voksen.

Tenk gjennom hvert spørsmål og vurderer utsagnene i forhold til dine EGNE erfaringer. Det finnes ingen rette eller gale svar!

Slik gjør du:

Hvis ikke annet er spesifisert, kryss av en rute for hvert utsagn eller spørsmål.

*Et eksempel:*

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
Jeg liker å svømme	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Hvis du har krysset av i feil rute, farg hele ruten sort  og kryss av i riktig rute.

**Her starter du:**

### A. Navn

1. Skriv inn ditt navn

### B. Informert samtykke

- |  | Ja                       | Nei                      |
|--|--------------------------|--------------------------|
| 2. Jeg bekrefter med dette at jeg har fått informasjon om undersøkelsen og at all besvarelse er anonym, at all deltagelse er frivillig og at jeg kan trekke meg når jeg vil. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Jeg bekrefter med dette at jeg besvarer dette spørreskjemaet frivillig  | <input type="checkbox"/> | <input type="checkbox"/> |

*For å lære mer om hvordan gymfaget organiseres vil vi i gjerne kontakte din skole. Ingen ved din skole ville fått vite hva du har svart i her.*

- |  | Ja                       | Nei                      |
|--|--------------------------|--------------------------|
| 4. Jeg bekrefter med dette at dere kan kontakte min skole for å lære mer om gymfaget | <input type="checkbox"/> | <input type="checkbox"/> |



### C. Deltagelse i gymtimene

5.

**Hvor ofte deltar du i gym?** Sett ett kryss.

- Jeg deltar i alle timene
- Jeg deltar i de fleste timene
- Jeg deltar i noen av timene
- Jeg deltar sjeldent
- Jeg deltar aldri



6.

**Dersom du deltar *noen, sjeldent eller aldri* i gymtimene, sett kryss ved de punktene som beskriver hvorfor du sjeldent deltar.**

- Jeg har eget undervisningsopplegg i gymtimene utenom klassen
- Jeg liker ikke å ha gym
- Aktivitetene er organisert slik at jeg ikke kan være med
- Glemt gymtøy
- Andre grunner, skriv hva:

### D. Trivsel i gym

7.

- |  | Helt Enig                | Litt Enig                | Litt Enig/<br>Litt Uenig | Litt Uenig               | Helt Uenig               |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Jeg trives ikke i gymtimene  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Jeg trives sammen med elevene i gruppa/klassen min   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Jeg trives sammen med min gymlærer   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Jeg trives best i gymtimene når jeg holder på med andre aktiviteter enn de andre i klassen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



8. *For hvert av utsagnene nedenfor, velg hvor mange ganger disse tingene har hendt deg de siste 30 dagene*

	Aldri	1-2 ganger	3-4 ganger	5-6 ganger	7 eller flere
Andre ertet meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre lo av meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre elever kalte meg stygge navn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg ble slått og dyttet av andre elever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre har sendt meg stygge meldinger på mobil eller facebook (eller andre steder)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre elever har hakket på meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### E. Deltagelse og organisering

9. **Din deltagelse i gymtimene**

	Alltid	Ofte	Noen ganger	Sjeldent	Aldri
Hvor ofte deltar du i gymtimene sammen med resten av klassen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hvor ofte får du ekstra oppfølging av en assistent eller spesial pedagog i gymtimene sammen med resten av klassen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hvor ofte har du undervisning utenom resten av klassen, som for eksempel spesial undervisning/ fysioterapi eller lignende, i gymtimene?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. **a) Hvor ofte er aktivitetene i gymtimene organisert...**

	Alltid	Ofte	Noen ganger	Sjeldent	Aldri	<b>b) Hvilke aktivitetsformer liker du best?</b>	Jeg liker best
... som fellesaktivitet for alle elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	..fellesaktiviteter	<input type="checkbox"/>
... i mindre grupper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	...mindre grupper	<input type="checkbox"/>
... slik at vi gjør mange av aktivitetene en og en	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	...en og en	<input type="checkbox"/>
... som konkurranser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	...konkurranser	<input type="checkbox"/>
... slik at vi kan velge mellom ulike aktiviteter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	...velge mellom ulike aktiviteter	<input type="checkbox"/>

11. **Les hvert utsagn og svar det som passer best for deg!  
I gymtimene...**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
... legges det til rette for at jeg kan delta i aktiviteter sammen med de andre i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... føler jeg at jeg har ferdigheter (kunnskaper) som blir satt pris på av andre i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... er læreren flink til å tilpasse aktivitetene slik at alle kan være med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... har jeg gode venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... gjør jeg ofte andre aktiviteter enn de andre i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... får jeg benyttet meg av mine ferdigheter (kunnskaper)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... er det mange aktiviteter som jeg ikke kan delta i	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... samarbeider jeg med de andre elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... har jeg tilgang til de hjelpemidlene jeg trenger for å delta sammen med de andre elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... føler jeg meg som en del klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



12. **Gymlæreren min synes jeg er mest vellykket...**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
... når jeg lærer meg nye ferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg er flinkere enn andre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg trener på det jeg ikke er flink til	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg vinner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg prøver ut nye ferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg får bedre resultater enn andre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13.

**Inkludering i gymtimene**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
Jeg lærer noe i hver gymtime	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vi samarbeider mye i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elever er med på å lage regler for hvordan man skal oppføre seg i gymmen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vi får være med på å bestemme hva vi skal lære i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg liker meg i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alle liker seg godt i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lærerne er like greie mot alle i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alle i klassen er med når vi skal delta i idrettsarrangement eller idrettsdag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
De voksne er høflig mot elevene i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elevene er høflig mot læreren og andre voksne i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vi tilbyr å hjelpe hverandre i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene er vi greie mot alle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene er alle greie mot medelever som er ivrige (positive holdninger)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Det er lite mobbing i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

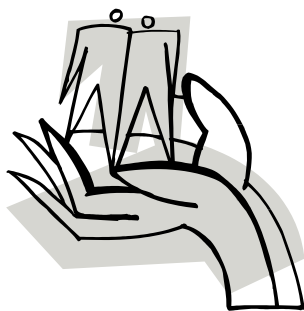


15.

**Tenk på klassen din i gymtimene når du svarer**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
I gymtimene føler vi at læreren gir oss valgmuligheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene kan jeg bestemme hvilke aktiviteter jeg vil holde på med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg tror jeg er ganske god i gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene føler vi oss forstått av gymlæreren	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene har jeg noe å si når det kommer til hvilke ferdigheter jeg skal trene på	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg er fornøyd med det jeg får til i gymtimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene viser læreren tiltro til at vi kan gjøre det bra i gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene føler jeg at jeg har gym fordi jeg har lyst	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg føler meg ganske flink i gym når jeg har deltatt en stund	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene oppfordrer gymlæreren oss til å stille spørsmål	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene føler jeg at jeg kan bestemme litt selv	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg har ganske gode ferdigheter i gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene prøver gymlæreren å forstå hvordan vi ser på ting før hun/han foreslår nye måter å gjøre ting på	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene har jeg valgmuligheter til å gjøre det jeg vil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gymtimene lytter gymlæreren til hvordan vi ønsker å gjøre ting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg er ikke så flink i gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18.

**Når jeg er sammen med andre elever i gym føler jeg meg...**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
... støttet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... forstått	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... lyttet til	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... satt pris på	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... trygg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19.

**I gymtimene føler jeg meg mest vellykket...**

... når jeg gjør en god innsats

Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

... når jeg er den beste

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

... når jeg viser personlig fremgang (blir bedre)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

... når jeg er helt suveren

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

... når jeg klarer noe jeg syntes har vært vanskelig

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

... når jeg får vist andre at jeg er best

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------



22.

**Vi lurer på om du har noen å være sammen med i gymtimene. Hvor sanne er påstandene under for deg?**

Jeg har ingen å snakke med i gymtimene

Helt Sant	Litt Sant	Litt Sant/ Litt Usant	Litt Usant	Helt Usant
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I gymtimene blir jeg gående mye for meg selv

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Jeg er godt likt i klassen

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Jeg har ingen i klassen å være sammen med

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Jeg føler meg «utafor» i klassen

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Jeg har venner på skolen

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Det er mange som vil være sammen med meg i gymtimene

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

20.

**Jeg deltar i gym ...**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
... fordi gym er morsomt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg vil lære meg idrettsferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg vil at læreren skal syntes jeg er en flink elev	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg får trøbbel hvis jeg ikke deltar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... men jeg skjønner ikke helt hvorfor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg liker å lære meg nye ting (ferdigheter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi det er viktig for meg å gjøre det godt i gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg ville følt meg dårlig hvis jeg ikke gjorde det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi det er det er meningen at jeg skal gjøre det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... men jeg ser ikke hvorfor vi skal ha gym	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi gym er spennende	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg ønsker å bli bedre i idrett	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg vil at andre skal synes at jeg er flink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... sånn at læreren ikke skal kjefta på meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... men jeg føler at det er bortkastet tid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... på grunn av gleden jeg føler når jeg lærer nye ferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi jeg lærer meg ting (ferdigheter) som jeg kan benytte meg av på andre arenaer i livet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi det gjør meg noe jeg ikke deltar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... fordi sånn er reglene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... men jeg kan ikke se hva jeg får ut av gymmen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



22.

**Mine foreldre synes jeg er mest vellykket...**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
... når jeg lærer meg nye ferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg er flinkere enn andre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg trener på det jeg ikke er flink til	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg vinner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg prøver ut nye ferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... når jeg får bedre resultater enn andre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**F. Bakgrunnsinformasjon**

- |   | Jente                    | Gutt                     |
|---|--------------------------|--------------------------|
| 23. Er du gutt eller jente? (Sett kryss)              | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Hvor gammel er du? (Skriv in alderen)             | <input type="text"/>     | År                       |
|   | Ja                       | Nei                      |
| 25. Er du født i Norge? (Sett kryss)                  | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Hvilket klassetrinn går du i? (Skriv inn trinnet) | <input type="text"/>     | Trinn                    |



### G. Fritidsinteresser

27. Sett kryss ved hver av de hobbyene du liker å holde på med på fritiden

- Idrett
- Musikk
- Drama/teater
- Leser bøker
- Spille tv/data spill
- Leke inne/ute



28. Hvis du driver med idrett uten om skolen, hvilken idrett driver du med?

29. Hvor mange DAGER i uka driver du med trening/idrett/fysisk aktivitet så du blir andpusten eller svett uten om skolen?

- 0 dager
- 1 - 2 dager
- 3 - 4 dager
- 5 - 6 dager
- 7 dager



30. Omtrent hvor mange TIMER per uke bruker du på trening/idrett/fysisk aktivitet så du blir andpusten eller svett uten om skolen?

- 0 timer
- 1 - 2 timer
- 3 - 4 timer
- 5 - 6 timer
- Mer enn 7 timer



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**A. Tilleggsinformasjon**

31.

Hvis du har andre erfaringer med gymfaget du vil dele med oss så vil vi gjerne høre dem:

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Ved eventuelle spørsmål kan Terese Wilhelmsen kontaktes på telefonnummer: 23 26 23 80, eller e-post:  
[terese.wilhelmsen@nih.no](mailto:terese.wilhelmsen@nih.no)

**Tusen takk for hjelpen 😊**

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## FORELDREUNDERSØKELSE – INKLUDERING I KROPPSØVING

I denne undersøkelsen ønsker vi å lære av dine erfaringer med kroppsøvfingsfaget for barnet ditt. Det er frivillig å delta og du kan når som helst trekke deg fra undersøkelsen. Vi minner også om at det er mulig å besvare spørreskjema online. Se informasjonsskrivet for mer informasjon.



Tenk gjennom hvert spørsmål/utsagn og vurderer de i forhold til dine erfaringer. Det finnes ingen rette eller gale svar.

*Hvis ikke annet er spesifisert, kryss av en rute for hvert utsagn eller spørsmål.*

NB! Det er spørsmål på begge sider av arkene.

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Her starter du:

### A. Tallkode

1. Vennligst skriv inn din epostadresse

### B. Informert samtykke

2. Jeg bekrefter med dette at jeg har fått informasjon om undersøkelsen og mine rettigheter som deltager i prosjektet.
3. Jeg bekrefter med dette at jeg besvarer dette spørreskjemaet frivillig
4. Jeg gir med dette min tillatelse til at mitt barn kan delta i denne spørreundersøkelsen

Ja      Nei

*For å lære mer om inkludering i skolen vil vi gjerne kontakte ditt barns skole. Ingen ved skolen vil få vite hva du eller ditt barn har svart i denne undersøkelsen.*

5. Jeg gir med dette mitt samtykke til at dere kan kontakte mitt barns skole for å lære mer om inkludering i skolen

Ja      Nei

6. Navnet på skolen er:

**C. DELTAGELSE OG ORGANISERING**

7. **Hvilket kroppsøvingstilbud har ditt barn?**

	Alltid	Ofte	Noen ganger	Sjeldent	Aldri	Vei ikke
Kroppsøvingsundervisning i vanlig klasse/gruppe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kroppsøvingsundervisning i vanlig klasse/gruppe, men med assistent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kroppsøvingsundervisning i vanlig klasse/gruppe, men får til tider spesialundervisning utenfor klassen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kroppsøvingsundervisning i spesialklasse på vanlig skole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Har ditt barn en individuell opplæringsplan for kroppsøving?

Ja                       Nei                       Vet ikke

8. **I hvor stor del av kroppsøvingstiden er deres barn... (Sett ett kryss for hver linje)**

	Alltid	Ofte	Noen ganger	Sjeldent	Aldri	Vei ikke
... sammen med en vanlig klasse/gruppe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... i en mindre gruppe barn <u>uten</u> nedsatt funksjonsevne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... i en gruppe mindre barn <u>med</u> nedsatt funksjonsevne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... alene med spesial pedagog	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... alene med assistent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. **Hvis deres barn mottar spesialundervisning eller oppfølging av assistent i kroppsøving: I hvilken grad synes du/dere at ditt/deres synspunkter og erfaringer har blitt tatt hensyn til i planleggingen/tilretteleggingen av tilbudet?**

	I veldig stor grad	I stor grad	I noen grad	Liten grad	I veldig liten grad
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. <b>Hvor ofte er aktivitetene i kroppsøving organisert..</b>		Alltid	Ofte	Noen ganger	Sjeldent	Aldri	Vei ikke
...	... som fellesaktivitet for alle elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... i mindre grupper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... slik at elevene gjør mange av aktivitetene en og en	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... slik at elevene kan stille spørsmål	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... slik at elevene kan velge mellom ulike aktiviteter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. <i>Les hvert utsagn og svar det som passer best for ditt barns situasjon.</i>		<b>I kroppsøvingstimene...</b>				
		Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
...	... legges det til rette for at mitt barn kan delta i aktiviteter sammen med de andre i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... føler jeg at mitt barns ferdigheter blir satt pris på av andre i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... er læreren flink til å tilpasse aktivitetene slik at alle kan være med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... har mitt barn gode venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... har mitt barn ofte andre aktiviteter enn de andre i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... får mitt barn benyttet seg av sine ferdigheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... gjennomføres det mange aktiviteter som mitt barn ikke kan delta i	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... samarbeider hun/han med de andre elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... har mitt barn tilgang til de hjelpemidlene hun/han trenger for å delta sammen med de andre elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...	... legges det til rette for at hun/han er en del av elevgruppen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Les hvert utsagn og svar det som passer best for ditt barns situasjon.

12. **I kroppsøvingstimene...**

	Helt Enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
... lærer barna mye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... syntes jeg mitt barn får brukt evnene sine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... samarbeider barna mye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... liker barna seg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... har lærerne arbeidet mye for at barna skal oppleve miljøet som godt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... blir alle elevene like mye verdsatt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... er de tilsatte høflig mot elevene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... er elevene høflig mot de tilsatte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Det er mye hjem-skole samarbeid i forhold til kroppsøvingsfaget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Det er lite mobbing i kroppsøvingstimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mitt barn blir mobbet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elever, foresatte og tilsatte har en felles forståelse av hva mobbing er	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Det tilsatte verdsetter kunnskapen de foresatte har om sitt barn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vi burde ha flere muligheter til å snakke med elevens kroppsøvingslærer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13.	Utsagnene nedenfor er om deres (foreldres) tanker og vurderinger om inkluderende kroppsøvingundervisning. Vennligst svar på hvert utsagn	Litt Enig/ Litt Uenig				
		Helt Enig	Litt Enig	Litt Uenig	Helt Uenig	
	Å inkludere elever med nedsatt funksjonsevne i kroppsøving vil hjelpe elever uten nedsatt funksjonsevne å omgås mennesker med nedsatt funksjonsevne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Å inkludere elever med nedsatt funksjonsevne i kroppsøving vil oppmuntre elevene til å lære å hjelpe hverandre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Å inkludere elever med nedsatt funksjonsevne i kroppsøving vil lære elevene større toleranse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Å inkludere vil ha en positiv effekt på personligheten til elevene med nedsatt funksjonsevne (eks. selv tillit og følelse av tilhørighet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Elever med nedsatt funksjonsevne vil sinke tiden til instruksjon og framgangen i kroppsøvingstimene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Det er mindre sannsynlig at barn med nedsatt funksjonsevne for tilrettelagt hjelp og individuell instruksjon i en inkluderende kroppsøvingundervisning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>						
	Innen inkluderende kroppsøvingklasser har barn med nedsatt funksjonsevne mindre sannsynlighet for å få spesialtilbud som fysisk- og språkterapi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg er (eller tror jeg hadde vært) mer fornøyd med mitt barns progresjon innen spesialundervisning enn i vanlige kroppsøvingundervisningen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Læreren er i stand til å tilpasse ulike aktiviteter og kroppsøvingundervisning slik at den tilrettelegger for elevenes ulike forutsetninger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Lærerne forstår ikke hvordan de skal integrere/inkludere barn med nedsatt funksjonsevne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Barn med nedsatt funksjonsevne vil utvikle akademiske ferdigheter bedre og raskere innen spesialundervisning enn i vanlig kroppsøvingundervisning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Spesialundervisning blir utført bedre av en spesialpedagog enn en vanlig lærer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>						
	Å inkludere vil gjøre at elever vil ha mer kunnskap om mennesker med nedsatt funksjonsevne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Barn med nedsatt funksjonsevne vil bli lett sosialt isolert av medelever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Barn med nedsatt funksjonsevne bør gis enhver anledning til å delta i vanlig klasseromsundervisning der dette er mulig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Å inkludere elever med nedsatt funksjonsevne i kroppsøving vil lære elever å samarbeide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Elever med nedsatt funksjonsevne vil oppleve diskriminering i vanlig kroppsøving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Å inkludere elever med nedsatt funksjonsevne i kroppsøvingstimene vil gjøre at kvaliteten blir redusert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



#### D. Hjem-skole samarbeid

14.	Utsagnene nedenfor er om deres opplevelse av hjem-skolesamarbeid i kroppsøving og skolen generelt	Helt enig	Litt Enig	Litt Enig/ Litt Uenig	Litt Uenig	Helt Uenig
	Jeg/vi vet altfor lite om de lærerne vårt barn har på skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi er meget fornøyd med den informasjon skolen gir om barnets utvikling i kroppsøving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi blir godt informert om barnets undervisningsopplegg i kroppsøving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi diskuterer ofte med lærerne om måten det undervises på og hva elevene lærer i kroppsøving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi har stor innflytelse på hva barna lærer og hvordan det undervises på kroppsøving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi får ikke tilstrekkelig opplysninger om hvordan barnet trives og har det sosialt i kroppsøving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Skolen har gitt meg/oss for dårlig informasjon om den klassen mitt/vårt barn går i	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi blir i altfor liten grad trukket inn i diskusjoner om barnets sosiale utvikling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi er enig med lærerne om de normer og regler i som eksisterer i skolen og klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Som foreldre har jeg/vi stor innflytelse på normer og regler i skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi er usikre på hvilke forventninger skolen har til meg/oss når det gjelder samarbeid med skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi har god kjennskap til lovverket og lærerplanen for skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Jeg/vi har så dårlig kjennskap til skolen og lærerne at vi ikke involverer oss eller sier i fra når vi er uenig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Foresatte er med på å utarbeider individuelle opplæringsplan hvis barna deres skal ha spesialundervisning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Elever som skal ha spesialundervisning i kroppsøving, er selv med i planleggingen av denne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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### E. Ekstra informasjon om kroppsøvingsfaget

15. Hvis du har andre erfaringer med kroppsøvingsfaget du vil dele med oss så vil vi gjerne høre dem:

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### F. Barnets situasjon

18. 16. Kan du kort beskrive barnets funksjonsnedsettelse:

20. 17. Har barnet diagnose?  **Ja**  **Nei**

18. Vil du/dere si at barnet er mildt, moderat eller alvorlig funksjonshemmet?  **Mildt**  **Moderat**  **Alvorlig**

19. Hvilken av følgende beskrivelse passer best til måten barnet snakker/kommuniserer?

- Barnet snakker ikke/har lite forståelig kommunikasjon
- Barnet bruker noen ord eller tegn, men er vanskelig å forstå for fremmede
- Barnet bruker flere ord, og det er forståelig for fremmede
- Barnet snakker bra, men snakker ikke like bra som jevnaldrende
- Barnet snakker bra for alderen

20. Hvordan beveger barnet seg vanligvis?

- Går vanlig
- Går vanlig, men ikke lange distanser
- Går, men bevegelseshemmet
- Bruker (vanligvis) rullestol, men kjører selv
- Avhengig av rullestol, og må kjøres av andre

21. I hvilken grad påvirker barnets funksjonsnedsettelse hennes/hans deltagelse i kroppsøving?

	I veldig stor grad	I stor grad	Noen grad	I liten grad	Ikke i det hele tatt
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### G. Bakgrunnsinformasjon

22. Kjønn
- |                          | Kvinne                   | Mann                     |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
23. Hva er ditt fødselsår
- 
24. Hva er den høyeste fullført utdanning i deres hushold?
- |   |                          |
|---|--------------------------|
| Grunnskole  | <input type="checkbox"/> |
| Yrkesfaglig Videregående opplæring                      | <input type="checkbox"/> |
| Allmenn Videregående opplæring                          | <input type="checkbox"/> |
| Fra 1 til 3 års høyere utdanning (høgskole/universitet) | <input type="checkbox"/> |
| Mer enn 3 år høyere utdanning (høgskole/universitet)    | <input type="checkbox"/> |
25. I hvilket land er du og eventuelt din partner født?
- |            | I Norge                  | I et annet land          |
|------------|--------------------------|--------------------------|
| Foreldre 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| Foreldre 2 | <input type="checkbox"/> | <input type="checkbox"/> |
- 26.

Hvis en eller begge er født i et annet land, hvilket land er du/dere født?

Foreldre 1

Foreldre 2

#### H. Fysisk aktivitet

27. Driver du med regelmessig mosjon eller trening?

Ja

Nei, men har vært aktiv tidligere

Nei

28. Hvor mange DAGER i uka driver du med trening/idrett/fysisk aktivitet så du blir andpusten eller svett?

0 dager

1 - 2 dager

3 - 4 dager

5 - 6 dager

7 dager

29. Omtrent hvor mange TIMER per uke bruker du på trening/idrett/fysisk aktivitet så du blir andpusten eller svett?

0 timer

1 - 2 timer

3 - 4 timer

5 - 6 timer

7 timer eller mer

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Ved eventuelle spørsmål kan Terese Wilhelmsen kontaktes på telefonnummer: 23 26 23 80, eller e-post: [terese.wilhelmsen@nih.no](mailto:terese.wilhelmsen@nih.no)

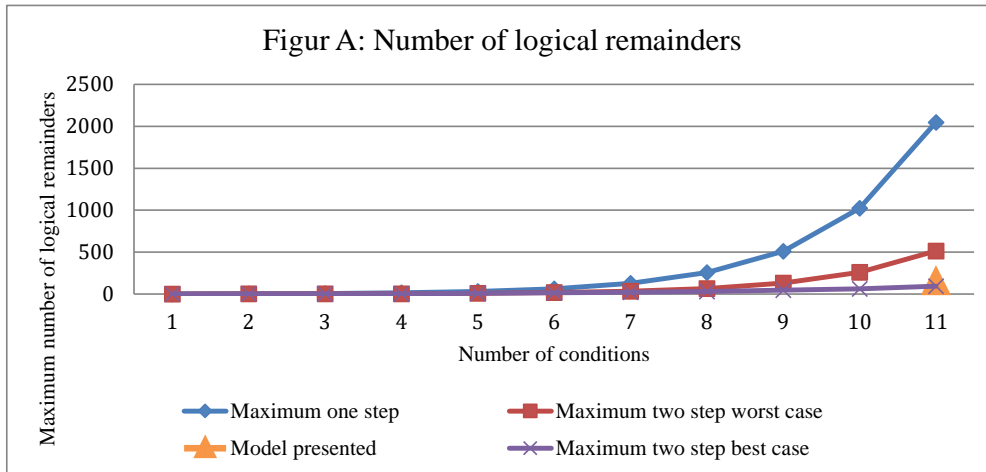
**Tusen takk for hjelpen 😊**

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## **Appendix VI**





The Figure A provides a graphical representation of the usefulness of two-step fsQCA for minimising the problem of limited diversity (Schneider & Wagemann, 2006). The upper line represents the maximum number of logical remainders in a one-step fsQCA ( $2^k-1$ ) representing the worst-case scenario. The middle line represent the maximum number of logical remainders in a two-step fsQCA, if the first remote category consists of two conditions and the proximate category consists of the remaining conditions. The lower line represents the maximum number of logical remainders where the conditions are equally distributed between the remote and proximate category representing the best case scenario. The triangle represents the particular model proposed in Article IV ( $2^7-1 + 2^4-1$ ).









