

DISSERTATION FROM THE
NORWEGIAN SCHOOL OF
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2018

Laura Suominen Ingulfsvann

Affected by movement

A qualitative exploration of 10-year-old children's experiences
from a school-based physical activity intervention

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Summary

The theme of the thesis is children's movement in school and the focus is on the children and children's own ways of moving – alone and together with others. Questions that guide the process address variations of children's movement and further what kind of movement opportunities the school institution provides for children today. The point of departure is a tension between movement in measurable effects and movement as a meaningful affective experience. Concerns for children spending excessive time on sedentary activities and the potential consequences for their health and learning are widespread in contemporary society. One consequence and the context of the thesis is intervention studies and initiatives, which aim to increase time devoted to physical activity (PA). The thesis is further situated within the sphere of humanistic and social sciences, where human beings, experiences and meaning is the prime area of interest.

The data material is produced through qualitative methods, and it consists mainly of children's movement and experiences in physical education (PE), physical active educational lessons (PAE lessons) and physical active breaks (PA breaks). Children in the study were aged 9-10 (5th grade) who participated in a larger school intervention study – Active Smarter Kids (ASK Study) in Sogn og Fjordane in Western Norway in the school year 2014/2015. In total 98 children from four schools (two intervention schools and two control schools) consented to participation in the qualitative study. After a drawing and writing task, 32 children were selected for further in-depth interviews and observation. Complementary to children's expressions and experiences, the data material includes also interviews with their teachers.

Theoretically, the thesis is inspired by Baruch Spinoza, affect theories, and the phenomenologists Jonathan Smith, Thomas Fusch and Sabine Koch. This perspective is used to explore children's movement in relation to other people, in particular situations and environments, and to understand both passive and active aspects of movement.

The findings particularly illuminate the affective aspects of children's movement, how children both choose to move and are drawn to move. The findings indicate further that children's experiences of movement in school are ambivalent. Children are drawn to move both when they are encouraged to and when they are supposed to sit still. The majority of children like PE, PAE lessons and PA breaks. They explain that they like to move better than to sit in a class. Although children desire to move, they experience many activities as boring and repetitive with little opportunity to follow their own sensations and interests. Children experience the institutional framework, teacher's instructions and structures of many activities as limiting. Paradoxically, when an opportunity to choose arises, children are drawn to repeat activities with which they are already familiar and enjoy. Furthermore,

movement in school both facilitates “togetherness” between children but also established an arena where some children feel weaker than others, are excluded or mocked.

The contribution of the thesis is complementary to physiological and cognitive-oriented research. The findings bring out bodily engagement, sensations and emotions as central aspects of children’s movement. They point to an important discussion about what kinds of activity can be chosen in school. In addition, the findings indicate that there is a need to discuss how children relate to one another and the world and how their own sensations can be acknowledged in a school context. Furthermore, many questions need to be asked in order to provide children with socially safe and supporting learning environments in school and to take account of the tensions and ambivalences that arise when children move alone and together with others.

Keywords: movement, movement in school, intervention, physical education, children, experiences, qualitative methods, affective perspective

Sammendrag

Avhandlingens tema er barns bevegelse i skolen og fokuset er barn i bevegelse og barns egne måter å bevege seg på, alene og sammen med andre. Spørsmålene vinkles særskilt mot variasjon og hva slags bevegelsesmuligheter skolen, som institusjon, tilbyr barn i dag. Tematikken kontekstualiseres i et spenningsfelt mellom kunnskap om målbare effekter av bevegelse og bevegelse som en meningsfull, affektiv erfaring. Bekymringer for at barn bruker mye tid på stillesitting og dets mulige konsekvenser for helse og læring er utbredt i dagens samfunn. Dette møtes med intervensjonsstudier og tiltak som har et mål om å øke mengde fysisk aktivitet (FA) i skolen. Studien er kontekstualisert in en slik intervensjon. Videre er avhandlingen plassert i humanistiske og samfunnsvitenskapelige kunnskapstradisjoner der menneskelig erfaring og mening er hovedinteressen.

Datagrunnlaget er produsert ved kvalitative metoder og består hovedsakelig av materiale fra barns bevegelse og erfaringer i kroppsøving (KRØ), fysisk aktive akademiske timer (FAA timer) og fysisk aktive pauser (FA pauser). Barna var 9-10 år gamle (5. klasse) og deltok i en større skoleintervensjonsstudie - Active Smarter Kids (ASK studie) i Sogn og Fjordane skoleåret 2014-15. Totalt samtykket 98 barn og deres foresatte fra fire skoler (to intervensjonsskoler og to kontrollskoler) å delta i denne kvalitative studien. Etter en tegne- og skriveoppgave ble det foretatt en ytterligere seleksjon der 32 barn ble valgt ut til dybdeintervjuer og observasjoner. Intervju med barns lærere inngår også i materialet og er utfyllende til barnas egne uttrykk og erfaringer.

Teoretisk trekker avhandlingen på perspektiver fra filosofen Baruch Spinoza, affekt teorier og fenomenologene Jonathan Smith, Thomas Fusch og Sabine Koch. Perspektivet anvendes for å forstå barns bevegelse i relasjon til andre mennesker, bestemte situasjoner og miljøer samtidig som den får fram at bevegelse har både aktive og passive sider.

Avhandlingen bidrar særlig med kunnskap om de affektive sidene av barns bevegelser, hvordan barn både velger og er trukket mot å bevege seg. Funnene viser videre at barns erfaringer med bevegelse i skolen er ambivalente. Barn er trukket mot å bevege seg både når de blir oppfordret til og når det er forventet at de skal sitte stille. Majoriteten av barna liker både KRØ, FAA timer og FA pauser og begrunner det med at de liker bedre å bevege seg enn å sitte inne i klasserommet. Til tross for at barn gleder seg over å bevege seg, opplever de mange aktiviteter kjedelige og repeterende, med få muligheter til å følge sine egne fornemmelser og interesser. De institusjonelle rammene, læreres instruksjoner og strukturer i mange aktiviteter, oppleves begrensende av barna. Paradoksalt nok, når muligheten til å velge oppstår, blir barn trukket mot å repetere aktiviteter de liker fra før og som de allerede kan. Videre skaper bevegelse i skolen både samhörighet mellom barna og er en arena der noen føler seg svakere enn andre, blir utestengt eller mobbet.

Avhandlingen utfyller kunnskap fra fysiologisk og kognitiv orientert forskning. Den løfter fram kroppslig engasjement, fornemmelser og emosjoner som sentrale aspekter av barns bevegelse. Funnene peker mot en viktig diskusjon om hva slags aktiviteter som bør velges i skolen. Funnene indikerer også at det er behov for å diskutere hvordan barns relasjoner til hverandre og omverdenen, samt deres egne fornemmelser for bevegelse kan ivaretas i en skolekontekst. Videre er det mange spørsmål som må stilles dersom skolen skal kunne tilby et sosialt trygt og støttende læringsmiljø, samt å kunne ta i betraktning de spenninger og ambivalenser som oppstår når barn beveger seg alene og sammen med andre.

Nøkkelord: bevegelse, bevegelse i skole, intervensjon, kroppsøving, barn, erfaringer, kvalitative metoder, affektiv perspektiv

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Bodø, 23. April 2018

Laura Suominen

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1 Introduction and background

The subject of this thesis is children's movement in school. The point of departure is a tension between movement in measurable effects and movement as meaningful affective experience. Today, many researchers as well as health and school authorities, politicians and teachers ask if children move enough and hard enough. They address a substantial concern for children spending an excessive time on sedentary activities and the consequences this can have for children's health and receptivity for learning. Recurrent questions are how children can become more *physically*¹ active, and whether increasing physical activity (PA) in school could be beneficial for children's health and academic learning. Accordingly, the school political landscape is amenable for initiatives that aim to increase and develop children's movement opportunities in school.

Already by 2009, the Norwegian government decided to allocate 76 additional hours for PA for 5th to 7th grade pupils (Union of Education, 2009). The new subject was called physical activity and health (PAH) and its main purpose was to increase PA and to make schooldays more varied. The subject was not given a syllabus nor requirements concerning competence of those who were in charge of the activity. (Standal, 2016; Union of Education, 2009). In 2017, the Norwegian Parliament (2017) approved further an initiative that ensures one hour of PA each school day for children and young people from 1st to 10th grade. The arguments were potential health, learning and social benefits of PA (Toppe et al., 2017). In purpose to fit the additional PA into the curriculum without decreasing time allotted to academic learning or increasing the length of the school days, Toppe et al. suggested combining PA with academic learning or to use PA to create short "brain-breaks" in the classroom. Both concepts have awakened interest also among researchers and teachers and they have already been introduced and tried out in several schools (Resaland et al., 2015; Borgen et al., 2017). This is to say, children's opportunities for PA in school has increased both when measured in time allotted to it and variation of movement sessions.

¹ The difference in concepts *physical activity* and *movement* is recurrent throughout the whole thesis. These two concepts indicate two different understandings. The Directorate of Health (2006) as well as the ASK intervention (Resaland et al., 2015) support a widely dispersed definition of *physical activity (PA)* as "any bodily movement produced by skeletal muscles that result in energy expenditure" (WHO in Resaland et al., p. 14). PA is measured in quantifiable and definable units of: duration (units of time), frequency (number of sessions per time unit, bouts or days), intensity (relative to maximal capacity), and mode (the type of physical activity behavior). Another central position is a wider concept that movement is always "more than" physiological act. Such position involves an emphasis on moving subject who performs the movement (cf. Larsson & Quennerstedt, 2012; Standal, 2016). I will return to the perspectives from which I approach children's movement and children in chapter 4 *Theories and concepts* and 5 *Methods and design*.

In addition to the political decisions that have expanded schools possibilities to provide children with more and more varying movement sessions, there is also a growing number of school-based PA intervention studies (Kriemler et al., 2011; Dobbins et al., 2013; Macdonald et al., 2014; Resaland et al., 2016), which aim is to investigate potential effects of PA in school. The interventions consist of varying selections of movement sessions that the researchers have designed in purpose to increase children's activity levels in terms of duration and intensity. These sessions can, for example, involve combinations of PA and academic learning or short "brain-breaks" in the classroom (Resaland et al., 2015), which are already mentioned above. In purpose to observe potential changes in children physiological health and/or academic performances, the researchers measure them in varying physiological, anthropometric and/or cognitive variables both before and after interventions. Central questions are whether the interventions and PA may help children to improve or maintain their health and/or academic performances. Correspondingly, Borgen and Ødegaard (2015) observe that in the contemporary society there is a growing interest for knowledge about "what works" (p. 5) and that could be used as base for political decisions concerning structures of a welfare state, including school institution.

On the other hand, number of researchers stress that it is important that "also children, parents, and teachers and school leaders whose everyday life involves the school, take part in the debate about physical education and physical activity in school" (Borgen et al., 2017, p. 11). In addition, one current concern today is that due to the extensive focus on amount and potential effects, movement in school might become limited to *physical* activity. Accordingly, a number of researchers suggest that bodily learning (Borgen et al., 2017) and opportunities to experience and experiment with movements (e.g. Borgen & Engelsrud, 2015; Standal, 2016) are important goals as well. Such perspectives are also central in the curriculum for physical education (PE) (Directorate for Education and Training, 2015) today but not explicit considered in the recent interventions and initiatives that form children's opportunities to move in school. They are often also marginal in teaching and learning practices in the context of PE where many teachers are rather concerned by keeping children physically active (Nyberg & Larsson, 2014; Borgen & Engelsrud, 2015; Borgen et al., 2017).

The perspective I work from indicates that movement is not only a physiological act but can also be viewed as a fundamental life force that arises out of interest and relations with others and the context and that connects the child with the world and others. Bjorbækmo and Engelsrud (2011) write about, "the feeling of being in touch with one's circumstances while moving" (p. 42). They associate such feeling further with "the meaning of finding "my own way of moving"" and suggest that it is satisfying and enjoyable for children to be "welcomed" (p. 42) to move in their own ways. However, in adult-organized movement sessions, instructions and predefined ways of moving often

overshadow the way children want to move or *are drawn to move*. In accordance with these perspectives, the focus of the thesis is children's own movement and movement opportunities in a context that is defined by adults.

To illustrate the topic and perspectives of the thesis, the moving child and children's own ways to move, I use one of my own childhood memories:

When I was a child, climbing in trees was one of the best things I knew. I still remember how I walked among old apple trees and a high birch in the schoolyard next to our house and how I felt a temptation to climb them. It was as if the trees invited me to explore them, and more than willing, I responded to this call. Time after time, I found myself standing at the root of the highest tree, holding my hands around the first branch, supporting my feet against the tree trunk and climbed up to the branch, and up to the next, and the next, until I did not dare any more. I can still recall the feeling of being absorbed in the climbing and risky movements as well as the feeling of insouciance and freedom from high up in the trees, looking around and waving my legs in the air.

Today, I identify these experiences with Smith's (2007) concept *first rush of movement* that he further associates with childhood, rushes of energy, vitality, playfulness, exuberance, spontaneity and delight as well as with landscape connection and sustained world relations. Smith suggests that landscape connection and world relations are existentially and developmentally important for children. He specifies that it is important for children's later lives to have such experiences and memories. In other words, Smith values movement for its own sake and considers *to be drawn to move* fundamental to the children. His definition of first rush of movement as well as the above example of climbing trees illuminate a power and vitality that occurs when movement emerges from the child and her or his own interests and affections. In such processes, children both decide how they like to move and are *taken by the movement*. Their movements develop in varying and multiple ways. That movement can emerge from the situations and create feelings of connectedness and freedom, is central in theories that frame the thesis.

1.1 Methodological position and empirical context

The thesis is situated within humanistic and qualitative knowledge fields where human beings, experiences, and meaning are the prime area of interest. To approach children as living subjects in their own right and to acknowledge verbal as well as non-verbal aspects of their expressions and experiences is common within these traditions and frame the thesis as well. Interviews and writing provide children with opportunities to express themselves verbally while observations and drawings

open up for non-verbal expressions. Furthermore, humanistic and qualitative researchers acknowledge the meaning of context in research and consider themselves and their interplay with research participants as inseparable parts of the processes of knowledge construction. One central perspective that frame the fieldwork and analysis here is an understanding of both childhood and the world as temporal and changing. I will return to these topics and the particular context, participants and the research process later. To understand research as a situated and contextual process points further to a question whether the findings may have relevance in other situations and contexts. I use continuous re/reading, thematic analysis and multiple levels interpretation to gain insight and perspectives that can be used to understand children's movement and movement opportunities not only in the schools where I conducted the study but also in other similar settings. Thus, the findings can be used to inform political debates and decisions as well as planning and organizing teaching practices.

In brief, the project is part of a larger school-based PA intervention study that has been given the title *Active Smarter Kids* (ASK study). The aim of the main project was to investigate potential effects of increased PA in school on children's academic performance and physiological health. The intervention was designed with account of these aims. It consisted of three aspects: physical active educational lessons (PAE lessons), physical active breaks (PA breaks) and physical activity homework. In addition, children in both intervention and control schools continued with PE and PAH as usual (Resaland et al., 2015). The core of the thesis is children's movement and experiences from the teacher-led movement sessions PAE lessons, PA breaks and PE that took place during the schooldays.

The ASK study and this project are further situated within one Norwegian county that provides a particular geographic and demographic context where to explore children's movement. Participants were 9- and 10-year old children (5th grade) from schools that were randomly selected either in the ASK intervention group or a control group. In this age, children spent a remarkable amount of time in school, sitting in a classroom and working with academic tasks. A movement intervention as well as PE makes an exception to this routine. On the other hand, school is only one of several arenas where young children move. The major part of children of this age also participate in organized sports and move in home environments either alone, with their friends, siblings and/or parents. Thus, although the ASK intervention and teacher-led movement settings in school frame the study, the themes and topics are not strictly limited to children's experiences from these settings. In order to understand children's movement interests and preferences as well as the specific character of their movement opportunities in school, the study also includes questions concerning how children in general enjoy movement or what they might not enjoy about moving.

1.2 Aims and research questions

Today, there is little research-based knowledge about how children move and what they experience in teacher-led movement settings in school. In particular, this concerns school-based PA interventions where qualitative perspectives are marginal to quantitative perspectives. However, in the ASK study, the interest among the researchers was also to develop a qualitative project. The focus here is to examine the children's movement experiences, their desires, interests, and movement generated by themselves. Given the growing political interest in increasing children's movement opportunities in school, there are several questions to pose and examine. One question is how children themselves experience movement in school and what happens when children's interests and preferences encounter the teachers' interests, rules and regulations. Based on the chosen theoretical and methodological positions, I take the starting point whereby children's own ways of moving and their experiences of movement in school vary between individuals and from time to time. In order to examine how children as moving subjects choose to move and how children's movement might illuminate movement as an affective, meaningful experience I ask:

1. What kind of variation do children perform when they move in an everyday school context?
2. How can such variations illuminate children's movement opportunities in school?

The research interest is to follow a sample of children during their everyday life in school and try to describe, identify and understand how they move and what they experience when they move in the different movement settings, which are the PAE lessons, the PA breaks and the PE lessons. In particular, the interest is the variation of children's movement and experiences. In addition, the aim is to understand how children themselves prefer to move when given the opportunity to choose and how their interests and preferences fit into teachers' instructions, rules and ideas. Furthermore, it is relevant to discuss what implications children's own movement and preferences might have for further development of their movement opportunities in a school context. In purpose to cover these topics and to answer the above research questions, I divide the questions further in,

- a) How movement emerge and develop in PAE lessons, PA breaks and PE lessons?
- b) How children experience certain situations and in particular their relationships to each other, their teachers and other elements or objects?
- c) How children's movement and experiences change and vary in particular situations or from time to time?
- d) When do children enjoy moving and when do they not enjoy it?

These questions guide the research process that I set forth according to the following structure.

1.3 Structure of the thesis

The thesis consists of nine chapters, which involve the preceding introduction and the following eight chapters.

Chapter 2 *Research context*, begins with an introduction of a geographic and demographic context. In addition, the chapter contextualizes the project through the ASK study and PE. The introduction of ASK study includes the aims and the design of the intervention and the learning environment. Correspondingly, the introduction of PE includes aims and objectives in the curriculum and characteristics of PE practices in Norway.

Chapter 3 *Research review*, contains an overview and summary of qualitative research and literature that addresses young children's (4th–6th grade/8-12 years) experiences from movement in school, including school-based PA interventions and PE. The aims and scopes of these studies contribute to a knowledge base concerning children's movement in school.

Chapter 4 contains *Theories and concepts*. The theoretical framework is inspired by Baruch Spinoza (2011) and affect theories (Seigworth & Gregg, 2010) with complementary influences of phenomenologists Smith (2007), Fuchs (2016), and Fuchs and Koch (2014). Central concepts are affects and passions from Spinoza, "yet-ness" from affect theories, "first rush of movement" from Smith and "bodily resonance" and "inter-affectivity" from Fuchs, Fuchs and Koch. These theories and concepts are the core of understanding how children move and are drawn to move.

Chapter 5 *Methods and design*, contains the design and methodological choices. It includes the selection of schools and participants as well as an overarching methodology and a discussion on exploring young children's movement and experiences with help of qualitative methods. Moreover, the chapter involves an introduction of methods, drawing and writing, interviews and observations, and how I used them.

Chapter 6 *Analysis* includes the overarching analytical framework and the structure of analysis and findings. Key words are purposeful re/reading and re/rewriting, thematic analysis and three levels of interpretation. In addition, the chapter gives an overview on the structure of the following two chapters that involve the findings.

Chapter 7 *Children's movement in physical education*, includes findings related to variation of children's movement and experiences in PE. The chapter encompasses two main themes: "Doing activities and being active" and "To move and to be moved," that consist of several sub-themes. The

sub-themes illustrate both repetitive trends, paradoxes and ambivalences in the data material, which I further discuss in light of relevant research and theories.

Chapter 8 *Children's movement in PAE lessons and PA breaks*, includes findings related to children's movement and experiences in the intervention activities including PAE lessons and PA breaks. Three main themes follow: "It is fun to move – at least better than sitting in a classroom"; "Fun and boring activities"; and "Experiences related to moderate to vigorous physical activity." The first theme concerns children's experiences of the intervention activities in relation to sit in a classroom and to move in a "free space." The second theme illuminates children's experiences of the intervention in relation to "fun" respective "boring" activities that children themselves repeatedly brought up in interviews. The third theme illustrates children's experiences of the intervention activities in relation to the aim of increasing amount of moderate to vigorous physical activity in school. Similar to main themes in chapter 7 *Children's movement in Physical Education* also the three themes in chapter 8 consist of several sub-themes.

In chapter 9, *Conclusion and discussions*, I return to the research questions: "What kind of variation do children perform when they move in an everyday school context?" and "How can such variations illuminate children's movement opportunities in school?". The first part of the chapter includes a conclusion of the findings, and a discussion of practical implications and suggestions for further research. These topics are followed by a discussion of relevance of the findings, quality of the research process, ethical considerations and critical notes. The chapter ends to a conclusion.

2 Research context and environment for the ASK study

As stated, the project is part of a school-based PA intervention study entitled the ASK study.² The study was conducted in collaboration with Sogn og fjordane University College (Western Norway University of Applied Sciences from 1st January, 2017) and the Norwegian School of Sport Sciences. The host institution, Sogn og fjordane University College, is located in the county of Sogn og fjordane in western Norway. The aim of the ASK study was to investigate whether an intervention consisting of PA in school has documented effects on health and academic performance for children in the 5th grade (10 years). In order to measure the effects, the researchers randomized 57 schools in two groups; an intervention group (intervention schools) and a control group (control schools). The researchers designed an ASK intervention then purpose of which was to provide 60 minutes daily PA of moderate to vigorous intensity for children in intervention schools. How children moved in the intervention and what they experienced as they moved, are central questions in the project. In this chapter, I introduce rationales and design of the ASK study and the ASK intervention. The focus is on what kind of understanding of movement rationales and the design convey, and what frames and expectations they create for children's movement. In addition, I explain the decision to include PE as one movement setting in the thesis and introduce the curricular aims and instructions for the subject. Several features indicate that the county of Sogn og Fjordane and its people made further the conditions for the project somewhat special and thus I start by introducing the geographical and demographic context where it was conducted.

2.1 Geographical and demographic context

From west to east, the county of Sogn og Fjordane extends all the way from the Atlantic Ocean to the Jostedal Glacier and the western part of Jotunheimen mountain area in the center of the country. Steep mountains, rivers and long fjord arms characterize much of the landscape. In particular, the coastal parts of the county are exposed to frequent, hard winds. During the winter season snowy, icy and rainy days typically alternate, with more snowy days in the areas close to Jostedal Glacier and Jotunheimen, and more rainy days in the coastal part of the county and in the fjords. Municipalities vary from approximately 700 inhabitants to 10 000. Correspondingly, school size in Sogn og Fjordane varies from small to medium. The geography and small schools places particular demands on research logistics and anonymity of the research participants that I will discuss later. In addition, they

² The ASK study involves several sub-studies conducted by PhD students, master students and bachelor students. A more detailed design and results of the main study are given in Resaland et al. (2015; 2016). I use "the ASK study" when referring to the academic part of the ASK project and "the ASK intervention" or "the intervention" when I refer to the movement activities children in intervention schools took part in. When I refer to both ASK study and the ASK intervention, I use "ASK project."

relate to a school political and demographic environment that stands out when compared to other counties in Norway.

Between 2010 and 2014 children in Sogn og Fjordane scored on average second best grades in reading and mathematics immediately following after Oslo. Knudsen (2014)³ calls this paradoxical since at the same time Sogn og Fjordane ranks relatively low in socio-economic status, something which usually predicts weak academic performances. In addition, he notices that people in Sogn og Fjordane score on average the best of all counties in Norway in many variables related to standard of living, including mortality, life expectancy, living on social benefits, unemployment, morbidity and criminality. Nordahl and Knudsmoen (2014) show further that parents in Sogn og Fjordane reveal above average interest for children's schoolwork, are more informed about it, and have more contact with school compared to other counties. According to Glosvik (2014) there is also a close dialog between different central actors within the school system in Sogn og fjordane. This includes school directors, dean of teacher education in Sogn og fjordane University College, leader of the association for education and municipal school and education directors in the municipalities. Glosvik describes further that the school system in Sogn og fjordane works on the municipalities' premises; school politics takes account of the school level and there is an established tradition of extended education for teachers. Resaland et al. (2016) point out that children who took part in the ASK study were on "average more active than a population-based national sample of Norwegian 10-year-olds" (p. 327). These characteristics indicate a county with good and safe living conditions, generally active children, and well-functioning co-operation between different levels and parties in the educational system.

Statistics from the ASK study indicate further generally positive attitudes toward research among school principals, teachers, children and their parents/guardians. In the main study, the researchers managed to recruit 95.3% of total possible recruitment⁴, which corresponds to 86.2% of all 10-year-olds in the county of Sogn og Fjordane. Both percentages are high for a school-based PA intervention study. As I return to in chapter 5 *Methods and design*, a major part of schools and children were also positive concerning the qualitative study and I could choose between a large numbers of volunteers.

³ Knudsen (2014), Nordahl and Knudsmoen (2014), and Glosvik's (2014) studies are parts of a large multi-component study "*Learning Regions*" (Universitetet i Agder et al., 2014) that was conducted to explore possible explanations to the paradox of high academic performances and low socio-economic status.

⁴ Inclusion criteria for ASK-intervention study were that schools should have at least seven children in fifth-grade; that children were healthy (with no serious or chronic illnesses) and able to participate in daily physical activity and physical education (PE). In addition, participants had to be able to complete standard academic performance tests (Resaland et al., 2015, p. 2)

On the other hand, Resaland et al. (2016) point out that the initially high activity levels can have influenced the results of the ASK study. Similarly, one should keep in mind when reading the findings of the thesis that a major part of participants in the qualitative project were children who, in general, enjoyed being active and at least seemingly lived in good and safe conditions.

2.2 The ASK study and the ASK intervention

As mentioned, the ASK study as well as the related intervention were designed to explore effects of PA in school. This involves measuring a wide variety of academic, cognitive, physiological, anthropometric and psychological variables as listed in figure 2-1. The researchers highlighted the amount of 60 minutes daily PA for all children in intervention schools. In addition, they underlined that approximately 25% of the PA should be on moderate to vigorous intensity. The researchers defined moderate to vigorous intensity as children getting sweat and out of breath (Resaland et al., 2015). The designed 60 minutes daily PA consisted of the curriculum-based subject PE, physical activity and health (PAH)⁵ and three additional forms for movement activities; physical active educational lessons (PAE lessons), physical active breaks (PA breaks) and physical activity homework. In order to establish a difference in amount PA between intervention and control schools, the control schools were asked to delimit weekly activity to PE and PAH as illustrated in figure 2-1.

⁵ In 2009, the Norwegian government decided to allocate 76 additional hours for physical activity for 5th to 7th grade pupils. According to formal documents the aim of PAH is to provide children with more varied school days. Further, activities in themselves are valuable goal, and engaging all children has a main priority. Children are not formally assessed and schools themselves are given freedom to plan and implement the subject as they best fit the local conditions (Union of Education, 2009). Standal (2016) points further that the subject has no syllabus and no given requirements concerning competence of those who are in charge of the activity. I observed some PAH lessons and took up the subject in interviews with children. However, I have little specific data material related to PAH. It also differs from PAE lessons, PA breaks and PE as it is not instructed by children's classroom teachers or PE teachers. Hence, I do not include it in the thesis.

Intervention group		Control group	
2x45 min	Physical education lessons	2x45 min	Physical education lessons
1x45 min	Physical activity and health	1x45 min	Physical activity and health
3x30 min	Physical active educational lessons		
5x5 min	Physical active breaks		
5x10 min	Physical activity homework		
Measurements for both intervention and control group			
<i>(baseline in August 2014 and follow up in July, 2015)</i>			
<i>Academic performance</i>		<i>Quality of life</i>	
<i>Cognitive performance</i>		<i>Classroom behavior and motivation</i>	
<i>Physical activity</i>		<i>Anthropometry (weight, height, skinfolds, waist</i>	
<i>Physical fitness</i>		<i>circumstances, pubertal status)</i>	
<i>Muscle strength and motor skills</i>		<i>Blood sample and blood pressure</i>	

Figure 2-1. Design of the ASK intervention study.

The material is created from PAE lessons, PA breaks and PE. PAE lessons and PA breaks were the parts of the intervention that differed the schooldays in intervention schools from the ones in the control schools. They are of interest here because they provided children with new ways to move in school. PE was common for both intervention and control schools, which in turn made it possible to view the intervention in comparison to another related context. In addition, all three settings, PE, PAE lessons and PA are relevant in relation to explore children's movement in school and to answer the particular research questions that are presented earlier. Physical active homework will not get any further attention in the thesis because it took place outside school hours. I leave also the PAH lessons outside the analysis since I only have little specific material from them and the lessons are not instructed by children's contact teachers or PE teachers.

A common element for intervention activities was that they were all designed to both increase children's activity levels and to support their learning. In PAE lessons, children moved while they were learning mathematics, Norwegian and English. For example, this could be mixing multiplication tables or word games in relay races or dodgeball. These lessons aimed at repeating academic material in the outdoors. The PA breaks took place within academic lessons in the classroom. For example, this could be using a short dance or exercise videos played from YouTube® to create activity

among children. A selection of performed PAE lessons and PA-breaks follows in chapter 7⁶. Physical active homework could, for example, include jumping rope, throwing a ball, short walks and runs or muscle exercise. One example is to jump a certain multiplication table with a jumping rope or walk 5 minutes and run back for the other 5 minutes.

Children's contact teachers instructed the ASK lessons and ASK breaks. The teachers could either search for activities for PAE lessons, PA breaks and the homework from an internet database (Sogn og Fjordane University College, 2015) or to develop and share their own activities with other teachers. The teachers were free to take account of local facilities and conditions when they implemented the intervention. Nevertheless, the researchers gave them some general guidelines.

2.2.1 The teaching and learning environment for the intervention

According to the intervention guidelines, the activities should be "varied and enjoyable for children (Resaland et al., 2015, p. 3)". In addition, they should be easy and differentiated in terms of motor and academic demands in order to ensure that all children could experience mastering the activities. Furthermore, the guidelines encouraged teachers to include a competitive element in order to inspire children to move in moderate to vigorous intensity. Nevertheless, at the same time the guidelines highlighted that teachers should tone down the winners and losers in purpose to ensure positive experiences for all children. Furthermore, the intervention guidelines emphasized the importance of effective organization such as use of permanent teams, clear instructions to children as well as a clear plan and routines on how to use and set out the equipment. Many of these points particularly targeted the PAE lessons. The guidelines were accessible for the teachers on the project website (Sogn og Fjordane University College, 2015). The findings in chapter 8 *Children's movement in PAE lessons and PA breaks* provide information on how children moved and what they experienced when they moved in these two settings.

2.3 Physical education as school subject

In contrast to the intervention activities designed for the research project, movement is the prime content in PE. The subject has also a long tradition in Norwegian schools. It has been a compulsory subject since 1936 and is regulated by the national curriculum. Throughout the years, PE has gone through several curricular reforms where the subject's main focus has changed. In the beginning, the objective was to raise decent citizens who would contribute to society. In 1974 the focus changed to

⁶ Examples on all these components can also be found in the ASK database (Sogn og Fjordane University College, 2015).

meeting children's need for PA; in 1987 to supporting children's personal growth and development and in 1997 further to learning children to be physically active (Directorate of Health, 2003). The operative curriculum LK06 from 2006 that was revised in 2012 highlights the general educational aims and the importance of lifelong activity;

Physical education as a general study subject shall inspire physical activity in all aspects of life and inspire lifelong enjoyment of being physical active. Physical activity is important for everyone as this fosters good health. The physical activity culture, such as play, sports, dance and outdoor life, is part of how we establish our identity in society and what we have in common. The subject shall stimulate physical use of the body to enhance individual sensing, experiencing, learning and creating. The social aspects of physical activities mean that PE is important for promoting fair play and respect for one another. (Directorate for Education and Training, 2015, p. 1).

These definitions show multiple perspectives to movement. They illustrate that the curriculum acknowledges the potential value of movement as well for children's physiological health as their identities and development. In addition, the curriculum highlights the social aspects of movement. Furthermore, Standal and Rugseth (2015) and Suominen et al. (2017) observe that inclusion of all children is a central value in Norwegian schools and thus also in PE.

In order to bring the general aims to a practical level, the curriculum for PE builds on a wide range competence aims where to be competent is defined as the ability to meet challenges and perform complex activities or tasks. Competence aims are scaffold to increase in complexity in successive grade levels (Directorate for Education and Training, 2015). During the 5th -7th grades, the curriculum states that among several points children are supposed to work towards being able to:

- Perform various physical activities that strengthen the body in different ways that promote stamina, coordination and other physical development
- [...]
- Comply with rules and principles for interaction and respect the outcome of the game
- [...]
- Experiment with physical expression and perform simple dances from different cultures
- [...] (p. 7)

These selected competence aims illuminate how teaching and learning in PE is planned to involve and support learning and development of as well physical, technical, social as expressive qualities. Suominen et al. (2017) point that in practice sporting techniques, sporting logic from competitive sports and weighing of fitness and vigorous activity often characterize teaching and learning environments in PE in Norway.

Furthermore, in LK06, the subject is divided in four main areas; "Physical activity in various environments and settings", "Sport activities", "Outdoor life" and "Exercise and lifestyle." On 5th grade, the curriculum places focus on "Sport activities" and "Outdoor life". Curriculum defines the first one to include a wide selection of sports, as well as dance and alternative physical activities and the latter one to be concerned with teaching children and young adults safe practices in nature and the value of visiting natural environments. According to Moen et al. (2018) ball games and exercise often dominate the teaching practices. Dance gets often increasingly less hours after 4th grade (Arnesen et al., 2017).

PE in Norwegian primary schools is organized in either two separate 45 minutes weekly units or one weekly double unit of 90 minutes. Schools have freedom to choose which alternative they prefer. It is typical in Norway that generalist teachers teach PE on a primary school level. Approximately half part of the teachers have credits in PE as a part of their education (Suominen et al., 2017).

2.4 Combining the intervention and physical education as research context

To underline central points from the preceding sequences, PAE lessons and PA breaks are designed to increase PA in school in purpose to support academic learning and improve children's health. From this perspective, amount and intensity of movement are central. In addition, the researchers emphasized positive experiences, variation and mastering for all children. They encouraged teachers to include competitive elements but to tone down that the movement sessions would be about winning and losing. Positive movement experiences, variation, mastering and competition were added with the purpose to motivate children to be *physically* active at a moderate or vigorous intensity. In practice, the PAE lessons combined movement with academic learning and PA breaks, according to their title, broke up academic lessons.

In comparison, PE is a curricular-based subject with educational aims and movement as the main area of interest. Lifelong enjoyment of movement and good health are central aims in the curriculum. However, these aims are complemented with a focus on development of children's identities, cultural and social aspects of movement, sensing, experiencing, learning and creating. Competence aims emphasize capacity to cope with challenges and to master increasingly more

complex and difficult movement tasks. Sport activities and outdoor life are the core content of PE lessons in the 5th grade.

This is to say, the intervention and PE base on different values and aims. The selection and organization of the activities in PAE lessons, PA breaks and PE is also different. Each of the settings create thus particular frames for children's movement and may further provide them with some different opportunities to move and to experience moving. On the other hand, movement is a central element as well in PAE lessons, PA breaks and as PE. In addition, all three sessions take place in school and are performed by teachers and the same children. Both differences and similarities of children's movement and experiences in each of the contexts is of interest here. In previous studies, the research interest is often to explore children's movement and experiences in either an intervention or PE as the following research review shows.

3 Research review

Movement and PA in general constitute a huge body of research and a knowledge field that branches into many different sub-disciplines (Tinning, 2010). Studies cover a wide range of scopes, aims, research questions and methods. Much of the research on school based PA interventions is quantitative and physiologically or cognitive oriented. This line of research focus on potential effects of PA. At the same time, a growing number of researchers aim to establish knowledge about children's movement as more than physiological act. Similar to my qualitative project, their focus is the moving subject. These perspectives are common within the field of PE and they have previously been examined by phenomenologically inspired researchers (Nilges, 2004; Smith, 2007; Standal, 2016; Evensen & Standal, 2017) and social scientists (Larsson & Quennersted, 2012) in particular. Furthermore, a number of researchers from different disciplines (Christensen & Prout, 2002; Morgan et al., 2002; Clark, 2005; Dockett et al., 2009; Theobald, 2012; Ulvik & Gullbrandsen, 2015) including PE and sports (O'Sullivan & MacPhail, 2010; Sandford et al., 2010; Borgen et al., 2017) stress that it is important to involve children in decisions and processes involving their everyday lives. Accordingly, there is a growing number of qualitative studies on children's movement and experiences in school-based PA interventions and PE. The studies take starting point in wide variation of perspectives and research questions, as I will show in this chapter.

3.1 Literature search

For the research overview, I conducted a primary literature search in Oria.no and a complementary search in Google Scholar. Oria.no is a search engine that covers a range of relevant databases including ERIC, DOAJ, Elsevier, Health Reference Center Academic, Taylor & Francis, Ingenta Connect, MEDLINE/PubMed, OneFile, ProQuest, SAGE Journals and Publications, Science Citation Index Expanded, Science Direct Journals, Social Sciences Citation Index and Wiley Online Library. Both Oria and Google cover a wide range of topics related to my interests and aims such as movement, PA, PE, primary education, pedagogics, childhood, health and well-being. In both Oria.no and Google Scholar I used different combinations of words (both in English and Norwegian): *physical education, physical activity*,⁷, *physical activity in school, physical activity school intervention, movement, primary school, elementary school, children, experiences, perceptions, perspectives, qualitative research, qualitative*

⁷ I have previously defined the difference between the concepts of *physical activity* and *movement* (see footnote 1). However, the literature research showed that concept *movement* is in "the shadow" regarding qualitative studies related to children's movement, resulting the concept *physical activity* being used in the literature search. Consequently, the concept "physical activity" repeats several times in the following. Despite this literary confusion, the studies included emphasize the moving subject – children – in different ways and thus relate to the concept "movement" and contribute to the base of research and knowledge that frame the thesis.

methods, affect and Spinoza.⁸ Combinations such as *physical education* and *physical activity* gave remarkably more relevant results than combinations with movement. *Movement* resulted only few matches and those mostly related to movement patterns and mechanics. Combinations with affect and Spinoza gave some matches on studies related to general education (Aloni, 2008; Dahlbeck, 2014, 2015; Gilbert, 2013; Watkins, 2006, 2008; Zembylas, 2007a, 2007b) and human development (Duff, 2010) as well as one peer reviewed article related to philosophy of sports (Kretchmar, 2010), but none addressing children's movement in school.

In the first round of the review, I selected promising articles based on titles and abstracts. Thereafter, I read all articles that according to their titles and abstracts seemed relevant before I decided to include or exclude them. I included studies that used qualitative methods, involved children in 4th to 6th grades (9-12 years) and that reported findings related to children's experiences and perceptions of school-based PA interventions targeting health and/or learning or ordinary PE. In the latter category, I included both studies that primarily explored children's experiences in PE and studies that in prime focused on PA or movement in general but also touched on PE. I did not include quantitative studies or studies that addressed particular curricular programs such as Sport Education or Teaching Games for Understanding or children with special needs only. Finally, I checked references from the included articles and book chapters for additional matches.

I identified four studies on children's experiences in school-based PA interventions. These are Naylor et al. (2006); Jago et al. (2015); Macdonald et al. (2014) and Harvey et al. (2018). In addition, I identified 16 studies and 1 book chapter on children's movement and experiences in PE. These are Wessinger (1994), Portman (1995), Groves and Laws (2000), Mulvihill et al. (2000), Burrows et al. (2002), Suomi et al. (2003), Nilges (2004), Gosling et al. (2008), Chedzoy and Burden (2009), Jago et al. (2009), Oliver et al. (2009), Lee (2010), Oliver and Hamzeh (2010), Dismore and Bailey (2011), Spencer-Cavalier and Rintoul (2012), Everley and Macfadyen (2015) and Parker et al. (2017).

3.2 Qualitative studies exploring children's experience on school-based physical activity interventions

3.2.1 Aims and scopes

Qualitative studies exploring primary school-aged children's experiences of school-based PA interventions are few, contrasting with a large number of quantitative studies which explore effects of the interventions in activity, fitness, health (Kriemler et al., 2011; Dobbins et al., 2013), cognitive and/or academic (Singh et al., 2012) variables. In comparison to four qualitative studies, Dobbins et

⁸ I included the words *Spinoza* and *affect* in the search due to the theoretical perspectives that I introduce in chapter 4 *Theories and concepts*.

al. identified 44 RCT (randomized controlled trial) school-based PA intervention studies that address the age group 6–18 years with minimum duration of 12 weeks by year 2011. Kriemler et al. identified 20 studies with the same criteria between 2007 and 2010. Singh et al. in turn identified 10 observational and 4 intervention studies exploring the relationship between PA and academic performance. In addition to being fewer in number than the quantitative studies, all but one of the qualitative studies explore and report children’s experiences as part of a larger project that also involves administrators, teachers and/or parents’ experiences. In their article, Macdonald et al. (2014) give equal space to children’s and teacher’s experiences, while Naylor et al. (2006) and Jago et al. (2015) give remarkably more space to teachers, principals and parents than to children’s perspectives. Harvey et al. (2018) focus only on children’s experiences. The contrast in volume of qualitative versus quantitative studies and designs of the qualitative projects indicate a sprouting interest for children’s own experiences in a field that is dominated by adults’ perspectives and quantitative measures.

The four qualitative studies relate to “Action schools! BC intervention (AS!BC)” in Canada (Naylor et al. 2006), “Active Kids Active Minds (AKAM)” intervention in Australia (Macdonald et al., 2014), “Active for Life Year 5 (AFLY5)” intervention in the UK (Jago et al., 2015) and “The daily physical activity initiative” (DPA) also in Canada (Harvey et al., 2018). All interventions were designed to provide children with additional opportunities to move in school. In AS!BC intervention the main arguments were to counteract obesity and physical inactivity among children while the aim of AFLY5 intervention was to increase children’s PA levels and consumption of fruits and vegetables. The AKAM intervention in turn, was designed in purpose to explore whether PA in school could promote learning. The DPA initiative had a multifaceted aim of, “to enable primary students to improve or maintain their overall health while enhancing their academic achievement, readiness to learn, behavior during instructions, and self-esteem” (Harvey et al., 2018, p. 2). Regarding to content, “AS!BC supported existing PE curriculum” and provided “additional physical activity opportunities [...] during the schools day” (Naylor et al., 2006, p. 414). One concrete example was 15 minutes daily PA in a classroom lead by the teachers. In AKAM intervention schools, children took part in PE, *Smart moves*, and AKAM classes. *Smart moves* was a political initiative that schools already took part in from before and which aim was to provide children with opportunities to play, sport and recreation, PE and active travel both within and outside schooldays. Within schooldays, the initiative allotted children 30 minutes daily PA. The AKAM intervention was designed to increase the amount further up to 60 minutes per day. The additional AKAM classes involved for example running, brisk walking, running games and continuous relays. AFLY 5 intervention included detailed lesson plans and parent-

child interactive components but Jago et al. do not describe the content of them. Harvey et al. do not specify the content of DPA initiative either.

The aim of all four qualitative studies is to evaluate the respective interventions and to inform of development of others. Naylor et al. write that their aim is to explore school administrators, teachers, students and parents' satisfaction with the AS! BC intervention and to identify facilitators and barriers to model delivery. Jago et al. state that their aim is to explore parents, teachers and children's responses to the AFLY5 intervention, their general views on healthy lifestyle promotion in schools and overall lessons learnt from the project. They suggest that their findings could be used "to improve the science and art of future physical activity interventions" (p. 947). Similarly, Macdonald et al. explore how teachers and students accepted the AKAM intervention. They ask in particular what kind of influence the AKAM intervention may have beyond the academic and physiological ones and if and how teachers and children would express "discourses of physical activity = academic achievement" (p. 438). With "physical activity = academic achievement" they refer to a belief that PA could contribute to improving children's academic achievements. Harvey et al. has the aim of exploring primary school-aged children's perspectives on facilitators, barriers, and recommendations for PA engagement at their school.

3.2.2 Contribution of the studies

All studies report similar findings. Based on interviews, Naylor et al. (2006), Macdonald et al. (2014) and Jago et al. (2015) report that the children in their studies experienced the interventions as positive and thought they were fun. Similarly, Harvey et al. (2018) show that enjoyment was one of the prime facilitators for children's engagement in PA in school. They mention also that several children hoped for more opportunities to be active in school. Naylor et al. and Macdonald' et al. highlight that individual children preferred different activities. Macdonald et al. in turn note that children linked their enjoyment (or lack of it) to intervention activities. They write that children told enjoying AKAM when they liked the intervention activities and not to enjoy AKAM when they did not like the intervention activities. Furthermore, Macdonald et al. notices that some children told that the intervention activities were easy for them while others struggled to keep up and felt sore and tired which limited their enjoyment. Harvey et al. show that "skill building" or accomplishing new activities made children feel happier whereas tiring easily, feeling unfit or less skilled than one's peers undermined children's engagement in PA in school. Furthermore, children both in Macdonald et al.'s and Jago et al.'s studies thought that the respective interventions could have been made even better by giving them more opportunities to choose the activities. Children in the study by Harvey et al. in turn experienced that the school environment generally limited their opportunities to engage in

PA. A recurrent theme was how teachers deemed and prohibited certain activities as “too dangerous” (p. 5).

Regarding intervention aims and influences, Naylor et al. (2006) reported that children felt that the AS!BC intervention had made them more active both in classroom, during school breaks and at home, and that the intervention made them feel healthier, stronger and happier and that they “tried harder” (p. 419). Similarly, children in the study by Macdonald et al. (2014) commented that they felt fitter than they had been before the intervention. In this study, the children also stated that they felt learning skills and game knowledge, which in their own words, increased their confidence. In addition, Macdonald et al. note that children associated intervention with fitness, PA and games. Many understood that the intervention was about making them healthy, fit or better in schoolwork. Compared to PE, children felt that intervention activities were more intensive. Harvey et al. (2018) mention that many children felt good about being engaged in PA, which they further perceived as a healthy thing to do. In addition, they report that children felt that they were “thinking clearly” (p. 4) and more ready to learn when they returned to the classroom after PA.

The studies provide an insight into what children might like/dislike in school-based PA interventions. In addition, they show how children themselves felt influenced by the above interventions. Nevertheless, the studies are few and leave many questions open such as how children move in these contexts and how their experiences vary. If, for example, children take the initiative to move or if they move according to the teacher’s instructions, what other feelings do they have beyond liking or disliking certain activities, and how are children’s interests and preferences met in the interventions? Within the field of PE, the amount of studies and spectrum of topics is wider. Yet, there is also more to learn about children’s movement and experiences in that context as well.

3.3 Qualitative studies exploring children’s experiences on physical education

As mentioned, I identified 16 qualitative studies and one book chapter based on a qualitative study that explore primary school aged children’s experiences in PE alone or as part of a more general exploration of movement or PA.

3.3.1 Aims, scopes and perspectives

The studies present a wide variation of scopes and aims. Wessinger (1994), Groves and Laws (2000), Nilges (2004), Goslinger et al. (2008), Lee (2010), Everley and Macfadyen (2015), and Parker et al. (2017) explore children’s experiences of movement, PA and/or PE. Nilges specifies her focus as movement meanings. Wessinger explores lived meaning of scoring when children play games in PE. Lee compares children’s meanings and experiences in PE with other movement contexts and

between children of different ages. Similarly, Parker et al. (2017) explore children's experiences of PE in relation to their experiences of PA outside school. In addition, several studies address in specific social aspects of movement and PE. Suomi et al. (2003) explore factors that influence children's social experiences either positively or negatively. Spencer-Cavalier and Rintoul (2012) focus on alienation understood as powerlessness, meaninglessness and social isolation. Jago et al.'s (2009) aim in turn is to establish knowledge of how friends and friendships may influence children's interest and engagement in PA. Furthermore, Mulvihill et al. (2000) examine factors influencing children's involvement in PA in general. Similarly, Oliver et al. (2009), and Oliver and Hamzeh (2010) examine girls' self-identified barriers to PA. Portman (1995), Chedzoy and Burden (2009) in turn target ability. Portman explores low-skilled children's experiences of PE while Chedzoy and Burden examine how children understand "doing well" or "not doing well" in PE. In addition, Dismore and Bailey (2011) ask what meanings young people give to terms fun and enjoyment and how these meanings relate to children's attitudes towards PE.

Alongside the variation of scopes and aims, the above studies also present a diversity of theoretical perspectives. Parker et al. (2017) support their study on social cognitive theory and thereby emphasize importance of investigating "triadic reciprocal influences of personal factors, behavior and environmental influences" (p. 4). Dismore and Bailey (2011) take a critical realist approach and stress an understanding that "the attitudes of children and young people towards physical education are an outcome shaped by a complex system of mechanisms and contexts" (p. 504). Chedzoy and Burden (2009), as well as Portman (1995) in turn, employ attribution theory and thus focus on reasons and explanations children give for their success and failures in various activities or tasks. Spencer-Cavalier and Rintoul (2012) build their study on theories and definitions of alienation. They understand alienation as an internal feeling that is influenced by external sources. Suomi et al. (2003) take an ecological perspective and emphasize importance of viewing children's motoric, cognitive and social development as a dynamic process. They specify their understanding as "the teacher/learner process in a broader societal context in which forces such as politics, economics, social morals, cultural values, legal mandates, and traditions influence attitudes, beliefs, expectations, and motivations of teachers and pupils, thus impacting the learning environment" (p. 188). Furthermore, Everley and Macfadyen (2015) make use of Bourdieu's concept of "capital" and ask how "physical, social and cultural capital are generated through participation in PA" (p. 2). Power relations and values children put on PA are of interest for them. Jago et al. (2009) build on self-determination theory which suggest that individuals have "three innate psychological needs; competence, relatedness and autonomy" (p. 2). They take a starting point in that in particular relatedness and competence and thereby friends may influence children's engagement in PA. Nilges (2004) and Wessinger (1994) are

inspired by phenomenology. Nilges explains that this involves an aim of contributing to “a better understanding of “essence”, or what it was like for participants to experience the phenomenon in question.” (p. 300). A central question for Wessinger is what meanings the experiences of scoring in a game situation have for children. Furthermore, Burrows et al. (2002) base their study on Foucault and discourses. Their focus is social constructions of health, what is possible for individuals to know or do under influences of certain constructions, and the power relations between different constructions. Oliver and Hamzeh (2010) and Oliver et al. (2009) position themselves within feminist, critical and post-structural theories. A central question for them is how race and gender influence children’s understanding of themselves and their participation in PA. Gosling et al. (2008) frame their study within participatory research. They emphasize importance of including children in research, employing “user-friendly” methods (p. 170) and letting children to influence the direction of research process. Lee (2010) states that her focus is the social structures such as class, gender and location of the schools. Groves and Laws (2000) relate their exploration to theories on experiences and meaning. They emphasize importance of letting children to express themselves in their own words. Mulvihill et al. (2000) are not clear about their theoretical perspectives. The variation of perspectives, aims and scopes projects further in a wide spectrum of insight that the studies provide into children’s movement and experiences of PE. On the other hand, several themes and topics also repeat across the studies despite the diversity of perspectives.

3.3.2 Contribution of the studies

One repeating topic is fun and enjoyment (or lack of them). Dismore and Bailey (2011), Lee (2010), Everley and Macfadyen (2015), Mulvihill et al. (2000), Suomi et al. (2003) and Parker et al. (2017) all report that the major part of children in their studies stated that they like PE. Dismore and Bailey suggest further that this may be because children of elementary school age simply find moving fun. This has support from Lee. Jago et al. (2009) present a complementary view. They argue that movement is an important part of children’s social lives. Nilges (2004) in turn states that children express movement in individual ways and can find meaning in movement at several levels including expressive, sensory, experiential, competency and intersubjective. By expressive level, Nilges refers to expressing oneself through movement and by sensory level to bodily sensations that one has when moving. Experiential level concerns recognizing familiar aspects in particular situations. Further, Nilges relates competency to feelings of being good and acknowledged by others. With intersubjective, she refers to interactions with others.

Furthermore, the studies show that beyond general enjoyment, children’s experiences or movement and PE varies according to a wide range of factors. Dismore and Bailey (2011) suggest that children’s enjoyment is linked to specific activities, locations, teachers and abilities. They specify that children

expressed a preference for activities with flexible rather than a rigid structure and that children liked best to play with different equipment on indoor lessons and running, freedom and being with friends on outdoor lessons. In addition, Dismore and Bailey found that children had negative experiences related to lack of choice and that they found repeating exercises or activities boring. The latter gets support from Spencer-Cavalier and Rintoul (2012), and Parker et al. (2017) who report similar findings. Spencer-Cavalier and Rintoul explain that the children in their study described certain activities such as “just running” as purposeless. According to them children thought that there was no reason for just running, it took time from opportunities to play and they felt not really learning anything from this. Similarly, Parker et al. state that much of children’s movement opportunities in PE were monotonous and repetitive, experienced by the children as boring.

Groves and Laws (2000) emphasize importance of feelings of freedom and meaningfulness. They suggest that freedom and meaningfulness may not only be a matter of content and organization of activities but also a matter of children meeting situations to which they can relate their experiences outside the school and what are familiar to them. Groves and Laws observed that children enjoyed PE when they identified themselves with activities and learning environments in a cultural sense. In contrast, children felt dislocated and uncomfortable when their personal values were in conflict with the cultural values that characterized the learning environment. Groves and Laws give an example of a child with competitive ambitions in an environment where teachers value co-operation. Correspondingly, several researchers highlight the importance of social factors and related feelings of acceptance, self-worth and competence for children’s enjoyment of PE. For example, Spencer-Cavalier and Rintoul’s (2012) study shows that to have friends and to take part in PE with them increased children’s enjoyment of the subject. Similarly, children in Mulvihill et al.’s (2000) study expressed that interaction with others increased their enjoyment of movement and girls in Oliver et al.’s study (2009) showed more interest for movement when they felt allowed to and invited to play by peers. Spencer-Cavalier and Rintoul write that children in their study told that feeling rejected or bullied decreased their enjoyment of PE. They specify further that children linked such feelings to low skill levels, which is apparent also in studies by Chedzoy and Burden (2009), Portman (1995), and Suomi et al. (2003).

Portman (1995) explains that children who she categorized as low-skilled experienced that their peers excluded or left them alone and that they received critical comments from their peers particularly in competitive situations. In addition, children referred to recognizing social hierarchies based on skill levels and felt that they received little assistance from the teacher. Portman reports related feelings of humiliation, frustration and embarrassment. Similarly, Spencer-Cavalier and Rintoul (2012) found that low-skilled children in their study experienced judgement by peers, ridicule

and were not selected for teams. Spencer-Cavalier and Rintoul report related feelings of little control and negative social experiences. Suomi et al. (2003) in turn observed that children in their study tend to group according to abilities when they could choose their partners freely. Children, who did not find a partner on such occasions, were consequently children who were less skillful in terms of motoric development, physical fitness and/or social abilities. Similarly, Suomi et al. observed that it occurred that these children were often excluded also in other situations which teacher did not observe. Jago et al.'s (2009) and Everley and Mcfadeyn's (2015) studies support these findings. Jago et al. argue that to be physically skilled, particularly in culturally desired activities, gives status among children. Everley and Macfadeyn add that physical skills bring along power for certain children to control others' access to collective activities.

Furthermore, several of the above studies indicate that to like or dislike PE is not equal to liking or disliking movement in general for children. For example, low-skilled children in Portman's (1995) study and girls in the studies by Oliver et al. (2009), and by Oliver and Hamzeh (2010) expressed that even though they seldom enjoyed moving in PE, they did enjoy it in a home environment. Portman explains that children in her study expressed that they felt less pressure to perform when playing in a home environment with friends. Similarly, Oliver and Hamzeh and Oliver et al. found that girls felt safer and more comfortable with themselves when playing in the leisure time with friends compared to a school setting. They did not need to worry about negative comments or getting physically hurt by boys. Correspondingly, Suomi et al. (2003) write that even children who struggled physically or socially mostly still enjoyed PE because of the accepting learning environments. According to Suomi et al., the environment was fun and safe since put downs, name-calling and making fun of others was not tolerated by the teacher. Parker et al. (2017) highlight that in a home environment children have more freedom to choose and regulate how to move and with whom compared to PE where the teacher controls the space and activities.

3.4 Summing up

To sum up, the studies outlined above provide an insight into several aspects of children's experiences with movement in school. Similar to qualitative studies related to school-based PA interventions, they indicate that children in general enjoy moving in school but that their experiences vary. The studies link enjoyment to many different factors such as variation, freedom and meaningfulness of movement as well as feeling physically able, being accepted and included by others, and gaining respect for one's own values. In particular, many of the studies highlight the social attributes of moving in PE. Furthermore, I mentioned initially that the studies present a wide variation of aims, scopes and theoretical perspectives. When one aims to determine, or understand

what to move means, there is always a perspective involved that forms the research process. I have chosen to use some aspects from Baruch Spinoza (2011) and affect theories (Seigworth & Gregg 2010) as a theoretical framework when approaching and analyzing children's movement and experiences in a school-based PA intervention and PE. The perspective has not been used previously in intervention studies or studies within the field of PE. However, there is a growing interest for affects within a wide variety of other disciplines (Clough, 2002; Seigworth & Gregg, 2010).

4 Theories and concepts

Seigworth and Gregg (2010) underline that there is no single theory of affects⁹, but that researchers and authors have used it in varying ways and purposes. However, they note that the researchers and authors who make use of affective perspectives share an understanding of human life and the world as complex and continuously changing fields of affective forces and relationships. Such perspectives provide a grasp on the empirical world where one understands children's movement in relation to other people, particular situations and environments and where movement has both active and passive aspects. Historically, Seigworth and Gregg (2010) as well as Clough (2002) associate the interest for affects to the modern era but its roots go far back in time. The branch of affect theories that I use as inspiration, for example, has its origins in the works of philosophers Baruch Spinoza (1632–1677) and Gilles Deleuze (1925–1995). I use elements from both the modern theories such as Seigworth and Gregg (2010) introduce them, translations of Baruch Spinoza's (2011) own texts and Deleuze's (1988) interpretations of the latter. I complement the theories further with phenomenological input from Smith (2007) who writes about children's movement as a relational phenomenon and Fuchs (2016), Fuchs and Koch (2014) who do the same with human sociality and human emotions. In particular, I use concepts affects and passions from Spinoza, "yet-ness" from affect theories (Seigworth & Gregg, 2010), "first rush of movement" and "landscape connection" from Smith and "bodily resonance" and "inter-affectivity" from Fuchs, Fuchs and Koch. These theories and concepts frame my understanding how children move and are drawn to move.

4.1 Baruch Spinoza and affect theories

To view Baruch Spinoza's ideas that he wrote in the 17th century in comparison to current affect theories reveals both similarities and differences. One central similarity is the understanding of human life and the world as a field of affective forces and relationships. Another one is interest for "passive" aspects of human life. Spinoza (2011) puts further weight on tensions between the passivity and activity. In addition, his theory of affects has a moralistic dimension. This involves questions of what is good and bad for a human being, how to live a good life and how to acquire states of happiness and freedom. (Spindler, 2009). Affect theories (Seigworth & Gregg, 2010) in turn underline a re-creative force of affects and the theories bring attention to how affects contribute to an ongoing movement in bodies and the world.

⁹ In everyday language, affections are understood as feelings or emotions and "to affect" is virtually synonymous with "to influence" or "to effect". Within the perspectives from which I work, they refer to fundamental forces that push and pull human and non-human bodies toward and away from each other. In other words, affects here are anecdotal to emotions and effects. Correspondingly, the definition of force refers to affects as powerful and something human beings can only sense on unconscious levels.

4.1.1 Baruch Spinoza, "affects and passions"

For Spinoza (2011), the world consists of human and non-human bodies that are related to each other and that have a capacity "to affect" and "to be affected" by each other. In other words, a reciprocal interplay where bodies both are influenced by and influence each other, particular situations and environments is central for his thinking. Spinoza adds that bodies can affect and to be affected in many different ways simultaneous. This can involve both being affected by many different other bodies or being affected in multiple ways by one single body. Further, he underlines also that the way a body becomes affected by another one is not causal. Thus, Spinoza's theory of affects stresses complexities and unpredictable aspects of human life.

Spinoza explains further that affections emerge when bodies encounter and can cause bodies to act or awaken feelings and ideas in them. Dahlbeck (2017) exemplifies, "we think through the encounters we experience" (p. 13) and thus "our beliefs, ideas and character are shaped by the external forces acting on us" (Kisner in Dahlbeck, 2017 p. 14). This is to say, in light of Spinoza, human ideas and acts always relate to certain situations, environments and the individuals relationships within them. How in particular a human being responds in a given situation, however, cannot be known in advance.

Affections are further antecedent to what a human being does, feels or thinks. Thus, when affected, human beings *are drawn* to feel, think and act in certain ways due to forceful sensations that emerge from their relationships or as a response to other human beings and the world around them.

However, the way a human being is affected is always also dependent on her or his own being, perceptions and understandings. Spindler (2009) underlines that for Spinoza, human beings are at the same time unique individuals and part of larger entities.

Furthermore, according to Spinoza (2011) human beings are unable to know the causes of their affects, but only the acts and ideas that follow from them. Affects and sensations are pre-conscious. Spinoza underlines, however, the importance of reason and self-knowledge and he devotes a central place to these in his philosophy. Spinoza writes about "adequate knowledge" and an opposing force of "passions." He understands adequate knowledge as a human being's capacity to act on reason and from needs of a situation in contrast to be drawn by passions. Passions here, can either concern being drawn by feelings, emotions and beliefs, or to rigidly and dutifully follow external instructions or abstract norms and rules. For Spinoza, the ultimate virtue of human life is to move towards an adequate understanding of oneself and the world, and thus to become increasingly able to take an active role in one's own life. In other words, to act on reason and needs of a situation. However, he stresses that human beings are "always passive to some extent" (Dahlbeck, 2017, p. 3). Their own

affections and external forces always influence their acts and ideas. Feldman (in Spinoza, 2011) explains that when passive human beings “*react*, not act” and are thus “not properly agents, but reagents” (p. 15). In other words, a central perspective in Spinoza’s thinking is a counterbalance between responding involuntarily on external forces and objects and understanding and thus being capable of choosing and regulating one’s own responses.

Due to the pre-conscious nature of affects, to learn to know one’s own passions and to become an actor in one’s own life is challenging. However, it is possible according to Spinoza. Accordingly, Dahlbeck (2015) describes Spinoza’s ideas as “a philosophy of self-improvement” (p 362), which he further suggests can serve as pedagogical ideal, also in our time. Affects, to be affected and to affect – are further corner stones also in affect theories that set the concepts in a contemporary context.

4.1.2 Affect theories and “yet-ness”

A central element in the affect theories is an understanding of human life and the world, in and with which human beings live, as complex fields of affective forces,. Accordingly, Seigworth and Gregg (2010) describe affects as intensities or forces and underline that they emerge between bodies. They write, “[A]ffect is found in those intensities that pass body to body (human, nonhuman, par-body, and otherwise), in those resonances that circulate about, between, and sometimes stick to bodies and worlds, and in the very passages or variations between these intensities” (p. 53). Further, they explain that from such perspective, “a body is as much outside itself as in itself” (p. 72). In other words, bodies are both individuals and bound to other bodies through their affections. Thus, central questions are how affects push and pull bodies in multiple directions and what happens between and with human and non-human bodies when they encounter each other. Due to the force of affects, bodies and the world are under a constant reformation or in other words about to “become” (Seigworth & Gregg, 2010). Accordingly, changes and variations of human life and relationships are central areas of interest in affect theories.

Central in “Deleuze’s Spinozian route” (Seigworth & Gregg, 2010, p. 114) in particular, is an interest for “yet-ness.” Yet-ness is a concept that derives from Spinoza’s words “no one has yet determined what the body can do” (Spinoza quoted in Seigworth & Gregg 2010, p. 75). Seigworth and Gregg comment that according to Spinoza: “a body is never defined by a body alone but is always aided and abetted by, and dovetails into the field or context of its force relations” (p. 75). In other words, what a body can do is dependent on its relation to other bodies and the context. In some relationships and contexts, bodies are empowered while they in others are disempowered.

In addition, Seigworth and Gregg identify “not yet knowing what the body can do” with an “unceasing challenge” and “a sense of urgency” (p. 80). They underline that there is no ultimate

answer to the question “what the body can do.” Affects draw bodies continually forward and towards ever new encounters. According to Seigworth and Gregg the power of affects lies in this movement, forward and toward. There is always a possibility of something different or something not expected to arise when bodies encounter other bodies. Encounters and relations are central elements also in Smith (2007), Fuchs (2016), and Fuchs and Koch (2014).

4.1.3 Complementary influences from some phenomenologists

Smith (2007), Fuchs (2016), and Fuchs and Koch (2014) all position themselves within phenomenology. Smith marks that Maurice Merleau-Ponty (1908-1961) in particular inspires him. His interest is children’s lived experiences of movement, embodied consciousness of the child, intentionality and relations with others and the world in a movement context. A central concept from Smith is “first rush of movement” which indicates that movement is a fundamental life force that arises out of landscape connection. Fuchs’ (2016) and Fuchs and Koch’s (2014) area of interest, in turn, is human sociality and emotions in particular. Fuchs views emotions as “encompassing spatial phenomena that connect the embodied subject and the situation with its affective affordances in a circular interaction” (p. 196). Correspondingly, Fuchs and Koch explore how bodily sensations influence human beings’ responses in certain situations and toward certain objects. Central concepts from Fuchs, Fuchs and Koch are “bodily resonance” and “inter-affectivity”.

4.1.3.1 “First rush of movement”

Smith (2007) exemplifies the perspectives of “first rush of movement” with a citation from novelist Margaret Atwood. The citation starts with Atwood (in Smith, 2007) memorizing how she as a child used to “go of the dock and wade in from shore, slowly, splashing water over [my] shoulders and neck” (p. 50). Atwood continues to describe how she felt the “cold climbing [my] thighs” and “the sand and the twigs and sunk leaves” under her feet. Further, when “diving and coasting along the lake floor with [my] eyes open” she could experience “distance” and her “own body blurred and eroding”. When diving, she could also see “the bubbles fleeing from [my] mouth” (p. 50). Smith theorizes that when moving in the water as a child, Atwood was “sensorially connected and responsive to the water”. In addition, he highlights the “delight of her motions”.

Accordingly, Smith (2007) emphasizes that children are “embodied beings who experience the world sensually, kinesthetically, and con-sensually” (Sheets-Johnston in Smith, 2007, p. 47). He uses this as a starting point to understand children’s movement, which according to him often emerges from connectedness to certain landscapes. He observes that what he calls “the first rush of movement”,

appears to be neither of my own volition nor a bodily imperative acting upon me. It is more an upsurge of feeling, literally a *rush* that comes over and flows through me [...] an unbridled enthusiasm for running, leaping, charging, diving, plunging into a landscape (and waterscape, seascape, firescape, airdscape) of action (p. 51)

Smith's words provide an understanding of a desire to move as an emotional, affective response to certain landscapes. An intense, bodily desire that rushes over and flows through a child and that draws a child to move in a certain way and to dwell on action and the landscape. Smith associates this further to "bodily immersion in movement." He argues that in the first rush of movement there is: "a fundamental animation of behavior, feeling, and thought that discloses essential connectedness to one another and to the world in which we live" (p. 49). Thus, the first rush of movement indicates presence and belongingness. In addition, it indicate movement that emerge and develop in certain contexts and situations. According to Smith, it is existential and developmentally important that a child experiences the kind of connectedness he associates with the first rush of movement.

4.1.3.2 "*Bodily resonance and inter-affectivity*"

Similar to Smith, embodiment and kinesthetic sensations are central also in Fuchs' (2016) and Fuchs and Koch's (2014) understanding of human sociality and emotions. One central concept for them both is "bodily resonance" which they define as subjects' affective engagement in a situation (Fuchs, 2016) and as "autonomic arousal and muscular activations" that "make us become *ready to act*" (Fuchs & Koch, 2014, p. 4). In other words, Fuchs and Koch explain that, "we are *moved by movement* (impression, affection) and *moved to move* (expression, e-motion)" (p. 4). As Fuchs and Koch underline, their understanding of bodily resonance has thus two dimensions; bodily sensations and engagement in a given situation *and* bodily readiness to action.

Fuchs and Koch associate bodily resonance further with affections and emotional perceptions. Regarding to the first dimension, the sensation and engagement in a given situation, they formulate, "being affected by affective affordances of a situation triggers a specific bodily resonance ('affection'), which in turn influences the emotional perception and evaluation of the situation" (p. 4). They provide an example, "the blushing and "burning" of shame" (p. 4). In other words, Fuchs and Koch highlight that being affected comes visible in an emotional, bodily response to a situation or an event. Fuchs and Koch continue that a specific bodily resonance further "implies a corresponding action readiness ('e-motion')" (p. 4). Action readiness may further cause a person for example, "hiding, avoiding the other's gaze, "sinking into the floor" from shame" (p. 4). If the affection is not forceful enough to initiate an act, according to Fuchs and Koch it may still lead to an expression.

Fuchs and Koch add that an expression indicates the individual's state and further opens up for potential actions to others, which points further to "inter-affectivity" and what Fuchs (2016) refers to as "a circular interaction" (p. 196).

"Inter-affectivity" is a central concept for both Fuchs and Koch (2014) and Fuchs (2016). Fuchs and Koch explain, "[O]ur body is affected by the other's expressions, and we experience the kinetics and intensity of his emotions through our own bodily kinesthesia and sensation" (p. 5). Accordingly, they divide bodily resonance along two more dimensions. These are self-resonance that provides feedback of one's own body postures, gestures and sensations on the one hand and interactional resonance that provides mutual feedback between two bodies on the other. Fuchs and Koch exemplifies the latter as "e.g. you lift your arms and I feel slightly "uplifted"" (p. 5). They explain further that the interactional resonance can occur both through visual, auditory, tactile and kinesthetic channels.

According to Fuchs and Koch, to be affected by another person's expressions and to feel the intensity of another person's emotions is further "the bodily basis of empathy and social understanding" (p. 5). Fuchs writes about "an intuitive understanding of others" (p. 195). To illustrate the point, Fuchs draws attention to an example related to human movement:

We may watch the performance of an acrobat on a high wire with a mixture of fascination and anxiety. Our lived body extends and connects with the acrobat's swinging movements; we may even be prompted to co-movements (p. 198).

The observer is bound to the situation and the acrobat through the fascination and anxiety he experiences. The fascination and anxiety in turn emerges from the observer connecting with the acrobat on a kinesthetic, bodily level. The observer is not only observing but he identifies with the acrobat's swinging movements. Correspondingly, Fuchs and Koch explain that emotions "are not only felt from the inside, but also displayed and visible in expression and behavior, often as bodily tokens or rudiments of action" (p. 5). Emotions have an "expressive" and "communicative" (p. 4) function, as they put it. Fuchs, Fuchs and Koch's understanding of bodily resonance and inter-affectivity and Smith's (2007) understanding of the first rush of movement together with affects, passions (Spinoza, 2011) and "yet-ness" (Seigworth & Gregg, 2010) are perspectives I use to explore how children move and are drawn to move.

4.2 To move and to be drawn to move

"To move and to be drawn to move" create a frame for understanding in particular affective and "passive" aspects of children's movement. The point of departure is Spinoza's (2011) and Seigworth

and Gregg's (2010) understandings of affects and affections such as introduced above. To underline some central points from their perspectives, "[A]ffect is in many ways synonymous with force or forces of encounter" that "can serve to drive us toward movement, toward thought and extension" as well as to "suspend us" or to "leave us overwhelmed" (Seigworth & Gregg, 2010, p. 54). Thus, one central aspect of to be drawn to move is sensations, forces and intensities that drive a child to act in certain ways in particular situations. Sometimes the sensations and intensities may be forceful. Other times affects are rather "subtle and shuttling" (Seigworth & Gregg, 2010, p. 58). Even when subtle and shuttling, they may be strong enough to push children toward to (or away from) movement.

Another central point is the "encounters". In accordance with Seigworth and Gregg (2010), who underline that affects emerge between bodies, Spinoza (2011) suggests, that bodies are "determined to motion or rest by another body" (p. 73). I associate these claims further with Smith's first rush of movement and Fuchs's and Fuchs and Koch's bodily resonance and inter-affectivity, which underline relational and affective aspects of children's movement, human sociality and emotions. The perspectives Smith, Fuchs, Fuchs and Koch outline, indicate that movement and social connection emerge from and develop following kinesthetic sensations and intensities that are (re)generated and interchanged when bodies connect with the world or encounter one another and particular situations. Thus, one may ask what happens with and between children when they move and decide how to move.

According to Hurley (in Deleuze, 1988), "[T]he environment is not just a reservoir of information whose circuits await mapping, but also a field of forces whose actions await experiencing" (p. ii). Hurley's words indicate that bodies, including human beings, are not only related to a number of other bodies, but that the relationships between bodies are also active and dynamic. Thus, to experience another body or the world requires one to take part or "to partake" as Hurley prefers to express it. Hurley continues to open up these perspectives by asking a question what "actions are we capable of experiencing?" (p. ii). He adds an example: "What is a walk in a forest (where the tick is waiting to experience us)?" (p. i). Hurley's words indicate that the world is a living organ and that to experience is a matter of action or active involvement. In a movement context, Smith (2007) writes about a child's "movements being sensorially connected and responsive to the water" (p. 50). When a child encounters water, an intensity or force emerges and takes the child who slips into the water and starts to swim. In other words, the child's encounter with and responses to the water happens on a sensorial embodied level and she or he experiences the water through moving in it. The child is drawn toward the water and toward to move. In addition, the water is not only an object of the child's perception but something to experience through action. Similarly, in Fuchs' (2016) example of the observer and the acrobat, the observer did not only watch the acrobat performing his art but

identified with the acrobats movements. She lived the situation together with the acrobat through the emotions awakened by her relatedness to the acrobat.

Another central aspect in Hurley's (in Deleuze, 1988) example above is that the manner in which human beings respond and experience is reciprocated in the manner in which the world responds to them. While a person experiences a walk in the forest, a tick simultaneously experiences her or him. Similarly, when a child swims, it is not only she or he who is drawn to move in the water but the child puts the water into a motion as well. Correspondingly, the affective perspective indicates that the individual's movements and experiences are relational and situated. Accordingly, Spinoza (2011) writes that to be affected involves "the nature of the affected body together with the nature of the body affecting it" (p. 74). The way the child is affected by the encounter with the water is partly dependent on his or her own nature, partly the nature of the water and most of all the composition of their own nature and the nature of the water. It is the invitation of the water together with the child's openness to the invitation that results to movement. Movement (or lack of movement) is always related to a particular situation and encounters. Seigworth and Gregg (2010) formulates, "affect is persistent proof of a body's never less than ongoing immersion in and among the world's obstinacies and rhythms, its refusals as much as its invitations" (p. 57).

What turns out to be a refusal and what is an invitation is further dependent on a body's affections. According to Spinoza (2011), things are never either good or bad in themselves but "it is according to his emotion that everyone judges or deems what is good, bad, better, worse, best or worst" (p. 126). He illustrates the point through an example; "Music is good for one who is melancholy, bad for one in mourning, and neither good nor bad for the deaf" (p. 153). Ahmed (2010) interprets that "feelings participate in making things good" (p. 401). From such perspective, to swim per se is neither good nor bad but the individual's experience of it is dependent on how she or he feels about swimming. Ahmed adds, "We move toward and away from objects through how we are affected by them" (p. 433). Duff (2010) applies this further to human development, which according to him is characterized by a search for encounters that affirm one's being and provide with feelings of joy and avoidance of encounters that contrast with one's being and create feelings of sadness. Human beings are drawn towards what they find enjoyable and pulled away from sources of discomfort. The affective perspective indicates that not all children may be drawn to the water and to swimming. The question is how an encounter with the water and swimming makes them feel.

Furthermore, Spinoza (2011) explains that: "The human body is composed of very many individual parts of different natures, each of which is extremely complex" (p. 76). He argues that a human being can affect and can be affected by other bodies in many different ways and in many different ways

simultaneously. This indicates that a variation of acts and feelings may emerge when a child is drawn to move or moves. Seigworth and Gregg (2010) suggest further that an affect involves both a promise and a threat; a promise in terms of potential joy or something new to become and a threat in terms of potential pain or misery. Such perspective indicates that to move and to be drawn to move may involve both feelings of pleasure and feelings of discomfort in varying combinations.

Finally, according to Spinoza (2011), human beings capacity to affect and to be affected is a changing state and preferably increases as the individual grows older and acquires more experience. He associates body's capacity to affect and to be affected with body's capacity to relate to very many other bodies in multiple ways. Duff (2010) converts this into a theory of human development as a "provision of new affective sensitivities and new relational capacities" (p. 619). In new affective sensitivities and relational capacities lies a potential for a human being to learn to understand himself and the world more adequately and from a multitude of perspectives. Following Spinoza, this would further increase the individual's capacity to act according to reason and the needs of a situation. In these terms, the affective perspective draws attention to children's capacity to perceive opportunities and to relate to other bodies as well as to a potential to improve in this capacity.

4.3 Using affective perspective to explore variation of children's movement in school

In summary, the affective perspective provides a grasp on the empirical world where one understands children's movement in relation to a number of other people, particular situations and environments and where movement has both active and passive aspects. In a school context in particular, children move together with their classmates and teachers. The particular environments here are the PAE lessons, PA breaks and PE. As shown in chapter 2 *Research context and environment for the ASK study* each of these sessions involve further a variation of activities and tasks. They base also on different aims and values. Consequently, many different persons, elements, objects and forces can potentially affect children when they move in school. In addition, individual children may be affected differently from each other and from situation to situation. The theories indicate also that children may not only be affected by what they encounter but that they may also affect one another and the construction of the PAE lessons, PA breaks and PE lessons. From an affective perspective, it is thus of particular interest how movement emerge and develop in each of the contexts, how children experience certain situations and their relationships to each other, to their teachers and other elements or objects and how situations as well as children's movement and experiences change and vary from situation to situation. These questions and the concepts affects, passions, yet-ness, first rush of movement, landscape connection, bodily resonance, inter-affectivity

and to move and to be drawn to move frame the analysis that I return to after the methods and design.

5 Methods and design

Qualitative methodologies are widely used within the humanities and social sciences. They are well suited to projects which aim to investigate social phenomena - here children's movement and experiences of movement in school. To examine children's movement and experiences as affective phenomena requires methods and analytical strategies that allow openness and flexibility to respond to changing situations, unpredictable events and variation of expressions, that the researcher might be exposed to. The use of qualitative methods indicates that the researcher wishes to find out what happens when one gives children freedom to choose their own words and provide with opportunities for not only verbal but also non-verbal ways of communication. Accordingly, the methods might open up for multiple and multifaceted interpretations from a rich data-material (Thagaard, 2013).

Central elements in qualitative research processes are relationships between the researcher, the participants and the context, closeness to data material and researchers' perspectives (Thagaard, 2013). Bengtsson (2014) writes: "what people say and do are not fixed 'things' to be observed but rather social action created in interaction with, and interlinked with, meaning and power in complex ways that the researcher inevitably becomes a part of" (p. 730). As Bengtsson's words highlight, in qualitative research, knowledge is produced in interplay between the different parts. Both the participants, the researcher and the context play a central role and influence the development of the research process (Thagaard, 2013). Several authors highlight further importance of dedication (Jackson & Mazzei, 2012) or emphasis (Thagaard, 2013) of the researcher. In addition, authors emphasize importance of reflexivity and transparency (Jackson & Mazzei, 2012; Koro-Ljungberg, 2016; Kvale & Brinkmann, 2009; Thagaard, 2013). They advise to make the circumstances where the knowledge is produced and one's choices throughout the research process visible for a reader.

Correspondingly, I have already introduced the research context and the theoretical perspectives. In this chapter, the focus is on the methodological perspectives, empirical context of the project and the participants. Central topics are how the material was produced in an interplay between myself, the children and the context, which methods I used and what happened when I met the children and followed them throughout the intervention period. First, one issue that influenced the choices and work throughout the process was the young age of the participants.

5.1 Exploring 10-year-old children's movement in school

The participants in the study were 10-year-old children who were in the 5th grade. Children of this age are young but just about to come into a phase of great change. Some of them have already commenced puberty; others follow each in their individual pace. Children are in the latter phase of

the primary school, which in Norway involves first to seventh grade. They are familiar with the school institution and PE through several years of experience. Yet, they have many years left. The school has a central place in children's everyday lives. In addition, children spent a lot of time at home with their families and friends, and in organized sports or other hobbies.

5.1.1 Children as "beings and becomings"

Uprichard (2008) notes that young children can further be understood both as "beings" and "becomings" in a world "that is also continually "being and becoming" (p. 304). In other words, children both live here and now and are about to become adults. Both processes take further place in a world that is under a constant change. These complementary perspectives stress temporality of childhood and the world. Accordingly, Uprichard discusses how place and time influence children's experiences and understandings of themselves. To illustrate her points she notes that children, for example, might see something favorable today while their opinion may change when they get older. She states that children have conflicting views and experiences about becoming older in a changing world. Furthermore, Uprichard associates the perspectives in children as "beings and becomings" to competence. She associates viewing children only as "becomings" to an understanding of competence as something a child acquires when she or he becomes older. Uprichard continues that viewing children as "beings *and* becomings" implies, in turn, an understanding of children as social actors who actively construct their own childhood, have their own views and experiences about being a child and are *both* competent and incompetent depending on the situation.

Corresponding with the perspectives Uprichard outlines, Borgen and Ødegaard (2015) stress importance of taking account of multiple perspectives when exploring children and their participation in as well as influences to contemporary cultures. According to them, "childhood can no more to be viewed as a one world within the world but as different, lived childhood(s)" (p. 5). In accordance with these perspectives, emphasis on encountering children as individuals and bringing out as well tendencies as exceptions, nuances and paradoxes in what children expressed and how they might influence constructions of PE, PAE lessons and PA breaks framed the fieldwork and analysis.

5.1.2 Young children as research participants

In a research context, a number of authors (Christensen & Prout, 2002; Mauthner, 1997; Morgan et al., 2002; Punch, 2002a, 2002b) emphasize that young children often feel uncomfortable or insecure when expressing themselves in the presence of an adult researcher. They associate this to unequal power relationships that is a particularly relevant issue when conducting research in a school context. The institutional structure determines hierarchical relationships and the teachers

traditionally control the learning environment and children's schedules. On this background, to build trusting relationships with children was one central consideration when designing and conducting the fieldwork.

Besides the unequal power relationships, Morgan et al. (2002) and Theobald (2012) point out that children and adults also live in different social worlds, and Punch (2002b) notes that children understand the world differently than adults. Punch (2002b) specifies further that children often have less experience of the world, communicate in different ways, have limited vocabularies and show interest in different details than adults. Ulvik and Gullbrandsen (2015), in turn, notice that "children make their interpretations within available cultural frames of reference; their interpretations do not come from 'deep inside'" (p. 216). This is to say, a number of studies indicate that children's expressions may not always open up so easily to an adult researcher who views world from another perspective. In addition, it may be difficult for children to communicate their experiences independently of social norms.

On the other hand, number of researchers show also that children are capable to express themselves in many different ways. Ulvik and Gullbrandsen (2015) comment that, "most children are able to tell about events in their everyday life". Accordingly, they suggest that, "[E]veryday life as a topic of conversation eases the communication with the child, and enables the co-construction of narratives, which are relevant for the child" (p. 222). Furthermore, they show that children communicate in many different ways. They provide an example of non-verbal vocalization and mention that a social and symbolic object such as food "can be expressive of feelings, thoughts, and relationships, and can be interpreted as such" (p. 215). Evensen and Standal (2017), in turn, show how disabled children communicate through movement and embodied expressions in a PE context. Correspondingly, the affective perspective underlines relevance of complementing verbal interactions with taking non-verbal and bodily dimensions of human communication into account in research with children as well.

Furthermore, these perspectives point to a question what kind of insight can be attained through research with children. Groves and Laws (2000) approach the question by problematizing the distinction between children's experience and a researcher's beliefs and interpretations of what children express about their experiences. They note that, "an individual's perception of events may differ from what is observed and therefore be deemed to be "untrue" by the outsider" (p. 21). They stress further the importance of the researcher's personal relationship with the individual children and the trust the children feel in them. In addition, Groves and Laws suggest that "[u]ltimately we need to accept that the child gives a representation of their "truth". (p. 21). Although the tone of

words “untrue” and “truth” is sharp in light of the perspectives of children as “beings and becomings” as well as the affective perspectives, the distinction between children’s experiences, how and what they express about their experiences and the researchers observations and interpretations is a central issue to consider. A related question is whether research with children can shed light on “children’s perspectives” or “perspectives on children” (Borgen & Ødegaard, 2015). In accordance with the understanding of children as “beings and becomings” and the affective perspective, I consider potential conflicting experiences, expressions and observations as an essential part of childhood and human life. However, I take also a critical, reflective stance to the process of data-construction, including the children’s expressions and my own role and perspectives. On the one hand, what children themselves said and did is the core of the thesis. On the other hand, the aim is to supply additional insight to the descriptive level of the material and I acknowledge that the particular circumstances, choices and perspectives influenced the process and the insight the findings provide. I will return to these points later in chapter 6 *Analysis and structure of the findings* that follows the selection of participants, progress of the research process and the methods as well as later in chapter 9 *Discussions and conclusions*.

5.2 Participants

In total, 57 schools took part in the ASK intervention study of which 28 were randomized in an intervention group (intervention schools) and 29 in the control group (control schools). In total 1129 children from these schools took part in the main study. I invited children from four schools (two intervention schools and two control schools) to the qualitative study. Ninety-eight children and their parents/guardians consented and I included 32 of them in in-depth interviews and observations. In addition to the children, I also interviewed and observed their contact teachers. All seven teachers consented to participate.

5.2.1 Choosing and contacting schools

I considered that it was manageable to visit four schools often enough to conduct several interviews with both children and teachers and to observe several PE lessons, PA breaks and PAE lessons. I included the two intervention schools and the two control schools in order to be able to observe potential differences and similarities between them. In addition, the selection of schools was based on differences in geographical location, school and class size, teachers’ educational background and years of teaching experience. The aim was to include a group of schools that would illustrate variation in schools in Sogn og Fjordane. Because of close relationships and co-operation between the university college and the closest elementary schools, I chose four schools within 1-2 hours’ drive in different parts of the county. The first two intervention schools and one of the control schools

volunteered without further consideration. Regarding the second control school, two schools did not want to participate due to pressure of other projects. The third school agreed, though hesitantly. Almost all children from the three first schools did return the parental consent. From the fourth school, only every fourth child consented.

The size of the schools and classes in the four schools varied. One school had fewer than 20 children in 5th grade, two schools had approximately 20 children, and one had more than 20 children. In two of the schools, the 5th grade had more than one contact teacher. All contact teachers in intervention schools instructed PA breaks and PAE lessons for their respective classes. One of the contact teachers in each school also had PE with children. One of the teachers was newly graduated while the rest had more than 10 years of experience. Four of the teachers had general teacher education of which one had specialized in PE, and one in arts and crafts. Two of the teachers had only education in sports or sports and PE, and one of the teachers had education in Norwegian, mathematics and social sciences. In addition to these selection criteria, the schools varied also in several other respects.

Two of the schools had a large gym hall while this was small in two others. One of the schools had its own swimming pool while the three other schools were dependent on bus transportation to a local swimming pool. One of the schools was located in the outskirts of a larger town, with a woody area right behind. Another was located on a cramped site between a lake and mountains while the other two were located between fjords and mountains. Furthermore, each of the schools had also its own character as I experienced it. At one of the schools, I experienced the atmosphere as tranquil and calm which made a contrast to bustle and flow of multiple, simultaneous events at another one. The third school was characterized by amount and size of sporting facilities and frequent appearance of themes relating to competition and competitive sports in both interviews and observations. At the fourth school, in turn, the principal and the teachers showed a consistent focus on creating inclusive learning environment and making the best out of small and limited facilities. In addition to these differences, the selection of PE and intervention activities varied somewhat from school to school. The children informed of somewhat different opportunities to choose what activities to do in their leisure time as well.

On the other hand, as outlined in the chapter 2 *Research context and environment for the ASK study* all schools were located in the same county and the same Western world society. In addition, in all schools, PE was regulated by the national curriculum (Directorate for Education and Training, 2015) and intervention activities were framed by guidelines from the researchers (Resaland et al., 2015; Sogn og Fjordane University College, 2015). Thus, each of the schools made a local context within the

overall context presented earlier. Within the common frames and under specific, local conditions, children and teachers performed the intervention, as well as PE, in their own ways.

However, I do not specify the different schools in the analysis but use particular situations and events from them to illustrate the variation of children's movement. I will explain later in the chapter 6 *Analysis and the structure of the findings*, how I developed themes and topics from the material and how I chose certain examples to illustrate them. In chapter 9.3 *Generalization of the findings*, I will further discuss how the knowledge constructed in these specific contexts may have relevance for other similar contexts. When necessary later in this chapter, I separate the schools as school 1, 2, 3 and 4. One central argument for not to specify the schools further is the aim of assuring the anonymity of participants.

5.2.2 Meeting children and establishing a group of participants

Similar to selection of schools, manageable but sufficient group size and variation of participants were central considerations when choosing children for in-depth interviews and observation. I took account of different movement interests and preferences, physical and technical abilities, and engagement in PE. In addition, I included both boys and girls. Of these selection criteria, ability and engagement in particular are subjective evaluations and thus difficult to define in a PE context involving many different activities and aspects. I asked PE teachers how they experienced individual children in this subject. I also followed one PE lesson in each school before selecting children. I noticed how some children ran faster or slower than others, and how some children engaged in activities while others struggled, did their own things or withdrew. Nevertheless, I found a single lesson too short to get an impression of how each child used to be in PE, and thus difficult to use as a systematic selection strategy.

In addition to discussing with the teachers and following one PE lesson, I interviewed all children, having obtained parental/guardian consent before the selection. I carried out the interviews in groups. I asked children to show me around the places where they use to move either in PE or school breaks and to explain how they usually moved or what activities they did. The aim was to get to know the children before the selection and to know the children's movement interests, PE practices and facilities in each school. I noticed some especially talkative or quiet children, and children who happened to say or do something extraordinary. Nevertheless, similarly to the single PE lesson I followed, I found that one group interview was too brief to get to know all children well enough such that this could be used as a systematic selection strategy.

In order to get something concrete to hold on to before the selection, I asked all 98 children who consented to the study further to draw a picture of something they liked very much in PE, and

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another picture of something they did not like or liked less in PE. I asked the children to complement their drawings with a short written explanation on their choices; 91 children were in school the days when I conducted the task and took part in it. Similar to what Punch (2002b) had experienced previously, I gained some personal information from a large number of children in a short time. The selection of children is primarily based on these drawings, writings and teachers' experiences of children in PE. Table 5 -1 and 5-2 illustrate two examples of children's drawings and writings accompanied with short descriptions on how I used them and the other strategies and criteria above to select participants.

Table 5-1. An example of selecting participants.



Gender	A girl	
Drawings <i>Left side: I like best in PE...</i> <i>Right side: I like least in PE...</i>		
Translations on children's explanations on why they like something best (left) or least (right) in PE	Best – capture the flag, because it is fun to run around and to play with others	Least – Frisbee because I don't quite get it
Reasons for why I selected the child in the in-depth interviews and observations	It is "fun to run" and to play together with others repeated in many drawings. Similar to many other children the girl relates not liking an activity to not being good at it. According to the girl's teacher, she is less active in PE.	

Table 5-2. An example of selecting participants.

Gender	A boy	
Drawings <i>Left side: I like best in PE...</i> <i>Right side: I like least in PE...</i>		
Translations on children's explanations on why they like something best (left) or least (right) in PE	Football is fun because I do it in my free time	Dance is boring because it is weird
Reasons for why I selected the child in the in-depth interviews and observations	Football was one of the most frequent activities in children's drawings across the schools. A boy not liking dance, in turn, follows a gender stereotype. In addition, the boy marked out during the drawing session by announcing aloud that he was going to draw dance. Several children in his class drew dance as something they did not like.	

As the last rows in the tables illustrate, I chose each child based on a different combination of strategies and criteria. I included children who chose to draw activities that many other children also drew and children who chose to draw activities only a few other children or no other child drew. Similarly, I chose both children who explained their likes or dislikes in a way that was repeated in many drawings and children who explained their likes or dislikes in extraordinary ways. For example, in addition to the above examples I included a girl who wrote that she liked to “dance because I move fast, do cool tricks and can tell and express myself ... I enter my own world and it feels so good.” In particular, to express oneself and to enter one's own world distinguished the explanation. To be able to compare what activities and explanations appeared frequently or seldom in the drawings and writings, I wrote down and counted the activities which were presented and in how many drawings. I did the same with explanations, only that I first grouped similar meanings together. For example, I placed both “I am not good at it” and “I don't quite get it” under the same label: “Do

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not like an activity he/she does not feel mastering.” Furthermore, I included both children who according to their teachers were usually active in PE, and children whose engagement often varied or who frequently withdrew.

On the first round, I included 12 children (6 boys and 6 girls) from the largest school. I divided them into three groups. In addition, I included 8 children (4 boys and 4 girls) from each of the three other schools, which I divided in two groups. After the first round of in-depth interviews, I reduced number of children in the largest schools to 9 (4 boys and 5 girls) since it was difficult to schedule sufficient time to interview three groups and 12 children individually in one school repeated times. In addition, I decided to continue interviews with only three of the girls from one of the other schools. I made this choice because the fourth girl went through some difficult issues not related to this study. After these adjustments, I ended up with a group of 32 children. The number of children in each school after the initial selection and the first round of interviews after the selection is presented in the following figure.

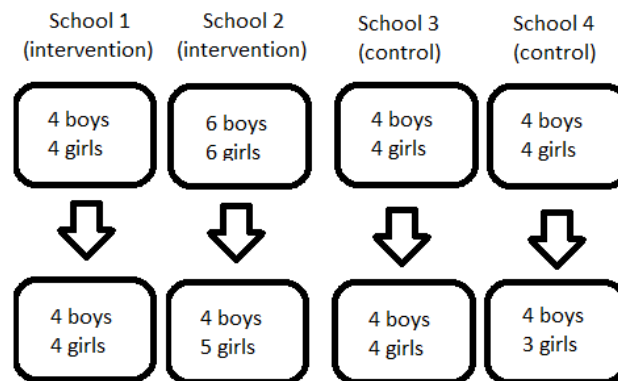


Figure 5-1. Number of participants on each school after the initial selection (the upper row) and first round of interviews after the selection (the lower row)

In purpose to both assure the anonymity of the participants and to stress that they were individuals, I gave pseudonyms to all children I interviewed. These are listed in the following table.

Table 5-3 Pseudonyms for the 32 children who I interviewed in-depth and observed throughout the intervention year

School 1	School 2	School 3	School 4
Emma	Ellen	Amanda	Silje
Thea	Sara	Mari	Kaja
Emilie	Julie	Line	Anna
Hanne	Ida	Maja	Tobias
Petter	Ingrid	Andreas	Niklas
Daniel	Jon	Elias	Alex
Sander	Jonas	Thomas	Lucas
Edvard	Kristian	Simon	
	Ola		

As the tables 5-1 and 5-2 already indicated each of these children had their own interests, preferences and experiences. In addition, they had their own ways of being too. For example, Thea was usually outgoing and reflected. She gave many long answers and explained often her thoughts in detail. Jon, in turn, was often short in words. Kristian appeared reserved in the interviews. Petter talked eagerly about exercise whereas Julie often took up friends or moving together with others. Thomas was often quick when he moved. Jonas was not in particularly quick but he was usually committed to what he did and often continued to move after the other children had gone or lost interest. Elias often found his own way to move when he waited for instructions from the teacher. Furthermore, Simon often stood together with a group of boys whereas Sander frequently stood alone or came to lessons after all the other children. In other words, such as in any school class, children presented a great diversity.

Furthermore, such as it is natural for children, each of them showed also a variation of responses and expressions from situation to situation and time to time. For example, Emma often stood or sat with a blank look on her face in intervention sessions and PE lessons while it also happened sometimes that she spurted over the gym hall or gave into a dance with a smile on her face. Maja, in turn, seemed often almost to fly over the gym hall or a sporting field when she ran with long, easy steps while she rather dragged after her feet when running around the track in one rainy day in a late

spring. As I will return to in chapter 5.4 *Multiple methods*, children responded also differently to the methods I used. This is to say, corresponding with the perspectives of children as “beings and becomings” and the affective perspectives the participants were not only unique but also complex individuals with changing and varying interests, feelings, moods, responses and expressions.

As I will return to in chapter 6 *Analysis and the structure of the findings*, what individual children said or did is more important in the analysis than the question who. Similar to what I wrote about the schools, I use examples from individual children to illustrate themes and topics that are central in relation to the particular research questions. Different to schools, I however, use the pseudonyms when I cite or refer to children in chapters 7 *Children’s movement in Physical Education* and 8 *Children’s movement in PAE lessons and PA breaks*. The aim is to enliven the examples and to distinguish individuals in examples that involve several children.

Furthermore, not all 32 pseudonyms appear in the themes and topics in chapters 7 and 8; some pseudonyms appear more often than others and I also refer to one girl whom I call Sandra and who is not in the above list in one field note. She did not participate in interviews but consented the study. As I will return to in chapter 6, I have chosen certain examples because they illustrate particular well themes that are relevant in light of the particular research questions and the context. In other words, each of the examples refer to something interesting in the material as whole. This involves further that I have taken account of expressions of all children in the analysis and thus each of them has made a valuable contribution to the production of knowledge regardless of whether their pseudonyms appear in the examples or not. After establishing the group of 32 children, I continued to interview them and followed them in PE, PAE lessons, PA breaks and PAH throughout the school year.

5.3 Scheduling field work

I conducted the fieldwork during the intervention year 2014/2015. I set time for 5 periods of 1 to 2 weeks for additional interviews and observations in each school. I scheduled two of these periods before the Christmas break and three after. The first period (see visit 2 in the table 5-4 below) took place around the beginning of the intervention in November 2014, and the last one immediately before the intervention conclusion in June 2015. During each period, I interviewed children either in groups or individually and followed them and their classes in PE, PAE lessons, PA breaks and/or PAH. Distribution of interviews and observations was as follows:

Table 5-4 interviews with children and observations organized according to schools and month.

School 1 (intervention)	Visit 2 (Oct.-Nov.)	Visit 3 (Nov.-Dec.)	Visit 4 (Jan.-Feb.)	Visit 5 (March)	Visit 6 (May)	In total
<i>Interviews</i>	2 group interviews	2 group interviews	8 individual interviews	2 group interviews	7 individual interviews*	6 (g) + 15(i)
<i>Observations</i>	1 x PE	3 x PE 3 x PAE 1 x PA br 1 x PAH	1 x PE 1 x PAE le	3 x PE 3 x PAE 1 x PA br	1 x PE 1 x PAE	9 x PE 8 x PAE 2 x PA br 1 x PAH
School 2 (intervention)	Visit 2 (Oct.-Nov.)	Visit 3 (Nov.-Dec.)	Visit 4 (Jan.-Feb.)	Visit 5 (March)	Visit 6 (May)	In total
<i>Interviews</i>	3 group interviews	2 group interviews	9 individual interviews	2 group interviews	9 individual interviews	7(g) + 18 (i)
<i>Observations</i>	3 x PE	5 x PE 3 x PAE 1 X PA br 1 x PAH	3 x PAE 1 x PAH	5 x PE 1 x PAE	5 x PE 1 x PA br	21 x PE 4 x PAE 2 x PA br 2 x PAH
School 3(control)	Visit 2 (Oct.-Nov.)	Visit 3 (Nov.-Dec.)	Visit 4 (Jan.-Feb.)	Visit 5 (March)	Visit 6 (May)	In total
<i>Interviews</i>	2 group interviews	2 group interviews	8 individual interviews	2 group interviews	8 individual interviews	6 (g) + 16 (i)
<i>Observations</i>	1 x PAH	4 x PE	3 x PE 2 x PAH	2 x PE	1 x PE	10 x PE 3 x PAH
School 4(control)	Visit 2 (Oct.-Nov.)	Visit 3 (Nov.-Dec.)	Visit 4 (Jan.-Feb.)	Visit 5 (March)	Visit 6 (May)	In total
<i>Interviews</i>	2 group interviews	2 group interviews	7 individual interviews	2 group interviews	2 group interviews**	8 (g) + 7 (i)
<i>Observations</i>	2 x PE	2 x PE 1 x Røris***	6 x PE	2 x PE	1 x PE	13 x PE 1 x Røris

Notes: PAE = PAE lesson; PA br = PA break; PAH = physical activity and health *. As already pointed out, one boy did not wish to take part in this particular interview **It was difficult to fit children's schedule with mine at this point, so I decided to interview the children in groups instead of individually in school 3 ***Røris is a Swedish dance concept for schools. Here all classes from school 3 gathered in the gymnastics hall and participated in "Røris" together.

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The table lists 27 group interviews, 56 individual interviews, 53 PE lessons, 12 PAE lessons, 4 PA breaks, 6 PAH lessons and 1 “Røris”-unit. Together with 17 group interviews, 6 PE lessons and 91 drawings and writings from the establishing phase, my empirical material thus includes a total of 34 group interviews and 56 individual interviews with children, 76 observational units, and 91 drawings and writings. Transcriptions, including both the above interviews with children and the complementary interviews with teachers make approximately 2000 pages.

In addition to children, I interviewed six of the contact teachers four times and one three times. Three of them were males and four females. The reason I only interviewed one of the teacher three times is that we did not find time for the fourth interview. The teacher was somewhat hesitant concerning taking part in interviews throughout the whole school year, so I was careful not to push too hard to fit in the interview either. All but one interview with teachers was individual. The only exception was the last interview in school 2 where I interviewed two teachers together on just one occasion. It was more difficult to fit interviews into teachers’ schedules than was the case for the children. Consequently, interviews were more dispersed as the following table illustrates.

Table 5-5 Interviews with teachers organized according to schools and month

	Sept.-Oct.	Nov.-Dec.	Jan.-Apr.	Apr.-May	<i>In total</i>
School 1 (intervention)	2 individual interviews	2 individual interviews	2 individual interviews	2 individual interviews	8 (ind)
School 2 (intervention)	3 individual interviews	3 individual interviews	2 individual interviews	1 individual + 1 group interview	9 (ind) + 1 (gr)
School 3 (control)	1 individual interview	1 individual interview	1 individual interview	1 individual interview	4 (ind)
School 4 (control)	1 individual interview	1 individual interview	1 individual interview	1 individual interview	4 (ind)

As the table shows, I have material from a total of 25 individual interviews and one group interview with teachers in addition to ones with children. I do not provide any personal details on the

individual teachers in purpose to assure their anonymity. When I cite them later, I use the noun “teacher” or “he.”

5.4 Multiple methods

As the above tables already have shown, the fieldwork involved multiple methods; drawing and writing, interviews and observations. Each of the methods has its own special character, strengths and limitations. Accordingly, I included them for different reasons and they required particular considerations throughout the process. The combination allowed children to express themselves in varying ways, and led to a multifaceted data-material.

5.4.1 Drawings and writings

The first method, drawing is often used in research with children. Similar to my study, many researchers who have used drawings – and in particular, those who have used it in relation to movement – have combined it with other methods (Anthamatten et al., 2012; Coates, 2002; Coates & Coates, 2002; Georgakis & Light, 2009; MacPhail & Kinchin, 2004; Mitchell, 2006; Mowling et al., 2006; Parker et al., 2017; Solmon & Carter, 1995; Yuen, 2004). I chose to include drawings because I reasoned that as a non-verbal way of communicating it could open up some interesting perspectives on children’s movement. A number of authors emphasize that movement is also a fundamentally non-verbal (Parviainen & Aromaa, 2015; Smith, 2007; Standal, 2016) phenomena. Other authors show that non-verbal expressions are central in human communication (Alerby, 2015) and that a variety of explorative methods could be beneficial when working with children (Ulvik & Gulbrandsen, 2015).

I reasoned that in particular a drawing and writing task could be a comfortable way for children to get used to the research process. Yuen (2004) writes that she has successfully used drawing as an “icebreaker” in focus groups with children. Mitchell’s (2006) experience is that drawing is a non-stressful way of getting to know each other in research with children. MacPhail and Kinchin (2004) in turn point out that children in their study enjoyed drawing as part of the research. In my study, a major part of the children appeared engaged when they were drawing, and several commented later that they liked the task. Other children stated that they just drew something quickly because they wanted to do something else. For example, in one school many children were eager to continue with their own drawings that they had started while they waited the lesson to begin.

Since other researchers (Coates, 2002; Coates & Coates, 2006) have shown that drawing and conversation are often closely related tasks for children, I would ideally have asked children to talk about their drawings while they drew, and to have paid more attention to how individual children

interacted during the drawing session. However, due to numbers of children, this was overambitious and thus I asked the children to write short explanations on their choices instead. The task I gave for them was as follows.

Draw something that you like very much about PE and something that you do not like or like less about. Write also a short explanation stating why you do like or do not like in particular the things you choose to draw.

I added that the “something” could be an activity or a special occasion that had made them especially happy or sad.

In cooperation with contact teachers in each school, I scheduled one regular 45-minute lesson for the drawing–writing task. Following my instructions most of the children in all four schools quickly started to draw something they liked about PE, indicating that they had no trouble with this aspect of the assignment. Some other children wriggled on their chairs and looked confused but started to draw after the teacher or I repeated the instructions. However, many children seemed to find it more difficult to draw something that they did not like and to write explanations. At all four schools, several children asked for help with these tasks or provided relatively superficial explanations such as “because it’s fun” or “because it’s boring.” In the drawing sessions, both the classroom teachers and I attempted to help children who struggled to write explanations by probing and asking about more about their experiences in PE. In some cases, this led to longer explanations. In other cases, children were not able or willing to write more. The length of children’s writings varied remarkably, so also did the motives and drawing styles. After the children has finished, I collected all the drawings and writings. In accordance with the ethical standards in the project, I coded them to ensure anonymity and stored the originals in a locked filing cabinet. I also scanned copies that I stored on a secured database.

Drawings and writings challenged my curiosity due to variations and expressiveness and inspired me to learn more about children’s experiences related to movement in school. I used the drawings and writings later also as inspiration and stimulating material in following interviews.

5.4.2 Interviews

Interviews are frequently used in research in many disciplines, both with children and adults (Clark, 2005; Kvale & Brinkman, 2009; Parrish et al., 2012; Thagaard, 2013). I chose interviews due to the central role of verbal language in human communication. I reasoned that many children could be familiar and willing to express their thoughts and ideas about movement in words. As already described, I interviewed children four times in groups and twice individually, and teachers four times

individually with the few exceptions that I noted earlier. Except for one interview on the first round, I conducted all group interviews with children in gender-specific groups because I thought it would be comfortable for the children and because I wanted to see if there would be any differences in boys' and girls' experiences, or ways to talk about their experiences.

I conducted all interviews during the school days. I scheduled them in co-operation with contact teachers and used free group rooms or classrooms. Interviews lasted from 15 to 45 minutes. Group interviews lasted longer on average than individual interviews; individual interviews with teachers lasted on average longer than individual interviews with children. I conducted most of the interviews alone, but my supervisors attended one or two interviews on each school. Afterwards, I transcribed all interviews verbatim and stored both the transcriptions and audio-recordings in a secured database. Similar to the drawings, I used codes and pseudonyms to anonymize the material. In addition to transcriptions and audio-recordings, I recall many sequences and situations from interviews. According to Kvale and Brinkmann (2009) to transcribe interviews, involve taking them out of the original situation and transforming oral language into written language. They claim that transcription are thus always deconstructions of conversations. Hence, I consider my experiences and memories important when analyzing the interviews as contextual and situated.

Furthermore, I used semi-structured interview guides (Kvale & Brinkmann, 2009). In other words, I prepared themes and questions in advance but did not always present them in the same order. In addition, I often probed further points that children took up but which I had not thought of in advance. I relied more on structure and interview guides in the first interviews while those conducted toward the end of the school year were more open. In the later interviews, I used more time to ask children to describe their experiences in more detail, and asked more about themes and topics children took up. In both individual and group interviews, I emphasized open questions. Especially in individual interviews, I often asked children to describe and to explain their ideas and thoughts more in order to encourage nuanced and varying descriptions. In the group interviews, I encouraged the children to discuss with each other corresponding to the perspectives from focus group interviews (Darbyshire et al., 2005; Morgan et al., 2002).

Some central themes and topics in interviews were¹⁰; what children did in PE and PAE lessons and PA breaks, and how they experienced moving in these settings and how they used to move or what activities they used to do on their free time. In addition, I asked children why they liked or did not like to move, which activities they liked or did not like and how was it for them to do their favorite activities or activities they did not like. Other topics covered how it was for children to learn new

¹⁰ See interview guides for both children and teachers in appendix.

movements and activities, and whether they felt that they were learning something in PE, PAE lessons or PA breaks. In some occasions, I searched inspiration for themes and topics from theories and previous studies while in particular in the later interviews I used drawings and writings, previous interviews and observations to develop further themes and topics.

As seen in table 5-4, I started the interviews with children in groups. I made the choice based on researchers (Horowitz et al., 2003; Koekoek et al., 2009; Parrish et al., 2012) who suggest that many children may be more relaxed and comfortable to talk with an unfamiliar adult in a group setting as they can find support from their peers. In practice, I experienced that children were often more open to sharing their experiences and thoughts in individual interviews than in group interviews. Hill et al. (1996) have similar experiences. They report that children gave more “measured” (p. 141) responses in individual interviews than in group interviews. Hill et al. notice: “peers can often be supportive, but also have potential to hurt” (p. 140). Similarly, Morgan et al. (2002) point out that in a group situation children may be particularly reluctant to talk about topics that are not socially accepted. These findings indicate that an individual interview may be a socially safer setting than a group interview. In addition, one girl I interviewed mentioned that she preferred individual interviews because she had my undivided attention and no other children could interrupt her. Another girl pointed out that she would preferred being interviewed in pairs and to be together another girl who often agreed with her. However, when I started with individual interviews I had already interviewed children three times in groups and thus do not know how individual interviews would have worked in an earlier phase.

My experience was that many children were somewhat tense in the beginning of the interviews. Children walked or sat stiffly, responded in short words and generally answered the questions one by one in contrast to conversing with each other. After the first interviews and visits, I experienced that the atmosphere generally became more relaxed. Most of the children showed less tension and came with somewhat longer answers. This varied between answering the questions and conversing with their peers. As already pointed out, it may have been that the children became more familiar with the research project and myself. At the same time, I also structured the interviews more openly towards the end of the research process as mentioned. I became more confident in the role of a researcher and found that asking more about children’s concrete experiences with movement, PE and ASK activities often led to long and nuanced descriptions.

Furthermore, I experienced that there were remarkable individual differences and that the group composition could make a difference to how children expressed themselves. For example, in one of the first group interviews, I noticed that two children were relaxed and talkative from the very

beginning while two other children were mostly silent throughout the whole interview. Later, I placed these children into other groups where both of the talkative children became much quieter than in the first interview. One of the “silent” children took increasingly to words as the interview proceeded and the fourth child remained silent as well in group interviews as in individual interviews throughout the whole interview process. Similarly, Hill et al. (1996) found that in their study some children were reserved in group interviews while other children were reserved in individual interviews. Hill et al., as well as Punch (2002a; 2002b), highlight that children’s individual preferences for different methods vary. I share their experience. In addition, I share the experience of Horowitz et al. (2003) that an “ideal group atmosphere cannot always be created” (p. 328). As the above example shows, some situations resulted in certain children to come forward while other situations affected other children. Who will be affected and how, is difficult to know in advance.

Corresponding with the above notions, I have different amount of interview material from different children. In addition, the notions show that what children said of left unsaid in the interviews is partly dependent on the situation and their relationships to one another and to me as researcher. However, the material from both group interviews and individual interviews is extensive and represent a variation and multitude of expressions and experiences, which was important in light of the research questions and for the analysis. I conducted all interviews in Norwegian. The citations later in chapters 7 *Children’s movement in Physical Education* and 8 *Children’s movement in the PAE lessons and PA breaks* are my own translations.

In addition to alternating between group and individual interviews I introduced a further variation in interviews by using tasks and stimulating material in both settings. One stimulating material was children’s own drawings and writings.

5.4.2.1 Using drawings and writings as stimulating material

Children’s drawings and writings have been used in interviews by several researchers (MacPhail & Kinchin, 2004; Parker et al., 2017). I brought children’s drawings with me to the second group interviews (visit 2 in the table 5-4) and the first individual interviews (visit 4). In the group setting I asked the children whether they still recalled the day when they made the drawings and what they thought when they got the task. All children answered that they remembered the task but only few of them could explain what they had thought. Most of the children repeated either what they had drawn and written or said that they did not remember what they had thought. In one of the schools, several children hesitated about showing their pictures to others. I told them that they did not have to show them if they felt uncomfortable. At the same time, I emphasized that it is okay to have different preferences and reminded them that drawing abilities were not the focus of the task. Since

responses in the group interviews were short and several children seemed somewhat uncomfortable when showing and discussing their drawings and writings in front of others, I decided to give another try later in the first individual interviews.

The first individual interviews took place several months after the drawing task, so I asked if children still remembered the task. I wondered whether they would still choose to draw and write the same things. Most of the children said that they would still draw and write the same things. A few stated that they would have chosen another activity. Many of these children said that they actually liked swimming most, but that they had not been sure if they could choose it¹¹. Furthermore, I asked more about the activities children had chosen to draw. My intention was to learn more about how children experienced doing activities they liked in particular well or disliked. To ask about the activities they had drawn, resulted in many detailed descriptions of how it was for children to undertake activities they liked and what they felt when they did activities they did not like.

In addition to using the children's own drawings as stimulating material, I drew one picture myself and used it to encourage conversation in second group interviews. I told the children that the picture was drawn by an imaginary child, Per, who liked gymnastics best and football least in PE because he was good in gymnastics and not so good in football. I chose the activities and explanations based on the children's own drawings and writings. I asked them what could make Per think that he was good in gymnastics or not good in football and how it would be for Per to be a pupil in their class. The purpose was to encourage children to express diverse meanings through a neutral example and to hear more about topics that had been repeated in drawings and writings. The children came with many different responses to my questions. Most were general since children mostly talked about Per. However, it happened sometimes that children started also to talk about themselves or their PE lessons. Sometimes I questioned or probed further whether the children's comments about Per concerned themselves or PE at their school. Many children seemed engaged when they made suggestions how it might be for Per to move into their class. Nevertheless, I experienced that the task provided little new insight or topics to explore further. After the drawing tasks, I tried out a movement with children in one group interview.

5.4.2.2 Trying out a movement with children

I thought that trying out a movement together with children could reveal an interesting insight into how is it for them to move. I chose an exercise where we stood on one foot and drew the number "8" in the air with the other foot. During the task, I asked the children where, for example, in their

¹¹ In Norway, swimming is part of PE but in children's schedules, it is often given title "swimming" unlike other lessons that are marked as "PE".

body they felt the exercise, what they thought they were training, if they had ideas on how to make the exercise easier or more difficult, and how was it for them to do the exercise in general. Almost none of children had tried the exercise before which gave an opportunity to ask how it was for them to try to learn new things and if they were accustomed to learn some new movements or activities in PE. The task showed that many children were able to talk about what and how they felt in their bodies when they moved. In addition, it demonstrated creativity and an interest in exploring movement. However, the task was short and only gave little material.

When I asked afterwards, the majority of children answered that it was fun to try the exercise. I varied between taking the task at the beginning, the middle, and the end of an interview. Especially when I took the task in the middle of or the end of an interview, I experienced that many children became more involved and a bit more alert compared to just sitting and talking. Similarly, Morgan et al. (2002) found that varying and using tasks in interviews could break up a routine and assist in keeping the children interested in the research process and in single interviews. As an afterthought I see also that doing more things and movements together with children could potentially have brought up many more interesting perspectives of affective and relational aspects of moving. Nevertheless, the task and procedures need to be developed further. Finally, I used video as a stimulating exercise in the last round of interviews.

5.4.2.3 Using video as stimulating exercise

Video-recordings are commonly used in research with children in varying ways. Buchwald et al. (2009) asked children to keep a video diary whereas Morgan (2007) used video clips to stimulate children's recall of classroom situations. Theobald (2012) used video to encourage conversations in interviews. Similar to Theobald (2012) I used video recordings as stimulating material. During the second last visit (visit 5 in the table 5-4) to the schools, I filmed one or two PE lessons and one to two PAE lessons at the intervention schools. I edited a short clip of approximately 3-6 minutes on each child and showed her or him the video clip in the last interview. In three of the schools, I used individual interviews, and group interviews in one school. Two of 32 children did not want to be filmed. I respected their wishes and conducted the last interview with them without the video clip.

I introduced the video clip in interviews by telling children that they could comment while the video was being shown or that we could talk about the clip afterwards. A few children came with short comments while it was being shown; for the most part the children either watched the clip in silence or laughed briefly occasionally. I asked how it was for children to see themselves on the video, whether they recognized themselves and if they thought that the video clip gave a realistic picture of them in PE and ASK lessons. In addition, I asked if the children remembered the lessons and could tell

me more about how the lessons had been for them. All the children replied that it had been a bit strange to see themselves in the video. Nevertheless, almost all the children also said that it had been fun or at least okay. I continued to probe them about their experiences from the lessons in the video clip. On the other hand, one boy seemed uncomfortable when he saw the video clip. He sat tense and quietly with an expressionless face throughout the whole clip. When I asked him about the video, he responded very briefly. I tried couple of different questions and waited a bit in between to give him time to answer. However, the boy did not respond to this encouragement. In the PE lesson I had video recorded he appeared disinterested and withdrawn. Correspondingly, Theobold (2012) points out that, “[A] sensitive matter is problematic for children to account for in front of others” (p. 46). I moved on to next topic.

The video clips provided an opportunity to ask the children about how it had been for them to move in a certain PE lesson and PAE lesson; what they thought when they saw themselves moving. Previously, Theobold (2012) has suggested that “video-stimulated accounting sessions enable children to inform interpretation of data...” (p. 47). Further, he argues that children’s accounts of video recordings of events in which they have been involved “illustrate their unique standpoint and highlights matters that are of interest to them at the time” (p.47). I experienced that some children affirmed my initial interpretations whereas others made me see their movements and acts from another perspective. For example, a girl who I had thought had appeared weak in a PAE lesson I video-recorded told me that she came ill the next day. In contrast, a boy who had appeared active and happy told me that he had not enjoyed the particular PE lesson I video-recorded very much. We entered into a longer conversation concerning the boy’s experiences of moving in PE as opposed to a home environment. In particular, cases where video recordings encouraged conversation such as this raised some interesting points for later analyses. In these terms, video recordings proved to be a useful complement among the other methods and tasks I used. I only used video recordings as stimulating material in interviews. Concerning observations in general, I relied on field notes and personal experiences.

5.4.3 Observation

Observation is frequently used in qualitative research of young children (Clark, 2005) as well as with adults (Baker, 2006). Several researchers underline that the method provides opportunities to explore participants’ interactions with one another in an everyday setting and to communicate with the participants in an informal setting. According to Fangen (2004), observation provides the researcher with “a unique opportunity to explore human interaction or use of language without influencing the interactions or use of language to as much as in interview or a survey” (p. 9). Mauthner (1997), in turn, notices that observations can open up opportunities for a researcher to

converse with children in a more relaxed atmosphere compared to formal interviews. Correspondingly, researchers suggest that observational material can open up important insight and perspectives in analysis. Fangen suggests that, “by being present in human beings in different settings, you can write with far more empathy and awareness....” (p. 9). Morgan et al. (2002) in turn highlight that observations provide insight into children’s social lives. Clark (2005) notes that observations make it possible for a researcher to interpret children’s actions and contexts where the actions take place. In addition, I relate observations to communication through movement, embodied expressions (Evensen & Standal, 2017) and bodily resonance (Fuchs, 2016; Fuchs & Koch, 2014). I reasoned that to observe the children’s movement in the PE lessons and intervention activities would be useful in purpose to learn about how their movement varied and to become familiar with the settings where children move in school.

I scheduled observations periodically following interviews at the respective schools as presented in the table 5-4. In schools that implemented the intervention, I observed, PAE as well as PE lessons, PA breaks and PAH. In schools that were in the control group, I observed PE and PAH. I focused primarily on PE and intervention-activities as I explained in chapter 2 *Research context and environment for the ASK study*. In the beginning, my approach was very open and strongly influenced by cultural norms related to movement. Earlier, I mentioned that I noticed how some children run faster or slower than others, and how some children engaged in activities while others struggled to do so, did their own things or withdrew. These observations correspond to how I in the beginning categorized the children according to their sport abilities and physical capacities such as many other researchers have done before me. The research questions and the choice of theoretical framework were not quite clear for me. Fangen (2004) notices that this is typical for observation studies.

Fangen (2004) continues that after a while a researcher usually starts to understand more about the setting or culture he/she observes. She explains that observations often contribute to clarification of research questions and that as research questions and theoretical perspectives becomes clearer for the researcher her or his focus tend to change accordingly. Similarly, the observations of children’s movement in PE and intervention-activities played an important role when I re/considered the research aims and questions. As I became more confident on the research questions and as the theoretical perspectives became clearer for me, my focus in observations changed and sharpened. I started to pay more attention to what happened with and between children, and how children responded in different situations; how children’s responses moved the activities forward and caused further responses in other children. In addition, I became particularly attentive to how the intensity of children’s movements and engagement in activities and interaction with other children changed and varied.

During the observations, I chose a role of a partially participatory observer. According to Fangen (2004) a partially participatory observer is one who “takes part in the social interaction but not the environment specific activities” (p. 74). Accordingly, I was together with children in PE lessons, intervention-activities and PAH lessons but did not take part in the activities that undertook during these lessons. In particular, in the beginning I stood or sat on the side and just followed what was going on. Later I tried walking around and talking with children, for example during circuit training. I found this a good way to connect with children and to hear about their immediate ideas and thoughts. However, I felt that I lost much of the general overview when I did this so I continued to follow from the side.

The observations as I conducted them made a useful contribution in the analysis. According to Fangen (2004), the role of a partially participatory observer allows a researcher to take in the atmosphere in addition to observing what participants do. Being present in the same room or space with children was essential in light of the affective perspective; I could sense the atmosphere and could share parts of what the children were experiencing. In addition, to have observed the children moving provided with ideas for themes and topics to be explored further in interviews. For example, in one of the schools, children often played “capture the flag” in PE lessons. It appeared that the children stood around a lot and that not much was happening. Nevertheless, many children wrote in their drawings that “capture the flag is fun because one can run a lot.” In interviews, children repeated the statement and added that one “can do many different things” and that “one never knows what will happen.” As an observer, I had a different experience than the children. This opened up for fruitful conversations about children’s experiences (and their teacher’s experiences as well) of a certain activity.

Finally, I have written field notes of varying length on all observation units either after the observations, either later on the same day or a day after. According to Fangen (2004) to write field notes is useful. However, she observes that researchers usually recall more than they have written down. Accordingly, I recall many situations from the observations that I have not written down. To have these memories and experiences were valuable in the analysis. They made it possible to bring in and fine down details during the process where research questions and theoretical perspectives became gradually clearer. Fangen writes further about “the problem of putting words on the ‘wordless’ – the embodied, emotional....” (p. 101). To develop a language and to find words to describe the observational material took time.

5.4.4 Complementary and contrasting insight

As the above descriptions show, observations, interviews, drawings and writings created interesting, multifaceted material reflecting variations in children's movement and movement experiences. When seen in relation to each other, to use multiple methods brought up both complementing and contrasting expressions. For example, many children quickly started to draw something they liked in PE but struggled to find out what to draw something they disliked. Correspondingly, in interviews most of the children said that they thought PE usually was fun. Further, I often observed eagerness to move, and smiling faces in PE lessons. Another example was that one girl drew and wrote that she liked football and handball because they are team sports. She wrote that she disliked tail tag because "it is not a team game" and "all my pigeons" [a tag game] because "one cannot help each other." The girl continued to emphasize that she liked team sports in interviews. Contrary to these two examples, the girl who wrote that she liked "capture the flag because it is fun to run around and to play with others" often stood still for long periods when her class played the game. Her face was often expressionless when she took part in PE or intervention activities. In addition, the girl's teacher experienced that she often was little active in PE. Furthermore, the boy who drew dance as something he did not like in PE and wrote that he thought it is strange, stated in an interview that he thinks dance is "something girls do" and that he is "not that good at it." Later the boy compared his own expressions as he spontaneously started to jam to a pop song during a circuit-training lesson in PE. Such notions affirmed the affective perspectives and the perspectives from children as "beings and becomings". They exemplified the complexity and temporality of children's dis/likes and experiences. Accordingly, I focused on both commonalities and exceptions, trends and variations when analyzing the data-material.

6 Analysis and structure of the findings

As the preceding chapter showed, the data-material is extensive. In the following, I show how I through a purposeful re/reading, gradually acquired a structure of the findings, developed central themes and topics and established three levels of interpretation.

6.1 Purposeful reading and re-reading

Purposeful reading and re-reading (Jackson & Mazzei, 2012) is an analytical strategy that involves both flexibility and systematics. It is a central element in Jackson and Mazzei's "Thinking with theory" and involves thinking different parts of the research process in relation to each other. When introducing thinking with theory and purposeful re/reading, Jackson and Mazzei, refer to a challenge of analyzing "complicated and conflicting voices and data" (p. 107) and the importance of context and circumstances in qualitative research. They are critical to approaches that focus on representing the data material in "thematic "chunks" that can be interpreted free of context and circumstances" (p. 107) or on figuring out what participants may have "meant". In contrast, they encourage qualitative researchers to choose analytical strategies that make possible "dense and multi-layered treatment of data" and involve a critical approach to "complexities of social life" (p. 107). In other words, Jackson and Mazzei, underline importance of viewing the data material from "multiple, conceptual perspectives" (p. 143).

Regarding to the critical stance, Jackson and Mazzei open up the perspectives of thinking with theory and purposeful re/reading further by explaining that when analyzing their own research they "question what we ask of data as told by participants, question what we hear and how we hear" (p. 133). This underlines importance of reflecting over the role of participants, relationships between the participants and the researcher and the questions and perspectives of the researcher. In addition, Jackson and Mazzei describe how they have experienced a "*constitution and emergence* of the data and concept that occurred simultaneously as we were thinking with/in the larger theoretical framework" (p. 143). The notion involves an understanding of qualitative analysis as a continuous process where the insight emerges gradually as the researcher works with the material and theories intertwined.

Corresponding with the perspectives that Jackson and Mazzei outline, complicated and conflicting data material, multiple, conceptual interpretations, and constitution and emergence of the data and concepts were characteristic to my analysis as well. I re/read the transcriptions, field notes, drawings and writings and re/visited my experiences from the fieldwork several times. Simultaneously, I re/read the theories and previous research. I viewed the data material in relation to theories and

theories in relation to the data material. Furthermore, I re/considered the research questions, how PE and ASK intervention frame the research and how the thesis in turn could illuminate and contribute to further knowledge about children's movement opportunities in school. In other words, I repeatedly thought through the different parts of the research process separately and in comparison to one another. I also re/wrote all the chapters several times. A central question was, "What is in the data and what is interesting about it" (Braun & Clarke, 2006, p. 88), and why? I became aware of an increasing amount of details and multiple perspectives. I considered several possible interpretations and my evaluation of what was relevant developed throughout the process.

According to Jackson and Mazzei (2012), purposeful re/reading requires intense devotion by the researcher. The perspective is similar to Thagaard (2013) who argues that to understand and acquire an insight into social phenomena requires one to emphasize the social situation being explored. Thagaard explains that empathy helps a researcher to develop contact with research participants during fieldwork and that during the analysis empathy can create favorable conditions for the emergence of ideas related to meaningful aspects of what participants have expressed. Contact with children and pondering over what they had drawn, written and told and what had happened during the observations were central parts of my analysis as well. Through the process of purposeful re/reading I acquired insight in to the theories as well. In addition, my understanding of the context, the research aims and previous research deepened gradually. The devotion and empathy were essential to my attentiveness for both tendencies, exceptions, associations and paradoxes within and between the different parts of the research process. However, to remain the critical perspectives and avoid letting devotion and empathy to take over, before choosing what themes and findings to include, I questioned why the certain points had caught my attention and what their relevance was in the particular context of the thesis.

6.2 Thematic analysis

To organize material in themes is a common practice in qualitative research. According to several authors (Braun & Clarke, 2006; Thagaard, 2013), searching for patterns are a central part of this strategy. For example, Braun and Clarke write that it is about "... searching across a data set – be that a number of interviews or focus groups, or a range of texts – to find repeated patterns of meaning" (p. 86). Similarly, to identify patterns of meaning in children's drawings, words, acts and movements was a central part of my analysis. However, as mentioned, I was not only interested in what repeated in the material but also in exceptions, nuances and paradoxes. Accordingly, Braun and Clarke reason that:

The “keyness” of a theme is not necessarily dependent on quantifiable measures, but rather on whether it captures something important in relation to the overall research question (p. 82)

As mentioned, I evaluated the relevance of each theme in relation to the particular research questions, context and perspectives of the thesis. Thus, it is common for all themes that they illustrate variation of children’s movement and experiences from different perspectives, which further can illuminate movement opportunities in school and have some implications for further development of these opportunities. Regarding to the diversity of the schools and children, this way of choosing the themes involves that particular events and what children did and said in which situation was more important than who or in which school.

Thagaard (2013) describes further that a thematic analysis often switches between inductive and deductive phases. By an inductive phase, she refers to identifying patterns of meaning in the data material. This corresponds with re/reading the empirical material and identifying central tendencies, typicalities, nuances and paradoxes in the drawings, writings, interviews and observations. By a deductive phase, Thagaard refers to using theoretical concepts in purpose to integrate new perspectives into such patterns of meaning. This, in turn, corresponds with re/reading the empirical material together with the theories. Thagaard comments further that due to shifting between inductive and deductive phases, the presentation of thematic analysis often combines phrases from participants and concepts the researcher develops with inspiration from theories. Accordingly, I use citations from children and teachers or field notes to illustrate the themes as well as I use theories to integrate additional perspectives into them. Some themes such as 8.2.1 “Running back and forth” are further direct citations from children while other titles such as 7.2 “To move and to be moved” are rather theoretically inspired. Seen from another perspective, the examples from the empirical material and the theoretical entries present different levels of interpretation.

6.3 Three levels of interpretation

It is common in qualitative analysis to distinguish several levels of meaning. According to Fangen (2010), the first level of interpretation is “to state what you see and hear” (p. 208). She identifies this with describing persons, situations and circumstances. Fangen explains further that on the first stage of interpretation, the participants own words, empirically based concepts and general interpretations are central. Accordingly, each of the themes start by referring to direct quotations from the children or teachers, or by describing situations that emerge in PE, PAE lessons and PA breaks based on material from observations and interviews. This is to say, the first level is how children themselves referred to movement, PE and intervention-activities in their own words and emphasis, and how

children moved and what happened in PE lessons and intervention-activities. When choosing quotations and field notes I emphasized ones that were clear and illustrated in particular well central aspects of each theme. At the same time, I also made sure to include examples from several children and schools in purpose to stress that the variation of children's movement that I show later was not specific for any one individual or school.

Fangen (2010) continues that the second level of interpretations are about to supply "something more" (p. 208) to what one has seen and heard and to exceed the descriptive level and participants' "taken-for-granted understandings." Fangen advises to use concepts and strategies that create distance to the descriptive level. Here, perspectives and concepts from Spinoza (2011), affect theories (Seigworth & Gregg, 2010), Smith (2007), Fuchs (2016), Fuchs and Koch (2014) create such distance. In addition, Fangen highlights importance of viewing acts and expressions in relation to the context where they emerged as well as in relation to other, relevant contexts. In addition to theoretical paradigms, she mentions political and cultural contexts. Besides the theories, I relate variation of children's movement and experiences to previous research and the research context that is ASK intervention and PE.

Another aspect of level two interpretations is what Fangen (2010) calls comparison. According to Fangen to compare two fields, enhances the researcher's opportunities to bring out the characteristic with each field. She suggests that comparison is in particularly relevant when exploring cultures that differ remarkably from the researcher's own culture. Here, the comparison is relevant due to the decision to include both intervention and control schools and to explore children's movement in both PE and the intervention. These comparisons make it possible to observe as well specific characters of PE, PAE lessons and PA breaks as similarities between these three settings.

Finally, Fangen (2010) writes that the third level of interpretations can be understood as "underlying, hidden interests and impetuses" as well as "critical interpretation" (p. 222). In other words, she explains that the third level is about searching for hidden agendas and taking a critical stance to structures and processes that influence the participants and the researcher. I show in chapters 7 *Children's movement in Physical Education* and 8 *Children's movement in PAE lessons and PA breaks*, how children are drawn to move in varying ways and in varying situations and discuss these drives further in chapter 9 *Discussion and conclusions*. I identify the drives with hidden interests and impetuses. In addition, to show and discuss exceptions, nuances and paradoxes in the material is a central part of these chapters which opens further some critical perspectives to children's expressions. Furthermore, the discussions in chapters 5 *Methods and design*, 6 *Analysis and structure of the findings* and 9 *Discussions and conclusions* provide critical perspectives to the conditions and

processes that has influenced constructions of data and knowledge, including my particular perspectives and interactions with children.

6.4 Organizing the findings

In purpose to stress the specific characters of the intervention and PE, I have chosen to set forth the findings from each of these two contexts in their own chapter. The following chapter 7, *Children's movement in Physical Education*, contains findings related to variation of children's movement and experiences in PE. Chapter 8, *Children's movement in PAE lessons and PA breaks*, in turn focuses on the variation of children's movement and experiences from the intervention. Further, I divide both main chapters in several main themes and sub themes. The chapter 7 consists of two main themes that are *doing activities and being active* and *to move and to be moved*. The chapter 8 involves three main themes that are *it is fun – at least better than sitting in a classroom, fun and boring activities* and *experiences related to moderate to vigorous physical activity*. Further, each main theme includes several sub themes, where each takes up a specific aspect of a main theme. I introduce the themes in the beginning of each chapter and the sub themes in the connection with each of the main themes.

Although I distinguish the findings related to PE from findings related to the PAE lessons and PA breaks, major part of them are relevant in all three settings. For example, the tension between children's own movement and movement that follow instructions and models that I exemplify through themes *doing activities and being active* and *to move and to be moved* in chapter 7, occurs both in PE, PAE lessons and PA breaks. Other themes are more clearly related to one of the settings. For example, children's experiences of competition that I bring up in chapter 8.3.2 *We make it to a competition*, are most frequent in PAE lessons. Similarly, the theme 8.3 *Experiences related to moderate to vigorous physical activity* is in particular relevant in relation to the aims and values of the intervention. However, even these themes have relevance for PE too as references to competition and focus on fitness in PE will show. I commence with findings related to PE and the general characteristics of teaching and learning environments. Accordingly, I finish with findings related to the intervention and its specific elements.

7 Children's movement in Physical Education

The findings from PE are organized under two main headings *doing activities and being active* and *to move and to be moved*, which illuminate two complementing and contrasting dimensions of children's movement. The theme *doing activities and being active* shows a practice that contains a wide variety of activities that are decided and instructed by teachers and where teachers try to make and keep children *physically* active. Other central aspects of the theme are children's experiences of "boring" activities and feelings of "just doing" activities or "not learning anything new." Central aspects in the theme *to move and to be moved* are, in turn, joys and pleasures of movement and movement that emerges from children's own *sensations* and *connectedness* to each other, the environment and changing situations.

7.1 Doing activities and being active

The theme *doing activities and being active* involves seven distinct aspects. *A wide variety of activities, emphasis on physical activity, activity should be a positive experience for all children, activities chosen and defined by teachers and repeating and "just doing" activities* outline overarching characteristics of the learning and teaching environments in PE. They show how *doing activities and being active* frame children's movement opportunities. The themes *repeating activities one likes* and *the ambivalent feelings of learning to move* show how children themselves on the one hand desire more variation and originality while on the other hand they are also drawn to repeat same activities and how they find learning both frustrating and rewarding.

7.1.1 A wide variety of activities

In all four schools, PE lessons consist of "a wide variety of activities." The most common ones are ball games, tag games and reaction games, gymnastics, track and field, obstacle races, circuit training, muscle exercises and running, swimming, skiing and orienteering. Normally the children have one activity for one or two lessons after which they move to next one. Activities, such as ball games or swimming sometimes constitute larger blocks where, for example, one or two lessons in football are followed by basketball, volleyball, floorball and so on, or children go swimming, for example, six times in a row. In swimming, floating in water may be the first lesson that is followed by practicing different swimming styles. In all PE lessons, there is limited time to practice each activity.

One indication that the children and teachers associate PE with activity was their response to the questions: What are they going to do/have in PE? They all answered by referring to activities: "We are going to play floorball", "We are going to have an obstacle race" or "Today we have swimming". Similarly, when I asked children to draw something they like and something they did not like in PE,

they all drew activities even when I specified that they could choose to draw an event that had made them happy or sad. To confirm this, the children titled their drawings by writing "I like football", "I don't like handball", "Capture the flag is fun", and "Frisbee is boring" or they answered simply "swimming", "running". Furthermore, all teachers expressed in interviews that they planned and organized PE around different activities. For example, one of them said, "In the long term, I do have a plan: I know what kind of activities they shall do that period". Another one mentioned that, "I have an idea that you need to include that and that and teach that – kind of, so they get a bit of everything." Thus, activities marks one of the bedrocks of PE. In addition, the expression "they get a bit of everything" illustrates that in PE children are introduced to or get taste many different activities.

The activities started typically with a teacher gathering children and instructing an activity. Thereafter, children performed the activity until the teacher gave them new instructions and changed the activity. The teacher could start: "In the first exercise you can use the whole gymnastic hall. You walk around and you bounce the ball. OK?" The children spread out in space and started to bounce their balls. After few minutes, the teacher blew a whistle and one by one children started turning toward him and grabbed their balls. This time the teacher instructed, "You continue to walk around and bounce your balls, but now you should also try to push away each other's balls." After a few minutes, he blew his whistle again, waited until the children had stopped the activity and gave the children a new task, and so the lesson continued. This illustrates that high activity that is interrupted by new instructions is common in the PE lessons. The instructions give children guidance on how to move, such as how to use the ball and ensure that they stay active. For children this means an expectation of doing a range of exercises and activities in predefined ways and as far as possible to stay in a constant activity.

Correspondingly, Moen et al. (2018) notice that instructional teaching styles are common in PE. Kirk (2010) in turn uses the term multi-activity model to indicate that many contemporary PE practices introduce children to a wide range of sporting, fitness and outdoor activities. Annerstedt (2008) affirms that the multi-activity model is characteristic for PE, also in Scandinavian countries. Kirk couples the multi-activity model further with a focus on teaching sporting techniques. Correspondingly, Moen (2011) shows that learning basic techniques in wide variety of sporting activities forms the body of PE teacher education in Norway. Säfvenbom et al. (2015) argue further that PE in Norway tends to appeal to most children who are involved in competitive sports outside school, which according to him, indicates similarities between these two contexts. Engelsø (2010) in turn claims that PE in Norway has become a recruiting arena for competitive sports or PE teacher education. The examples above indicate that instructions, activities and sporting techniques

dominated the content in the four schools as well. However, on several occasions, this focus was blended with or was even subdued by a focus on making and keeping children *physically* active.

7.1.2 Emphasis on *physical* activity

In the interviews, the teachers expressed that activity is one of their priorities in PE lessons. Several of the teachers agreed to and made statements such as the following:

It is extremely important to introduce as much activity as possible. I notice I have more focus on this than I might have had before. I see the development in society – that they need PA. PE might be the only activity they get and I guess the most important thing is that everyone, let's say, everyone can take part and perform according to their physical fitness. I try so that they can improve the physical fitness

Such quotes show that teachers understand children as being little active and in need of being *physically* active to improve their fitness. Accordingly, teachers talked about “toning down techniques” or how they may “break up” activities such as volleyball that involve “a lot of standing still” such that “every once in a while they [children] have to run a bit.” To tone down the focus and to reduce time spent on practicing techniques and replacing it with a focus on PA and running shows that teachers considered a central part of their role to make and keep children active in PE.

To put weight on PA, confirms further a concern for children spending increased amount of time in sedentary activities and potential consequences this may have for their fitness and health, – a view generally held in society. Such a view is common and several researchers and instances suggest that school might be an important arena to reach those children who are less active and less fit (Resaland et al., 2015) as noted in the beginning of the thesis. To make and keep children physically active is a central goal of the curriculum for PE (Directorate for Education and Training, 2015) and in the ASK intervention (Resaland et al., 2015) too. Correspondingly, Walseth et al. (2015) notice that a focus on PA and fitness often influences PE practices in Norway, which is affirmed by Aasland et al. (2016) who identify a vigorous activity and exercise as characteristic for PE in Norway. Aasland et al. highlight further how teachers in their study explicit told pupils that they need vigorous activity for getting fit and being healthy. I did not observe teachers talking explicitly about the potential association between vigorous activity, fitness and health with children. It is though worth to notice that the students in Aasland et al.'s study were several years older than children in this study. In interviews, teachers emphasized that all children should be active and enjoy PE.

7.1.3 Activity should be a positive experience for all children

On several occasions, the teacher's concern was to make PE enjoyable for all children. For example, one teacher expressed "I try that it should satisfy as many as possible." Further, teachers often reasoned that PE should be enjoyable and to provide all children with the opportunity to do activities they like and can master. They underlined further that reaching these goals might be challenging due to differences between children, in particular when it comes to interest in sports and in fitness levels. For example, one of the teachers reasoned:

It is as if you have a many different pupils. Some of them are interested in sports, and some of them think that sport is not fun. Some of them are not that fit so you have to try to involve everyone and that is a challenge, to get everyone to feel that they master what they take part in, so it is not that simple, so we try to involve everyone in every PE lessons. If you have someone, special pupils, you may sometimes choose activities you know these pupils like, even though it may be at the cost of others who think it is not that fun, but it is important to involve those who are, let us say weaker

It was important for the teachers to note that different children like and master different activities. They emphasized the importance of variation in purpose to provide something to everyone and in particular for those children who were less fit. Accordingly, the teachers associated the enjoyment further with engagement. For example, one of them explained, "when you have non-sporting games, the children who prefer ball games are a bit disappointed. When it is ball games, it is the opposite. Those who prefer non-sporting games are passive then". The examples illustrate a belief that an opportunity to do activities one likes and masters could make PE enjoyable for children, and that the variation in activities would help to involve all children.

Corresponding to teachers' ideas, enjoyment, mastering and involvement of all are central aims in both the Norwegian curriculum for PE (Directorate for Education and Training, 2015) and in ASK intervention (Resaland et al., 2015). In particular in the intervention these values are related to aim of inspiring children to move more and on higher intensity. Previous research also show the association between enjoyment and engagement in PA. Nyberg and Larsson (2014) point out that many PE teachers view "fun" as the core of PE because they believe that children could be inspired to active life styles through positive experiences. They write, "one can assume that teachers hope that in offering fun physical activity, pupils will probably learn something: namely, that it is fun to be physically active" (p. 4). The teachers did not explicitly talk about intentions of inspiring children to active lifestyles or learning to think that PA is fun. However, they were concerned about children

being active and engaged in PE and about providing children with kind of activities they enjoyed. Further, teachers controlled the selection of activities and the ways children moved in PE.

7.1.4 Activities chosen and defined by teachers

Usually, the teachers chose, explained and exemplified the activities and exercises, such as in the ball exercise lesson, presented earlier. The children confirmed that such a teaching method was the norm, "No, we are not like allowed to decide what we do" (Julie). Some explained also in detail how they felt that the teachers expected them to move in a certain way and they had limited opportunities to choose and regulate how to move:

I don't really feel like doing this anymore, but I have to [...] I don't want to do that but I have to because it is PE [...] it was actually a bit boring to do it, it is decided, how to do it correct. [...] we couldn't do as we wanted to, we did what we were supposed to, we couldn't do it differently, we had to do it exactly as it is supposed to be done (Elias)

Both Elias and Julie express that the teacher decides the activities in PE. In Elias' case, it is not only that the teacher decides the activity, but also the way the children should move and the duration of time the activity lasts. Children do what teachers told them to do.

Accordingly, Parker et al. (2017) have also observed that in PE, teachers control the space and choice of activities. Standal (2016) in turn suggests that emphasis on "correct" techniques may be a reason for why some children find moving in PE meaningless. Spinoza (2011) understands following instructions and norms as "passions", which he contrasts with understanding needs of a situation and acting upon this understanding. In light of these the contrasting perspectives Spinoza outlines, Julie's and Elias' words illustrate that in PE, children are passive in terms of reacting (Feldman in Spinoza, 2011) on what an external authority, the teacher, asks and expects them to do. To be an active actor, in opposite, would involve children actively evaluating situations, acting upon their own evaluations and adapting their movements to needs of the situation. The comparison underlines that instructions and norms frame children's opportunities to move in PE. Correspondingly, the teachers play a central role in construction of PE whereas children themselves have little influence on the content of the subject and on how to move. In addition, children expressed that they find many activities in PE boring and that they feel they are repeating the same activities in a similar way year after year.

7.1.5 Repeating and "just doing" activities

Many children mentioned the "boring activities." Further, several children explained that they often felt that, "PE it is more like, then we do that activity we just do it, if we play football so we just play

football" as Simon put it. Simon added that when "just doing an activity." One "does not practice football, just play." Other children used the same phrase "just doing" when they talked about activities such as running in relay races, running a distance or doing strength exercises such as push-ups and sit-ups. Children explained that in such occasions one just does a certain movement and nothing else, "Sit ups [are boring] because you just go up like that, that's not fun" (Ola).

In addition, children felt that they repeated the same activities year after year. For example, Sara told that,

we learned a lot in first grade because then we had a lot of games we didn't know from before... we don't learn that much different things now, now it's just things we've had before

Children did not associate PE with learning, but doing activities they already knew from before. In addition to feeling that they "just did" activities, children felt also that they did activities in a same way repeated times.

Similarly, Dismore and Bailey (2011) note that in their study children found repeating exercises and activities boring. Children in Spencer-Cavalier and Rintoul's (2010) study, in turn explained that they did not like "just running" because they did not feel they are learning anything of it. Children's comments place "doing and repeating an activity" as a core content of PE. In many lessons, their opportunities to move consist of performing activities in a schematic manner or a manner that they already know from before or doing monotonous and repetitive movements. As a response to repetition, the comments express a desire for more variation and new activities.

Correspondingly, Moen et al. (2018) concludes that children from 5th-10th grade wish more varying content in PE than what they encounter in practice. In addition, some authors also notice that exploring and experimenting with movements which have a central place in the curriculum are often absent in PE practices (Borgen & Engelsrud, 2015). A number of researchers claim also that PE is often practiced with little or no attention on learning or educational aims (Annerstedt, 2010; Kirk, 2010; Nyberg & Larsson, 2014; Standal, 2016). In the light of the concept "not yet" (Seigworth & Gregg, 2010) doing and repeating activities indicates further a *predictable* movement environment. According to Seigworth and Gregg, the unceasing challenge of "not yet" knowing is what drives affects forward and towards ever-new encounters. I identify this with curiosity for new ways to move and to do activities. In contrast, a feeling of "just having things one has had before" shows that, children often already embody ideas of what is going to happen in the PE lessons and what they will experience. When the force of "not yet knowing" is absent, children experience to move as "boring".

There is no "unceasing challenge" or "sense of urgency" (Seigworth & Gregg, 2010, p. 80), which would draw children toward movement, ever-new encounters and new experiences.

However, although children expressed a wish for more variation and new activities, many of them also mentioned that they desired to do more of their favorite activities in PE and that certain activities never get boring. In the following chapter *repeating activities one likes*, the focus moves from the teaching and learning environment in PE to the children's own desires, preferences and tendencies.

7.1.5.1 Repeating activities one likes

Although children expressed that, they found it boring to repeat the same activities year after year, many of them also stated that they enjoyed PE best when they were allowed to do their favorite activities and that there were activities they could do repeatedly. The enjoyment of and desire to do more of one's favorite activities repeated both in children's writings and in interviews. Many children explained their likes and dislikes by writing, for example, "Football is fun because I do it in my free time "I don't like football because I am not good at it" or "I like least of all Frisbee because I don't quite get it." Children associated enjoyment of movement and PE with activities they liked and knew from before.

In interviews, several children informed further that if they were allowed to choose more in PE they would probably do more of their own favorite activities:

Yes, it [PE] would be totally different, it would [...] if we had voted, it would have been a lot, it would have been different, everyone would have been happy if we had had football because everyone in our group likes football almost (Simon)

Quotes such as this, show that many children believed that doing more of their favorite activities would make PE more enjoyable for them. Others meant that it was good that the teacher decided the activities because they self would probably just choose to repeat the same ones. Both expressions underline that such as teachers introduced and instructed children same activities year after year, also children themselves had a tendency to repeat certain activities if given an opportunity to. In particular, the examples show that children were drawn to choose activities they liked and knew from before.

Correspondingly, Spinoza (2011) argues that bodies are drawn toward relations and situations that are enjoyable for them and avoid ones that they find uncomfortable or unpleasant. However, he notices also that things are never either good or bad in themselves. Similarly, the contrast between children's experience of repeating "boring" activities in PE and repeating activities they like shows,

that to repeat an activity or movement per se is not unambiguously either unpleasant or enjoyable. Rather, children experience it enjoyable in some situations and uninteresting in others. Thus, to understand "boring" activities in PE requires one to view children's experience of repetition in a wider perspective.

In the preceding sequences, Elias' and Simon's examples illustrated that children felt often not only repeating activities but also limited by the teacher's instructions. Elias, for example, would have preferred to experiment different ways to perform the movement tasks and Simon would have preferred to practice football instead of "just playing it". They did not only feel repeating the activities but repeating them in a way the teacher had decided and that differed from their own interests. In addition, many children told that it was boring to do activities they did not know how to do. For example, Andreas explained his dislike of gymnastics, "I don't really understand what you're supposed to do, you just stand one place and you can do the same movement all the time." Gymnastics was not familiar to Andreas and it did not come to him intuitive, what to do. In addition, Andreas had an idea that gymnastics involved to "just do" movements. He was dependent on instructions and models and did not see opportunities to vary the activity. Such examples show that to do an activity and thus to do it repeatedly as well is boring when one experiences limited opportunities to follow her or his own interests or is not capable of seeing how to do the activity or to create variation.

In comparison, some other children in Andreas' class told that they liked gymnastics very well. These children described a variation of exercises they used to do when they did gymnastics. The same repeated also in other occasions when children talked about their favorite activities. They described a multitude of ways to experience and to vary the activities. For example, Andreas explained that when he swam he could "swim deep down", "play handball in the pool", "float on a mattress", "jump down from a dock", just "swim", "swim distance" or "race". The amount of examples he listed, shows that an activity such as swimming or moving in water can be varied in many ways. Thus, to do an activity several times does not need to mean doing it in a same way each time. Some children explained also how they used to pay attention in many different things simultaneous when they did activities they liked and knew well. For example, Alex explained that when playing defense in football,

You should watch out so they don't pass you and score, so you have to keep an eye on him who's behind you or him in front of you. You have to be close to him and then someone goes in, like runs in, then you have to, yeah, take care of that... ee, right or left defender, that he doesn't pass or shoot, if he who has the ball passes, passes to the

other defender, he who'll have the ball and shoots. Then I just go into him and tackle or take the ball, yeah, or then it comes a throw-in...

In contrast to "just playing" football, the quote illustrates a complex understanding and sensitivity to a specific game situation. Such complexity and changing situations involve further that an activity may still surprise a child and provide some new experiences although she or he would have done it before. Furthermore, some children mentioned that they felt getting stronger or faster as they kept practicing activities they liked. They saw progression. For example, Petter told that he had observed that he got stronger by doing gymnastics and that he "now can jump really, really high". Thus, to repeat and practice an activity is not opposite to learning something new but may rather be necessary for that a child could experience progression or to develop such multifaceted, complex understandings and sensitivity for specific characters of an activity as shown above. Petter added further that he would like to start athletics to get even more "explosive". In addition to seeing progression, he was drawn toward a certain activity also due to his personal interests. These examples show that seeing a multitude of opportunities to vary an activity, experiencing and understanding complexity of an activity, feeling progression and engaging in an activity for individual reasons are enjoyable and desirable for children and thus can make it enjoyable and inspiring for them to repeat an activity as well.

The example of progression points further to another paradox that relates to children's experiences of repeating activities in PE, the ambivalent feelings of learning to move.

7.1.5.2 The ambivalent feelings of learning to move

Although many children informed that it is boring to not do new activities or learn anything in PE, many children told also that they did not really mind it. They still found the subject "fun". When I asked children more about their experiences of learning to move, they told about ambivalent feelings. For example, Sara explained:

Sara: heh, heh, I used a really long time to learn to cartwheel.

Laura: was it only fun to learn all the time?

Sara: sometimes I got like, aagh, I don't get it.

Gunn: but you practiced alone, like you tried and tried and tried.

Sara: yeah, then I got it on a trampoline and then I started to practice on the floor indoors, then it wasn't that difficult because I could do it already.

Similar to Sara, also other children described moments of frustration and failure when learning activities and movements on the one hand, and moments of pleasure when they felt they “finally succeeded” on the other. Sara told that when she learned the cartwheel “then I got praise from one in my class.” Other children told about feeling proud and happy. Such examples show that what is fun is to achieve what one is trying to learn. It is also fun to be noticed and acknowledged by others when one succeeds. The process of practicing something new in turn is not necessarily always that fun.

Seigworth and Gregg (2010) write about a tension between a promise and threat of “not yet knowing what a body can do” (Spinoza, 195: 87 in Seigworth & Gregg, 2010, p. 75). When learning a new movement or activity, children cannot know for sure whether they will succeed. From experience, they know that to succeed will give them joy and possibly praise from others. At the same time, they know that to get to that point, may take time and involve effort and frustration. Accordingly, children wish to learn new movements while at the same time they are drawn toward the habit, security and pleasure of doing what they already can.

The ambivalent feelings related to learning and repeating activities create a linkage from the theme *doing activities and being active* to *move and to be moved* where the variation in sensations, feelings and movements are central.

7.2 To Move and to be moved

The theme *to move and to be moved* focuses on affective dimensions of PE and takes on examples of movement that emerges from children's own sensations and connectedness with each other, situations and the environment. The theme consists of seven sub themes. *We like to move, to feel active and in motion, to feel connected and confident, to feel connected and confident with others and to feel superior to others and to succeed* show how children enjoy movement for different reasons and in varying ways. *Movement that emerges from connectedness and to take part in, exclude others and oneself from play* show in turn how children's own movement emerges and develops in many different ways.

7.2.1 We like to move

The material shows that children in general enjoy PE. Children used the word “fun” to express this. Furthermore, they explained that they enjoy PE because in this subject they have an opportunity to move or “to be active” to use children's own words. However, when I asked children to tell more about what they meant by “fun,” most of them struggled to answer. They often repeated “it is just fun,” “I like being active.” Some children explained that when they move, they “[I] feel kind of fresh”

(Jon) or that to move feels "lovely" (Thomas). In light of Spinoza (2011), children are drawn to move because they experience it as pleasant. However, it is difficult for children to put words on why and how they enjoy movement and PE. This shows that the experience of "fun" has non-verbal, bodily dimensions, which the children may not be used to talk about.

Some children pointed further to differences between PE and classroom education or commented that it may be good for them to move. For example, Jon described PE as a "physical subject" and Julie reasoned that it

may be good for your body to move instead of sitting in a classroom, to get free – get off thinking mathematics and Norwegian and to empty your thoughts and think something else than getting things done.

Children's choice of words – physical, body, movement and freedom – contrasts with sitting at the desk and a pressure to perform academically. Furthermore, many children highlighted that in PE they were together with friends. Being together with friends emerged in particular in accompanying writings in children's drawings. Many children wrote that they enjoyed best activities they did together with others. Emma, for example, wrote that [I like best] "capture the flag because it is fun to run around and play with others." Such examples show that PE offers children space and opportunities to interact with each other and to be together in contrast to everyone sitting behind their own desks and working individually in a classroom.

Similarly, Dismore and Bailey (2011) highlight that children in their study liked PE because it gives "a break from school work" (p. 506) and because it is "more fun than other school subjects" (p. 502). They conclude that PE makes an "exception to the rule that lessons were boring" (p. 507). Lee (2010) notes that children in her study appreciated the break PE makes in classroom education. Harvey et al. (2018) in turn state that PA in general can "alleviate boredom" (p. 3). Both, Dismore and Bailey and Lee conclude that young children seem to simply enjoy moving and running around. This corresponds with children's use of word fun and to be allowed to be active as explanations of why they like PE. In addition, Dismore and Bailey highlight that in PE children enjoy in particular freedom and the opportunity to be with friends and Harvey et al. note that children find PA "fun when *participating with others*" (p. 3). Other studies (Jago et al., 2009; Nilges, 2004) indicate that to move may have several meanings for children. So do the findings here.

7.2.2 To feel active and in motion

When children talked about how they felt about moving, they often compared it with sitting. To move was repeatedly in favor to sitting. As noted above children said that they liked PE since they

liked "being active." In addition, children used expressions as "feel doing something" and "just coming up with ideas", which they further compared with "just sitting" and "don't know what to do." Both to be active, to do and to come up with ideas are verbs and thus expressions of action. They show that children feel that something is going on and that they have an active role in this something. In comparison, to sit and not knowing what to do indicates stationarity.

Smith (2007) describes movement experiences in childhood as "rushes of energy" and "vitality affects". Correspondingly, children's words show that when moving they are affected and they experience an increased energy. Fuchs and Koch (2014), in turn write about "autonomic arousal and muscular activations" that "make us become *ready to act*" (p. 4). To feel aroused and ready to act are central aspects of the energy children experience. Fuchs and Koch associate "autonomic arousal", "muscular activations" and "readiness to act" further to affective engagement and an individual's response to certain elements or objects in particular situations. The contrast between feeling that one "comes up with things" when moving and "not knowing what to do" when sitting show that to move may intensify or increase children's experience of possible ways to respond and engage in situations and environments. Seigworth and Gregg (2010) observe further that, "affect is in many ways synonymous with force or forces of encounter" that "can serve to drive us toward movement, toward thought and extension" (p. 54). "To come up with things" show that to move can put a child also into processes where ever-new affections and opportunities to move emerge. From these perspectives, children enjoy and desire to move because they feel alert, bodily involved and in motion. Involvement as presence in one's own being and connectedness with others was also a repeating theme when children talked about activities they liked to do in particular well.

7.2.3 To feel connected and confident

When children talked about moving in ways they liked best, they often described good feelings that emerged from their own movements. For example, Anna wrote under her drawing:

I like to dance because I move fast, do cool tricks and can tell and express myself. I like to sing because, for example, I am afraid and shy to say I am sorry, so it becomes easier when I sing. When I dance and sing I enter into my own world and it feels so good.

Anna's expression "my own world" shows that when she dances she feels present and at home in her own being. She is at ease with herself and feels confident and capable of expressing herself, in contrast to situations where she is scared to express herself. Similarly, Maja tells that she often likes to run because it makes her feel that she is "by herself" and has "fun for herself." Similar to Anna, also Maja feels present in her own being. In light of Fuchs and Koch's (2014) concept intrapersonal

feedback, one's own body postures, gestures and sensations dominate the girls' awareness. They interpret the feedback as positive and they enjoy being in movement and being in their own worlds.

In addition, Anna's words show that she feels capable to move in terms of feeling fast and being able to move in ways she considers as "cool." Similarly, Maja told that when she moves, she feels "that I can do whatever I want." Simon, in turn, mentioned that he felt as "I can do many different things" [with my body]. According to Spinoza (2011), what is good for a human being is what affects him/her in a way that increases her or his capacity to act. Spinoza understands this as to be more in control of one's own responses and to act according to one's own evaluation of the situation. To feel good when moving links to a feeling of being capable and confident to do a variety of things one wants and feels for.

At the end of her text, Anna added, "The best thing is that others think I am good in dance and singing", which shows that others who told that she is good further reinforced her good feeling. Nevertheless good feelings that emerge from one's own movement are not dependent on affirmation from other people and can even outweigh a comparison to other children. For example, Maja reasons that when feeling good about running she often feels like running so fast that she can

pass everyone else, even though I might be running last, heh [...] if I run as fast as I can and someone runs faster than me and then I feel that I run faster than they do, although I actually run slower.

From her own words, Maja feels confident and describes a capacity that emerges from her own body and movement.

Children's movement capacities and related experiences of moving in PE have been an interest for several other researchers too. Both Portman (1995), Suomi et al. (2003), Chedzoy and Burden (2009) and Spencer-Cavalier and Rintoul (2012) emphasize that low physical or technical skill levels are often associated to negative social experiences in the context of PE. The examples above highlight the importance of feeling good about oneself and one's own ways to move, regardless of the child's physical or technical skill levels. In addition, and corresponding with Portman, Suomi et al., Chedzoy and Burden, Spencer-Cavalier and Rintoul's emphasis on children's social experiences, there were also examples, which show that to feel confident with and connected to others can be central for children's enjoyment of movement in PE.

7.2.3.1 To Feel connected and confident with others

Children told repeatedly about situations where their enjoyment came from doing an activity together with others or when their enjoyment was reinforced of sharing it with others. For example, Line explained that:

when you play [snip and snap] then you move and follow, so it's like many of us who play and you do not only have yourself to follow but you have to kind of work together so it would work.

Central in this quote is that Line moves together with others and that children make the game snip and snap to work together. Such as in many activities in PE, it is necessary that children are attentive to and respond to one another for that the game would run further. Children share the world of snip and snap, which they create together. The points illustrate that when moving together such as in PE, children are aware of themselves but at the same time, they are also connected to each other. This corresponds with Spinoza's view (Spindler, 2009) of human beings simultaneous as unique individuals as part of larger entities. Children enjoy the situation when it involves experience of being and doing something together and when the games "work" as Line puts it. Similarly, Mulvihill et al. (2000) suggest that interactions with others can increase children's enjoyment of PE. Oliver et al. (2009), in turn, show that children prefer moving when they feel invited and welcomed by their peers.

Another example of a pleasant collective experience of movement is a shared joy or success. For example, Silje explained that she likes team sports because even if she might not score when her team wins, she "feel[s] like that everyone feels that they have done it, so it gets like, everyone has helped." Again, to make something work together with others feels good. In particular, it is pleasant to feel that one has contributed and helped one's team. The good feeling may further be intensified when the team is successful in comparison to other teams. Similar, Wessinger (1994) shows that in a game situation, feeling good is often associated to scoring or helping one's team to win.

Following Spinoza, Duff (2010) argues that human beings are drawn toward encounters that affirm their own being and provide feelings of joy. The above examples show that one aspect of feeling good in PE is about getting affirmed one's part in and contribution to a group or a team, which involves feelings of togetherness, making the activities to work together and achieving something as a group or a team. In addition to feeling good about achieving something as a group or a team, many children were also concerned about doing well as individuals.

7.2.3.2 Feelings of superiority and success

Both in writings and interviews, many children expressed that it feels good to succeed or to win while it does not feel good to fail or not to master something. Quotes such like "I like handball because I am good at throwing" and "I don't like Frisbee because it is difficult to throw it to the right person" are common in writings. Furthermore, children told that to perform better than others feels good while to feel weaker than others does the opposite. For example,

Julie: if you are exhausted, taken really hard and then you see that many others are exhausted so it's like, you feel like stronger than they are sometimes... Other times it is the opposite, that you are exhausted and not everyone else is.

Gunn: and if you are the stronger one so it is, not exhausted so is it a good feeling?

Julie: yes

The conversation exemplifies how children's feelings are affirmed or changed through a social comparison. In contrast to feeling exhausted or strong, Julie talked about feeling of being *stronger* or *weaker* than other children are. Just like feeling strong feels good, also feeling stronger feels good. On the contrary, feeling exhausted does not feel good, just like feeling weaker than other does not feel good. Accordingly, many children mentioned also that winning and scoring feel good whereas losing does not.

However, even though to be stronger than others or to score and win feels good, the pleasure they give is qualitatively different from enjoying movement for its own sake as the following conversation illustrates:

Laura: Are there some special situations or events that make you happy [when you move]?

Tobias: Yes, if we score in football

Niklas: mm

Laura: Is it different to enjoying a game

Tobias: Yeah, it is like, you are happy there and then when you score and afterwards you have forgotten it

Laura: ... mm, but in a game you think it lasts a bit longer, the enjoyment.

Tobias: Yeah, like if you do a fun thing, do it for a long time, it is fun all the time

Central in this conversation is the contrast between the children's feeling of sudden joy or arousal that follows from scoring and a long lasting pleasure of doing something one likes. Regarding the sudden joy and arousal, Silje described a feeling of winning as "THE feeling." The weight on the definite article, "the," highlights that there is something intense and special with the feeling of winning. This makes a contrast to the pleasure of playing a "fun" game, which is rather moderate, but steady and longer in duration.

Correspondingly, Spinoza (2011) highlights a difference between a passionate feeling of joy and a long lasting joy that involves the whole person. The examples here, and the preceding sequences, show that to move can feel good in many different ways. Sometimes the pleasure or joy emerges from being superior to others, or success, other times from connectedness and confidence. Regarding to winning, children agreed that it feels good as mentioned. However, whereas some children thought it was important to win, others told that they did not care about it. Connectedness and confidence, in turn, characterized often children's descriptions of movement experiences that were inherently meaningful and pleasant for them. In addition, such experiences related often to movement that emerged from children's connectedness to situations or environments.

7.2.4 Movement that emerges from connectedness

When children talked about activities they liked best, they often described how new movements "just appeared" to them. For example, Anna explained:

It is just, like I find some music and then I just dance and I come up like that [...]. What is weird, is that for example when I start to dance, I just dance like completely to myself, it is easy, and if you do a cool trick and then for example, I try to show it to dad and then I've kind of totally forgotten it. If I first start to dance I come up it right away, and then I forget it in the end and, it is kind of, just to do a lot of things, but some tricks I can only do in the middle of the dance, it is a bit weird.

Anna's movements emerge from her connectedness to music and her own sensations. Her movements emerge and exist within the dance. The dance takes Anna, and Anna creates the dance ongoing. Smith (2007) observes that: "In the first rush of movement there is an elicitation of interest that comes from the world." He continues: "Landscape remains the necessary correlate of movement experience. It is felt as an underlying kinesthetic awareness" (p. 52). Similarly, Fuchs (2016) writes about "intuitive understanding." For Anna, the elicitation to movement comes from the music and her moves correlate with the music. When the situation has passed and the music is gone, Anna struggles to show and explain what she did. Nevertheless, at that very moment, Anna knew intuitively on a kinesthetic, bodily level what to do. It "just appeared" to her.

Another illustrative example of such intuitive, bodily immersion in movement and one's environment is Elias who tells how his interest for biking grew from a visit to his grandfathers' farm,

My grandfather has sheep and he has a place up there, like a meadow, so it's really humpy there and first time I was there with my cousin, we went up along an old road; we rode a horse and rode down there [by bike]. It was fun and then I tried once again and in the end, it was so much fun that I decided to buy one; my bike was quite old and so I bought a new one with suspension and better wheels and so it got much more fun and I started to ride more often

Corresponding to Anna's experience of dance, Elias' biking down the hill filled him with an urge to do a movement repeatedly and to live again "the fun." His interest developed according to his own sensations. An occasional experience of biking down a humpy road at grandfather's farm aroused pleasure in Elias. He was absorbed with the speed of the bike on the humpy road. Further, his interest grew deeper as he continued to bike. I suggest this as an example of being as one with movement and the world.

Similar to Anna's dance, Elias' biking shows a self-generating movement and consuming experience. Previously, several other authors have identified and discussed such qualities as well. Above, I already referred to Smith (2007) and Fuchs (2016). In addition, Hans Georg Gadamer (in Steinsholt, 2010) uses the expression of "being played" by a game or in other words forgetting oneself as one slips into a game. Hurley (in Deleuze, 1988), in turn, uses the term "partaking" which he further illustrates with an example of "experiencing a walk in the forest". Hurley's phrase becomes relevant in the above examples where Anna experiences a dance, or in other words partakes in the dance by slipping into the music, and where Elias experiences biking down a humpy road or in other words partakes in the humpy terrain by following its forms with his bike. Movement emerges from children's sensations and feelings, which in turn emerge from their connectedness with the particular situations and environments. Through movement, their bodies extend into the world. Dahlbeck (2017) suggests that; "a thing's identity is bound up with the external forces that it encounters" (p. 13). Anna's and Elias' movements are bound up with their encounters with music versus landscape by the grandfather's farm and their experiences of these encounters.

It is worth to notice that these movement experiences are actually from outside school. However, I chose to include them in this chapter about children's movement in PE since they illustrate an aspect of movement that is deeply engaging and enjoyable for children. Although children did not talk about having such deeply engaging movement experiences as the above ones from PE lessons, observations show that movement emerging from connectedness and children's own sensations also

appear in PE. While the above examples indicate pleasure, devotion and freedom, in PE children's own movement took many different forms and intensities.

7.2.5 Take part in, exclude others, and oneself from play.

Observations showed that when children follow their own sensations, they all moved in somewhat different ways. Some children moved all the time and engaged in the activities that the teachers chose and instructed. Other children took part impulsively, or withdrew or engaged in their own tasks, or dreamed away. Further, some children invited others to play while other children excluded some of their peers. An activity such as sheep and wolverines in the following example is not "the same" for everyone. For example:

Thea smiles and walks around on all fours. She bleats like a sheep and moves toward her teacher. Thea pokes the teacher's leg and the teacher turns around. He grips Thea's shoulders and starts pushing her around. Two other children join him and they fell Thea around. Thea stands up, looks around and joins a group of wolverines in an attempt to fell another sheep. She goes down on her knees and starts to push the sheep with her left shoulder and right hand. Her look is firm. After a while, Thea straightens up, takes off her woolly hat and gloves, walks to the side of the playing area, places the clothes there and walks back to the game. This time Thea joins two other wolverines that attempt to fell another girl.

Thea modified her movements and acts to the course of the game. She was in constant movement and engaged in fighting against wolverines and later in felling sheep. Similar to Thea, Petter moved constantly:

Petter runs over the playing field. His feet barely hit the ground and his heels almost touch his bottom as he speeds up. He turns his head to the right and left as he runs. Petter stops briefly by one sheep and pushes a couple of times before he runs over the playing field again

Whereas Petter moved intensely and eagerly, he expressed only little interest for felling sheep. Some other children moved and played the roles of sheep and wolverines occasionally, withdrew or were excluded by other children. For example:

Edvard stands by his own, motionless with an inscrutable expression on his face. Suddenly his look sharpens and his body tenses up. Edvard walks to a group of wolverines that are attempting to fell a sheep. He takes a grip on the sheep's shoulders and pushes a bit while the absent look returns on his face.

Edvard both moved and engaged in felling sheep impulsive. So did also Hanne,

Hanne stands on a side of another group of wolverines. Her arms hang by her body and she looks slant past the group. After a while, one of the wolverines asks her to help them. Hanne does not respond. The wolverine asks once more and Hanne walks to the sheep and puts one hand on sheep's shoulder. She makes no effort to push or pull the sheep.

Hanne moved little and only engaged in felling sheep when other children invited her to join. Even when other children invited her, Hanne hesitated. Similar to Hanne, Sander appeared to be little engaged in playing with other children. Nevertheless, he did move and imitate a sheep. Whereas some other children invited Hanne to join the game, the classmates mostly ignored Sander:

Sander stands on all four behind a tree on the outer edge of the playing area. He faces the center and bleats like a sheep. No one responds to Sander's bleat until after a while the teacher goes to him and pushes him lightly. Sander lies down on his belly and the teacher walks away. Sander stays lying on his belly. After a while, Daniel comes to him. Boys do not talk or touch each other but they stay around the tree together for a moment. Daniel returns to the game and joins a group of wolverines. Sander walks away and hides behind a snow mound on the other side of the playing area. Occasionally he lifts his head up and bleats like a sheep. No one responds to him.

Sander moved and emphasized with the role of a sheep but he did not connect with other children.

These examples illustrate how a group of children practiced an activity each in somewhat different way. The teacher had given them the same instructions and they kept to the same playing area. However, children moved in different intensities and intervals. They came also into different situations that further caused them to respond in varying ways. Rather than "just doing an activity," children took part in their own ways, they performed the roles of sheep and wolverines in varying ways and they responded immediately to situations that emerged within the game. I identify this with Seigworth and Gregg's (2010) definition of affects as an "ongoing immersion in and among the world's obstinacies and rhythms, its refusals as much as its invitations" (p. 53). Children immersed in and among the game of sheep and wolverines and opportunities the environment and changing situations provided. In some occasions, children invited others to play or threw themselves into others invitations. Other times, they excluded some of their peers or ignored invitations from others. The examples show that engaging and connecting with activities and other children in PE lessons is a reciprocal event. It is a matter of both being affected and to affect (Spinoza, 2011) – a matter of

joining in the game and to take contact with others as well as a matter of being invited and “taken in” by other children. Such variations of children's movement and engagement show that another dimension co-exists with *doing activities and being active* in PE.

7.3 Summing up

To sum up the chapter, I started by showing how *doing activities and being active* frame children's movement and movement opportunities in school. One central aspect of the theme is that teachers emphasize a wide variety of activities, PA, and “something for everyone”. In addition, PE is characterized by instructions, repeating and just doing activities. Subsequently, children find many activities boring and feel that they are not learning anything new. The subject appears as a predictable movement environment and children already embody an idea of what kind of activities they will be exposed to and how to perform these activities. Children wish for more variation and new activities. However, they are at the same time drawn to repeat their favorite activities and observe that to learn is not always only fun. Such ambivalences show that although children wish more variation and new activities in PE, they are not always ready to make new choices even if given an opportunity. It seems that to do activities one knows from before is safe and fun while to learn involves a tension between potential joys and pleasures, and a possibility of frustration over repeating a movement without getting it work. Children's experiences of doing the activities they like best and least show further that to repeat an activity does not alone explain “boring” activities or “not learning anything”. It is possible to do an activity in many different ways, to experience it in complex, multifaceted ways and to progress.

In the second part of the chapter, *to move and to be moved*, I showed how children connect with their environment and one another in varying ways and consequently move in varying ways in PE. Complementary to being instructed to move, the children move and experience their own moving bodies as well as the world around them in their unique ways. Children's own movements move them further as well as their responses to other children who move together with them or other people's comments on their movement. Another central aspect of the theme *to move and to be moved* is how children, in varying ways, are (not) moving and (dis)connected to themselves, their environment, other children and the teachers. Furthermore, central points are children's desire to move, their enjoyment of movement that emerges from their own sensations and feelings, the uniqueness of each child and how movement and activities in PE emerge ongoing in unpredictable and multiple ways as children and teachers practice them. Themes *doing activities and being active* and *to move and to be moved* co-exist in PE and appears as two dimensions of movement. The same

two dimensions appear as relevant also in the context of PAE lessons and PA-breaks that are the focus of the next chapter.

8 Children's movement in the PAE lessons and PA breaks

The main themes from the intervention are *it is fun – at least better than sitting in a classroom, fun and boring activities* and Experiences related to moderate to vigorous *physical activity*. The theme *it is fun – at least better than sitting in a classroom* builds on a comparison between movement and sitting in a classroom and between movement that emerges from children and adult-organized movement. I illustrate the comparison with examples from the intervention activities, classroom education and movement in a “free space.” The theme *fun and boring activities* underlines that both PA breaks and PAE lessons consist of many different activities. I show how children's movement and experiences vary accordingly. I exemplify the variation by comparing Live Gym® breaks with “Just Dance” breaks and relay races with dodgeball in PAE lessons. *The theme experiences related to moderate to vigorous physical activity* covers two topics that relate to the intentions of the intervention that is increasing moderate to vigorous PA in school. The first topic is children's expectations and experiences of (not) to be exhausted or fit. The second topic is emergence of competition and children's experiences of competition in PAE lessons.

8.1 It is fun – at least better than sitting in a classroom

The majority of the time spent on learning activities in school takes place while children are sitting on chairs at their desks. In chapter 7 *Children's movement in Physical Education*, I showed already that children experience the opportunity to move in PE as desirable and as a contrast to classroom education. The same contrast was a repeating theme also in relation to the intervention. Similar to PE, children repeatedly stated that the intervention was “fun” and explained that they were “allowed to be active.” Nevertheless, many children continued further, “it is at least better than sitting in a classroom.” The last statement highlights that children experienced the intervention activities as fun *in relation to* classroom education. Simultaneously, it shows that the intervention activities might not be as much fun as children wished or had expected. Under this theme, I show how children's movement emerges and develops in four different settings that are *sitting in a classroom, moving in a 'free space', moving in PAE lessons* and *moving in PA breaks*. I supplement the last setting with a sub theme *shift from tired to awake* where I show how PA breaks in particular make children experience a change in their state of alertness.

8.1.1 Sitting in a classroom

In classroom education, children typically sit each behind their desks in symmetrical lines and rows. Children's heads and upper bodies are bent over their desks as they read their books or write. Teachers are situated at the front of the class. The lines and rows of desks demonstrate how each child has their own given place where to sit and work in the classroom. The desks and chairs locate

the children and the space between demonstrates how each child is supposed to work individually. Furthermore, the teacher standing in front of the class underlines a position superior to children and that children must look forward and to follow the teacher. The situation signifies order and stationarity. The seated position gives limited range of movement.

Nevertheless, movement and interaction between children were seldom totally absent in the classroom. They only appeared in subtle forms such as the following example towards the end of a typical classroom lesson illustrates:

One of the boys in the front row slides backwards and forwards on his chair. He puts his arms on the backrest and turns around. He swings his legs a couple of times and turns back. Another boy at the back of the classroom crosses his legs. In the next moment, he crosses them the opposite way. By the window, a girl lifts her eyes up and looks at another girl who sits beside her. The girl lifts her eyes too and looks back. On the other side of the classroom, a boy stands up and walks from one corner of the room to a crayon box in the opposite corner. He fingers in the box and mumbles something to himself. The boy picks a pen, returns to his desk and bends over it from the opposite side to his chair.

The subtle movements and looks cracked the order and stillness. They indicate a desire to move and to interact with other children that is subdued by rules and the expectation of how one is supposed to be in the classroom.

According to Smith (2007), children experience the world sensually and kinesthetically and children's embodied consciousness emerges through bodily immersion in movement. In the light of these notions, a classroom creates an environment that insists children to curb any desires to move and to ignore the presence of each other. At the same time, the subtle movement and looks show that sitting in a classroom is an effort and that children are drawn towards movement and towards one another. Usually, the subtle movements and looks became more frequent and intense towards the end of the classroom lessons. The longer one sits and ignores the presence of others, the more intense the need to move and interact may grow. Consequently, when classroom lessons end, children often rush out with burst of energy. Children long for "free space" and to move with freedom.

8.1.2 Moving in a 'free space'

To move freely is desirable for children and breaks are moments in school when, for a short time, the children can decide what to do. The breaks interrupt the order and discipline of classroom education, as in the following moment between a classroom lesson and a PAE lesson:

Children start lifting their looks up from the books. They push their chairs back and start moving. Children rush out from the classroom and in few seconds both sides of a double door to the schoolyard fly open and two or three children at the time run out screaming and yelling. Behind the fastest and loudest ones comes a second wave of children who walk at a slower pace. Some of them take few occasional running steps or chat with their peers. In a few seconds, most of the children has spread out onto the schoolyard. Some of the children keep running around, others start talking lively or shoving each other in more or less friendly manner. The last of the children slowly drop out and slip in among the others.

For a short moment, no one tells children what to do or how to behave. In contrast to submitting to rules and expectations of the classroom, they have an opportunity to follow their own sensations, interests, feelings and desires. Sitting and individual, quiet working is replaced by a turbulent, energetic space that is formed by children themselves both as a group and as individuals. I identify the energy and urge to move with Smith's (2007) first rush of movement and Seigworth and Gregg's (2010) "yet-ness."

Smith writes:

The first rush of movement appears to be neither of my own volition nor a bodily imperative acting upon me. It is more an upsurge of feeling, literally a *rush* that comes over and flows through me [...] an unbridled enthusiasm for running, leaping, charging, diving, plunging into a landscape (and waterscape, seascape, fire-scape, air-scape) of action. (p. 51)

The energy and urge to move seems to have accumulated in children's bodies and is now released. In addition, corresponding to Smith's words, children plunged into the schoolyard and the possibilities it provided. Seigworth and Gregg write further about "an unceasing challenge" and "sense of urgency" (p. 80) of not yet knowing "what the body can do" (Spinoza, quoted in Seigworth & Gregg, 2010, p. 75). In a free space, children have an opportunity to follow their own desires and to explore and define their own possibilities and boundaries. Furthermore, in the free space, many different things happen simultaneously and each child contribute in his or her unique ways to shaping of the space

and flow of events. The sudden transfer from one mode to another makes the contrast especially clear. In PAE lessons, children encountered both some freedom to move and some regulations from the teachers on how to move.

8.1.3 Moving in PAE lessons

Similar to PE, I identified two dimensions of movement in PAE lessons. On the one hand, teachers instructed children to move in certain ways. On the other hand, children also moved and interacted in ways that they invented themselves. In relation to classroom education, PAE lessons gave children an opportunity to move and interact with one another more. In comparison to free space the opportunities were, however, more limited. The following sequences from a PAE lesson where the academic part focused on repeating themes children had recently learned in social sciences¹² illustrates the latter point well,

“Go in your teams so that each team faces its own box.” The teacher instructs children and points to four plastic boxes on the other side of a gravel field. She continues: “You go and pick one piece of paper where you can read a word or sentence we have learned in social science during the last weeks. Think of the word or sentence as an answer and figure a question that fits to it. Then you come to me, tell me the question and further run back to your team and send out the next pair. “Okay?”

Similar to the classroom lesson, the teacher defines where children should stand, what they are supposed to do, how they should move and in which direction. Such as desks and chairs located the children in space in the classroom; the boxes locate children in groups and highlight that each group has their own, parallel line to run. What differs the setting from the classroom is that the teacher allows and even expects children to move, or more specifically, to run.

Running in teams and pairs corresponds further with the rationale and guidelines for the intervention (Resaland et al., 2015). The predefined groups and short instructions from the teacher correspond with the emphasis on effective organizing that would assure children as much as possible time for being *physically* active. Further, organizing groups in parallel courses encourages competition between groups. The guidelines instruct teachers to include an element of competition in the aim of motivating children to move more intensively. In addition, running fits with the aim of keeping motor demands low in order to ensure a feeling of mastering for all children (Sogn og Fjordane University College, 2015). These notions constitute PAE lessons as oriented toward making and keeping children

¹² According to guidelines main part of ASK activities are about Norwegian, English and mathematics but occasionally teachers in this school blend in also other subjects such as social sciences in this example

physically active for a certain amount of time at a given intensity with the aim of supporting and improving children's academic performances, health and fitness. The aim of supporting children's learning was additionally reinforced by combining movement with an academic task.

However, in practice, children moved in varying ways and in varying intensity. They also did their own things. For example, in the above lesson:

The first two children from each team start running towards their boxes. They pick up one piece of paper and look at it. One of the pairs runs almost immediately further to the teacher for confirmation and acceptance of the answer. Others follow shortly after.

Although children ran the same course, they ran at a different pace. They all had their personal styles too. Some of children took long steps and lifted their heels high up in the air while others ran in small, low steps. When children practiced the activity, variation of movement emerged.

Variation of children's own movement and interaction emerged also when they waited for their turns to either to run and pick up an answer or to give their answer to the teacher.

Soon there is a crowd of children around the teacher jumping, waving their arms and waiting for the teacher to hear their question or simply repeating their question aloud. Many of the children who wait for their turn jump or step around too. Alternatively, they chat with other children or just stand. When pairs return, from the teacher they send the next pair out and so the activity continues.

Within the structure and order of the PAE lesson, children found their own space to move and interact. In this space, some children moved or interacted more or more intensely while others moved and interacted less, less intensely or just stood still. Some children pushed through the group, and were eager to tell their answers to the teacher. They shouted aloud or waved and jumped energetically while others stood close to the teacher in a restrained manner, waited for their turn and talked quietly or tranquilly. Similar to "free space," many different things occurred in many different ways and intensities simultaneously. Children responded each in their own ways and expressed variation of interests and propensities. The variation contrasts with the teacher's instructions and the organization of boxes that demands all children to run the same course and in turn. Thus, even if the teacher-organized activities dominate PAE lessons, the lessons also open up some space for children to move and interact according to their own sensations and propensities. The same concerns PA breaks.

8.1.4 Moving in PA breaks

In PA breaks, children moved 5 minutes in the classroom, in between academic lessons. In both intervention schools, teachers usually chose to play either a "Just Dance"¹³ video or a Live Gym^{®14} video. As the name indicates, "Just Dance" breaks involved dancing in the classroom while Live Gym[®] breaks involved either bodyweight or endurance exercises or dancing. The following is an example from a PA break with "Just Dance":

Children push back their chairs and many of them seek the empty space in the back of the classroom. Some of children form groups. Others stand by themselves. The teacher clicks on a "Just Dance" video and turns off the lights. A figure starts to move on the screen on the front wall and music fills the classroom. Children start to move. They step on place and around and they wave their arms and bodies after the video.

The PA break marks a shift in the organization of a classroom from sitting still to movement – movement that usually is subdued and curbed becomes allowed and expected. Furthermore, children have some freedom to choose their own places in the classroom and in relation to other children. They get also some space to dance (or to choose not to dance), according to their own preferences and in their own styles,

Some children follow the rhythm of the music and the steps to the figure on the video while other children step in their own rhythm and patterns. Some children make their movements large while others make their movements small. Some barely moves.

The individual variation of children's movement was clearly visible and the dance developed in many different directions as children related to it and practiced it, each in their individual way. In the light of Smith's (2007) emphasis on kinesthetic, emotional and embodied aspects of children's way to experience the world, this shows that a movement break in a classroom may provide children with an opportunity to experience the classroom and one's relation to her or his classmates in another way than is the case with traditional academic education. They take part bodily and they have more opportunities to move and to choose their places or with whom to take contact. However, the order and structure of the classroom still frame the children's movement and interactions. The video

¹³ «Just Dance» is a dance video game where colorful human or non-human figures dance to the latest pop hits. In PA breaks, teachers play videos from YouTube[®].

¹⁴ Live Gym[®] is a commercial exercise concept where users purchase access to a database with exercise videos, which they can play on their own pc. The company has developed a set of exercise videos especially targeted for 5-minute activity breaks to be used in school. A contract between Live Gym[®] and ASK intervention gave intervention teachers access to these videos. The Live Gym[®] videos made for schools involve different combinations of body weight and endurance exercises or dances that can be made in a classroom.

provides them with instructions on how to move, and children imitate the figures. Furthermore, the walls and desks encircle the children. Thus, similar to PAE lessons, PA breaks involve two dimensions: children's own movement and movement that follow instructions. Another perspective from which to view PA breaks is to regard them as a transitional phase between two units of academic education.

8.1.4.1 Shift from tired to awake

In the interviews, children often told about experiencing to be quicker in academic tasks after PA breaks or that they felt more awake. For example, Ingrid explained:

You sit like that, oo that is so easy, you do know that... I know that, but I don't bother to think it, oo like that, it was like, you look tired Ingrid, you are tired.... Now we have to have the ASK thing and then we have ASK things, then I get like [waves her arms up in the air] wow

Julie added:

It is Ingrid, now she is awake,

In this conversation, a PA break marks a shift from feeling tired or apathetic towards feeling awake and filled with energy. The arms waving up in the air show that the feelings and the shift between them has a bodily dimension. Children experience the shift from tired to awake in their entire being. I relate this to Fuchs and Koch's (2014) perspectives of bodily engagement and readiness to act. In contrast, the word "tired" indicates apathy or lack of bodily engagement and readiness to act. Thus, PA breaks create variation in the classroom and provide children with a pause in both the academic learning and the sitting in a classroom. Children associate them with increased energy and alertness.

Correspondingly, Harvey et al. (2018) report that children in DPA (The daily physical activity) initiative felt that they were "thinking clearly" (p. 3) and more ready to learn after having been engaged in PA. Gibson et al. (2008), in turn, state that teachers in PAAC (Physical Activity across the Curriculum) intervention experienced PA breaks as "a great teaching strategy" that help break up the monotony of the class" (p. 44). Correspondingly, a central reason to include PA breaks in the ASK intervention (Resaland et al., 2015) was the potential improvement in children's academic performance or increased brain activity right after varying bouts of PA. Resaland et al. based the arguments on recent neuro-cognitive research (Hillman et al., 2011). Both Resaland et al., Gibson et al. and Harvey et al. express an interest for whether movement in a classroom can support or even enhance academic learning. Findings here show that breaking up a classroom lesson with movement may help children to restore bodily engagement and emotional readiness to act.

As mentioned, children did different activities both in PA breaks and PE lessons. The material shows that it made a difference for them what activities they had.

8.2 Fun and boring activities

When children talked about their likes and dislikes in the intervention, they repeatedly expressed that it depends on the activity. Accordingly, a central topic in this chapter is the variation in children's movement and experiences in relation to diversity of intervention activities. I illustrate the variation with six sub-themes. The first ones, *running back and forth* and *when it happens a lot* illustrate variation of activities and children's movement in PAE lessons whereas *performing an activity* and *dancing together* does the same in a context of PA breaks. One central topic in both settings is a distinction between fun and boring activities. The last two sub-themes, *the challenges of complexity* and *dancing in the presence of others*, underline that each child experienced the activities in his or her own individual way.

8.2.1 Running back and forth

Running back and forth is an expression that came up when I asked children to tell what they liked about PAE lessons. Similar to many other children, Thea explained,

I think it becomes a little bit boring if we have relay races and stuff like that, 'cause I feel we just run back and forth and nothing new happens [...] everyone has to do the same, it gets a little bit boring

The phrase "nothing new happens" shows that children feel movement as "just the same," which was also part of the findings in chapter 7.1 *Doing activities and being active*. Similar to PE, children experience that many activities in PAE lessons are repetitive and monotonous or that they "just do" activities. In addition, "everyone has to do the same" shows that children experience their opportunities to choose and vary how to move limited. Rather, they feel that they all should move in a way that the teacher and the organization of the activity defines. An activity that involves only "running back and forth" constitutes a learning environment that is both predictable and standardizing. Children demonstrate neither bodily engagement (Fuchs & Koch, 2014) nor intense joy. They are happy to be allowed to move - or to be *physically* active -, but at the same time they find the way of moving little inspiring.

8.2.2 When "a lot happens"

In contrast to relay races, many children expressed that they enjoyed what they framed as "when a lot happens" and what I frame further as complex activities. For example, Thea continued her previous quote: "It's fun when we have activities that are a little bit exiting and when a lot of things

happen, [...] I like dodgeball and things like that because it's almost never the same". The quote shows that in activities such as dodgeball, children encounter a multitude and variation of situations and opportunities to move. Consequently, they can never be quite sure what might happen next.

Correspondingly, observations affirm that several things happen simultaneously when children play a complex activity such as dodgeball in PAE lessons. For example,

Petter notices a ball rolling on the floor. He rushes toward the ball and reaches it first. He gets an eye on Thea, targets and throws the ball. He misses and Thea gets the ball. She turns toward Petter with a firm, determined look on her face and throws. Petter jumps up and bends his body but the ball hits him. He rushes up to the scene where the teacher has placed a bunt of sheet with academic tasks allowed to return to the game, children have to solve one such problem/task. Petter quickly finishes one, jumps down from the scene and runs back into the game.

Children's movements emerge from their responses to one another and situations. The complex web of situations and events that follows, develop further in unpredictable ways providing children with ever-new and varying opportunities to move and to engage in the game. The situations and events that change ongoing and often quickly, demand children further to adapt their movements continuously and sometimes to switch a role very quickly. Above, Thea stated that it is "exciting" when it happens a lot. Seigworth and Gregg (2010) write about a force of "not yet" knowing. The heat of the game and the unpredictable course of events is tickling. Children are drawn toward the game and its invitations.

When children join the game, they also influence the development of the game and their own and other children's opportunities to move. For example:

Daniel picks up a ball. He looks around and gets an eye on Emilie. Emilie notices this. A short laughter slips out of her mouth and she starts to run away from Daniel. They pass by Emma who steps slowly around with a neutral look on her face. Suddenly Emma notices that another child is targeting her. She speeds up into a run and a small smile appears on her face.

To be targeted by another child appears here as a personal invitation to take part in the game. The smiles on girls' faces and the change from standing or walking to running exemplifies how children further accept invitations from one another. The affects and emotions turn into acts, similar to what Fuchs and Koch (2014) and Fuchs (2016) describe. By inviting and accepting the invitations, children create opportunities for others to take part and become part of the game. They make the game to

what it is through taking part and playing it together. According to Spinoza (2011), "a body in motion or at rest must have been determined to motion or rest by another body" (p. 73). Children are not only moved, or in their own words excited, by the variation of situations in dodgeball but they also contribute to that it "happens a lot" and thus draw another into the movement.

Thus, when compared to "running back and forth" in a relay race, there is difference both in children's enjoyment and children's opportunities to act and interact. Children in general enjoy the thrill of being surprised by the game while they find "running back and forth" boring. In a complex activity such as dodgeball, children also play an essential role in the creation of the game and consequently each other's movement opportunities while they in a relay race feel that they all need to move in a same, predefined way. Whether an activity sets rigid boundaries on how to move, or whether it involves elements of surprise and opportunities to choose how to take part, move and to influence the course of the activity, makes a difference to the children.

However, action and excitement of not yet knowing may not always be only enjoyable for all children. As the example of sheep and wolverines in chapter 7 *Children's movement in Physical Education* already showed, not all children slip into an activity although they would provide opportunities to take part and move in varying ways and to influence the course of events. One challenge with complex activities is that a lot of action and a multitude of simultaneous events can also become overwhelming and difficult to intervene.

8.2.2.1 The challenges of complexity

The material shows that complexity of an activity or a learning environment can sometimes override a child's capacity to cope with it. This can further arouse feelings of discomfort and a struggle to get involved. For example, Hanne explains that sometimes when she plays together with all her classmates in a small gymnastic hall, she

get a somewhat confused because it is like many who laugh, laughter like in that direction, little bit screaming in the other. You hear when they run, because it is like, they run and then they step quite hard on the floor and I get kind of, quite confused, don't know what to do, but I hold to the side until I'm not confused anymore.

It is difficult for Hanne to fix her attention on what is relevant in the situation because of the multitude of voices and events around her.

"Spinoza suggests that beings will be defined by *their capacity for being affected*, by the affections of which they are capable, the excitations to which exceed their capacity...." (in Deleuze, 1988, p. 45). The excitement and multitude of simultaneous events and sensorial stimuli in the above situation

exceeds Hanne's capacity to cope with it. The situation is too intense and too complex for her. In contrast to connecting with others, she withdraws to the side. She is more paralyzed than stimulated by the situation and not yet knowing what might happen. The example shows that children's capacity to cope and enjoy complexity is individual and that when a situation or environment exceeds a child's capacity to understand and cope with it, complexity turns from inspiring to confusing. This shows further that activities are not unambiguously enjoyable or inspiring but that children's enjoyment and engagement relate to their individual experiences of them.

Correspondingly, the material shows that children's capacity to cope complexity and enjoy activities may change over time and often relate to how familiar they are with the particular activity such as the following conversation illustrates,

Petter: For example, capture the flag, first time I tried it

Edvard: It was boring

Petter: It was a little boring yes, but then it get funnier and funnier but yes, and when we have tried it many times it gets, it has got really fun

Daniel: Yes, but we knew, we didn't know what was allowed and what was not allowed

Petter: mm

Daniel: ... and if we get to know it better, then it gets like...

It is central in the conversation how boys told experience of the capture the flag changed as they practiced it. Boys noticed that the game became much more fun when they learned to know it better. In the beginning, the boys did not understand the game and they did not know what to do. They were overwhelmed by the complexity and insecure about what they were allowed to do. Through practice, the boys' understanding of the game increased as well as did their capacity to cope its complexity. Simultaneous, they learned to like the game. This shows that a child's experience of complexity as well as enjoyment of an activity is not only individual but also change. Sometimes, children may need some time or practice to learn to understand, engage and enjoy an activity. The amount of time and practice each child needs may further vary.

The following sections *performing an activity*, *dancing together* and *dancing in the presence of others* provide another example of how children's experiences varied across both activities and individuals.

8.2.3 Performing an activity

Similar to PAE lessons, children's movement and experiences varied also across different PA break activities. One of the typical activities was Live Gym®. During these breaks, the teachers played short exercise videos from an internet database as described in 8.1.4 *Moving in PA breaks*. The content of videos usually involved muscle and/or fitness exercises that children could perform beside their desks or on their chairs. Children continued with one exercise until the instructor showed them a new one. The following is an illustrative example of one such break:

A gym instructor appears on the white screen. He stands on a wooden floor in an empty room that reminds one of a training studio from a commercial fitness center. The instructor stares straight out from the screen and stretches his body in full length. With a cheerful voice and clearly articulated words, the instructor asks children to start with one leg squats, "Stand up, lift one foot up behind you on the chair and go down and up on the other one." A loud beat of music is heard and the instructor continues by counting repetitions and repeating "very good, very good." After one leg squats, the instructor asks the children to sit down on the chair and continue to exercise core muscles by bending the upper body up and down. The children have their gaze fixed on the widescreen and follow the instructor's guidance and modelling. The looks on the most children's faces are neutral and changeless throughout the break. Some of the children follow the number of repetitions the instructor counts. Others take breaks or stop before the instructor moves to the next movement.

Children copy the instructor's movement and in order to move "correctly" they look at the video screen. The children do the exercises the instructor shows and their attention is fixed on the video. However, their neutral looks and body language differs from the instructors exaggerated cheerfulness and energy. In the light of Hurley (in Deleuze, 1988), children do not "partake" the emotional state, which the instructor builds up on the video. Rather, the video runs and children repeat the exercises. Children are *physically* active and they perform the exercises, each in their own ways.

In interviews, the children seldom mentioned Live Gym® breaks when they talked about the intervention. One of the few children who made comments in these breaks is Sara who formulated, "I don't mind but I have done funnier things." When talking about doing fitness or muscles exercises in general, the children usually mentioned that exercise is good for them or that doing fitness or muscle exercises is boring. Ola made both remarks on two separate occasions. First he explained that "it is quite nice [talks about a feeling in his body] and good to get some exercise." Later, Ola told that

he did not really like "to do sit ups, because you just go up like that. It is not that fun." The quotes make a contrast. They show that children's ideas and experiences of doing fitness exercises are ambivalent. On the one hand, children like to move as I have already shown. In addition, they consider it as "good" for them to exercise. On the other hand, children do not enjoy "just doing" muscle and endurance exercises that much. In comparison, "Just Dance" - breaks seemed to engage many children emotionally and even turned into personally meaningful experiences for some of them.

8.2.4 Dancing together

Observations showed that PA breaks where children dance to "Just Dance" videos were often engaging and enjoyable for many children. For example,

A human figure worn in colorful clothes appears on the white screen. The figure starts to move, and music fills up the classroom. In the background, abstract figures wave and blink in different, bright colors. The children start to follow the figure and the rhythm of the music. Thea, Emilie, Emma and Sandra all go together to the back of the classroom. Their faces are turned toward the white screen but every once in a while they glance at each other. The girls' eyes shine; their steps are firm and their arms wave and swing following the figure on the screen.

Enjoyment, engagement and connectedness characterize the girls' way of moving. The looks that shift between the video and each other show that girls' attention has multiple fixation points. They dance following the model on the video but at the same time, they also dance together. Further, the girls' smiling faces and energetic moves match the energy that glows from the video. They are both socially and emotionally engaged in the situation. In addition, the girls follow the steps of the figure as well as the rhythm of the music, which reinforces the appearance of engagement and connectedness. However, children's engagement and connectedness in "Just Dance" breaks is not dependent on the latter features. For example, in the same class, Daniel steps vigorously and waves his arms far up in the air. He smiles and spins around. He looks at the video frequently and changes his movements according to the model the figure provides. However, he loses the steps several times and do not quite follow the rhythm. Yet, he keeps dancing and his energy agrees with the energy the video creates.

The girls affirmed further in interviews that they enjoyed the dance. In addition, they expressed that dancing together with each other was an important aspect of their enjoyment. For example, Thea explained,

Now we have "Just Dance" in a 5-minute break and I think everyone thinks it is quite fun. At least we girls think so, because we have, like, we are always together, if it is two and two so it is always me and Sandra. If it is four then I'm always together with Sandra, Emilie and Emma. We have become a group in "Just Dance"; we stand always foremost [...] we have got our own place there and that makes it quite fun because we just watch the screen and do exactly the same. The first time we had that video everyone started to laugh because it said "what a f[...]k sake"

In addition to be allowed to move, also to move together is an essential part of the girls' experience of the "Just Dance" break. Similarly, Mulvihill et al. (2000), Spencer-Cavalier and Rintoul (2012) observe that many children in their studies enjoyed PE more when they felt they were having friends and that they moved together with others. Harvey et al. (2018), in turn, observe that participating with others is an important facilitator for children's engagement in PA. Complementary, the quote above shows that for these girls "Just Dance" has become something special. They talk about a favorite place and always dancing together. They are not "just doing an activity" but they have created a habit which they share with each other.

Correspondingly, Waite and Pratt (2011) suggest that:

Spaces have particular possibilities, history and associations for children and adults that make them meaningful "places" and these are constantly being revised by ongoing experiences in them. (p. 13)

The dance in a classroom opened up particular possibilities, which involved that some children created embodied memories about sharing the place and the activity with each other, which made further the dance in a classroom to a meaningful "place" or experience for these particular children. Smith (2007) writes about "primary mimetic moments of childhood that carry through adulthood" and that "hold the promise of human connectedness to one another and to the otherness of the world" (p. 58). Connectedness to one another is a central aspect of the girls' performance and experience of the "Just Dance" break, which further made dancing in the classroom special and meaningful for them.

However, such a strong involvement of enjoyment about "Just Dance" breaks did not concern all children. Many of them described the breaks simply as "fun." There were also children who did not engage in nor did enjoy "Just Dance".

8.2.4.1 *Dancing in the presence of others*

Besides the enjoyment, engagement and connectedness the preceding "Just Dance" break also brought out other expressions. For example

Hanne stands by her desk in the front row. Her shoulders are tense and her head and gaze points down to the floor. Her moves are small and she glances around in the classroom. A small, bashful smile passes by upon her face.

The eyes directed slant towards the floor expresses an attempt not to look at the video. This indicates avoidance. The glances around in the class express further awareness of the environment and other children whereas the bashful smile and tense shoulders indicate insecurity and an attempt to make oneself unnoticeable. The example illustrates that not all children experienced connectedness in "Just Dance" breaks or shared the experience of dancing in the classroom with others. Some of them rather took part in these breaks in a same room with their classmates. They sensed the presence of the other children, but did not took contact with them. In the above example, the child did neither engage in dancing.

Another example of variation in children's ways to take part in "Just Dance" breaks is Sander who,

steps on the place. He drags his feet, spins around once and steps some more. He does not look at the video or the other children.

Sander moved constantly in his own way. He did not follow the video or seek eye contact with other children. He created his "own world" that made a fracture in the rest of the setting. The example affirms that connectedness was not characteristic for all children's participation in "Just Dance" breaks. In addition, it shows that some children chose to dance or move without paying attention to the model from the video.

Correspondingly, Seigworth and Gregg (2010), emphasize that *affects* sometimes move bodies toward one another or toward movement and other times can become overwhelming or pull bodies apart (Seigworth & Gregg, 2010). The contrast between the two examples here and the examples in the preceding sequence show that the form and intensity of children's engagement and movement in "Just Dance" breaks varied although they all moved in the same space and were expected to follow the same instructions and rules. Corresponding with findings in 7.2.5 *Take part in, exclude others, and oneself from play*, and 8.2.2.1 *The challenges of complexity*, this affirms that children respond in different ways by the same activities and environments. Although many children enjoy certain activities such as "Just Dance" breaks, these breaks or any other particular activities do not

guarantee engagement and enjoyment for all children. Neither did PAE lessons and PA breaks make all children to feel sweat or out of breath such as the aim was.

8.3 Experiences related to moderate to vigorous physical activity

The primary aims of ASK intervention were to motivate children to move more, to move on moderate to vigorous intensities and to involve in particular children who were less active and fit. In order to motivate children to move hard enough the researchers (Resaland et al., 2015; Sogn og Fjordane University College, 2015) encouraged teachers to include competitive elements in the intervention activities. At the same time, the researchers, however, advised teachers to tone down winners and losers in purpose to ensure positive experiences for all children. Fitness, exercise, feelings of being exhausted and competition were themes also in interviews with children. I divide central traits from these conversations in four sub themes. Of these themes, *experiences of (not) getting exhausted or fitter* and *(dis)likes of getting exhausted*, cover children's experiences of the physical aspects of the intervention. *We make it to a competition* and *I can get quite stressed*, in turn, focus on competition that flourished in PAE lessons and children's responses to this element.

8.3.1 Experiences of (not) getting exhausted or fitter

Many children were aware of that the aim of the intervention was to increase PA in school and to explore whether children would "get smarter" by the intervention. Beyond this, children's experiences varied. Some children experienced that the PA, which came with the intervention was physically easy while others felt that they became fitter throughout the year. Petter was one of the children who experienced the intervention physically easy. He told that, "I had actually thought it would be harder than like relay races." Later, he added that, "I go to quite many activities so I don't care if I don't get that much exercise in school." Similar to him many other children told that they seldom felt exhausted or sweat in the intervention activities and that they went to sporting activities in their free time. This brings attention to the large number of children who are active and fit and who experienced that the intervention provided them only little or no physical challenge.

On the other hand, the material indicates that the intervention may have helped some children to get fitter and to gain positive experiences of movement. For example, Hanne explained:

...suddenly I run like faster, at least that's how I feel [...] I feel quite happy because I can actually run faster than others, it's quite fun [...] it meant actually quite a lot for me before, because I didn't really feel fit, but now I've become more [fit].

Hanne felt physically fitter and she associated the change to the intervention. Her teachers also told that both they themselves and their colleagues experienced that several children in Hanne's class

looked fitter towards the end of the intervention year. Correspondingly, to involve particularly those children who were initially less active and less fit was also the main purpose of the intervention. Resaland et al.'s (2015; 2016) research interest was whether the intervention could contribute to make children more active, fitter and healthier or to help children to improve in cognitive or academic performances. Perspectives and findings here are complementary and show that the feeling of being physically fit and even with others is important for children. However, in contrast to associating physical fitness with health or academic performances, children themselves associate it with participation in movement activities with their peers. Physical fitness had a social aspect and value for them. In addition, it had emotional value for them when they felt strong or stronger than others are such as shown in chapter 7.2.3.2 *Feelings of superiority and success*. Furthermore, children talked about managing physical challenges. Some children, for example, explained how they needed to exercise some more to be able to run up to a mountaintop.

Correspondingly, Rodriguez Garcia et al. (2014) found a positive relationship between physical fitness and general self-concept in 10-year old children. Liu et al. (2015), in turn, have observed an association between PA interventions and increases in the self-concept and self-worth in children and adolescents. Furthermore, Jago et al. (2009), and Everley and Mcfadeyn (2015) argue that movement is an important part of children's social lives and that in particular to be physically skilled in culturally desired activities gives status among children (Jago et al., 2009). The above example illustrates that an experience of being fit and able to play equally with one's friends can "mean a lot" to a child.

As the above examples show, some children were fit and moved a lot already before the intervention, while others were less fit and moved less. Correspondingly, children's experiences and interest for being exhausted varied as well.

8.3.1.1 (Dis)likes of being exhausted

Some children expressed that they enjoyed the feeling of being exhausted and sought activities and situations that provided them with physical challenges. In contrast, other children found the feeling of being exhausted unpleasant. They rather avoided situations that made them sweat and out of breathe or felt a strong desire to rest when they get exhausted. Petter fell into the first category: "I really like when I get exhausted and then I can relax and then up again. Like we do in football that we have to run many rounds, like in a relay race." Petter enjoyed pushing himself hard. He liked in particular intervals where he could first "take out" and then rest a short moment just to sprint again. Similar to Petter, Silje liked to push herself. They both told about moving and exercising a lot and mentioned that they felt getting stronger by it. On the other hand, they had both experienced strain

injuries as well. These examples show that many children choose to move in intensities that make them sweat and exhausted when given an opportunity. For some of them, the challenge may not be to move enough and hard enough but rather to find a balance between physical stress and rest.

In comparison, Maja told that she did not enjoy being exhausted. She described her experience of the fitness test¹⁵ in the beginning of the intervention:

Maja: When we would run back and forth in gym hall that was not fun

Laura: You're not that happy to be exhausted?

Maja: No, he

Laura: Doesn't feel that good or ...?

Maja: Yes, and the heart beats really fast and I was, I feel that I want just sleep but I can't at school heh

Rather than to stand up and continue, Maja wanted to go home and rest when she got exhausted. Similar to Maja, Andreas told that when he feels exhausted, he "likes better to lie down on the couch." These examples show that not all children were drawn to push their limits and that children did not only express a desire either to push their limits or to avoid exhaustion, but often mentioned also how they balanced moments of exhaustion with rest.

According to Spinoza (2011), things are never either good or bad themselves. Correspondingly, the examples above show that to move in high intensities is not unambiguously good or bad. Such as too little movement may be disadvantageous or harmful for a child so can also be too much or too intense movement. Furthermore, Ahmed (2010) writes, "we judge something to be good or bad according to how it affects us" and "feelings participate in making things good" (p. 401). Similarly, the above examples show also that some children experience exhaustion as good and pleasant while others experience it uncomfortable. Accordingly, they are either inclined to push their physical limits or to slow down or stop when the intensity and strain of PA increases. In some occasions, to follow one's drives may be advantageous whereas it in other occasions may be disadvantageous such as the examples of strain injuries show. To find a fine balance between exhaustion and rest involve different challenges for different children.

¹⁵ Anderssen test (see Resaland et al., 2015)

Corresponding with the varying experiences of being exhausted, children experienced also competition that characterized many PAE lessons in different ways.

8.3.2 We make it to a competition

Competition is a topic that children from intervention schools often took up in interviews when they talked about PAE lessons. For example, Emilie explained, "It's not actually a concrete competition but we kind of make it to a competition, heh." Similarly, Sara told that, "The teacher always says that it is not a comp – remember it is not a competition, and then we say – we think; ha ha.... because we think about it like a competition". The examples show how PAE lessons often turned into a competition although children knew that they should not think about them like that. It did not help that teachers kept reminding them of not thinking the activities as a competition. The existence of competitive elements as well as children's awareness of teachers' attempts to tone it down correspond with the intervention guidelines (Resaland et al., 2015; Sogn og Fjordane University College, 2015). However, it is clear that the competition has a more significant role in the PAE lessons than was the teachers' intention and that was the intention with the intervention guideline about toning down winners and losers. The examples above show that teachers had only limited opportunities to control what happened between children. Correspondingly, Suomi et al. (2003) observe that negative interactions between children easily take place behind the teacher's back. In PAE lessons, the competition emerged in interactions between children.

Children told that during the activities, competition emerged particularly in situations where two teams were evenly matched or when teammates cheered each other. For example, Ida explained how she "try to run faster than others do and sometimes I look to my side and see if I'm behind or in the front or in line with them." Emilie affirmed, "Like if it is about to win, for example, and it is two teams that are doing like even just before the finish line, it is like "come on, come on". Both examples underline that in many PAE lessons, children were divided into groups and they ran on parallel courses.¹⁶ The structure invites children to compare themselves and their teammates with the competing teams. During the activity, children may try harder or attempt to push their peers to try harder with the aim of winning. Afterwards, they talk about who won or lost, "We talk in groups [...] it's mostly, "I finished before you [...] we were first" (Sara). The conversations afterwards could also concern how much one's team won or lost,

¹⁶ See the example of a relay race in 8.1.3 Moving in PAE lessons

When we had like a basketball thing, so they asked how many, how many you got, and we got like 84 I think and then it was one group that get like 150 and suddenly the group says, yeah we got 16 – no 84, and then he adds 100. (Ingrid)

In such conversations, children express that they were concerned about doing better than others. According to Sheskin et al. (2014) strong preferences and tendencies for social comparison are common for young children and that young children in general dislike achieving less or doing poorer than others. These findings affirm the ones in chapters 7.2.3.1 *To feel connected and confident with others* and 7.2.3.2 *Feelings of superiority and success*. In addition, the examples above show that the competitive element in PAE lessons underpinned social comparison. Furthermore, the material shows that competition aroused varying emotions in children.

8.3.2.1 I can get quite stressed

In interviews, many children stated that they liked competition and that they thought that trying to be faster than others may have made them more alert and to try harder. On the other hand, other children told in interviews that competitive situations could also make them stressed, “Like if I get bad time, then I get stressed, mm if I’m like supposed to run and pick up something and if I don’t like find it, then I get stressed”. Ola’s words emphasize a combination of feeling a need to be fast and a struggle of finding a correct answer. The combination made him stressed.

Other children explained how taking incorrectly could make one to feel not only stressed but that they also disappointed others,

if you have like brought in the last brick you have, and then you have taken wrong and then like at that moment someone else comes first, then you can feel like you have ruined it for the whole team. (Thea)

In PAE lessons, children moved in teams and thus to take incorrectly or being slow had consequences for the whole team. Earlier in chapter 7.2.3.1 *To feel connected and confident with others*, I showed how winning together with one’s team could reinforce the joy of success. The example here indicates that to feel that one causes one’s own team to lose can similarly reinforce the feeling of failure or being weaker than others as well.

Sometimes, other children contributed to make feelings of failure, being weak or a burden to one’s team even worse,

It might be like, if you come a bit later “ooh, you are so slow” and “you’ve taken wrong,” then it is almost that, may be you start crying because you get so sad, because it feels like you’ve ruined it for the whole group. (Emilie)

Children blamed each other for being slow or making a wrong choice. They also told about comparing if they had had fast or slow children in their teams such as “I have him or her in my team” (Sara). Children personalized winning or losing by a team on individual children. To be the slow or the one who makes a mistake had social consequences.

Although competitive situations may motivate some children to run harder and work faster, it becomes clear that they also facilitate comparison and mocking between children, which further threatens many children's enjoyment of PAE lessons as well as their sense of self and social relationships. Correspondingly, Aggerholm et al. (2018) write about competition in PE, “empirical studies have highlighted certain negative and excluding tendencies in physical education, and there are indications of a discontent among some students, which appears to be related to competitive activities in physical education” (p. 2). They add that it is difficult to “integrate good and fair competition” (p. 7) in a school context where participation is obligatory and children have remarkably different skill levels. Aggerholm et al. suggest avoiding competition in a PE context. The examples above show that children are inclined to compete and social comparison and that encouraging this disposition further facilitates negative interactions and expose in particular children who take wrong or are slower than their peers for unpleasant experiences. The previous chapter showed in addition that it is not in teachers' control to select the “good” sides of competition and to tone down the “bad” ones. The competitive element in PAE lessons involve not only a potential of some children trying harder but also increased probability of feelings of stress and exclusion of some children.

8.4 Summing up

To sum up, the chapter started with the theme *it is fun – at least better than sitting in a classroom*. A central finding was that children in general are drawn to move and to interact both when they are supposed to sit and work with academic learning tasks in the classroom, and when they are given free space between the lessons or offered an opportunity to move in PAE lessons and PA breaks. Another central aspect was that the intervention activities differed from both sitting in a classroom and moving in a free space. On the one hand, in both PAE lessons and PA breaks, teachers allowed and even expected children to move. They provided also children with some more space to choose how to position themselves in relation to each other and how to interact. One aspect of the movement that emerged showed bodily engagement, readiness to act and joy of experiencing the

world and one's relationships to other children in a different way than when sitting in a classroom. On the other hand, order and instructions characterized the organization of the intervention activities as well. Children's opportunities to move in their own ways were limited. To move in predefined ways another aspect of children's movement. Comparing the different settings made the contrast between to move and to sit and the different aspects of children's movement particularly clear.

Under the second theme *fun and boring activities*, a central point was how children's experiences of the intervention varied across activities and individuals. Central findings were that many children enjoy activities in particular when a lot is happening or when they are emotionally and/or socially engaged. A comparison between two different PAE lessons and two different PA breaks showed that organization and structure of activities make a difference for the children. They desire to do activities that involve an element of surprise and where they have opportunities to influence the development of the activity. Furthermore, "dancing together" exemplified that activities have particular possibilities and that sometimes they can acquire a particular history or associations that make them personally meaningful for children. At the same time, the possibilities activities offer are always related to children's individual experiences of them. For example, children have varying capacities to handle complexity and this capacity is often related to their familiarity with an activity. When an activity or situation exceeds a child's capacity to cope it, it appear rather confusing than inspiring for a child. Although certain activities are more popular and may engage the majority of children, no single activity guarantees the enjoyment and engagement of all children.

The last theme *experiences of moderate to vigorous physical activity* illustrated how many children were aware of the aims of the intervention and that they experienced competition as a central feature of PAE lessons. Another central finding was that children experienced the intensity and possible physiological effects of the intervention differently. Whereas some children experienced the intervention as easy, others felt getting more fit. To feel physically fit and even with others was further important for children. Another central aspect of the theme was that some children were drawn to push their limits while other children found to be exhausted uncomfortable. To regulate amount and intensity of one's movement involved balancing between exhaustion and stress and provided different challenges for different children. Furthermore, children experienced competition in PAE lessons in varying ways. Although it made some children to try harder and many children told that they liked competition, it also brought along stress, disappointment, social comparison and mocking. Teachers did not manage to tone down negative sides of competition but they flourished in interactions between children.

9 Discussions and conclusions

In the previous two chapters, we have witnessed variation of children's movement in three different settings: PE, PAE lessons and PA breaks. The variation of movement, (or lack of it), was related to rules and structures of the school environment and the particular activities, instructions and models from teachers and videos, interactions between children and children's own individual interests and affections. In addition, the themes and topics in the preceding chapters have shown that each of the settings had some specific characters that influenced children's opportunities to move while many features also repeated throughout the settings. The core of this chapter is a discussion of the implications the findings could have for organizing children's movement in a school context and how to take account of the movement qualities that children themselves bring in. I initiate the implications by concluding the findings and finish the chapter with discussions on their relevance for other contexts, quality and limitations of the study.

9.1 Concluding the findings

The findings related to PE showed that to do a wide variation of activities was the core of the subject while children at the same time felt they were repeating activities year after year and not learning anything new. Children embodied ideas of what would happen and what they would experience. Furthermore, teacher's choices and instructions framed children's opportunities to move. Teachers told children how to move and for how long. Children had to compromise their own interests and preferences. On the other hand, the findings related to PE showed that children enjoyed the subject and movement for many different reasons. In particular, they preferred to move in comparison to sitting still. Feelings of connectedness to the world and others as well as contentment in one's own movements and capacities were important for the children's enjoyment. Children also liked to win and score, but the joy that followed from such moments differed from the long lasting, inherent pleasure of being in movement. Observations showed that movement emerging from connectedness also took place in PE. Children appreciated the opportunity to move in school and they performed activities each in their individual way. Some of them slipped into the course of activities while others hesitated or withdrew. However, *doing activities and being active* framed children's opportunities to move and children's experiences were more ambivalent than unambiguously positive. Children expressed a desire to do activities in varying ways and to learn new activities and movements. However, they were also drawn to repeat their favorite activities and had ambivalent experiences of learning. They knew that to learn could take time and be frustrating until one finally succeeded.

The tension between an instructional, adult-organized learning environment and children's own interests and movements was central also in the intervention. The comparison between a classroom

situation, free space, PAE lessons and PA breaks showed that children were drawn to move whether they were allowed and expected to or not. In PAE lessons and PA breaks, teachers' instructions and choices of activity framed children's movement opportunities. In "free spaces" between the lessons and when waiting their turn during the lessons, children had an opportunity to choose how to move and interact. Their own movement developed in various and multiple ways. In PAE lessons and PA breaks, that were adult-organized, it varied from activity to activity how much freedom children had to interact and to influence the course of the events and situations. Relay races and muscle exercises gave them few opportunities to vary their movement and to interact with other children. Complex activities such as dodgeball involved an element of surprise, which children found thrilling and inspiring. Children also played an active role in the development of such activities. The excitement and interactions created action and ever-new opportunities to engage and respond to another. Some activities, such as dance, turned out to become personally meaningful experiences for some children. However, the opportunities the activities offered were related to the children's individual experiences of them. While many children enjoyed the complexity and action, others found it overwhelming and confusing. A variation of experiences was characteristic also for children's experiences of physical aspects of the intervention, feelings of exhaustion and competition. Many children for example liked competition but it gave also rise to social comparison, mocking and feelings of disappointment and sadness. Teachers had little control over the negative sides of competition.

One central point in the findings is the multiple dimensions of movement that co-exist in them. Another is the variation of movement and interactions that emerged when children followed their own sensations and interests. These points relate further to the multitude and variation of interests, preferences, propensities and experiences children expressed. In addition, the findings covered a notion that both children's responses, interests and experiences could change from situation to situation or time to time. These aspects of the findings show that many different structures, interests and drives influence how children move in school. Within such complex web of influences and impetuses, children both choose how to move and are drawn to move (or not move) each in their own ways. I frame these perspectives as affective aspects of children's movement.

9.2 Discussing the findings

To conduct research based on affective perspectives on children's movement are, to my knowledge, today marginal in school based PA interventions and in PE. Based on the insight I have brought out when using such perspective in combination with qualitative research, I have further chosen to contribute with a discussion that I consider relevant for school political debates as well as for

research on school-based PA interventions and for teaching and learning practices both when it comes to school interventions and PE.

9.2.1 Contributions of the thesis

As mentioned in the beginning, a number of politicians, school authorities and researchers today suggest that children should be more *physically* active with regard to health and academic performances. In addition, they suggest that to integrate more PA in children's schooldays could be one solution to such concerns. From such perspectives, the interest is whether movement sessions such as PAE lessons and PA breaks can make children more active, healthier and more receptive for learning. Accordingly, much of the research on school-based PA interventions is physiologically or cognitively oriented. Within these research traditions, quantitative methods and perspectives are dominant. The thesis contributes this field of research with qualitative perspectives and insight that complement the few previous studies exploring children's experiences from school-based PA interventions.

In contrast to school interventions, within the research field of PE, qualitative methods, humanistic and social perspectives are common. The amount studies exploring children's experiences is larger and the curriculum highlights not only the importance of active lifestyles but also educational aims including personal development as well as cultural and social aspects of movement. In other words, the researchers within this field of knowledge and the curriculum for PE emphasize multiple perspectives to movement. Many of the researchers as well as the curriculum show also an interest for children as moving subjects who take part in and experience the subject. In this context, the thesis complement in particular the perspectives of phenomenologically inspired researchers (Nilges, 2004; Smith, 2007; Standal, 2016; Evensen & Standal, 2017) and social scientists (Larsson & Quennerstedt, 2012). Corresponding with such perspectives, a central aspect of the findings is that to move is more than an unambiguously physiological act, the effects of which can be measured in quantifiable variables. The particular contributions of the thesis are knowledge about movement as a way to engage bodily with the world and other people, which is also a central topic for Standal (2016), and other affective and "passive" aspects of movement.

I suggest that these perspectives have further relevance and implications for both PE and school based PA-interventions. In the context of school interventions, the findings indicate a need to discuss – not only how much and how hard children should move – but also how children are affected by the activities and settings in which they move. The same question is relevant also in the context of PE. The contrast between children's desire to move and "the boring" activities both in PE and the intervention show that to have opportunities to move in school can provide children many enjoyable

and valuable experiences but that this requires that the movement is organized in a way that engages and inspires them. From the perspectives of the thesis, the experiences and engagement per se are further valuable aspects of movement and fundamental for children's development, learning, self-concepts and belongingness to one another and the world. Viewed through the perspectives and aims of school interventions and the concerns for children spending too much time in sedentary activities, to develop more engaging and inspiring opportunities to move may contribute to increase the effort children put and time they spent in movement as well. Although these questions are important as well, the discussions of amount, intensity and effects of movement are beyond the scope of the thesis. More about the effects of the ASK study in particular can be read in Resaland et al. (2016) and Aadland (2018).

What children like and find inspiring with moving in school or what they do not like about it, has previously been of interest to a number of other researchers as well. As noted in the research review, many researchers underscore that children in general like to move in both interventions and PE. However, similar to findings here, they also report that children prefer different activities (Naylor et al., 2006; Dismore & Bailey, 2011; Macdonald et al., 2014), and generally dislike repetitive, monotonous activities (Dismore & Bailey, 2011; Spencer-Cavalier & Rintoul, 2012; Parker et al., 2017). In addition, the research review revealed that to move can have multiple meanings for children (Nilges, 2004) and that to move together with others is a pleasant and desirable experience for many children (Jago et al., 2009; Everley & Macfadyen, 2015) whereas it involves exclusion and painful feelings for some (Portman, 1995; Suomi et al., 2003; Chedzoy & Burden, 2009). One central contribution of the thesis is the comprehensive insight it provides into the multitude of experiences, feelings and sensations that arise when children move in school and how children accordingly are sometimes drawn to move and other times not. An important question is how to take account of such multitude, variations and ambivalences when designing and organizing movement opportunities in school. I suggest that the answer is multifaceted.

9.2.2 Implications of the findings

One question is what kind of activities teachers should teach in school. Another one is how children's own worlds and sensations are acknowledged in a school context. Furthermore, there are many questions to be asked regarding the communication between children and how they respond to one another. Other related questions are how the school should provide children with socially safe and supporting learning environments in school and how to take account of the tensions and ambivalences that arise when children move alone and together with others.

9.2.2.1 The art of choosing inspiring and engaging activities

Regarding to the question what kind of activities to choose, the paradox of “it is fun to move” and “boring activities” was central both in the context of PE and in the intervention. This is to say, although major part of the children expressed enjoying PE, PAE lessons and PA breaks, the content does not always quite meet their interests and preferences. In interviews, teachers suggested that providing all children opportunities to do activities they like could help to make the subject inspiring and engaging. Correspondingly, children themselves noted that they would probably choose to do more of their favorite activities if provided an opportunity to decide the content. In other words, both teachers and children associated fun and enjoyment to activities and more specific in activities children already knew and liked from before. One challenge that emerge from this perspective is that children prefer different activities, which makes it difficult to satisfy all children in a school class.

Another issue is, children’s likes and dislikes of particular activities are bound to their individual experiences of them and their experiences can further change and vary. As the findings showed, children may for example enjoy an activity such as football in their leisure time, although they simultaneous may find the way it is practiced in school “boring”. In addition, an activity children experience as boring first time may turn out to become one of their favorite ones after a while. It may also be that a child enjoys a particular activity one day but not another or only in certain situations. Furthermore, how the activities work and develop is dependent on how children respond to one another and the changing situations. An activity such as sheep and wolverines, snip and snap or dodgeball, for example, require that children include one another in the game, create and make the game to work together. In one school class, this may work well while children in another school class may struggle to play together or to find meaning in a particular activity. This is to say, no single activity nor a particular selection of activities alone will guarantee engagement and enjoyment of all children to all time. Activities develop in different ways from situations to situation and each child experience them in their own, changing ways. Thus, to take account of children’s interests and preferences when developing their movement opportunities in school requires one also to pay attention to what happens with and between children when they move and what in particular children find “fun” or “boring”.

9.2.2.2 Potentials and challenges of varying and complex activities

One perspective is that children desire variation and complex activities. The findings show further that variation for children is not only a matter of doing a “wide variety of activities”. Children also desire variation in the way an activity is undertaken and enjoy when activities open to them as complex and multifaceted. In addition, children find it particularly inspiring when the course of an

activity and changing events surprise them. In contrast, following instructions and models, repeating, and just doing activities that often frame children's movement opportunities in school today guides them to move in a similar way time after time, and only to experience one particular way to perform an activity. Children may sweat and become breathless but their affective and emotional engagement remains superficial. They struggle to see what there would be for them to experience or learn. To move in such setting gives little meaning.

In comparison, to see several different ways to perform and engage in an activity opens up an opportunity to choose and vary how to move and thus also to experience the activity in a multitude of ways. To choose involves further an element of freedom and independence whereas variation involves an element of newness and change, which can be inviting for children. Complex activities where movement emerges from sensations and interplay, in turn, require children to be attentive to several elements simultaneously and to be constantly prepared to respond to unpredictable situations. The elements of surprise, the unexpected and excitement bind children emotionally. They move because they are drawn to this; children become part of the activity or game and their movements emerge from the situations and events they encounter. The activity becomes different each time children perform it. In such case, activity involves a potential for children to vary their movements and to choose between different roles or ways to engage. In addition, complex activities provide children with opportunities to influence the course of the events. It positions them in a role of an active actor.

The challenge when creating variation within activities and choosing new or complex activities is that they set higher demands on children's capacity to pay attention to relevant aspects of an activity and changing situations as well as their capacity to respond independently and purposefully in unfamiliar situations. To learn a new way of performing an activity, or to be able to take part and to enjoy a complex activity, may take time and practice. In a school context, time is often limited and there are remarkable differences in how much time and practice each child needs. In addition, the perspective of "doing a wide variety of activities" overshadowed trying out and working with an activity or movement over time, in order to learn to know its complexity and one's own bodily sensations and responses when performing it. To provide children with activities they easily can master is rather activation than learning. There is neither a tradition nor a widely-held priority to invest time and effort in practice and progression or learning to perform activities in varying ways. However, the findings show that they may be worth the challenge.

A central question to explore further is how to organize movement such that it provides children with optimal amount and form of variation, complexity and originality. Further, also how to help

children to develop their capacity to handle complexity, unexpected and unfamiliar situations. One entry could be Duff's (2010) theory of human development as a "provision of new affective sensitivities and new relational capacities" (p. 619). In other words, children's capacity to understand themselves as movers and the activities more adequately and from multiple perspectives, to perceive opportunities and to adapt their responses to needs of particular situations.

9.2.2.3 How to acknowledge movement that emerges from children's own sensations and relationships

Another central point from the findings is that a nature landscape or a landscape of music, for example, can also create opportunities to move and that such opportunities may be in particular enjoyable for children. Movement that emerges from landscape connection or a child's relationship to music provides them with experiences of connectedness. When children talked about such experiences, they usually talked about free time where they had opportunities to follow their own interests and preferences. In school, an individual child usually needs to compromise her or his desires. In addition, movement often takes place in gymnastic halls or the schoolyard and the opportunities a landscape and children's own sensations may provide are further marginalized by the central role of activities and instructions. To explore and experiment with possibilities to create space for movement that emerges from kinaesthetic sensations and a landscape connection or social connection in a school context is one suggestion for future research and development of children's movement opportunities. In addition to examples of children's own movement in chapters 7 *Children's movement in Physical Education* and 8 *Children's movement in PAE lessons and PA breaks*, Smith's (2007) "first rush of movement" offers one entrance into the theme. Standal (2016) discusses the bodily engagement to others and the world as a source of movement as well.

9.2.2.4 Importance of socially safe and including learning environment

Similar to a number of other studies (Harvey et al., 2018; Mulvihill et al., 2000; Spencer-Cavalier & Rintoul, 2012; Suomi et al., 2003), another central finding was the meaning of the social aspects of moving in school. Findings underline both potentials and challenges. On the one hand, opportunities to interact with each other are clearly an important aspect of children's enjoyment of PE and intervention activities. To play together with others, to work in common aims and to share a feeling of success or getting an activity to work are pleasant experiences for children. On the other hand, to move together with others opens up for social comparison and conflicts. This leads further easily to mocking and accusing one another. Some children get their superiority affirmed while others feel bad about being weaker than their peers or a burden to their teams. Furthermore, some children easily connect with each other while others hesitate and struggle to take part. To move together can be a source of enjoyment and belongingness but it can also be a challenge for some children, or to

become a power struggle and create distance between children. That both teachers and researchers engage in developing and exploring ways to encourage and support creation of a socially safe environments and including learning environments in PE and movement interventions, is important. As mentioned, inclusion is also a central value in Norwegian school institution and for example, Standal and Rugseth (2015) have previously discussed its implications in a context of PE. The findings here show that certain types of activity encourages competition, which further facilitates negative interactions between children. This shows that when choosing and organizing activities in school, teachers and politicians need to be cautious. In addition, the findings show that many children need guidance and support in how to include other children or how to take part in joint activities. Since the teacher cannot observe all that happens between children and cannot control children's interactions, it is necessary that children learn to include and show respect to one another, also when the teacher is not watching.

9.2.2.5 The potentials and challenges related to children's own interests and desires

Finally, a central contribution of the thesis is the insight into affective and "passive" sides of children's movement. On the one hand, children express a strong desire to move. Many of them move even when the teachers do not allow or do not wish them to move. In addition, they are curious to undertake new activities or skills, and they feel inspired by activities that challenge their capacity to cope with complex situations. Most children do not need the teachers or instructive programs to "make" them active. They find and initiate ways to move when given the opportunity. They may find inspiration as well in the landscape, music as interplay with one another or further in activities they have learned or seen other to perform or in desires to jump higher or run faster. In addition, when able to choose one's own ways to move, children create variation and challenge themselves. In these terms, children themselves possess a great potential. To involve them in planning and organizing movement opportunities in school and to ensure that children can choose and vary their own ways to move and to influence the course of the activities and lessons, may be a one way to make movement in school more varying and engaging.

On the other hand, children are also attracted to do what makes them feel good and to avoid discomfort. Accordingly, they tended to choose habitual patterns. To join in a game with one's peers, and to win or to be the strongest of two, all feel good although in different ways. In addition, to get right a movement one has practiced a while feels good although the learning process itself may not feel that good. To do what one already can is in turn "fun." It is also safe and easy. Furthermore, to get exhausted may be experienced either as pleasant or uncomfortable. The process of choosing how to move involves a multitude of potential affections and responses. Sometimes, to follow one's affections and interests can lead one into a process of self-activation and self-improvement. Other

times, it can lead one into a habit of performing the same familiar movements or activities repeatedly. In addition, to follow affections and interests can lead some children to push their physical boundaries or to attempt to beat one another. Other children will avoid sweating and getting out of breathe or withdraw from competitive situations. The findings underscore individual differences and show how children's experiences of movement may change when they get fitter, more familiar or proficient in a particular activity. In addition, individual children may also respond differently from time to time.

Outcomes of a child's choices and responses may further be either beneficial or disadvantageous for her or him, depending on the situations and the criteria used to evaluate them. Seen from an educational perspective, self-improvement is desirable while competing is not. From a health perspective or within competitive sports, to push one's limits is a virtue, although it may also lead to injury or trauma in extensive amounts. To avoid exhaustion would, at the other extreme be a threat to the individual's physiological health. At the same time to force one into a state of discomfort involves an emotional risk. To repeat an activity or movement may lead a child to become increasingly competent in it but it can also lead the child become narrow and inflexible in his or her movement interests and competences. As Spinoza writes, we "do not know what a body can do" (p. 106). Thus, there is no simple or universal answer to how children should move – or what they may be able to do.

Næss (2010) suggests, "Children and young people need to be supported in development of active feelings such that the positive feelings would take over the multitude of conflicting feelings" (p. 71). Aarskog (2014), in turn, shows that choosing in a context of PE is a complex phenomenon that needs to be learned. He makes a distinction between free and reflected choices and impulsive or habitual choices. Correspondingly, Spinoza (2011) differs between being active or passive, where active refers to act upon an adequate evaluation of a situation, and passive is similar to following emotions, impulses, rules or norms. I suggest that children need guidance and support concerning their affective and emotional responses when learning to move and in particular when learning to move together. From an educational perspective, to learn to invite one another to participate in movement and to see a difference between enjoyment that emerge from connectedness in contrast to arousal of feeling superior to others, are examples of issues that have relevance for all children. From a health or performative perspective, it may be beneficial for children to learn understand their movement needs and desires and to self-regulate them in an appropriate and purposeful way so they both move and rest in a fine proportion. What each child needs most help with will further vary from individual to individual, and partly also from time to time. This in turn indicates that it is important for a teacher to show interest and to establish trusting relationships with all children in her or his

class. In the light of Hurley (in Deleuze, 1988) to know a child's needs and preferences requires one to "partake" in her or his learning processes and experiences.

These findings and implications are based on empirical research, conducted in a particular context and with a selected group of children. However, I argue that they have relevance also in other similar contexts.

9.3 Generalization of the findings

Whether research findings can be generalized or are transferable to other contexts and situations is a central question in qualitative research. Several authors conclude that this is possible, though dependent on certain conditions (Halkier, 2011; Lewis & Richie, 2003; Thagaard, 2013). I suggest that generalization is also a necessary premise for the relevance of the research findings in, for example, political purposes, which in this case are debates and decisions concerning children's movement opportunities in school. Further, the discussions of generalization of the findings are intertwined with discussions about the quality of the findings that will follow right after. Together, these discussions address questions what do the findings tell us, how can they be used and on what possible limitations or restrictions, and what makes the findings trustworthy?

According to Thagaard, transferability presupposes interpretation of data-material that goes beyond a descriptive level. She uses the term "theoretical generalization" and argues that this is "based on logic reasoning" (p. 211). I identify logic reasoning with the continuous re/reading and re/writing thematic analysis and three level of interpretation that I went through. Thagaard continues:

With a starting point that a study brings up central features of a phenomena, a researcher can argue that understanding developed in one context can be assumed to have relevance also in other contexts. (p. 211)

Similarly, Lewis and Richie suggest that through developing categories, concepts and explanations researchers can draw general interpretations about social processes and structures from the material they have collected. As mentioned, the themes in chapters 7 *Children's movement in Physical Education* and 8 *Children's movement in the PAE lessons and PA breaks* illuminate issues that are central in the light of the research questions and the particular context that is school institution and PE, PAE lessons and PA breaks. I chose the particular themes because they illuminate the variation of children's movement in these particular movement settings and open up for critical discussions about children's opportunities to move in school.

Halkier (2011) explains further that with help of theoretical concepts one can elaborate “a more general perspective on specific qualitative patterns” (Kvale, 1996, (p. 233), quoted in Halkier, 2011). Correspondingly, the affective perspective and the second and third levels of interpretation lift the themes beyond a descriptive level. Although the citations and field notes that illustrate the themes are from specific local contexts and unique individuals, the meanings and interpretations that I develop are general. Thus, they can be used to understand or discuss also other similar situations and contexts. On the other hand, it is important to simultaneously take account of that the particular perspectives of the researcher and research process always influence the data construction. This is to say, while meanings and interpretations are general, they also indicate certain perspectives to and aspects of children’s movement among several other possible ones.

Halkier continues that to generalize from qualitative data material is not only a matter of outlining the typical but rather about achieving a balance between the typical and unique. She suggests that one should try to “represent the dynamisms, ambivalences, conflicts, and complexities that constitute various overlapping contexts and the knowledge-production processes” (p. 788). As described in chapters 5 *Methods and design* and 6 *Analysis and structure of the findings* one of my central aims has been to bring out variations and diversity of children’s movement and experiences. The variations and diversities came further visible already in the selection of schools and participants and later in the analysis as well. The variations and diversities imply further that the generalization of the findings needs to be done with a certain cautious and with account of local, individual and temporal variations and differences. As noted, each child is a unique individual and each school makes it local context. In addition, each school class makes a different composition. Thus, each school and school class provides somewhat different frames for children’s movement opportunities and each child will respond in their own ways to same environments and activities. Although, for example, complex or new activities may be preferable for children in general, they may not fit in every situation or may not work that well or to be that enjoyable for all children in all schools every day. The final relevance and use of the preceding findings and perspectives needs to be considered in each individual context and situation.

Finally, Lewis and Richie highlight that one central pre-condition for making general interpretations from qualitative data-material is the quality of the research process.

9.4 Quality of the research process

There is an ongoing discussion on how to evaluate and define quality in qualitative research. One central question is whether to use paradigm-specific criteria or overarching criteria. Seale (1999), and Ravenek and Rudman (2013) argue for the latter. According to Seale, a qualitative researcher can do

good work without choosing a methodological position in advance. He suggests that selecting principles from different positions and traditions may be beneficial when developing one's own style. Seale adds that to evaluate the process employing general or multiple criteria offers a more flexible and applicable base in order to evaluate quality throughout an entire research process in comparison to evaluating all phases on a single set of paradigm-specific criteria. He points out that researchers' theoretical and methodological positions often form and sharpen along the way, which has also happened in this case.

According to Ravenek and Rudman (2013), five different quality criteria tend to repeat in qualitative research across methodological and theoretical positions. They label the criteria as: "social value and significance of the research", "thoroughness of data collection and interpretation", "transparency and reflexivity of the authors", "coherence of the research approach", and "due regard for the participants" (p. 451). The last criterion involves ethical considerations. Ravenek and Rudman specify their first overarching quality criteria, social value and significance of the research, by suggesting that researchers should clearly articulate and discuss the importance of their research and the value of their findings. As shown movement in school is a timely topic and there is little research-based knowledge on children's own movement and experiences in PE and school-based PA interventions. This concerns in particular the affective perspective. As discussed above, the findings provide insight about how children's movement vary and emerge, that teachers, researchers and politicians can further use to discuss how they can work in order to secure children varying, stimulating, socially safe and supportive movement opportunities in school.

Ravenek and Rudman (2013) relate further thoroughness of data collection and interpretations to a variety of sources and methods, including discrepant data and involvement of multiple authors and/or participants. I have used multiple methods and included a number of children, teachers and schools in the study. In addition, I have illuminated both tendencies, paradoxes and ambivalences in children's expressions. Furthermore, I have re/read the material and theories in light of the research questions and research context repeated times and co-operated with my supervisors throughout the process. This is to say, the fieldwork is extensive and during the data analysis, I have considered multiple interpretations and perspectives.

Ravenek and Rudman (2013) continue by highlighting the importance of transparency and reflexivity, which they associate with describing how the research is conducted and including possible problems that arose and how one coped with them. Kvale and Brinkman (2009) and Thagaard (2013) write about trustworthiness. Similar to Ravenek and Rudman, they both highlight the importance of critical reflections throughout the research process including fieldwork and relations to participants,

theories, methods, analysis, logic of interpretations, ethical considerations and awareness of that the reader will make her or his own interpretations of the findings. Choice of participants, research design, methods and the process of analysis are described in detail in chapters 5 *Methods and design* and 6 *Analysis and structure of the findings*. I have also made clear my theoretical perspectives and research interests.

Continuous reflections over what to include and how to present different parts of the thesis relate further to Ravenek and Rudman's (2013) fourth criteria, coherence of the research approach. Ravenek and Rudman stress a "good fit" between research questions, methodologies, methods, knowledge claims and applications. The continuous re/readings and re/writings – in addition to repeated rounds of feedback, comments and discussions with supervisors, has progressively enhanced the coherence of the thesis. The continuous weighing of the material in relation to the theoretical and methodological perspectives, research questions and the research context has strengthened the arguments when choosing to include certain points and themes in certain ways and to exclude other issues and alternatives. Finally, ethical considerations have had a central place throughout the project.

9.5 Ethical considerations

When undertaking research with children, a central ethical consideration is how to take account both of their vulnerability and of competence. Backe-Hansen (2009) emphasizes that on the one hand it is important to examine children and their everyday lives and to involve children themselves in these processes. On the other hand, she notes that children may need particular protection due to their young age. She discusses the importance of evaluating potential discomfort research may cause for children and observes that young children's cognitive capacities are not fully developed and that they neither have a legal competence before the age of 18. The ethical considerations have had a central role throughout the research process.

I have taken a starting point in a combination of ethical responsibility and duty ethics where ethical responsibility involves relying on one's own judgement (Christensen & Prout, 2002). According to Koro-Ljungberg (2016), qualitative research and in particular, interactions with participants provide a researcher often with unexpected situations and require them to improvise in the aim of solving ethical dilemmas. In the chapter 5 *Methods and design*, I have already pointed out and described several situations where I had to improvise and to rely on my own ethical judgements. One example was whether to keep interviewing the girl who went through some difficult issues not related to this study. Another example was two boys who did not want to take part in the video recording at the

end of the schoolyear and one boy did not want to participate in the final interview. I respected their wishes such that I felt was right thing to do and that I was committed to do as well.

Duty ethics, in turn involve following rules and regulations. In Norway, two institutions provide ethical guidelines and approve research projects. The study would normally have required approval from Norwegian Centre for Research Data (NSD) (2014a; 2014b). However, as a part of the ASK intervention study, which involved taking blood samples from children, The Regional Committee for Medical Research Ethics (REK) (2014) approved the study in accordance with the guidelines of the World Medical Association's (WMA) Helsinki declaration (Resaland et al., 2015; WMA, 2014). Hence, I took account of guidelines for both instances. One main pillar for both REK and NSD guidelines is informed consent. All children I invited to take part in my research had already consented to take part in the ASK intervention study and the associated physiological, cognitive and academic measures. Nevertheless, since qualitative methods differ significantly from the other measurements, I informed and asked respective children and their parents/guardians to consent to the qualitative part separately. I first took contact with children through their teachers who delivered further the written information about the study that children could take home and read together with their parents/guardians. I also gathered informed consents from the teachers who I interviewed. Examples on all informed consents as well as the approval letters from the REK can be found in appendix.

In addition to the written consent, I informed the children verbally about the research procedures in the drawing and writing sessions and the first interviews. In particular, I emphasized that I would not use their real names and that participation was voluntary. In addition, I clarified that children could withdraw at any time or refuse to be involved in individual parts of the research process if they so felt. I asked children several times in interviews throughout the school year how it was for them to take part in the study and if they still felt comfortable to continue. Similarly, I repeated the central points from the written consent in the first interviews with teachers where I also informed them about some more details about the research process. Furthermore, I have used pseudonyms and codes to make my empirical material anonymous and stored the material on a secure server such as the guidelines require. I have also chosen not to describe the individual schools, children and teachers specifically in order to secure their anonymity within a small community as already explained.

9.6 Critical notes

Although the thesis is based on extensive fieldwork and a thorough analytical process, it has certain limitations such as any research. Firstly, my ambition was to involve children with varying interests and movement preferences. However, only one of the 32 children I interviewed in depth clearly

expressed that he did not like moving. In addition, I often found it difficult to encourage the boy to tell about his experiences and feelings related to movement. Thus, the findings are mostly based on experiences and expressions of children who already enjoyed movement and who in general liked PE and were positive toward the intervention. Marginal insight into these children's experiences is a notable limitation of the thesis and a relevant theme for further studies.

Another issue that I have omitted in the thesis, although my material indicates that it may have a significant role for children's movement experiences and opportunities in school, are the relationships between children and teachers. The reason why I excluded the topic is that I have relatively little specific material on what happens between children and teachers compared to what happens with and between children when they move. In addition, I found it difficult to include teacher–children relationships without ending up with a less coherent presentation. However, I have included some relations in the findings and have some more experiences and material on the topic than presented here. Based on these experiences and additional material, I consider relationships between teachers and children as a potentially important issue to address in future studies. The claim gets support from research within the field of pedagogics where a number of researchers address questions related to the teacher's role and relationships with pupils or students. Dahlbeck (2014), Watkins (2006; 2010) and Gilbert (2013) addresses affective perspectives.

Furthermore, in the beginning of the research process, I considered an alternative of including a gender perspective. As Oliver and Hamzeh's (2010) and Oliver et al.'s (2009) studies indicate, this might have resulted in an interesting and important insight into the variation of children's movement in school. I did also observe that football had more significant role in boys' everyday lives than for girls and in two of the schools, some girls experienced boys more competitive and noisy than themselves. However, I found the individual variations more dominant than variations between girls and boys as gender groups. In addition, to include the gender perspective would have required drawing in additional theoretical perspectives, which would have complicated the aim of coherence. Thus, I omitted this theme.

Regarding the teachers' significant role in creating and controlling children's movement opportunities in school, it might have been fruitful to address the power relations between the teachers and children more clearly and comprehensively. I have touched on the topic but not discussed it explicitly. For example, power relations were visible in Elias' experience of having to do as the teacher said and in the tension between teachers' instructions and children's own movement that developed in varying, multiple ways. Within the field of classroom education, Wong (2016) shows that power relations between teachers and students are "affected by the interplay of various

factors” (p. 248). To pay more attention on the power relations could have provided an interesting insight into teaching and learning practices in PE and intervention activities as well. However, similar to gender perspective I found it difficult to give more focus on power relations without complicating the aim of coherence.

Finally, I have considered whether it was too ambitious to include both PE and PAE lessons and PA breaks within one thesis. Whereas PE is an educational subject and regulated by the national curriculum, the intervention is based on positions where the interest is to measure certain variables that indicate increased health and cognitive functioning. However, children moved and talked about movement in very similar ways whether it was in PE, PAE lessons or PA breaks and they had many similar experiences in all three settings. This is similar to Parker et al.’s (2017) study where children made little difference between moving in PE, recess, lunch and after-school. I concluded that although each of the settings had some specific features, the variation in children’s desires, needs, interests and preferences was independent of how the subject or activity was referred to. In addition, on several occasions the same teachers were instructors in both PE and intervention activities. Thus, I kept to my initial choice and included both PE and the intervention. If the objective had been to evaluate implementation and achievement of subject/intervention aims, a separation of PE and the intervention would have been necessary. However, my focus was children and their movement.

9.7 Conclusions

In this thesis, I have explored the kind of variation children perform when they move in an everyday school context, and how do such variations can illuminate children's movement opportunities in school. To conclude, variations in children’ movement emerged in multiple dimensions and forms. One central finding was that PE, PAE lessons and PA breaks provide children with opportunities to move and to interact with each other in school, where academic learning and sitting in a classroom otherwise dominate children’s everyday lives. Children in general enjoyed this opportunity. At the same time, the activities and teachers’ instructions created frames, rules and expectations for how to move in PE, PAE lessons and PA breaks. Children both followed the instructions and models, performed the activities and movements in their own ways and invited own ways to move and interact. Many of them were drawn to move both when they were allowed and expected and when they were supposed to sit still. Although children in general enjoyed PE, PAE lessons and PA breaks, their experiences of them were rather ambivalent and varying. This indicates that the frames these three settings create for children’s movement do not always meet children’s interests and preferences. The findings provide insight into the ambivalences and variations of children’s

experiences, and in particular, the affective and “passive” dimensions of their movement. In addition, I provide some suggestions on how to take account of these perspectives when planning and organizing movement opportunities in school. I suggest that for children it is not only important to have opportunities to move in school but also that teachers, politicians and researchers engage in creating and exploring how to make the opportunities varying, stimulating, socially safe and supportive.

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Appendix

Appendix 1-2

Approval letter from Regional Committees for Medical and Health Research Ethics (ASK study)

Approval letter from Regional Committees for Medical and Health Research Ethics (use of video)

Region: REK sør-øst	Saksbehandler: Anette Solli Karlsen	Telefon: 22845522	Vår dato: 04.03.2014	Vår referanse: 2013/1893/REK sør-øst A
			Deres dato: 28.01.2014	Deres referanse:

Vår referanse må oppgis ved alle henvendelser

Sigmund Anderssen
Høgskulen i Sogn og Fjordane

2013/1893 ASK - Active Smarter Kids

Forskningsansvarlig: Høgskulen i Sogn og Fjordane
Prosjektleder: Sigmund Anderssen

Vi viser til søknad om forhåndsgodkjenning av ovennevnte forskningsprosjekt. Søknaden ble behandlet av Regional komité for medisinsk og helsefaglig forskningsetikk (REK sør-øst) i møtet 13.02.2014. Vurderingen er gjort med hjemmel i helseforskningsloven (hfl.) § 10, jf. forskningsetikklovens § 4.

Opprinnelig prosjektbeskrivelse

Målsettingen i dette prosjektet er å undersøke effekten av en time daglig fysisk aktivitet i skolehverdagen for elever i femte klasse.

En eventuell effekt skal måles på skoleprestasjoner i matematikk, lesing og engelsk, på kognitive prestasjoner og på helsevariabler som lipider og hjernerivert neurotrofisk faktor (Brain Derived Neurotrophic Factor, BDNF), som påvirker hjernecellers utvikling og funksjon.

Prosjektet har et klynge randomisert design. Skolen er enheten med to grupper, en intervensjons- og en kontrollgruppe. Forsøket har en varighet på åtte måneder. I alt 1196 barn som går i femte klasse i ulike skoler i Sogn og Fjordane skal spores om deltakelse. Halvparten av skoleklassene vil bli randomisert til intervensjonsgruppen med daglig fysisk aktivitet, mens den andre halvdel vil komme i kontrollgruppen og får fysisk aktivitet som vanlig i skolen, dvs. to timer per uke. Den fysiske aktiviteten, som intervensjonsgruppen tilbys er variert, og etter endt forsøk, vil kontrollgruppen bli tilbudt den samme intervensjonen dvs. når de går i 6. klasse. Med et slikt design vil alle få det samme tilbudet. Hele utvalget vil undersøkes ved baseline og etter åtte måneder med en rekke fysiske tester, med antropometriske mål, høyde, vekt midjemål og hudtykkelse, med blodtrykk, flere kognitive tester, spørreskjema om livskvalitet, kosthold, samt vil det bli tatt blodprøver for å måle lipidmønster i blod, glukose og BDNF.

Det er utarbeidet et informasjonsskriv med samtykkeerklæring som er adressert både til foreldrene og til barna. Noen av deltakerne, dvs. barn og lærere, vil bli spurt om å delta i en kvalitativ studie, hvor intervju skal tas opp på bånd, transskriberes og analyseres. I denne kvalitative delen av studien vil man også benytte seg av fotografi, dvs. man ønsker å ta bilder i de fysiske aktivitetene i prosjektet, og disse vil bli forelagt deltakerne og brukt i intervju situasjonen.

Saksbehandling

Søknaden ble behandlet i møte 24.10.2013, og det ble fattet et utsettende vedtak. Komiteen ba om tilbakemelding på følgende punkter:

1. Datamaterialet vil bli anonymisert for forskerne i prosjektet 31.12.2016, men en navneliste vil bli

oppbevart hos en tredje person, dvs. hos NSD. Man opplyser også i informasjonsskrivet at man planlegger å be barna nå de er fylt 16 år om deres samtykke til å anvende data for senere forskning. Hva denne forskningen vil medføre står det ingenting om, og det går heller ikke klart fra prosjektprotokollen hva som planlegges. Prosjektbeskrivelsen omtaler ikke en slik eventuell oppfølging.

2. I informasjonsskrivet ber man om at data fra undersøkelsen kan kobles mot nasjonalt helseregister, medisinsk fødselsregister og mor/barn-registeret. Denne koblingen er ikke begrunnet noe sted, og man kan heller ikke i prosjektbeskrivelsen finne noen omtale av en slik kobling som man ber deltakerne samtykke til i informasjonsskrivet.
3. Det fins ingen opplysninger i informasjonsskrivet om den kvalitative delen av studien og heller ingen informasjon til lærerne som vil bli bedt om å delta i den delen av studien er vedlagt.
4. Prosjektledelsen har på side 8 i søknadsskjemaet diskutert ulike mulig ulemper som prosjektet kan ha på barna og argumentere for at prosjektet ikke kan ha slike ulemper som de diskuterer. En mulig ulempe er muligens uteglemt i diskusjonen og det er relatert til gruppepress. Hva med elever som ikke vil delta, for eksempel en elev i en klasse på 20 som ikke vil være med. Om hele klassen er randomisert til 1 times fysisk aktivitet hver dag, hva skjer med den ene elevens undervisningstilbud og hva kan han/hun eventuelt utsette for av mobbing/gruppepress? Det savnes en diskusjon av dette aspektet og hvordan man skal ivareta «ikke-deltakere».
5. Komiteen ber om en nærmere redegjørelse om behovet for en beredskap i forbindelse med informasjon som kan komme opp som resultat av prosjektet. Kan det tenkes uventede funn i analysene av blodprøver? Kan det tenkes svar på spørsmål i spørreskjemaet som kan tyde på det trengs en eller annen form for oppfølging?
6. Norsk versjon engelsk spørreskjema må ettersendes.

Prosjektleder har sendt tilbakemelding, denne ble mottatt 28.01.2014.

Om komiteens merknader fremkommer det av tilbakemeldingen:

1. Det kan i fremtiden være aktuelt å se på langtidseffektene av intervensjonen. Kontrolldeltakerne vil bli tilbudt samme intervensjon som studiegruppen, noe som i første omgang vil vanskeliggjøre en sammenligning mellom gruppene. Av denne grunn omfatter ikke protokollen en oppfølging på det nåværende tidspunkt. I midlertid vil en oppfølging av deltakerne i et longitudinelt design muliggjøre en evaluering av langtidseffekter, og for å sikre at man kan be barna om deltakelse i et slikt eventuelt oppfølgingsstudie ønsker man nå å legge dette inn i informasjonsskrivet. Formuleringene i informasjonsskrivet er endret slik at dersom barnet planlegges undersøkt på nytt eller dersom data vil bli benyttet etter barna er fylt 16 år, så vil man be om et nytt samtykke for dette.
2. Det skal innhentes data fra medisinsk fødselsregister og MoBa-registeret, og disse koblingene er nå spesifisert i informasjonsskrivet.
3. Det foreligger nå en beskrivelse av den kvalitative delen av prosjektet, og det er utformet separate informasjonsskriv for deltakerne i denne delen.
4. Randomiseringen til intervensjon eller kontroll vil foregå på skolenivå, og ved intervensjonsskolene vil den ekstra timen med fysisk aktivitet inngå som en ordinær del av det pedagogiske tilbudet. Det vil derfor ikke oppleves som press på enkeltelever i forhold til deltakelse i prosjektet eller ikke. For de elever som av ulike årsaker søker fritak fra fysisk aktivitet, vil skolen på ordinær måte finne andre undervisningstilbud.
5. Eventuelle funn som måtte avdekkes ved deltakelse i prosjektet vil håndteres gjennom den enkelte skolehelsetjeneste på ordinær måte.
6. Tidligere engelske skjema foreligger nå i norsk oversettelse, dette gjelder deler av MSLQ skjemaet (management strategies, learning self-efficacy) og CCC-instrumentet (cross-curricular competencies).

Prosjektleders tilbakemelding er å anse som tilfredsstillende i forhold til komiteens merknader.

Vedtak

Komiteen godkjenner at prosjektet gjennomføres i samsvar med det som fremgår av søknaden.

Godkjenningen gjelder til 31.12.2017.

Av dokumentasjonshensyn skal opplysningene oppbevares i 5 år etter prosjektslutt. Forskningsfilen skal oppbevares avidentifisert, dvs. atskilt i en nøkkel- og en datafil. Opplysningene skal deretter slettes eller anonymiseres, senest innen et halvt år fra denne dato. Forskningsprosjektets data skal oppbevares forsvarlig, se personopplysningsforskriften kapittel 2, og Helsedirektoratets veileder for «Personvern og informasjonssikkerhet i forskningsprosjekter innenfor helse- og omsorgssektoren».

Prosjektet skal sende sluttmelding på eget skjema, se helseforskningsloven § 12, senest et halvt år etter prosjektslutt.

Dersom det skal gjøres endringer i prosjektet i forhold til de opplysninger som er gitt i søknaden, må prosjektleder sende endringsmelding til REK.

Komiteens vedtak kan påklages til Den nasjonale forskningsetiske komité for medisin og helsefag, jf. helseforskningsloven § 10 tredje og forvaltningsloven § 28. En eventuell klage sendes til REK sør-øst A. Klagefristen er tre uker fra mottak av dette brevet, jf. forvaltningsloven § 29.

Med vennlig hilsen

Knut Engedal
Professor dr. med.
Leder

Anette Solli Karlsen
Komitesekretær

Kopi til: erik.kyrkjebo@hisf.no; post@hisf.no

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK sør-øst	Anette Solli Karlsen	22845522	09.09.2014	2013/1893/REK sør-øst A
			Deres dato:	Deres referanse:
			02.09.2014	

Vår referanse må oppgis ved alle henvendelser

Sigmund Anderssen
Høgskulen i Sogn og Fjordane

2013/1893 ASK - Active Smarter Kids

Forskningsansvarlig: Høgskulen i Sogn og Fjordane
Prosjektleder: Sigmund Anderssen

Vi viser til søknad om prosjektendring datert 02.09.2014 for ovennevnte forskningsprosjekt. Søknaden er behandlet av leder for REK sør-øst på fullmakt, med hjemmel i helseforskningsloven § 11.

Vurdering

REK har vurdert følgende endring:

-Det søkes om å bruke videofilm under datainnsamling. Filmene skal benyttes som støttemateriale under kvalitative intervjuer.

Komiteens leder har vurdert søknaden og har ingen innvendinger til de endringer som er beskrevet. Imidlertid skal det tydelig opplyses om bruk av videofilm i informasjonsskrivet til deltakerne. Det bes om at informasjonsskrivet revideres slik at det tydelig fremkommer hvordan det skal informeres om filmingen, hvordan lagring av filene skal sikres, hvordan anonymitet skal sikres ved bruk av videofilm samt hvordan prosjektmedarbeidere skal vurdere og analysere filmene for kvalitative intervju gjennomføres. Det bes om at det reviderte informasjonsskrivet innsendes for det tas stilling til endelig godkjenning av endringen.

Vedtak

Vedtaket i saken utsettes. Det bes om tilbakemelding om de merknader som er anført før endelig vedtak fattes. Komiteens leder tar stilling til godkjenning av prosjektet på fullmakt etter mottatt svar.

Klageadgang

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

Med vennlig hilsen

Knut Engedal
Professor dr. med.
Leder

Anette Solli Karlsen
Komitesekretær

Kopi til: erik.kyrkjebo@hisf.no; post@hisf.no

Appendix 3-6

Informed consent, children

Information letter to the revised consent

Informed consent (revised), children

Informed consent, teachers

Kjære foreldre eller foresette i/ved 5. klassetrinn i Sogn og Fjordane, skuleåret 2014/15

Foresurnad om deltaking i den kvalitative delen av forskingsprosjektet «ASK - Active Smarter Kids»

KVA ER «ASK»?

ASK er eit stort utviklings- og forskingsprosjekt som skal undersøke korleis auka fysisk aktivitet i samspel med dei tradisjonelle faga påverkar skuleprestasjon, skuletrivsel og helse gjennom eitt skuleår (2014/15) for 5. klasseelevar.

Kva er formålet med den kvalitative delen i ASK-prosjektet?

Med den kvalitative delen av ASK-studie ønskjer me å oppnå en betre forståing for læringsprosessar som finner stad under kroppsoving og fysisk aktivitet i skulen. Me vil undersøke borns erfaringar med fysisk aktivitet i skulen og korleis deira erfaringar blir danna. Denne forståinga kan gi oss kunnskap om både korleis ASK-intervensjonen virka, og korleis kroppsoving og fysisk aktivitet i skulen kan vidareutviklast. Me ønskjer å undersøke erfaringar frå born med ulik bakgrunn og frå ulike skular. Fire skular frå ulike delar av fylket med variert elevtal og ulike fasilitetar har blitt valt ut i studien, og alle 5. klasseelevar i disse skulane blir spurt om å delta.

Kva inneber den kvalitative delen i ASK-prosjektet til dykkar son/dotter?

Det vil bli gjennomført fire 1-2 vekes periodar med intervjuar og observasjonar i løpet av intervensjonen (aug/sept 2014 – mai/juni 2015). I tillegg vil forskarar gjere 2-4 kortare besøk i mellomtida for å oppretthalde kontakten med borna. Intervjuar blir gjennomført både individuelt, i par og i små grupper. Intervju og observasjonar vil fokusere på borns erfaringar om fysisk aktivitet og sin egen kropp, det sosiale læringsmiljøet i skulen og opplevelsen om ASK-intervensjon. I samband med intervjuar blir det brukt ulike oppgåvar og støttematerial, til dømes teikning, bilde og videonutt. Dette for å oppnå ein betre forståing av bornets perspektiv og danna ei god og trygg stemming i intervjuet. Eit intervju vil ta mellom 0,5 og 1 time og blir plassert i borns timeplan i samarbeid med læraren. Opne timer og ved behov delar av fysisk aktivitet blir benyttet. På oppmoding sender me spørreskjema/intervjuguide til gjennomlesing dersom de ønskjer det. Under observasjonar blir born følgt opp i ulike delar av ASK-intervensjonen. Formålet er å bli betre kjent med dei og skulekvardagen deira.

Frivillig deltaking i ASK-studien

Det er frivillig å ta del i ASK-studien. Ein kan trekkje seg frå heile eller delar av studien kva tid som helst og utan å oppgje grunn, og utan at det får negative konsekvensar. Dersom foreldre/foresette eller dykkar son/dotter ynskjer å trekkje seg, vil innsamla data der dykkar born er involvert bli sletta.

Moglege føremoner og ulemper

Under heile undersøkingsprosessen bli det lagt vekt på bornet sitt beste. Alle moglege førehandsreglar blir tekne for å unngå eventuelle situasjonar som kan opplevast som ukomfortable for borna. Dersom intervju situasjonen og observasjon medfører påkjenningar for nokre av borna, me vil følgje dette noye opp. Dersom dykkar born ikkje ynskjer å svare på enkelte spørsmål, er dette heilt i orden.

Kva skjer med informasjonen om dykkar born?

Intervjuar blir tatt opp på lydband og transkribert etterpå, teikningar og andre oppgåver blir samla inn, observasjonar blir tatt opp på video, og det blir gjort notat. Alle data vert handsama i samsvar med krav til personvern og IKT-tryggleik nedfelt i helseforskningslova og personopplysningslova. All informasjonen som vert samla om dykkar born, skal berre nyttast i forhold til føremålet med studien. Alle skjema og data vert aidentifisert, og ingen opplysningar eller utsegn som kjem fram i publikasjonar kan først tilbake til ein skildpersonar. Til dømes blir det brukt pseudonym. For meir detaljar om planlagde publikasjonar, sjå det generelle informasjonsskrivet for ASK-studien. Alle data som vert samla inn om dykkar born vert sletta ved prosjektavslutt 31.12.2016.

Dersom de aksepterer at dykkar born tek del i den kvalitative delen av ASK-prosjektet, skriv du under samtykkjeerklæringa nedanfor. Om du seier ja til å vera med no, kan du seinare trekkje attende samtykkje utan at det påverkar handsaminga di elles. Dersom du seinare ynskjer å trekkje dykkar born eller har spørsmål til studien, kan du kontakte Gunn Engelsrud.

Dersom de på noko tidspunkt har spørsmål, ta gjerne kontant på telefon eller e-post.

Venleg helsing

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Samtykkje til deltaking i ASK-studiet

Eg har lese informasjonsskrivet og aksepterer at mitt barn tek del i ASK-studiet

(Signert av foreldre til prosjektdeltakar, dato)

Eleven sitt førenamn og etternamn: (Skriv tydeleg, helst med blokkbokstavar)

.....

Foreldre/føresette sitt førenamn og etternamn: (Skriv tydeleg, helst med blokkbokstavar)

.....

Eg stadfestar at eg har gjeve informasjon om studiet

Signert, prosjektkoordinator Geir K. Resaland, dato

Kjære foreldre eller føresette på 5. klassetrinn i Sogn og Fjordane, skuleåret 2014/15

I vår de fekk de spørsmål om deltaking i forskingsprosjektet «ASK – Active Smarter Kids». Ved å samtykke til denne førespumaden, aksepterte de at dykkar born deltek i fysiske og kognitive testar knytt til ASK-prosjektet i inneverande skuleår.

ASK-studien legg også vekt på å fanga opp erfaringar knytt til fysisk aktivitet og kroppsøving gjennom ei kvalitativ undersøking som skal gjennomførast på to intervensjonskular og to kontrollskular. Desse skulane er valt ut med omsyn til variert storleik og satsing på fysisk aktivitet. Skulen til dykkar born er ein av desse fire skulane. Kva dette betyr for dykkar born er beskrive i vedlagt informasjonsskriv.

Sidan den kvalitative undersøkinga ikkje gjelde alle skulane i ASK-prosjektet og fordi forskingsmetodar som observasjon og intervju skil seg frå dei andre testane i ASK-studien, spør me no om ei eiga godkjenning for denne delen av studien. Dersom de aksepterer at dykkar born tek del i den kvalitative undersøkinga, skriv de under samtykkjeerklæringa i slutten av det vedlagte informasjonsskrivet. Denne førespumaden er uavhengig av førespumaden til hovudprosjektet. Svaret de her gir vil med andre ord ikkje ha konsekvensar for svar som de har gitt tidlegare.

Dersom de har spørsmål til noko av dette, ta gjerne kontakt på telefon eller e-post.

Venleg helsing

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Kjære foreldre eller føresette i/ved 5. klassetrinn i Sogn og Fjordane, skuleåret 2014/15

Førespurnad om deltaking i den kvalitative delen av forskingsprosjektet «ASK - Active Smarter Kids»

KVA ER «ASK»?

ASK er eit stort utviklings- og forskingsprosjekt som skal undersøke korleis auka fysisk aktivitet i samspel med dei tradisjonelle faga påverkar skuleprestasjon, skuletrivsel og helse gjennom eitt skuleår (2014/15) for 5. klasseelevar.

Kva er formålet med den kvalitative delen i ASK-prosjektet?

Med den kvalitative delen av ASK-studien ønskjer me å oppnå ei betre forståing av læringsprosessar som finn stad under kroppøving og fysisk aktivitet i skulen. Me vil undersøke borns erfaringar med fysisk aktivitet i skulen og korleis deira erfaringar blir danna. Denne forståinga kan gi oss kunnskap om korleis ASK-intervensjonen verkar og korleis kroppøving og fysisk aktivitet i skulen kan vidareutviklast. Me ønskjer å undersøke erfaringar frå born med ulik bakgrunn og frå ulike skular. Fire skular frå ulike delar av fylket med variert elevtal og ulike fasilitetar har blitt valt ut i studien, og alle 5. klasseelevar i desse skulane blir spurt om å delta.

Kva inneber den kvalitative delen i ASK-prosjektet for dykkar son/dotter?

Det vil bli gjennomført fire periodar med intervju og observasjonar i løpet av studieåret 2014/15 (september – juni) som kvar varer i om lag 1-2 veker. I tillegg vil forskarar gjere 2-4 kortare besøk for å oppretthalde kontakten med borna. Intervju blir gjennomført både individuelt, i par og i små grupper. Intervju og observasjonar vil fokusere på borns erfaringar om fysisk aktivitet og sin eigen kropp, det sosiale læringsmiljøet i skulen og opplevingar frå ASK-intervensjonen. I samband med intervju blir det brukt ulike oppgåver og støttematerial, til dømes teikning, bilde og korte videoopptak. Dette gjer me for å skapa ei trygg og god stemning i intervjuet og for å hjelpe borna til å snakke om sine erfaringar frå studien slik at vi kan oppnå ei betre forståing av bornas perspektiv. Eit intervju vil ta mellom ½-1 time og blir plassert i bornas timeplan i samarbeid med læraren. Opne timar og timar til fysisk aktivitet blir i hovudsak brukt til å gjennomføre intervjuet. På oppmoding sender me ut bakgrunnsmateriell som intervjuguide og observasjonsskjema til gjennomlesing dersom de ønskjer det. Vi vil ta opp nokre av observasjonsøktene av fysisk aktivitet på video for å kunne fange opp komplekse lærings situasjonar på ein meir presis måte og for å auka bornas moglegheit til å engasjere seg i forskingsprosessen. Under observasjonar blir borna følgd opp i ulike delar av ASK-intervensjonen. Formålet er å bli betre kjent med dei og skulekvardagen deira.

Frivillig deltaking i ASK-studien

Det er frivillig å ta del i ASK-studien. Ein kan trekke seg frå heile eller delar av studien kva tid som helst og utan å oppgje grunn, og utan at det får negative konsekvensar. Dersom foreldre/føresette eller dykkar son/dotter ynskjer å trekke seg, vil innsamla data der dykkar born er involvert bli sletta.

Moglege foremoner og ulemper

Under heile undersøkingsprosessen bli det lagt vekt på bornet sitt beste. Alle moglege førehandsreglar blir tekne for å unngå eventuelle situasjonar som kan opplevast som ukomfortable for borna. Dersom intervju situasjonen eller observasjon medfører påkjenningar for nokre av borna, vil me følgje dette nøye opp. Dersom dykkar born ikkje ynskjer å svare på enkelte spørsmål, er dette heilt i orden.

Kva skjer med informasjonen om dykkar born?

Intervjuet blir tekne opp på lydband og skrivne ut etterpå, teikningar og andre oppgåver blir samla inn, nokre observasjonar blir tekne opp på video og det blir skrivne notat. Alle data vert handsama i samsvar med krav til personvern og IKT-tryggleik nedfelt i Helseforskningslova og Personopplysningslova. Vi gjer merksam på at videoopptaka blir lagra i ein sikker database saman med annen informasjon frå studien. Opptaka blir koda slik at filene ikkje kan koplast til enkelte skular eller elevar. Det er berre nokre få forskarar med ansvar for den kvalitative delstudien som får tilgang til videoopptaka. Videoopptak som blir brukt i intervju situasjonen er først grundig vurdert av minst to forskarar på førehand. Dei vel ut filmklipp til bruk i intervju situasjonen som dei trur vil bidra til å skapa eit trygt og positivt engasjement for samtale hjå eleven. All informasjonen som vert samla om dykkar born, skal berre nyttast i forhold til føremålet med studien. Alle skjema og data vert aidentifisert, og

ingen opplysningar eller utsegn som kjem fram i publikasjonar kan først tilbake til enkeltpersonar. Til dømes blir det brukt pseudonym. For meir detaljar om planlagde publikasjonar, sjå det generelle informasjonsskrivet for ASK-studien. Alle data som vert samla inn om dykkar born vert sletta ved prosjektslutt 31.12.2016.

Dersom de aksepterer at dykkar born tek del i den kvalitative delen av ASK-prosjektet, skriv du under samtykkjeerklæringa nedanfor. Om du seier ja til å vera med no, kan du seinare trekkje attende samtykkje utan at det påverkar handsaminga di elles. Dersom du seinare ynskjer å trekkje dykkar born eller har spørsmål til studien, kan du kontakte Gunn Engelsrud.

Dersom de på noko tidspunkt har spørsmål, ta gjerne kontakt på telefon eller e-post.

Venleg helsing

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Samtykkje til deltaking i ASK-studiet

Eg har lese informasjonsskrivet og aksepterer at mitt barn tek del i ASK-studiet

(Signert av foreldre til prosjektdeltakar, dato)

Eleven sitt førenamn og ettermann: (Skriv tydeleg, helst med blokkbokstavar)

.....

Foreldre/føresette sitt førenamn og ettermann: (Skriv tydeleg, helst med blokkbokstavar)

.....

Eg stadfestar at eg har gjeve informasjon om studiet

Geir K. Resaland

Signert, prosjektkoordinator Geir K. Resaland, dato

Kjære lærar i/ved 5. klassetrinn i Sogn og Fjordane, skuleåret 2014/15

Førespurnad om deltaking i den kvalitative delen av forskingsprosjektet «ASK - Active Smarter Kids»

KVA ER «ASK»?

ASK er eit stort utviklings- og forskingsprosjekt som skal undersøke korleis auka fysisk aktivitet i samspel med dei tradisjonelle faga påverkar skuleprestasjon, skuletrivsel og helse gjennom eitt skuleår (2014/15) for 5. klasselevar.

Kva er formålet med den kvalitative delen i ASK-prosjektet?

Med den kvalitative delen av ASK-studien ønskjer me å oppnå ein betre forståing av læringsprosessar som finn stad under kroppøving og fysisk aktivitet i skulen. Me vil undersøke borns erfaringar med fysisk aktivitet i skulen og korleis deira erfaringar blir danna. Læraren er sentral i undervisningskonteksten og derfor er det viktig å inkludere deira perspektiv i studien. Lærars erfaringar saman med borns erfaringar kan gi oss kunnskap om korleis ASK-intervensjonen verkar og korleis kroppøving og fysisk aktivitet i skulen kan vidareutviklast. Denne førespurnaden blir sendt til lærarar på alle skulane der elevar deltek i den kvalitative delen av ASK-studien. Skular med ulikt tal elevar og ulike fasilitetar blir valt ut i studien for å dekke den naturlige variasjonen som eksisterer på feltet.

Kva inneber den kvalitative delen i ASK-prosjektet for deg?

Det vil bli gjennomført fire periodar med intervju og observasjonar i løpet av studieåret 2014/15 (september – juni) som kvar varer i om lag 1-2 veker. I tillegg vil forskarar gjere 2-4 kortare besøk for å oppretthalde kontakten med deg og borna. Under kvar observasjonsperiode vil du bli intervjua individuelt. Eit intervju vil ta ca. 1-1,5 time og blir tilpassa din timeplan. I tillegg kan du bli stillt spørsmål meir uformelt i samband med observasjonar. Intervjua og observasjonar vil fokusere på dine erfaringar som lærar, korleis du gjennomfører fysisk aktivitet i skulen, bidreg til det sosiale læringsmiljøet i klassen og korleis du har opplevd ASK-studien. Intervjua blir tatt opp på lydband og det blir gjort notat under observasjonane. Me vil også ta opp nokre av timane med fysisk aktivitet eller kroppøving på video. Dette gjer me for å kunne fange opp komplekse lærings situasjonar på ein meir presis måte og for å kunne bruke video som underlagsmateriale i intervjua for å skapa betre samtalar og rikare data frå undersøkinga.

Frivillig deltaking i ASK-studien

Det er frivillig å delta i ASK-studien. Ein kan trekkje seg frå heile eller delar av undersøkinga når som helst og utan å oppgje grunn, og utan at det får negative konsekvensar. Dersom du ynskjer å trekkje deg, vil innsamla data der du er involvert bli sletta.

Kva skjer med informasjonen om deg?

Alle data vert handsama i samsvar med krav til personvern og IKT-tryggleik nedfelt i Helseforskningslova og Personopplysningslova. Vi gjer merksam på at videoopptaka blir lagra i ein sikker database saman med annan informasjon frå studien. Opptaka blir koda slik at filene ikkje kan koplant til enkelte skular, elevar eller lærarar. Det er berre nokre få forskarar med ansvar for den kvalitative delstudien som får tilgang til videoopptaka. Videoopptak som kan bli brukte i intervjusituasjonen er først grundig vurdert av minst to forskarar på førehand. Dei vil velja ut filmklipp til bruk i intervjusituasjonen som dei trur vil bidra til å skapa eit positivt engasjement for samtale. All informasjon skal berre nyttast i forhold til føremålet med studien. Alle data vert avidentifisert, det vil seie handsama utan namn og fødselsnummer eller andre direkte opplysningar som kan gjera at dei vert kopla til deg. Identifiserbare opplysningar som knyter dine opplysningane vert erstatta av ein kode. Lista som koplar kode og namn vert oppbevart på ein sikker måte åtskilt frå forskingsdata, og berre prosjektleinga har tilgang til namnelista og det er berre dei som kan finne attende til deg.

Resultata av prosjektet vert publisert i form av engelskspråklege artiklar i internasjonal faglitteratur. I tillegg vil resultata frå prosjektet bli formidla til det norske fagnmiljøet i form av populærvitenskaplege artiklar og faglege føredrag. Me skal også skrive ein rapport frå prosjektet som er retta mot deltakarane og aktørar som har vore med på å legge til rette for gjennomføringa av prosjektet. Me understrekar at opplysningar som kjem fram i

publikasjoner og foredrag ikkje kan førest tilbake til einskildpersonar. Til dømes blir det brukt pseudonym. Alle data som vert samla inn om deg vert sletta ved prosjektavslutt 31.12.2016.

Høgskulen i Sogn og Fjordane (HiSF) er ansvarleg for forskingsprosjektet, og vil gjennomføre studien. Prosjektleiarar er førsteamanuensis Geir K. Resaland og professor Sigmund Alfred Anderssen. ASK er tiltrådd av Personvernombodet for forskning, Norsk samfunnsvitskapleg datateneste og Datatilsynet. Prosjektet har vore gjennom ei grundig fagleg vurdering i Norges Forskningsråd som tildelte prosjektet 17,5 millionar kroner i oktober 2012 (prosjektur. 221047). Norges Forskningsråd vurderte ASK-prosjektet til å ha svært høg kvalitet.

Dersom du aksepterer at tek del i den kvalitative delen i ASK-prosjektet, skriv du under samtykkjeerklæringa nedanfor. Dersom du seinare ynskjer å trekkje deg eller har spørsmål til studien, kan du kontakte Gunn Engelsrud.

Dersom de på noko tidspunkt har spørsmål, ta gjerne kontakt på telefon eller e-post.

Venleg helsing

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Samtykkje til deltaking i ASK-studiet

Eg har lese informasjonsskrivet og aksepterer at tek del i den kvalitative delen i ASK-studiet

.....
(Signatur, dato)

Førenamn og etternamn: (Skriv tydeleg, helst med blokkbokstavar)
.....

Eg stadfester at eg har gjeve informasjon om studiet

Geir K. Resaland

.....
Signert, prosjektkoordinator Geir K. Resaland, dato

Appendix 7-12

Interview guide 1-1 (children, group interview)

Interview guide 1-2 (children, group interview)

Interview guide 1-3 (children, group interview)

Interview guide 1-4 (children, individual interview)

Interview guide 1-5 (children, group interview)

Interview guide 1-6 (children, individual interview)

Interview guide 1-1 (children, group interview)

Task: "Show me around the schoolyard, gymnastic hall and other place where you use to move in school and tell me what you usually do in PAH, PE and school breaks?"

Additional themes and questions to ask during the walk:

1. How do you like PE / PAH?
2. What do you like/do not like about them?
3. What do you usually do here?
4. What are you allowed to / not allowed to do here?
 - a. How do you feel about that?
5. What have you heard about ASK intervention?
 - a. What do you expect? How do you think it is going to be?
6. Have you already had some tests?
 - a. How was it?

Interview guide 1-2 (children, group interview)

Introduction: "Today we will talk about topics that arose from the drawings you made last time I was here"

Question:

1. Do you still recall what you thought or experienced when you got the task and while you were drawing?

Present an imaginary student Per who drew and wrote that he likes gymnastics because he is good at it and that he does not like football because he is not good at it

Themes and questions:

2. How does Per know that he is good at gymnastics?
 - a. And that he is not good at football?
3. If Per went to your class, how would it be for him to take part in PE?
 - a. What kind of comments could Per get from the teacher?
 - b. What about the other pupils?
 - c. Could he get some comments outside PE lessons as well?
 - d. How do you think Per would respond to these comments?
4. What do you think, why is Per good at gymnastics and not good in football?
5. Do you think it is common or not that Per likes gymnastics but not football?
 - a. What if it had been a girl who made this drawing?

Interview guide 1-3 (children, group interview)

Introduction: “we continue to talk about topics that arose from the drawings”

Themes and questions:

1. Some children wrote that they like when they can express themselves through an activity
 - a. What do you understand with “to express oneself through an activity or movement”?
 - b. Is it important/unimportant for you?

2. Some children wrote that a movement can feel strange in body
 - a. Do you have some movements that you think are strange?
 - b. What do you feel in your bodies during a PE lesson?
 - c. Do you talk about such feelings with someone?

3. Some children wrote that an activity can be boring because it is exhausting
 - a. Do you often get exhausted in PE?
 - b. What about in ASK activities?
 - c. What do you do when you feel exhausted?

4. Do you think it is important that PE is fun?

5. Some children wrote that some activities can be embarrassing
 - a. Do you have some activities you think are embarrassing?
 - b. What makes these activities embarrassing?

6. Are there some activities that are more popular than others here?
 - a. What if one does not like these activities?

7. Some children wrote that they like when they get exercise in PE
 - a. What do you know about exercise?
 - b. How or where have you learned about exercise?

Interview guide 1-4 (children, individual interview)

1. How has it been for you to take part in the interviews?
2. You drew in the beginning that you like X best in PE. Is it still your favorite?
 - a. Could you tell about one time you had X in PE?
 - b. What happened, what did you think/feel?
 - c. How is it for you to do X? What do you like about it?
3. You drew also that you like Y least. Is that what you still like least?
 - a. Could you tell about one time you had Y in PE?
 - b. What happened? What did you think/feel?
 - c. How is it for you to do Y? Why is it that you do not like it?
4. Have you recently learned something in PE?
 - a. What about outside school?
 - b. Could you tell me more about how it was for you?
 - c. What did you feel or think?
 - d. Did it take a long time for you to learn?
5. What activities do you do in your free time?
 - a. Do you like to move?
 - b. Why / why not?
6. What do you like about ASK? (in intervention schools)
 - a. Could you tell me how it is to take part in an ASK lesson or an ASK break?
 - b. Is it more like PE or school?
 - c. Do you learn something?
 - d. Do you get exhausted?

Interview guide 1-5 (children, group interview)

Theme: learning

1. I am wondering; what do you learn in PE?
 - a. Should one learn new things in PE? What do you think?

2. One topic that is interesting for me is “bodily learning” – What do you think, what is “bodily learning”?
 - a. What would you like to learn in PE?
 - b. What would be interesting for you to learn about body? Do you often think how body functions?
 - c. In PE or ASK, can you do activities or movements in your own ways?
 - d. Do you ever get a feeling that you just want to move?
 - i. How is that feeling?

3. How is it for you to try new things?
 - a. Do you think it is fun or not fun?

4. Many children wrote in the beginning that they like activities they are good in and do not like activities in which they are not good.
 - a. Do you think it is important to be good? Why?
 - b. Many children have mentioned also that they like to win. Is it important to win?

5. Let’s try a movement together. We stand on one foot and draw number eight in the air with the other one.
 - a. What do you feel in your bodies?
 - b. How could we modify the exercise?
 - c. What do we practice?

6. How is it going with ASK? (Intervention schools)
 - a. Do you think it is more like school or PA?
 - b. Is it a lot of competition in ASK lessons?
 - c. Why do you have ASK? What have you heard or what you think?

Interview guide 1-6 (children, individual interview)

Introduction: Start the interview by showing each child a short video clip on themselves in a PE and/or a ASK lesson.

Instructions for children: "You can either comment the video during its playing or we can talk about it after it has finished"

Themes and questions:

1. How was it for you to see yourself on the video?
 - a. Are you usually like that in PE/ASK? Or, was it different? What do you think?
 - b. Do you remember what you thought or felt on those lessons?
2. Many children have said that PE is fun but that activities are often boring. Could you explain me more about how PE can be both fun and boring at the same time?
3. How has it been for you to take part in ASK intervention?
 - a. How has it been to have all the tests and to be interviewed and observed?
 - b. Do you think ASK have changed you somehow?
 - c. Have you noticed some changes in your class?
 - d. Are the schooldays different?
4. If you had been the interviewer, what would you have asked children in 5th about PE or ASK?

Appendix 13-16

Interview guide 2-1 (teachers)

Interview guide 2-2 (teachers)

Interview guide 2-3 (teachers)

Interview guide 2-4 (teachers)

Interview guide 2-1 (Teachers)

1. Could you tell me about your background?
 - a. Education and working experience (in particular within sports or PE)
2. Do you use a periodical or annual plan when you plan PE?
3. How well do you know the curriculum and the subject aims?
4. What do you think is most important in PE?
5. What do you weight most in your teaching practice?
6. Does the school have some overall rules or routines children are expected to follow in PE?
7. How do you view your own role as a PE teacher?
8. How would you describe your relation to pupils?
9. What do you think about being randomized in ASK intervention group / ASK control group?
10. How did you experience the gatherings before the intervention start (intervention teachers)
11. I wish to choose 8 pupils from your class to further interviews. The aim is to include pupils with varying interests and engagement in PE and varying physical capacities. Who would you choose and why?

Interview guide 2-2 (teachers)

Themes and questions based on children's drawings:

1. Many children expressed in their drawings and writings that they like activities they are good at and do not like activities they do not feel mastering.
 - a. Have you noticed such tendencies in your class?
 - b. How important do you think it is for children to be "good" in movement activities?
 - c. What expectations do you have for children in PE?
 - d. How do you communicate your expectations to children?

2. Some few children wrote that they liked when they could "express themselves through an activity".
 - a. Have you heard similar comments from children?
 - b. Do you think "to express oneself through an activity" has place in PE?

3. Some children wrote also about different bodily sensations or feelings such as a feeling of being in the water, a movement that feels strange or a feeling of being exhausted.
 - a. Have you heard similar comments from children?
 - b. Do you think such expressions/experiences could have some relevance in PE?

4. Some activities, such as football, showed to be more popular than others among pupils. Children commented that it is okay to like different activities but that it can also have social consequences if one does not take part in the popular activities.
 - a. What is your experience?
 - b. Do you have some concrete examples?

Interview guide 2-3 (teachers)

1. Today, activity is often prioritized in PE. It is also an important element in ASK.
 - a. How do you think about this?

2. Many children express that they like activities they master well. At the same time, they tell that they like to try new things.
 - a. Is this something you recognize in your class?
 - b. What do you think about it?

3. Is there place for experimenting with body/movement in school?
 - a. Have you reflected on differences between learning that emerge from one's own body and curiosity and learning after instructions?

4. It is said that reflection is important for learning.
 - a. Do you think reflection has place in PE?

5. Many of children have mentioned also that it can be embarrassing to do some activities or to learn new things.
 - a. Is this something you recognize in your class?
 - b. What do you think about it?

6. How is it going with ASK?
 - a. Many children talk about competition in ASK lessons. What is your experience?
 - b. Where do you think the competition comes from?

Interview guide 2-4 (teachers)

1. If you think about this schoolyear, what experiences or thoughts have you made?
 - a. About the class?
 - b. Yourself as a teacher?
 - c. ASK intervention?

2. Many children say that they seldom learn anything new in PE and when they feel learning something they usually talk about having learned a new activity?
 - a. What do you think about this?

3. Many of children say also that they think PE is one of the best subjects in school but that they often think that activities they do are boring?
 - a. What do you think about this?

4. PA, health and academic performances are central in ASK. In PE, it is often activities and techniques, which make the core of teaching and learning practices.
 - a. What do you think about these priorities?
 - b. What about experimenting and bodily learning?

5. The intervention has increased amount adult-organized activity in school.
 - a. What do you think about this?

6. How has it been for you to take part in the interviews?

7. Is there something more you wish to take up? Or do you have some questions to me?

