

# An Elementary School Student with a Physical Disability Participating in Physical Activity Class

*A Qualitative Study of his perceptions and  
experiences*

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# Abstract

The purpose of this study was to create a thorough description of the phenomenon under study. This study focused on participation from the perspective of Henry a seventh grade Norwegian student with Cerebral Palsy in physical activity class. The focus of this research was to investigate what impacted Henry's opinions to participating in physical activity class. The experiences and perceptions of Henry could potentially create useful insights for students' with disabilities who are not currently participating in physical activity classes.

The research problem which functioned as the basis for this research was "*What are the perceptions and experiences to participating in physical activity classes of an elementary student with a physical disability?*" This main question was accompanied by four sub-questions which were used to explain the phenomena more clearly and richly. To do so, qualitative approaches were taken in the form of qualitative interview questions and observations. The participant was interviewed once using a semi-structured interview guide. Also, the participant was observed in a pilot observation which was followed by subsequent observations during physical activity class. The data collected, was organized into categories. These category topics were influenced by theoretical information which was used as a guide, of possible ways of grouping categories together.

The data revealed that Henry does acknowledge that he belongs, is supported, and accepted in his physical activity classes. His experiences were influenced by his teacher, teacher assistant, his classmates, and friends. Henry reported benefits from participation in physical activity classes, such as more energy to complete daily tasks and homework. Henry reported that his teacher supported, encouraged, and helped him in physical activity classes. Finally, classmates were found to be supportive and helpful. Henry reported that he would rather be together with classmates during activities. Also, friends were identified as being important to participation in activities in both physical activity classes and recess. Henry reported that he felt it was easier for him to make friends during physical activity classes and at recess as compared to other subjects. He also claimed the social aspect of school is what he feels is the most important.

*Key words: Participation, Physical activity classes, physical disability, perspectives, experiences.*



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# Table of Contents

1	Introduction .....	1
1.1	Research Question and Sub-questions .....	2
1.2	Purpose of Study .....	2
1.3	Significance of Study .....	3
1.4	Cerebral Palsy and Physical Activity .....	4
1.5	Norwegian School and Physical Activity .....	6
1.6	Terminology .....	7
1.7	Structure of Thesis .....	8
2	Theoretical Framework and Relevant Studies .....	11
2.1	Inclusion .....	11
2.2	Social Inclusion in a Physical Activity Class .....	12
2.3	Self-efficacy beliefs in Physical Activity Class .....	13
2.4	Achievement-Goal Theory and Achievement motivation in Physical Activity Class 15	
2.5	Threats-to-Self-esteem model and Physical Activity Class .....	16
2.6	Zone of Proximal Development and Physical Activity Class .....	18
2.7	International Child Development Programs and physical activity class .....	19
2.8	The Enrichment Perspective and Physical Activity Class .....	20
3	Methodology .....	23
3.1	Research Design .....	23
3.2	Methods of Data Collection .....	24
3.2.1	Selection of Case .....	25
3.2.2	Qualitative Interview .....	25
3.2.3	Qualitative Observation .....	28
3.3	Data Collection Procedures .....	30
3.3.1	Permission .....	30
3.3.2	Pilot Study .....	30
3.3.3	Main Study .....	31
3.4	Data Analysis .....	32
3.5	Ensuring quality and rigor in case study design .....	34
3.5.1	Validity .....	34



3.5.2	Applicability .....	35
3.5.3	Reliability .....	36
3.6	Ethical Considerations .....	37
4	Presentation of the Research Findings .....	39
4.1	Analysis of Research Findings .....	39
4.1.1	Difficulties I overcome with help.....	40
4.1.2	My choice.....	40
4.1.3	Benefits in my daily life because of physical activity.....	41
4.1.4	I get pushed to do my best.....	42
4.1.5	Times when my friends made me feel like I belong .....	43
4.1.6	How I feel accepted.....	43
4.1.7	Activities I do when I am together with my friends.....	44
4.1.8	How I am helped and what I get help with .....	44
4.1.9	My goals in physical activity .....	45
4.1.10	Times when I feel like the real me .....	45
4.1.11	Special things I do on days when I have physical activity class .....	46
4.1.12	Times when I didn't participate .....	46
5	Discussion of Research Findings .....	49
5.1.1	A student with a disability expressions of perceptions and experiences of belonging, being accepted and/or supported in physical activity classes .....	49
5.1.2	How and in what ways does an elementary student with a physical disability perceive and experience that he or she benefits from physical activity classes? .....	52
5.1.3	How do teachers influence perceptions and experiences in physical activity class a student with a physical disability?.....	54
5.1.4	How do classmates influence perceptions and experiences in physical activity class for a student with a physical disability? .....	56
5.2	Key Findings and Final Considerations.....	58
5.2.1	Classmates and friends .....	58
5.2.2	Self-efficacy and participation in physical activity classes.....	59
5.2.3	Reflections.....	60
5.2.4	Possibilities in the future .....	62
	References .....	63
	Attachment 1: Interview Guide .....	67
	Attachment 2: Observation Worksheet .....	74

Attachment 3: Permission from NSD..... 78  
Attachment 4: Information Letter ..... 80  
Attachment 5: Consent Form ..... 82

# 1 Introduction

There are approximately one-hundred twenty infants born each year in Norway with Cerebral Palsy (Cerebral Palsy Foundation, 2010). This study has focused on participation from the perspective of Henry; a seventh grade Norwegian student with Cerebral Palsy in physical activity class. Henry's physical disability is Cerebral Palsy, which is a chronic neurologic disorder of movement and posture caused by damage to the immature brain and accompanied by associated dysfunctions (Sherrill, 2004). This study was carried out in Nittedal, a community outside of Oslo, Norway.

In Norway, great importance is put on both education and physical activity. This is evident in the *Opplæringslovas* (Education act) which was updated in 2011. In short, all children in Norway have a right and responsibility to thirteen years of free public schooling and all students with physical disabilities which have been diagnosed by a specialist have right to special pedagogical resources and adapted learning plans in all subjects § 2-1 (Education Act, 1998). Eriksen (2012) reports that there is no debating that certain schools in Norway give their students less than one hour per day of physical activity as suggested by the People's Health Act. Eriksen (2012) also points out that there are many schools in Norway which place students with disabilities in other subjects rather than in physical activity classes when physical activity is on a student's schedule.

The focus of this research was to investigate what impacted Henry's opinions to participating in physical activity class. Investigating the perspectives of a child with disabilities can give great insight into what factors are important in being a participant in physical activity classes. This study was conducted to try to shed light on the subjective experiences of one student who participates in physical activity classes. The experiences and perceptions of Henry could possibly create useful insights for all students with disabilities who are not currently participating in physical activity classes. Becoming physical active in school could result in an individual having a physically active lifestyle into adulthood.

In the next chapter the research question and sub-questions will be presented. Then a description of the purpose of this study, which will included justifications for conducting this study. Followed by significance of this study where the importance and implications of this study will be discussed. In the preceding chapters, Cerebral Palsy and Physical Activity Class

where a short description of Cerebral Palsy and participation in physical activity will be in focus and to finish this introductory section of the thesis with Norwegian School and Physical Activity where law and rights related to physical activity, rights to education and adapted education will be discussed.

## 1.1 Research Question and Sub-questions

The research problem which functioned as the basis for this research is as follows:

*What are the perceptions and experiences to participating in physical activity classes of an elementary student with a physical disability?*

This question was explored by the help of the sub-questions:

- How does an elementary student with a physical disability experience he or she belongs, is accepted and/or is supported in physical activity classes?
- How and in what ways does an elementary student with a physical disability perceive or experience that he or she benefits from physical activity classes?
- How do teachers/teacher assistants influence perceptions and experiences in physical activity classes of an elementary student with a physical disability?
- How do classmates influence perceptions and experiences in physical activity class of an elementary student with a physical disability?

## 1.2 Purpose of Study

Conducting this study has been of special interest since 2006. In 2006, was the first opportunity to participate in adapted physical activity class in Nova Scotia, Canada. The experiences taken from that time formed an interest in working together with individuals who have disabilities and making adaptations to exercises and activities so that participation was possible for all.

The view that physical activity is an important aspect for children with and without disabilities to participate has been life-long. I have a personal belief that physical activity

classes are a unique time for creating friendships and learning to cooperate with classmates, which is unlike the other subjects in school. Investigating the experiences of students with disabilities in physical activity classes in Norway was interesting to investigate and gain insight into what perceptions and views of physical activity are in this country.

### **1.3 Significance of Study**

In a study conducted by Frostad and Pijl (2007) as cited in Koster, Pijl, Nakken, & Van Houten (2010) of Norwegian inclusive classrooms proposed that almost twenty-five percent of students with special needs have considerable problems creating relationships with classmates. In the same study, eight-percent of students without special needs reported having difficulties creating relationships with classmates (Koster, et al, 2010).

Physical activity class is the only subject for students where physical activity and their body is at focus; one subject where students physical abilities are shown in a completely different way than in other subjects. Physical activity classes are described by students generally as fun, exciting, challenging and demanding but also boring (Eriksen, 2012). For students with disabilities having an opportunity to participate in physical activity classes can translate into many benefits, personal and social.

One benefit of inclusion for students with disabilities is the opportunity for positive social interactions with classmates (Place & Hodge, 2001). Examples of positive social interactions could be supportive, cooperative, respectful, frequent, and meaningful interactions (Place & Hodge, 2001). Henry's perceptions were explored in this study by using themes such as, helpful, support, understanding, acceptance, encouragement and choice.

Goodwin and Watkinson (2001) researched the perspectives of students with and without disabilities in an inclusive physical activity class. Their study identified students with disabilities positive experiences in physical activity class happened when they had felt a sense of belonging to the activity (Goodwin & Watkinson, 2001). Goodwin and Watkinson (2001) explained that their students with disabilities felt that they experienced a sense of belonging when their classmates and teachers had supportive interactions with them in physical activity. Supportive interactions such as helping with equipment and giving encouragement were examples given my Goodwin and Watkinson (2001). Having friends in physical activity class who support and encourage physical activity is vital to wanting to participate in physical

activities, and self- efficacy (Sherrill, 2004). It could be important that students have an opportunity to participate in physical activity classes to have these experiences.

Possible result of not participating in physical activity classes could be social isolation. Social isolation of a child with disabilities has been shown to have a detrimental effect on their social- emotional development, which results in low self-esteem and confidence, a fear of failure and school attendance, lack of motivation, low test scores as well as deviant behaviors and dropping out of school (Pijl, 2005).

## **1.4 Cerebral Palsy and Physical Activity**

There are approximately eight thousand individuals living in Norway today, which have Cerebral Palsy (CP) (Cerebral Palsy foundation, 2010). In Norway, every individual who has CP has a right to free physiotherapy their entire lives (Cerebral Palsy foundation, 2010). CP is a chronic neurologic disorder. CP affects movement and posture due to damage to the immature brain and is often experienced with additional associated dysfunctions (Sherrill, 2004).

CP is an umbrella term which encompasses any disorder of irregular locomotion and paralysis caused by irregular function of the cerebral cortex (Sherrill, 2004). CP can be categorized by the way it affects movement or by the number of limbs it affects and these categories can be joined to define severe forms of CP. The categories of CP are: Mild CP, Spastic CP, Spastic Diplegia CP, Ataxic CP, Athetoid CP, Severe Athetoid CP, Mixed CP, Hemiplegia and CP, Quadriplegia and CP. The symptoms of CP and their intensity are inconsistent. CP may present itself in minor intensity where difficulties are experienced with fine motor skills, such as grasping and manipulating movements using the hands (Sherrill, 2004). CP may present itself in severe intensity where significant muscle control difficulties in all four limbs, mental retardation, seizures, and difficulties with vision, speech, and hearing are experienced (Sherrill, 2004). Other possible symptoms of CP may be visual defects, hearing loss, comprehension or the expressive language (Sherrill, 2004).

Many individuals with CP are able to participate in both team and individual activities. Team activities such as soccer, indoor wheelchair soccer and boccia are the most popular team activities. Individual activities for persons with CP are much more varied and they include

archery, bowling, bicycling, track and field, horseback riding, swimming, rifle shooting, slalom, table tennis, and power lifting (Sherrill, 2004). There are different physical requirements for differing activities, and assessment of each individual's ability to complete these activities will vary from activity to activity (Sherrill, 2004).

Assessments in physical activity maybe useful for example as an indicator of task or concept comprehension, to motivate, keep an eye on development or to offer feedback to teacher, student and parents (Vickerman, 2007). It may also be helpful to use assessments in physical activity when defining the need of adapted physical activity (Lieberman & Houston-Wilson, 2009). Also assessments maybe useful because they identify the special physical or motor requirements of students with disabilities and can help in the progress of student program goals and objectives. Areas of difficulty for a student can become the program goals and enhancements of certain activities used to help achieve goals or the program objectives. Assessment also makes it possible to monitor student progression in physical activity (Lieberman & Houston-Wilson, 2009). Ongoing or frequent assessments make possibilities for teachers and students to make records of progress and as one goal is achieved, others can be formed (Lieberman & Houston-Wilson, 2009).

Frequent or ongoing assessments can also be referred to as formative assessment. This is an assessment which continues all the way through the class and helps the teacher and the student to get an idea of how the student is making out at every moment (Vickerman, 2007). Formative assessment maybe a tool to help create an illustration of students fortes and weak point of student motor skills but also the possible impact this has on the students self-concept, self-esteem and motivation (Vickerman, 2007).

Assessments can help recognize possible obstacles to participation and give an opportunity to overcome them (Vickerman, 2007). If a student frequently experiences disappointment or frustration in physical activity it may cause them to become discouraged or lose motivation and possibly begin to see experiences and participation as negative (Vickerman, 2007). Assessments may include student explanations and clarifications on their own work and work of others, which relates to their perceived abilities or competences in physical activity. The explanations and clarifications of students may also point out students that may understand the exercise which they are asked to perform but they fail to physically carry out the task. Also, student descriptions of how their bodies feel while exercising may help them to comprehend the signals that their bodies give during physical activity, such as exhaustion or

pain (Vickerman, 2007). Assessments may also include observations from a teacher in relation to students copying, repeating and adapting basic movements like posture (Vickerman, 2007). Assessments may also include observations from a teacher of students performing activities where they experience variations of speed, direction and intensity, which can help control, coordination and steadiness (Vickerman, 2007).

## 1.5 Norwegian School and Physical Activity

Norwegian educational legislations put emphasis on educating the whole child who includes responsibility for learning, safety and individual development (Befring, 2001). The official declarations mean that each Norwegian school has three main goals for each student: 1) to make a dignified useful reality, 2) to prepare them for later life, and 3) to support and uphold cultural and social values (Befring, 2001). All students with disability have a right to special needs amendments and adapted learning in all school subjects for all the thirteen school years. All teachers in Norway have a responsibility to create adapted teaching plans in all subjects in a way that the instruction is adapted to the individual students ability with consideration to difficulty, amount, tempo and progression (Eriksen, 2012). In agreement with the Education Act, 2011 § 5-7 all students have a right to special classes or special pedagogical help if it is determined to be necessary after an assessment is conducted by a professional from their local community, this is also true for physical activity classes (Eriksen, 2012).

The report *Idrett for alle* (Sports for All) described that there is a discrepancy between what is mandated and what the reality is in Norwegian schools (Eriksen, 2012). The document *Sports for All* discusses that in physical activity classes students with physical disabilities vary greatly in their participation from fully participating to absent (Eriksen, 2012). Instances where students are absent are reported to be because the activity was not adapted and designed by the physical activity teacher (Eriksen, 2012). Also, the document *Sports for All* discusses that when students with physical disabilities were not integrated into the physical activity classes that they would often be together with a school assistant or go to physiotherapy after school (Eriksen, 2012). Physical activity classes are obligatory for all students however there exists possibility for students to be exempted from classes or from class all together (Eriksen, 2012). Teachers that were interviewed stated that they felt students with physical disabilities should not participate in physical activity class, because they hinder the other student development and expressiveness (Eriksen, 2012). The report *Sports for all*



shows that there are many facets in this subjects which can be approved upon, such as a number of things which could be changed so that students with disabilities get a better quality adapted learning experience (Eriksen, 2012). One possible improvement could be to ensure that the physical activity teacher has the training and background in adapted physical activity (Eriksen, 2012).

## 1.6 Terminology

### **Inclusion**

Depending on the context, inclusion can be defined in different ways. Lieberman and Houston-Wilson (2009) offer this definition of inclusion; inclusion is the process of educating children with and without disabilities together at all times. This definition forgets the importance of offering support or special aid to students while they are together. Another definition of inclusion can be found from, Kirk, et. al (2009),

Inclusion is the process of bringing all, or nearly all, exceptional children into the regular classroom for their education, with special educational support (p. 44).

This definition does include the importance of special educational support to children who are included, but does not achieve including all children into its definition. In this discussion the concept of inclusion will be closely related to Stainback and Stainback's (1990) definition which stated that,

“An inclusive school is a place where everyone belongs, is accepted, supports, and is supported by his or her peers and other members of the school community in the course of having his or her educational needs met” (p. 3)

Sherrill (2004) defines the inclusive environment to be a place where everyone is seen as being unique and as having their own special talents and the individual feels they belong in the environment because they identify themselves as being part of the whole. Also, the inclusive environment has rules which are justly imposed to all and the individual feels challenged by the goals they have set (Sherrill, 2004).

The definition of inclusion from Stainback and Stainback and Sherrill's inclusive environment illustrate the aspects of inclusion which were important in this investigation.

These definitions address the role which the environment, the teachers and classmates play on the experiences of the student.

### **Social Inclusion**

Social inclusion is the positive personal interactions with classmates that contribute to feelings of acceptance and liking each other (Sherrill, 2004).

### **Adapted Physical Activity**

From the website PE Central (2011) adapted physical activity is defined physical activity which may be adapted or modified to address the individualized needs of children and youth who have gross motor developmental delays. This could include the following:

- Assessment and instruction by professionals that are prepared to gather assessment data and provide physical activity instruction for children and youth with disabilities and developmental delays.
- Individualized Goals and Objectives that are reflective of the physical activity instructional content and monitored.
- Adapting or modifying the physical activity curriculum and/or instruction to address the individualized abilities of each child. Adaptations are made to ensure that each student will experience success in a safe environment.

## **1.7 Structure of Thesis**

The thesis is presented in the following four chapters. In Chapter two, a presentation will be made of the theoretical framework and relevant studies, all of these concepts are discussed in relation to physical activity classes. Chapter two begins with the concept of Inclusion and its connection to social interactions. This will be highlighted using Spencer-Cavalier and Watkinson's study. Social inclusion will be presented together with Social Inclusion Competence Goal Theory, a concept from Sherrill (2004). Banduras' theory of Self-Efficacy will be presented as the fourth topic in this thesis and includes information regarding Sherrill's concept of Sport Self-Efficacy. Moving on from this will be the Achievement-Goal-Theory and Achievement Motivation. Next, information concerning Task-Goal-Perspectives versus Ego-Goal-Perspective will be presented. Threats-To-Self-Esteem model will be presented and its concern with the nature and giving of help and how this may affect self-

esteem beliefs. The theory of the Zone of Proximal Development by Vygotsky will be detailed next and following this will be a presentation of the International Child Development Program. Focus will be to discuss the eight guiding principles in relation to teacher-student interaction and student-student interactions. To finish this chapter the Enrichment Perspective will be presented which is a concept from the well-known Norwegian, Edvard Befring.

In chapter three of this thesis, methodology for this study will be presented. In this chapter, the research design justification will be made for the use of case study design; as well as a statement of the case and phenomena for this study. The methods of data collection will then be presented, where procedures for selection of the case are given as well as how the study will attempt to collect a rich description of the phenomena using qualitative interview and observations. A description will be given as to how permission was acquired to conduct this study from the Norwegian Social Science Data Service. A description will then be presented of what happened during the observation pilot study and how it changed the observation worksheet and a description of what happened during data collection. Data analysis will be used to present how the raw data was transcribed and how categories and themes were found in the data. To end chapter three, a discussion of ways in which this study attempted to ensure quality and rigor as well as considerations which were important to follow in relation to ethics will be presented.

In chapter four of this thesis, a presentation of the research findings will be given as well as a description of the participant, his school situation and his school gymnasium. The findings are presented in twelve categories. These findings include quotes from the participant as well as observations which were made.

In the fifth and final chapter of this thesis, a discussion will be created in relation to the findings of this study. The findings will be discussed in relation to the research question and sub-questions. Also a discussion of the key findings and final considerations will be presented. To end, reflections as to how this study could have been improved as well as the limitations of this study will be discussed.



# 2 Theoretical Framework and Relevant Studies

## 2.1 Inclusion

As mentioned in the terminology section of this thesis, the concepts of inclusive school and inclusive environment were central in the understanding of inclusion in this study. Sherrill (2004) describes that in an inclusive environment is where everyone is seen as being unique and as having their own special talents. Furthermore, an inclusive environment is one in which the individual feels they belong in the environment because they identify themselves as being part of the whole (Sherrill, 2004). Finally, an inclusive environment has structure through rules which are justly imposed to all and participation has a purpose because the individual feels challenged by the goals they have set (Sherrill, 2004). Stainback and Stainback (1990) define the inclusive school,

“An inclusive school is a place where everyone belongs, is accepted, supports, and is supported by his or her peers and other members of the school community in the course of having his or her educational needs met” (p. 3)

The definition of the inclusive from Stainback and Stainback and Sherrill’s inclusive environment illustrates the aspects of inclusion which were important in this investigation. These definitions address the role which the environment, the teachers and classmates play on the experiences of the student.

One benefit of inclusion for students with disabilities is the opportunity for positive social interactions with classmates (Place & Hodge, 2001). Examples of positive social interactions could be supportive, cooperative, respectful, frequent, and meaningful interactions (Place & Hodge, 2001). Opportunity for social contact is created when students with disabilities are included into regular classrooms, however research has documented this does not necessarily translate into more social interactions or friendship development between students with and students without disabilities (Pijl, 2005). Inclusion may not be sufficient if students with disabilities are integrated into the regular classroom.

Social isolation of a child with disabilities has been shown to have a detrimental effect on their social- emotional development, which results in low self-esteem and confidence, a fear of failure and school attendance, lack of motivation, low test scores as well as deviant behaviors and dropping out of school (Pijl, 2005). Interaction between students with and without disabilities has been shown to have positive effects on the students without disabilities also. Research has shown that students without disabilities who were in an inclusive setting with both students without disabilities and students with disabilities for one year, socialized equally with students without and with disabilities (Scheepstra, Nakken & Pijl, 1999).

A study conducted by Spencer-Cavalier & Watkinson (2010) investigated inclusion in physical activity classes, recreation and free play settings. They investigated these settings through the perspectives of participants with disabilities. Spencer-Cavalier & Watkinson (2010) discovered three themes which their participants indicated as being important to their perceptions of being included. These three themes were; gaining entry to play, being treated as and actually seeing oneself as a legitimate participant, and having friends (Spencer-Cavalier & Watkinson, 2010). Department of Ministry (2009) reported that a social relationship between peers was a critical quality of being a student (Department of Ministry, 2009). Also, the Department of Ministry (2009) reported that ability to become successful in social relationships effect strongly learning motivation and identity development in students (Department of Ministry, 2009). Similar to the study by Spencer-Cavalier and Watkinson (2010), the Department of Ministry also reported that children think that to be together with their friends is one of the most important aspects of going to school (Department of Ministry, 2009). For many it is social relationships and feeling of belonging to their peer group which motivates them the most to participate in their schools society (Department of Ministry, 2009).

## **2.2 Social Inclusion in a Physical Activity Class**

Creating the most possible opportunities for interaction between students with and without disabilities is often regarded as a vital part of inclusion (Sherrill, 2004). Being in an inclusive environment means feeling like you belong, are accepted and that you feel you are supported. Social inclusion is the positive personal interactions with classmates that contribute to feelings of acceptance and liking each other (Sherrill, 2004). Individuals of all ages, type of

disability, and experiences exhibit personal differences in their modes of response when in comparable circumstances in physical activity settings. Sherrill (2004) discusses that the benefits of making physical activity settings that respect diversity and encourage personal advancement are recommended methods to planning successful inclusion, securing a place to train social skills and discovering attitudes.

Social Inclusion Competence Goal Area (SICGA) is a concept by Sherrill (2004) that can be defined as social behaviors which encourage inclusion in exercise and sports activities. The SICGA incorporates learning of personal interactions like sharing, working together with others, taking turns, encouraging and being welcoming. SICGA encourages the learning of social behaviors to reduce social isolation. For example, how to ask to join in on an activity and accepting or rejecting invitations to an activity. Finally SICGA identifies the importance of learning the social behaviors of starting and keeping friendships and to developing skills to be accepted by peers who have or do not have a disability in sport or exercise setting as encouraging of inclusion. Having friends in physical activity class who support and encourage physical activity class is vital to wanting to participate in physical activities, and self- efficacy (Sherrill, 2004). According to Sherrill (2004), you can make inclusion a mandate, you cannot mandate friendship. High self-efficacy and high goal perspectives could be two crucial elements for individuals with disabilities to have experiences of in inclusive setting (Sherrill, 2004).

## **2.3 Self-efficacy beliefs in Physical Activity Class**

Bandura (1986) as cited in Biddle & Mutrie (2008) defines perceived self-efficacy as:

People's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with the judgments of what one can do with whatever skills one possesses. (p. 107)

It is important to point out that Bandura distinguishes between efficacy expectations and outcomes expectations (Biddle & Mutrie, 2008). In other words, beliefs are linked to the ability to perform a certain behavior are efficacy expectations (Biddle & Mutrie, 2008). On the other hand, beliefs related to if the behavior will end with a certain outcome are outcome expectations (Biddle & Mutrie, 2008). For example, efficacy expectations could be the belief that they can keep with a workout regime of weight training three times a week for one hour

at a time. But, outcome expectations could be the belief that the workout regime will produce strong or well-toned muscles that were sought after in the start.

Unique to the physical activity environment, if a student holds an opinion of his ability to complete a particular degree of performance, this can be termed as his sport self-efficacy (Sherrill, 2004). Studies show those who have a high sport self-efficacy are more likely to demand to be included, and to have modifications be made to tasks in order for them to meet their personal needs and goals (Sherrill, 2004).

Bandura acknowledged four sources of information for self-efficacy beliefs; performance attainment, imitation and modeling, verbal and social persuasion, and judgements of physiological states (Biddle & Mutrie, 2008).

Performance attainment is grounded on individual experiences of success and failure (Biddle & Mutrie, 2008). Bandura says that successes promote efficacy judgements (Biddle & Mutrie, 2008). Recurrent failures demote efficacy judgements, particularly if the failures happen at the beginning of an experience and failures were not the result of not trying hard enough or difficult outside conditions (Biddle & Mutrie, 2008). Efficacy expectations at the beginning of participation in physical activity may be improved if past experiences in comparable settings were positive (Biddle & Mutrie, 2008). For example, negative perceptions of school physical activity class early on could be linked to later or post-school participation in physical activity.

Self-efficacy may also be developed through imitation and modeling processes (Biddle & Mutrie, 2008). Watching those around you succeed or fail could have an impact on efficacy beliefs, especially in situations that the individual has little to no previous experience to reference back to (Biddle & Mutrie, 2008). Bandura (1986) as cited in Biddle & Mutrie (2008) suggests that social comparison information is significant in self-efficacy beliefs. First experiences in exercise, and the success or failure the other individuals had in those past experiences will have an impact on self-efficacy expectations and plans of being physical activity in the future. Also, watching others which are of comparable stature and physical facility being successful in physical activity has a potential to have positive effects on self-efficacy expectations. Though, these positive effects are more likely to happen when success is perceived as self-improvement or task-orientation (Biddle & Mutrie, 2008). On the other hand, continuous comparison against others or ego-orientation could create feelings of frustration and possible end in participation (Biddle & Mutrie, 2008).



Verbal and social persuasion can have an influence on perceptions of self-efficacy but it is related to who the efficacy information comes from (Biddle & Mutrie, 2008). Self-talk for example can possibly be a helpful approach for enhancing self-efficacy (Biddle & Mutrie, 2008). In relation to exercise, it is possible that self-talk and individual perceptions of the advantages and disadvantages of exercise influences participation in physical activity either commencing or continuing (Biddle & Mutrie, 2008).

Bandura's fourth and last source of influence to self-efficacy is judgements of physiological states (Biddle & Mutrie, 2008). If an individual knows how to keep an eye on physiological cues, it may result in improving efficacy perceptions (Biddle & Mutrie, 2008). For example, a higher attentiveness of bodily warning signs of being exhausted or in pain could help to continuing a workout regime to suitable intensity because concern about physical appearance for example may get in the way of participating (Biddle & Mutrie, 2008).

## **2.4 Achievement-Goal Theory and Achievement motivation in Physical Activity Class**

Achievement-goal theorists assert that the goals individuals have in relation to achievement in situations affect self-assessments of success or failure, perceptions of competence, emotional reactions and achievement behaviors (Dunn & Dunn, 2006). Nicholls (1989) as cited in Biddle & Mutrie (2008) has contended that the two main orientations here, task and ego are built on how the individual understands his or her own competence.

According to Nicholls (1989) as cited in Dunn and Dunn (2006), a task-goal-perspective focuses on self-oriented improvements, learning and skill expertise. The task-goal-perspective is related to feelings of achievement, perceptions of competency, effort and determination even when perceived abilities are lower when compared to others as stated by Nicholls (1989) as cited in Dunn & Dunn (2006). Indications of competence are judged by the individuals own experiences of trying and finishing a task (Biddle & Mutrie, 2008).

Nicholls also discusses ego-goal-perspective; it focuses on showing how one's ability is greater than another's, where success and failure are determined by winning or losing (Dunn & Dunn, 2006). Also, the ego-goal-perspective is judged by comparing one's self to others and opinions of others could be accepted instead of the individuals own opinion of ability (Biddle & Mutrie, 2008). In situations where students with disabilities participate in physical

activity classes, a dominant ego-goal-perspective could be associated with experiences of negative self-perceptions and emotional reactions (Dunn & Dunn, 2006).

In line with the Achievement-Goal Theory, the goal perspectives which individuals assume in different situations can be persuaded by situational influences as well as individual decision to choose either activity or ego goals (Dunn & Dunn, 2006). Situational influences could come from authority figures beliefs and expectances of what are more desirable in the physical activity setting, task-goals or ego-goals. Therefore situational influences could have a greater impact in younger individual's choice of goals because they might not have yet developed a clear decision for the preference of task or ego goals and are influenced greatly by authority figures (Dunn & Dunn, 2006).

Maehr and Nicholls (1980) as cited in Biddle & Mutrie (2008) differentiated three categories of achievement motivation: ability-oriented motivation, task-oriented motivation and social-approval-oriented motivation. Ability-oriented-motivation is related to ego goal orientations where the individual considers displays of ascendancy to others to be success (Biddle & Mutrie, 2008). According to Maehr and Nicholls as cited in Biddle & Mutrie (2008), the main goal in task-oriented-motivation is to create an acceptable outcome or to work out a challenge for the individuals own reasons not to show off one's ability (Biddle & Mutrie, 2008). Social-approval-orientated motivation aspect of achievement motivation is the display of agreement or playing along to customs or morals instead of displaying exceptional abilities over others. Defining success is subjective and maybe associated to motivation.

## **2.5 Threats-to-Self-esteem model and Physical Activity Class**

The Threat-To-Self-esteem model puts forward that being the recipient of help can be a positive and a negative. The manner in which help is given, the behaviors of the individual offering the help, and the helping environment can enrich or diminish the emotional meaning and significance of the helping act to the individual receiving help (Goodwin, 2001). If the situational circumstances of help suggest weakness, a conflict in beliefs of independence and negative self-perceptions may translate into an interpretation of help to be threatening (Goodwin, 2001). When the situational circumstances convey caring, concern and help is

suitable, precise, and encouraging, help may translate into promising self-perceptions (Goodwin, 2001).

The threat-to-self-esteem model suggests that help that is largely supportive or encouraging, prompt positive or non-defensive reactions in those receiving help (Goodwin, 2001). The threat-to-self-esteem model also proposes that help can prompt negative or defensive reactions if help is not supportive or encouraging (Goodwin, 2001). Self-supporting help stimulates independence and therefore a perception of a strengthened feeling of power over ones surroundings (Goodwin, 2001). The perceived degree of control can be established by the surroundings circumstances and the individuals confidence in their ability to be independent if they make a conscious decision to do so (Goodwin, 2001). An individual can experience a controllable self-threat in situations where threatening help is teamed together with a high belief in their power to manage upcoming events (Goodwin, 2001). Controllable self-threat can be associated by negative feelings about the self, but these feelings can generate a self-help behavioral reaction in the individual (Goodwin, 2001). On the other hand, an individual can experience uncontrollable self-threat in situations where help is accompanied by a low belief in their power to manage upcoming events. Uncontrollable self-threat can also be associated with negative feelings about the self which can lead to a continuous dependence on others (Goodwin, 2001). Thus there exists an irony, social interaction can decrease the individuals belief in their abilities and promote a feelings of powerlessness.

With consideration to individuals with disabilities, help can be experienced in a dissimilar manner from that of individuals without disabilities because help can greatly decrease the power that those receiving help have over them and their life (Goodwin, 2001). Help has the potential to weaken the gaining of new abilities or the use of and preservation of abilities which the individual already has. Vagueness can develop if it is not clear if the individual needs or wants help or the way in which it should be given (Goodwin, 2001). It is very common for students with physical disabilities to talk about helpful interactions with their classmates in physical activity classes. The quality and quantity of social interactions between students with and without disabilities greatly influences students with disabilities experiences in physical activity classes. Also, the level that classmates include or exclude others during activities, mock or praise abilities, and impede or enable active participation can greatly influence student experiences in physical activity classes (Goodwin, 2001).

## 2.6 Zone of Proximal Development and Physical Activity Class

The ZPD states that children's learning occurs before their first day of school. Children understand what they learn in school based on prior experiences. Children create their own informal understandings related to their experiences in childhood, thus their development level when entering school will be different depending on these experiences (Vygotsky, 1978). The child's present development is referred to by Vygotsky as their actual development (Vygotsky, 1978). That is to say that the child's established mental age, found through completion of standardized testing is defined to be their present stage of development. The standardized tests used to determine the child's present development and thus represent their mental abilities, is to be completed alone without assistance. The problem here for Vygotsky was that if we only base the child's mental abilities based off of their determined mental age using standardized testing alone, we are only addressing part of their possible mental abilities (Vygotsky, 1978). Vygotsky suggests a better representation of the child's present and future stage of development and mental abilities is their completion of tasks with assistance and aide from people or artefacts (Wells & Claxton, 2002). To give an example, if we consider a student who can complete a pass to another classmate in baseball, this is considered their actual development. If the student can accept a pass or catch the ball in baseball only by stopping the ball with their feet, this is their development in the zone of proximal development. If after assistance the child can now catch the ball with his or her hands because they were taught to keep their eye on the ball and follow their hands to it as it comes closer, this is considered also their actual development.

The elements which are involved in the ZPD are many and the cooperation between these elements is very important on the success of the child. Mahn and Steiner (2000) as sited in Wells and Claxton (2002), argue that the elements of the ZPD such as the individuals, their opinions and observations, the artifacts and setting are interconnected and reliant upon each other. Not only does Mahn and Steiner (2000) as sited in Wells and Claxton (2002) say that these elements are interconnected, they say that the harmonization of these elements is critical to the building of the ZPD. If a harmonization of these elements is not present because for example, the teacher is using language that the student does not understand, the zone of learning is weakened, and does not operate optimally. For Mahn and Steiner (2000) to achieve harmonization between the elements within the ZPD there must exist mutual comprehension

of the given problem to be solved and a respect between the learner and the more experienced assistant (Wells & Claxton, 2002).

## **2.7 International Child Development Programs and physical activity class**

The International Child Development Programs (ICDP) was founded in 1992 and is a registered international non-governmental organization in Oslo, Norway. ICDP is founded on the thought that human beings are fundamentally social and in turn this means that human beings are at risk in social relationships because it is in that area we can experience happiness or suffering. If an individual is in a situation where he or she is starved of regular human interaction, the individual can experience misery, often seen in institutionalized children (International Child Development Program, 2011). It is in such instances that the ICDP can be used as a tool to help bring back and awaken regular human compassionate communication (International Child Development Program, 2011). The ICDP strategies can be applied to babies and young children, as well as teenagers, adults and the elderly.

ICDP views all individuals as being candidates of its principles because everyone exists in relationships with one another, and it is the condition of these relationships which dictates how they feel, manage and grow (International Child Development Program, 2011). The philosophy of ICDP is to offer for human nurturing by awakening understanding and education of the caregiver and their children. The ICDP has a specific goal of using the most up to date research in child development for the special interest of at risk children. The school provides an important role in the bringing up and socializing of students, as well as the duty of teaching students the knowledge required in their teaching outcomes. Liking school may rest on having a positive teacher-student interaction and also on the quality of the student-student interaction (Rye, 2001). These principles may be applied to the physical activity class as well as all other subjects in school. The principles in the ICDP program may be used to encourage a positive physical activity classroom environment. The guiding principles which are intended to serve as tools for the teacher in teacher-student interaction are: demonstrate positive feelings, give praise and acknowledgement, help the students focus their attention, give meaning to the students experiences, elaborate and explain, and help the students achieve self-discipline (Rye, 2001, p. 97).

In relation to student-student interactions, teachers may: demonstrate positive feelings, help students adjust to one another, help the students talk about shared experiences, encourage the students to express acceptance, praise and recognition, help the students focus their attention on shared activities, help the students share their experiences with each other in a meaningful way, help the students express and explain their experiences and opinions to one another, and help the students develop self-discipline (Rye, 2001, p. 99).

## **2.8 The Enrichment Perspective and Physical Activity Class**

The Enrichment Perspective suggests ways to further develop special education (Befring, 2001). This perspective pertains to the perspective of empowering individuals to socialize and network with others and with his or her surroundings, while simultaneously generating a social atmosphere and setting that facilitates such interactions (Befring, 2001). If we apply this to physical activity classes, it could be suggested that empowering students to socialize and interact with classmates could create a class setting that enables and encourages socializing and positive interactions.

The Enrichment Perspective maintains that a community, a school, and a society, which adjusts and is open to the needs and unique attributes of people with varying requirements and aptitudes, enriches all pupils and educators equally (Befring, 2001). Kindergartens, elementary and high schools that are enriching for students with disabilities will in turn present a model setting for educating and nurturing of welfare of all other children in the classroom or school (Befring, 2001). According to the Enrichment Perspective, personal diversities are considered resources. This perspective could be considered as a starting point from notions of disorder or irregularity by highlighting the positive features that special need individuals have to contribute (Befring, 2001). The Enrichment Perspective is a developmentally based educational approach or in other words meets each learner at the stage he or she comes into the learning experience (Befring, 2001). Also, by identifying the resources which special needs individuals can offer, it could relate to some of the same main beliefs as enabling and the perspective of empowerment (Befring, 2001). Lassen (1999) as cited in Befring (2001) states “the possibility of empowering parents is available for practitioners if they perceive the capabilities of parents, children and systems and are willing

to foster development of unused resources, in this lies the real challenge of special education” (p. 55).

There is a potential for students to become the instructors and social supports for each other in contexts when teachers place importance on variation within and between students (Befring, 2001). When students with or without disabilities play a role in cooperative lessons, they have a chance to 1) realize for themselves, their fortes and scholastic abilities when they help their classmates to learn, and 2) create more cooperative learning environments instead of the traditional competitive peer relations (Befring, 2001). These concepts could be used in physical activity classes as well, for example through peer interactions or peer tutors. Peer interactions refer to a connection where classmates are not given any formal training in physical activity classes, where peer tutoring refers to formal training (Lieberman, & Houston-Wilson, 2009). In peer tutoring the instructor giving formal training is the tutor and the individual receiving the formal training is the tutee (Lieberman, & Houston-Wilson, 2009). A number of studies suggest benefits to using peer tutors in physical activity classes. Some of these suggestions were that participating together as partners inspires positive relationships between tutors and tutee’s and possibly socialization among other classmates is also stimulated (Lieberman, & Houston-Wilson, 2009, p. 79). Also, cooperative learning experiences encourage more social interest among the students with and without disabilities, higher self-esteem, and more compassion may be seen in all students (Lieberman, & Houston-Wilson, 2009, p. 79).





# 3 Methodology

## Introduction

This chapter will present and give justification for the research design, method and instruments of data collection, area of study, procedure and criteria for case selection, procedure of data collection and analysis.

## Research Question

*What are the perceptions and experiences to participating in physical activity classes of an elementary student with a physical disability?*

## Sub-questions:

- How does an elementary student with a physical disability experience he or she belongs, is accepted and/or is supported in physical activity classes?
- How and in what ways does an elementary student with a physical disability perceive or experience that he or she benefits from physical activity classes?
- How do teachers/teacher assistants influence perceptions and experiences in physical activity classes of an elementary student with a physical disability?
- How do classmates influence perceptions and experiences in physical activity class of an elementary student with a physical disability?

## 3.1 Research Design

A single case study design was chosen to explore perceptions of being a participant in physical activity classes. Gall, Gall & Borg (2007) define case study research as: “The in-depth study of instances of a phenomenon in real-life settings and from the perspective of the participants involved in the phenomena”. Phenomenon is “a process, event, person, document, or other thing of interest to the researcher” (Gall, Gall & Borg, 2007). This study explored the phenomenon of perceptions and experiences to being a participant in physical activity class.

Single case study design refers to the type of case study, in which the phenomenon is investigated in relation to a single case. In this study the case was Henry, a student with a physical disability, Cerebral Palsy, in physical activity class in a Norwegian Elementary school. Interview and observational data was collected from the participant in the form of observer field notes, interviewer notes, and interview voice recordings.

Case study research may be conducted for three different purposes: to create a comprehensive description of the phenomenon, to create potential explanations of the phenomenon or to evaluate or assess the phenomenon (Gall, Gall & Borg, 2007). In this study, creating a thorough description of the phenomenon was the intended purpose. The attempt is to use in-depth descriptions of the phenomenon by narrating things such as the environment; where and when the study took place, the school setting, what the gym looked and was arranged; in this case the perceptions of the student with a physical disability. When all of the data was collected, analyzed and described, the result was a “thick description of the phenomenon” (Yin, 2011). That is, statements that re-create a situation and as much of its context as possible, accompanied by the meanings and intentions inherent in that situation.” of the case study (Gall, Gall & Borg, 2007, p. 656). A thick description can give a picture of the participant, what happens and the activities of the participant in the environment which is under study (Yin, 2011).

The results from the descriptive data will be organized and themes will be formed from the data. These themes attempt to clarify the phenomenon to the researcher by using both interview and observations of the phenomenon as expressed by Henry. Themes are prominent distinguishing aspects of case being explored (Gall, Gall & Borg, 2007).

## **3.2 Methods of Data Collection**

It is common in qualitative research to have multiple sources of the data. The method of data collection was a qualitative interview and observations. Information obtained through the interview method has potential to be biased by the participant not recalling accurately (Gall, Gall & Borg, 2007). Therefore, the observation method benefited the information gathered from the interview by directly watching the behavior and environment of the participant. Observations gave an additional source of data for verifying the information acquired by the

interview (Gall, Gall & Borg, 2007). The interview was the primary method and the data obtained through observations were used to support the previous one.

### **3.2.1 Selection of Case**

“Selecting those times, settings and the individuals that can provide the information that is required to answer the research questions is the most important consideration in qualitative selection decisions” (Maxwell, 2005). Qualitative research traditionally uses purposeful sampling because it tries to “select cases that are likely to be information rich with respect to the purpose of the study” (Gall, Gall & Borg, 2007, p. 178). A type of purposeful sampling was used to select the participant, more specifically criterion sampling was used because there were certain prerequisites which the participant was desired to have (Gall, Gall & Borg, 2007). Maxwell (2005) discusses that criterion based and purposeful samplings are deliberate in that they offer information about the specific setting, person, and processes that could not be obtained from other alternatives. Criteria for being a participant in this study were; a student between the age of ten and fifteen, who has a disability, and participates regularly in physical activity classes. The age of ten to fourteen was chosen because there was a higher likelihood that the participant would have some years of experience with participating in physical activity classes, more so than a first grade student. The quality of responses of a participant with more years of experience in physical activity class was connected to the possibility of obtaining information rich example of the phenomena. Having a disability and participating regularly in physical activity classes was desired as criteria because these two criteria were in direct relation to the research questions.

One participant was chosen for this study because a goal of the study was to create a richly detailed story of the experiences and perceptions of Henry’s participation in physical activity classes. The selection of more than one participant could have been an opportunity to report on the experiences and perceptions of other students and possibly identify patterns of positive or negative experiences in physical activity classes.

### **3.2.2 Qualitative Interview**

Qualitative interviewing was used as data collection for this study. The interview was completed at Henry’s school during the spring of 2012. Interviews give information which

can be used to understand experiences and events that only the participant has experienced. Interviews were used to gather understanding and knowledge of Henry's perceptions and experiences. Interviewing also allowed for one-on-one interaction with Henry, to hear his experiences and perspectives in the unique way that only Henry could give. An advantage of this method is creates opportunity for building a rapport with respondents to help them feel more comfortable, which can result in collection of more open answers. Also, an advantage of interviewing is that it gives opportunity for following up on answers to dig for deeper for information and clarification which can help to avoid misunderstandings (Gall, Gall & Borg, 2007). However, data that was obtained from Henry had a potential of being biased because he might have given responses which were socially or personally preferable or because he did not recall accurately when interviewed and made up his answers (Yin, 2011).

There were three different formats to be chosen to complete the qualitative interview: unstructured, semi-structured, and structured interview. Unstructured interview was not chosen because it did not give the opportunity to create specific questions and details which were of interest. Unstructured interviews are very flexible and allow for emergent insights from the participant and the interviewer (Maxwell, 2005), however, unstructured interviews are possibly best suited for more experienced interviewers. Structured interview was not chosen because it did not offer opportunity to get in-depth responses from the participant or allow the interview to move in a natural conversational pattern because of the use of closed ended question format (Gall, Gall & Borg, 2007).

The interview guide in this study was semi-structured which allowed for organized questions and also allowed for the opportunity to dig deeper into responses. The interview was changed and adapted quickly and easily during the interviewing session, for example the question: "Do you feel like you are heard in physical activity class" was reworded to "Do you feel like if you had something to tell your teacher that he would listen to you?" During the interview there was an opportunity to search and dig deeper at Henry's beliefs, experiences and attitudes. An audio-tape recorder was used to record the interview and notes were taken during the interview. The rationale for using notes in addition to the audio-tape recorder was to have the opportunity to write reminders or put emphasis on responses Henry gave during the interview. The interview gave rich nonverbal information such as facial expressions, and body language and this gave extra data to be considered for analysis. Using the audio-tape recorder

to record the interview gave the opportunity to check understandings and reflect on questions which could have been asked differently.

Finding a setting that was comfortable and unthreatening to Henry was taken into consideration. Therefore, Henry was interviewed in his school, an area he was familiar with. Prior to the beginning of the interview, Henry discussed everyday things such as the weather and the location of his school. Henry was informed that if at any time he did not understand a question that was given, to feel free to ask for it to be explained or worded in a different way.

The interview guide was divided into three parts. To start, ice breaking questions like what his age was and how many classmates were in his class. The second part of the interview was focused on Henry's experiences and perceptions related to his classmates in physical activity classes as well as how and in what way they influenced his feelings in regard to feeling he belonged, was accepted or supported. Lastly, the interview focused on Henry's experiences and perceptions related to his teacher in physical activity classes as well as how and in what way they influenced his feelings in regard to feeling he belonged, was accepted or supported. Also, questions regarding benefits if any that Henry experienced because of physical activity classes were asked. The interview guide was written in Norwegian and the interview was conducted in Norwegian. During the transcribing process the data was translated into English (See Attachment 1).

Interviewing children and children with disabilities requires special consideration. First "how to listen" to what children say is an active rather than passive activity (Tangen, 2008, p. 159). According to Tangen (2008), active listening includes hearing, reading between the lines of what is being said, and creating meanings from that information. Also, active listening requires an understanding of the child being interviewed and is therefore context specific (Tangen, 2008). The result of active listening is teamwork between the interviewer and the interviewee (Tangen, 2008). Studying the perceptions and experiences of Henry raised many issues, as Tangen (2008) discusses "Do you have to be one to know one?" (p. 159). This quote refers to the issue that only Henry and other people that have cerebral palsy have special access to information about their own experiences, information that an individual that does not have cerebral palsy cannot fully understand (Tangen, 2008). However Tangen (2008) raises a question, "what does it mean to know children's experiences?" (p. 160). According to Tangen (2008), only Henry himself can give the most accurate knowledge of his own

experiences and that others with cerebral palsy are the second best chance of developing valid knowledge related to this.

Furthermore, the theory of subjectivism claims that knowledge has to be founded on the individual's state of consciousness. Each individual is an expert on his or her own experiences and knowledge. The individual has direct knowledge about him-self, but has limited access to knowledge about other individuals and settings (Tangen, 2008). An individual can acquire knowledge about others by trying to understand, be compassionate, and find similarities within their own experiences. Knowledge is created through experiences, by the values, beliefs, and the significance the individual assigns to these experiences (Tangen, 2008). In research, trying to understand an individual can be possible through compassionate, delicate interaction and observation (Tangen, 2008). Also, the researchers can also understand the individual better through comparison of his or her past experiences or information the individual has of past experiences of other people, fictional or nonfictional (Tangen, 2008).

### **3.2.3 Qualitative Observation**

Qualitative observation as a method, allowed for the researcher to establish her own version of reality (Gall et al., 2007, p 276). Observations were used to describe the setting that Henry had his physical activity class and factors which influence the phenomena. Observing directly Henry's behavior and the environment functioned as an alternate way data was collected in relation to the phenomena. Relying solely on the interview data would have created an incomplete description of the phenomena, as compared to the description of the phenomena with the addition of the observation data (Gall, Gall, & Borg, 2007). Observations are not dependent on participants; understanding, what they remember, their communication skills, or how they wish themselves to be seen by the observer. Observations created an extra source of data that supported information gathered from the interview.

There are two main styles of qualitative observation; reactive and nonreactive. Reactive observation means participant(s) are aware that they are being observed (Gall, Gall & Borg, 2007). Nonreactive observation means that the participant(s) do not know they are being observed (Gall, Gall & Borg, 2007). Observation in this study was reactive. Henry was informed that he was to be observed in his physical activity class however, he did not know the exact objectives of the observations. At the beginning of the observation Henry's

classmates were informed that “I am a student from the University of Oslo and will be observing today because I have an interest in how it is for people with physical disabilities to use wheelchairs in physical activity classes”. Henry’s classmates were not explicitly informed that Henry was the focus of the observations, only that individuals with physical disabilities who used a wheelchair in physical activity classes would be observed. Henry was the only student in his physical activity class who had a physical disability and used a wheelchair. The classmates were not informed explicitly that Henry was the focus of the observations because their behavior and interactions with him could have been affected and it was desired to have a most natural setting as possible.

The role of the observer is dependent on the amount of participation and the amount of communication that occurs with participants and other persons in the setting (Gall, Gall & Borg, 2007). A complete observer is an observer who keeps an independence from the location being investigated, no interaction is made with the individuals in the setting (Gall, Gall & Borg, 2007). In this study, the observations were conducted with the observer as a complete observer; it allowed for more focus to be put on creating detailed field notes. Field notes were taken and included information regarding descriptive matter: Gymnasium, gym equipment, and a reconstruction of dialogues and reconstructions of activities. Also, field notes included reflective observations: research method effectiveness/ appropriateness, ethical problems/concerns, observer interpretations as well as personal thoughts and ideas. To record observed data a worksheet was designed. The worksheet included a column for descriptive comments, a column for interactions between Henry and his classmates, and a column for interactions between Henry and teacher/teacher assistant. Also, the worksheet included space for reflective notes. (See Attachment 2)

Valid observation data can be difficult to collect if the observer effects to the findings are not considered. The observer’s personal predispositions or biases are identified by Gall, Gall and Borg (2007) as being possible observer effect to consider in data collection and analysis. The presence of the observer in the setting changes the way in which the classmates and Henry acted. It is good practice to describe and analyze these possible effects to the findings (Gall, Gall & Borg, 2007). Through the use of validation procedures and verifying data analysis and examining results from several theoretical theories, misrepresentations in data can be lessened (Gall, Gall & Borg, 2007). These concerns are discussed more in depth in section 3.5 Ensuring quality and rigor in case study design.

## **3.3 Data Collection Procedures**

### **3.3.1 Permission**

In the beginning of the research process it was necessary to get permission from the Norwegian Social Science Data Service or NSD. NSD helps researchers with the standards of privacy and research ethics. Permission was granted for this project in September 2011. While waiting for permission to be granted, five local elementary schools in district were contacted in the area to find a participant which fit the sampling criteria. None of the local schools which were contacted reported having a participant which fit the sampling criteria. The local Pedagogy and Psychology office was then contacted and through the physiotherapy section of this office, the participant was found. The participant was a student from the local school district. Henry's physiotherapist was contacted and it was she who informed Henry and his mother that they were of interest to the study. After approval from Henry's and his mother to do so, an information sheet and consent form were sent to them. After receiving signed copies of the information sheet and consent form from Henry's mother, the principal of Henry's school was contacted and also received an information letter. The principal had one concern with the study, she insisted that either to have consent from all of all the student's parents in the class or during the first observation of the physical activity class that the class be informed that "A student from the University of Oslo will be observing today because of an interest in how people with physical disabilities use wheelchairs in physical activity classes". Ideally for research purposes, the class was to be informed that there were to be observations taken of the class, not pointing out any individual of focus. It was decided that the alternative with consideration to the time restraint of only four months for data collection, to inform the class of the person of focus of the observations as the principle had suggested.

### **3.3.2 Pilot Study**

In qualitative research, pilot studies are important because they provided an understanding of "what the phenomena and events around the phenomena mean to the people who are in them and the perspectives that inform their actions" (Maxwell, 2005, p. 58). Of the two methods of data collection qualitative interview and observations, only the latter was pilot tested. The observation pilot test was completed in the physical activity class which Henry was present



in. The benefit of completing a pilot observation was that it gave an opportunity to test run the observation worksheet, and also gave an opportunity to become familiar with the setting, and activities. The pilot observation also gave a good opportunity to decide the best area to observe from and move around in the gymnasium with least amount of distraction for the class. A pilot interview was not completed. However, the interview guide was discussed and modified together with the supervisor and the interview guide was practiced in Norwegian and memorized prior to the interview with Henry. The interview guide was adjusted to try to ensure that there were not any communication difficulties with language or vocabulary.

### **3.3.3 Main Study**

After confirmation by Henry's mother and principal, Henry's teacher was contacted and it was decided when the most convenient times for the interview and observations to be conducted. The interview was conducted first. The room in which the interview took place was appointed by the principal of the school and it was located beside her office. It was arranged two weeks in advance by Henry's teacher when the most convenient time would be for Henry to meet to do his interview and it was decided that the interview take place on a day that Henry had physical activity class. Before the interview began, Henry was informed of how the interview would be recorded on a voice recorder which only the interviewer would hear. Also, Henry was told that his name and his school would not be told to anyone and that the responses he gave would not be connected back to him in any way. Henry was given an opportunity to ask questions or to tell about any concerns he had. The interview was completed in the last period of that school day and took approximately one hour and thirty minutes. The knowledge created from interview with Henry is not one hundred percent representative of his actual experiences and perceptions. However, the knowledge created from the interview with Henry was a representation of his experiences and perceptions to the extent that the methods of this study allowed for.

The pilot observation took place the following week after the interview and the main observation the week after that. During the pilot observation, an introduction was made to the class where they were informed of the nature of the observations that would be in focus. Before the main observation, a number of adjustments were made to the observation work sheet. The pilot observation helped to change the layout of the work sheet, for example allowing for more room for comments. Also, the work sheet was changed in respect to its

organization. For example, the help from classmates and help from teacher/teacher assistant were used instead of the single heading help. Both the main observation and pilot observation lasted the duration of the physical activity class which was forty-five minutes. After the pilot observation and main observation notes were made, reflections and additional information were noted.

The organizational categories which were chosen to create the interview guide and observations were based in part from the ideas and themes from other research studies. Maxwell (2005) defines organizational categories as broad areas or issues that are established before interviewing or observing, or that could have been anticipated. With consideration to preconceived categories taken from other research as well as categories based from past personal experiences, the phenomenon was investigated. It was in this way Henry's perceptions and experiences were explored in this study. Organizational themes used to create the interview guide and observations were; helpful, support, understanding, acceptance, encouragement and choice. In the Data Analysis chapter these themes will be broken into descriptive categories for what Henry reports as being his beliefs and ideas. These emic categories are Henry's own words and explanations of the themes he was asked about, as well as themes which do not fit into the mentioned organizational categories.

### **3.4 Data Analysis**

After the interview and observational data was collected, the task of reducing the data into categories and patterns began. After the interview was completed, it was translated and transcribed into a Word document. The transcription was first analyzed by searching for the underlying meaning behind the words. While analyzing the transcription, reflections were made by asking the question; what is this about? The first reading of the transcription resulted in a list of topics: helpfulness, caring, understanding and acceptance, acquisition of knowledge, comfort, respectfulness, encouragement and choice. These themes were broken into descriptive categories for what Henry reported as being his beliefs and ideas. Categories are constructs that are connected to different phenomena in the data (Gall, Gall & Borg, 2007, p. 467). These emic categories were Henry's own words and explanations of the instances of the phenomena he was asked about, as well as instances of the phenomena which did not fit into the mentioned organizational categories. After the interview data was categorized, the observational data was analyzed. Connections between the interview categories and the

observation data were compared. In instances where there was a similar category, the observed data was added into the categories found from the interview. When a category was found in the observational data that did not have a connection with the interview categories, a new category was made.

After looking through the transcription again, new topics were found that were in Henry's words, these topics were: special things I do on physical activity class days, difficulties I overcome with help and benefits in my daily activities because of physical activity, times when my friends made me feel like I belong, how I am helped and what I get help with, times when I feel like the real me and my goals in physical activity and my choice. These categories were influenced by the theoretical information which was presented in the previous chapter. The theoretical information was used as a guide of possible ways of grouping categories together.

The concept of inclusion was used to help identify indicators of inclusion or qualities of inclusion. For example, an indicator of inclusion was considered to be Henry's stating that he has a network of support at the current school he attends in the category "Times when my friends make me feel like I belong".

Finding examples in the raw data of social inclusion, such as feelings that contribute to acceptance or liked by classmates were used to shape category of "How I feel accepted". This was inferred to be a description of Henry's perception of positive social interactions, as Sherrill (2004) discussed was a quality of the definition of social inclusion. The Enrichment Perspective was used to discuss the qualities of socially inclusive behaviors, such as classmates being instructors and social supports for one another.

The forming of the category "My goals in physical activity" was not directed by any theory. However, the theory of Self-Efficacy, Achievement-Goal, and Achievement Motivation will be used to discuss this category. Self-efficacy theory will be used to discuss what may influence Henry's self-efficacy. Achievement-goal and Achievement Motivation theory will be used to discuss examples of the characteristics of the goals which Henry has in physical activity class, and what may influence his motivations to complete these goals.

The categories "Difficulties I overcome with help, how I am helped and what I get help with" were discussed with the Threats-To-Self-Esteem model and the ZPD theory. For example, the

category “Difficulties I overcome with help” where Henry is described from an observation between him and his teacher assistant learning a passing technique was related to the ZPD and discussed in relation to this theory. The Threat-To-Self-Esteem model was also used to discuss this category because the characteristics of the help Henry received in the ZPD could influence his self-esteem positively or negatively.

Finally, the ICDP program guiding principles were used to discuss the categories and to give examples of them during physical activity classes and make suggestions for how the principles could be used to facilitate more social interactions.

## **3.5 Ensuring quality and rigor in case study design**

### **3.5.1 Validity**

Gall, Gall and Borg (2007) define validity as the degree to which the research uses methods and procedures that make certain of a high level of research quality and accuracy (p. 657). “Validity is a goal not a result; it is never something that can be proven or taken for granted” (Maxwell, 2005, p. 105). Validity in qualitative methods is connected to a high degree on the ability, aptitude, and accuracy of the person doing the data collection (Patton, 1990). A crucial concept in validity is the threat of what might be wrong (Maxwell, 2005, p. 106). Attempts were made to manage these threats to validity by using the strategies of reflecting on reactivity, respondent validation, presenting rich description of the findings, and presenting negative information.

“Reactivity is the influence of the researcher on the setting or individuals studied” stated by Maxwell (2005, p. 108). The interview with Henry was an unavoidable threat to validity because it was necessary to be present at the interview as an interviewer. Reactivity was attempted to be avoided by asking questions to Henry which were not leading questions, for example open questions were asked such as how or why.

To manage respondent validation of findings, time was taken during the interview to check with Henry to discuss his responses. During the interview, answers which Henry gave would sometimes be repeated back to him, to avoid subjective interpretation of responses. Questions were also clarified if Henry asked. By receiving feedback from Henry, it lessened the

possibility that misunderstanding or misinterpretation of the data to occur. Also, the interview tape recording was translated to English as closely as possible to Henry's exact words to strengthen respondent validation.

To create a rich description of the findings, observation notes were an account of events which were observed. Also, the interview data were presented and analyzed from the emic perspective of Henry and are presented in the beginning of chapter four.

“Identifying and analyzing discrepant data and negative cases is a key part of the logic of validity testing in qualitative research” as stated by Maxwell (2005, p. 112). It was important to analyze the data that were Henry's positive as well as negative experiences and perceptions. The theme of “Times when I did not participate” is an example of one of the negative themes which was reported from Henry during his interview.

### **3.5.2 Applicability**

Gall, Gall and Borg (2007) define applicability as the extent to which the findings of a qualitative research study are applicable to other cases or studies (p. 633). Determining if the findings of a study are applicable can be attempted by considering the procedures of case selection. Comparison of the case of this study with another study could be a way of identifying how the case of one study is like or unlike other cases (Gall, Gall & Borg, 2007). Choice of sampling procedures could increase the probability that the findings of a study could be applied to other cases which share the same phenomena (Gall, Gall, & Borg, 2007). For example, a study may use purposeful sampling to find participant(s) that will best help in the understanding of the phenomena and the research questions (Creswell, 2009). Using purposeful sampling to choose the participant(s) to be used in a study, could consider four factors (Creswell, 2009). Factors that could be considered are the setting, the participant(s), the events such as what the actors will be seen or heard doing, the process for example the changing quality of the events taken on by the participant(s) within the setting (Creswell, 2009, p. 178). Applicability could be determined by putting cases or settings side by side and comparing them in connection with current theory (Gall, Gall, & Borg, 2007). However, it could ultimately be the obligation of the reader of a particular case study research to decide the applicability of the results of a study and use it in other research or settings (Gall, Gall, & Borg, 2007).

The following two concepts, internal and external validity were not applicable in this study however they could be important concepts in other qualitative and quantitative studies and it is for that reason they are mentioned. Maxwell (2005) discusses the concept of internal generalizability as being a key issue for qualitative study. Internal generalizability is the generalizability of a conclusion within the setting, individual, or group studied (Maxwell, 2005, p. 115). The descriptive, interpretive, and theoretical validity of the conclusions of a case study all rest on their internal generalizability to the case as a whole (Maxwell, 2005, p. 115). For example, the perceptions and experiences of Henry were investigated in this study, and therefore only his interactions with classmates and teachers were taken into account. This means that the findings and conclusions of this study are only understandings of the experiences and perceptions of Henry. It was not the intent to generalize the findings and conclusions of this study to any other individuals.

External generalizability is generalizing outside the study setting or case (Maxwell, 2005, p. 115). External generalizability is almost never an important issue for qualitative studies. This is because the strength of qualitative studies is found in the specific description and themes developed in context of a specific site (Creswell, 2009, p. 193). Maxwell (2005) discusses that absence of external generalizability has strength in qualitative research because it does not correspond to a large population however it does give an insight into particular setting or group, for example a radical case. External generalizability was not the intention of this study.

### **3.5.3 Reliability**

The uniqueness of qualitative research case study within a particular setting makes it impossible to replicate precisely in different setting (Creswell, 1994). Reliability is concerned with discussing the possible limitations in replicating a study (Creswell, 1994). Reliability was attempted in this study by providing thorough details of the phenomena and case of this study. Presenting reasons for selection of Henry was significant to reliability because to replicate would require finding a student with CP, who has the same physical abilities, and capacities. This would pose a substantial challenge due to the variation and differences of individuals with CP.

Also in relation to reliability, mentioning the role of the researcher is also important to describe richly, so that another individuals could attempt to reproduce the same actions.

However, this is difficult to complete because the role of the researcher evolves individually through the interaction with the participant and the situation (Dalen, 2004).

Reliability can be strengthened by describing the setting where data was collected therefore; a description of the setting was included in the Chapter Presentation of Research Findings. Also, the chapters Methods of Data Collection and Data Collection Procedures strengthen reliability of this study and that is one of the reasons why these chapters included information regarding the making of the interview guide and observation worksheet. The Data Analysis chapter included details related to how the interview was transcribed and the process which was used to create categories, which can also strengthen reliability.

## **3.6 Ethical Considerations**

In educational research, many individuals are studied from different backgrounds and with different characteristics and therefore the ethical concerns are different from one research study to another. Considerations were taken to the ethical concerns that could have affected the participant in this study. It was important to have a strategy of how to identify ethical concerns and overcome them at all times during the study, planning, during and after. The ethical concerns were different at different stages of the study.

A research proposal was the first item to be under ethical investigation. A panel of professors from the University of Oslo accepted the proposal in March of 2011 and this paved the way for the next step in proceeding with this study. An application for permission was sent to the Norwegian Social Science Data Service and it was not possible to before begin collecting data from Henry before permission was granted. (See Attachment 3)

Information sheets and consent forms were required to be handed out to Henry's parents before data collection could begin (See Attachment 4 and 5). The information sheet contained information about the researcher, the focus and goal of the study, what participation in the study would entail, how data would be collected, as well as guarantee of confidentiality and anonymity, and how data would be gathered. The information sheet also included the possibility of further information to be provided if it was required and/or addressing of any possible concerns the parents or Henry had. The consent form contained a list of seven conditions which were necessary to be agreed upon before data collection could begin. Both

the information sheet and consent form were signed and returned before data collection began.

To protect the anonymity of Henry during the analysis and interpretation of data, a fake name was used. The computer in which the data was stored in was in a private residence and protected by a password. In October 2012, all tape recordings which were gathered from Henry were deleted as agreed upon with the Norwegian Social Science Data Service. At the end of this study, all data that had been collected will be deleted, such as interview transcript and observation field notes.



# 4 Presentation of the Research Findings

Emic perspective of Henry is presented in this chapter through the data analysis from an interview and observations. The data is divided into twelve categories and these categories are named after Henry's interview data. The data was not organized into main categories and sub-categories but instead the categories will be discussed and compared in the chapter five, Discussion of Research Findings which will follow the current chapter. Introductory descriptions of the school and gymnasium as well as the overall situation of Henry are provided.

Henry was a fourteen year old boy and was diagnosed with Spastic diplegia CP as a young child. Henry required a wheelchair for mobility due to muscular control difficulties in his legs. Henry had muscular control difficulties with his arms as well, but he was able to complete weight training and stretches to help with spasticity. Henry would visit a physiotherapist weekly outside of school.

The school which Henry attended was an elementary school, with grades one through seven. The physical activity class which Henry was a member of consisted of twenty classmates, one teacher, and one teacher assistant. Henry did not report that there were any other classmates which had a disability. Henry was included in all of his subjects and received extra help in another classroom for the subjects of English, Norwegian, and mathematics. In terms of physical activity classes, Henry was a regular participant of these classes with the exception of field trips the class would take. Henry reported that at the times where his class would go away and it was not possible for him to come along as decided by his teacher.

The gymnasium which Henry participated in physical activity classes was in the front area of the school beside the entrance and reception area. Access to the gymnasium with a wheelchair was possible. The gymnasium was spacious, with cement floors, wooden sided walls, and was well lit. During the observations, Henry did not use any adapted equipment, he used the same equipment as his classmates.

## 4.1 Analysis of Research Findings

### **4.1.1 Difficulties I overcome with help**

When Henry was asked how he experienced learning new techniques and activities weekly, he explained that the difficulties he faced were eased by his teachers help. The Henry said, *“it is not easy let me tell you, but I get help with it though and I like working out.”* Henry expressed that he enjoys almost all activities, even though they may be difficult, because he was personally interested in his own physical activity. Henry was asked about how he felt about the difficulty of interval training and strength training, and he responded that he felt that everything was equally difficult. Because of the support of his teacher, Henry said that he was willing to try and to work at difficult activities. An interaction between the teacher assistant, a student, and Henry was observed. It was observed that the teacher assistant demonstrated a passing technique for floor hockey to Henry. During the activity, the class had been divided into groups of three to practice passing techniques before the whole class was to play a game of floor hockey together. During this practice time, Henry received help from the teacher assistant. The teacher assistant used both verbal explanations of the passing technique as well as physically assisting Henry with the technique. The teacher assistant first stood behind Henry, the two then completed the passing motion together, they repeated this five times. Each time they completed the technique, the assistant gave feedback to Henry for example, *“Now this time try to keep your arm extended until you have completed the swing.”* Henry participated in the floor hockey game later in the hour. During the game, it was observed that Henry received advice from one of the students which had been in his practice group. The student appeared to demonstrate the same technique which the teacher assistant had demonstrated during the practice time. Henry accepted this help and once play resumed he was able to successfully complete several passes to his classmates.

### **4.1.2 My choice**

Henry had his own personal weight training workout which he, his teacher, and teaching assistant put together. Henry said that, using his input in the making of his own weight training workout made him feel that his needs were important and being addressed. The teacher assistant made his instruction of weightlifting meaningful to Henry because he shared a personal experience. Henry said that, *“I have my assistant Isaac he broke his collar bone in an accident, so he has trained up his broken bone again so he gives me a lot of tips too.”*

Henry knows what to expect in his daily physical activity classes because his teacher writes out beforehand. Henry said, *“He (the teacher) is really well organized he has everything written up before class, he is a little more serious. I think it is better like that.”* Henry also mentioned that he is part of the making of his personal file, a file which he said his teacher has. Henry told that, he feels comfortable with his teacher because they have known each other for two years. Henry responded to the question, do you feel like your teacher understands what sorts of activities you like best, *“Yeah, he knows a lot about me, one hundred percent.”*

Henry was asked, how he would prefer his physical activity class to be organized and he answered, *“Teams actually, yeah on a time I like that the best. Because then it’s actually you are not just by yourself, I like to work together!”* Henry was observed clapping to cheer on his classmates during the floor hockey match. Also, when a goal was made by his team, Henry would be in a line in front the bench with his classmates and the classmates who had scored would run past and get high-fives.

The pace of activity was also inquired on and Henry said that he preferred fast paced over slow paced activities. Henry went on to describe that a fast paced team activity that he most enjoys was floor hockey. Henry went so far as to say that, *“So I think that I would like to play that every day!”*

#### **4.1.3 Benefits in my daily life because of physical activity**

Henry explained that he felt that his weight training program made everyday activities easier for him and that he felt that he had more energy to complete tasks throughout the day. Henry reported that his teacher was able to adjust the weight lifting workout to an optimum level, where he experienced many positive benefits in his daily life. Henry reported experiences with prior physical activity teachers. Henry described that he did not receive the training he felt was in his interest and therefore he did not experience the same positive benefits that he did from his current weight lifting workout.

Henry reported that learning about how his physical health was related to his feelings of having more energy for daily life activities. Henry said he experienced that he felt it was easier to complete homework on the days where he had been physically active, he said,

*“...and more energy to do more at the end of the day.”* Henry also reported that, *“I learn to take care of my body a lot more.”*

Henry reported that one of his most preferred activities to do in his physical activity class is strength training. He said that he likes to do that best because it is most useful in his everyday life. Also, Henry explained how his class works out with weights, he said, *“We get ready to start lifting weights and then there comes on a song, I like the fast songs best!”* Henry also talked about how on Thursdays when he has physical class in the mornings and archery after school, that *“I feel myself stronger at archery after I have been at physical activity class actually, then it’s easier to get charged up actually, I think that...”*

#### **4.1.4 I get pushed to do my best**

When asked how he feels about letting his teacher know when he has cannot continue an exercise, Henry said that, *“Yeah, absolutely, I tell him when I have had enough because he pushes me and pushes me to try. My teacher can tell when he has pushed me too hard, and then I am not so great to have around.”* Henry reported that he did his best in his workouts and he did not mind getting pushed by his teacher, he said that, *“Yeah, he has been in the Norway Championships for Gymnastics, so you know, he knows a little about training and how to train hard, to put it that way.”* When Henry was playing during the floor hockey match, he got advice from his teacher for example, suggestions that he should try to pass the ball to his classmate and that he should try to get closer to the goal. Henry’s reaction when his teacher told him to pass the ball to his classmate was Henry stopped moving and looked to his teacher. Henry then found the classmate his teacher referred to, than he carefully lined his stick to point in the direction of his classmate, and hit the ball. After completion of the pass, Henry looked back to his teacher for a few seconds before continuing. Later in the activity, Henry completed a pass to a classmate and then he did receive recognition from his teacher. Henry’s teacher clapped and gave him a thumbs-up.

Henry was asked about an occasion where he might not have been able to complete an activity until the end of class, he responded that, *“Yeah, then I was soo tired that I could not do anymore! Then I had given all I had, it was then I had done the long loop in thirty nine seconds exactly, back and forth!”*

#### **4.1.5 Times when my friends made me feel like I belong**

Henry was asked through his experiences in physical activity classes what happens when he is on a winning team and on a losing team. Henry responded that when he was on a winning team his reaction would be, *“Yeah, that’s when I am more with the boys, we act like, saying nice work and talk a little, stuff like that.”* Henry responded that when he was on the losing team that he would get back up or support from his class, *“My class that I am in, we are so good because we back each other up.”* Henry was observed on a day where he was on a team which lost a match. It was noted that at the end of the match, the captain (Henry) of the team that lost asked all the classmates to make a circle in front of the bench. When all the classmates were in the circle, Henry began a chant which his classmates repeated. The chant went, Henry said, Heia Ekorn (Go Squirrels) and his classmates would repeat, Go Squirrels! The winning team also conducted a similar circle in front of the bench and chanted a similar song. Exchanges of high fives were observed between the classmates in which Henry received and gave.

Henry was asked about how he felt about physical activity classes, for example if he thought there was anything different about physical activity class than about his other classes, Henry responded that, *“Well after I came into the network that I have, I have actually started looking forward to going to school.”* Henry also said that he felt that it was easier for him to make friends at physical activity class and at recess at the current school that he attended. Also, Henry stated that, *“The social aspect is the most important part of school, that’s what I think...”* Henry was asked if he felt that his classmates were thoughtful, *“Yes, absolutely they are very thoughtful! I have it really good at school my own setting for friendship!”*

#### **4.1.6 How I feel accepted**

Henry was asked if he talked about his disability in his physical activity class, Henry responded that, *“No, it is actually like no one even notices it actually. I do exactly like the others I warm up like the class and things like that so...”* Henry also said that it is during warm up that he feels most like his classmates.

Henry was then asked if he had to talk about his disability. Specifically, Henry was asked if he would think that it was okay to talk about his disability with his classmates, Henry responded with, *“I think it is better that we just let it be like it is. I have been made fun of*

*before and then I do not really want to be made fun of. But it is not like my friends made fun of me because I am handicapped, but I have been made fun of before.*” Henry also explained that none of his classmates mentions anything about his disability. Henry explained that his classmates knew about it because at one point he had explained for the class about his disability when he first started attending the current school.

Henry was asked if his classmates had any special nickname for him in physical class and possible answers were suggested: the fast one or the sharp shooter. Henry responded that he and his classmates have nicknames for each other that they use in all their classes. Henry explained, *“I have a nickname from a TV show, because we make a lot of references to that! So we call each other for newbies, new beginners you know?”* During observations, use of nicknames was recorded. Henry used only nicknames for some of his classmates. The use of nicknames was used during the entire physical activity class. Henry mentioned in the interview that only he and his friends use nicknames and that they use them in other subjects at school as well.

#### **4.1.7 Activities I do when I am together with my friends**

Henry was asked about after he had learned a new activity in physical activity class for example, if he would feel it then easier to participate in that same activity at recess. Henry responded that he would participate when he was together with his friends.

#### **4.1.8 How I am helped and what I get help with**

Henry was asked if he needed help and if he felt it was easy to ask his classmates for help. Henry responded that, *“I get help from my teacher and teacher assistant. I also get help from my classmates too, friends yeah. It is really easy to ask for help, absolutely.”* Henry was asked what he usually needs help with and he responded, *“If I was a little behind in warming up for example, so if the others have gone a lap around the gym so my friends come around and give me a little speed! They push me a little and let me go to help me get going again in that lap.”* Henry was pushed in his wheelchair by a classmate when coming into the physical activity class. The classmate pushed Henry until they were beside the other classmates in a circle in the center of the gymnasium. After the classmate had stopped pushing Henry, he

stood beside him; they laughed and smiled at each other until the teacher started to talk, so they stopped talking to each other.

Henry was asked if he experiences that his classmates help him before he asks for help, and he said that, *“Yeah, really often. I will do things for myself, I am a little stubborn don’t yeah know! But I will do things by myself but then there comes one of my friends and pushes me before I get rocket speed!”* Henry went on to explain that he prefers it that his classmates help him without him having to ask for their help first. Henry also described that he prefers to attempt to complete activities on his own first, but that he does not mind if he then receives help from one of his friends or teachers. Henry was observed getting help without asking first during the floor hockey game when Henry had been trying to get the ball away from a classmate on the other team. Henry hit the other classmate’s stick with his own first from the side and then he tried to pull from behind by extending his stick as far out of his grip as he could. The stick then fell out of Henry’s hands because it had been stepped on by a classmate. Henry asked a classmate which was approximately three steps away from him if he could pick up his stick and the classmate did.

#### **4.1.9 My goals in physical activity**

Henry was asked how his physical activity class is organized and Henry explained that he and his classmates are not free to do what they want in class, but that there is a certain list that needs to be followed. Henry said that he tries to follow as well as he can and complete the exact same activities like the others in the class. Henry was then asked about the kinds of feelings he has when he is in physical activity class, he responded that, *“Workings out and nothing else then training, that is my only focus.”* Henry described the goals which he has in his physical activity class. Henry described that for his time interval loop, *“I have a goal to get myself back and forth in the long lip in thirty seven seconds exactly.”* Henry described his past goal for his strength training was he to hold of two, two kilogram weights extended at shoulder level in each hand for thirty-nine seconds. Henry explained that, *“I have a goal to make it to one minute, I set my own goals.”*

#### **4.1.10 Times when I feel like the real me**

Henry was asked if he felt it was easier to make friends in physical activity class as compared to other subjects and why he thought that may be or not be. Henry responded that, *“For example, yeah in gym class and in recess I have it the easiest to make friends, at least at this school here. Because that’s when I can open myself a little more instead of just looking down at a page.”*

Henry also mentioned that he felt it would be easiest for a new student coming into his class to make friends in physical activity class or recess. Henry repeated that he felt it would be easiest to make friends because that is when he himself feels it is easiest, *“Yeah because then I can show the real me, that is how I can be my real self in activities.”*

#### **4.1.11 Special things I do on days when I have physical activity class**

Henry explained that he feels it is important to eat whole wheat breads on days when he knows he has physical activity class. Also, Henry explained the importance of a good breakfast and eating after physical activity class to regain energy. Henry said, *“And I take time that I eat a good breakfast on Thursdays and Fridays when we have gym.”* Henry also explained that he wears his gym clothes to school on Thursdays and Fridays, jogging pants that are comfortable and easy to move in. Henry also told that he would wear his gym clothes to school and keep them on the entire day but that the others in his class changed in and out of their gym clothes. At the end of physical activity class, all the classmates except Henry went into a changing room. Henry left the gymnasium through an exit door that lead into a hallway.

#### **4.1.12 Times when I didn’t participate**

Henry was asked, have you ever wanted to participate in a recess activity but you did not for some reason? *“No, maybe two times, because it was soccer and it’s a really big net so I cannot participate because, the goal could be open and it would not matter...”* Henry was then asked, so the times that you have not participated have been because of the equipment? *“Yeah the equipment was too big or I can’t have a chance to participate anyway.”* Henry was asked what his favorite place to have physical activity class was. *“That is in the gymnasium, not outside, it is so we have outside gym classes sometimes in the summer and that are not fun as it is to be inside because I cannot move around on the soccer field.”* Henry explained that



some times that his class goes on field trips and that when the class is away that he stays back and he does his training workout. During the interview, Henry's teacher interrupted to discuss when the observations could take place. The teacher indicated that the following Thursday would not be a good day to observe because the class would be away on a field trip and Henry would be alone doing his weight lifting training. There was an exchange between the teacher and Henry at that point. The teacher turned to Henry and nodded and explained "*Now you know that when the class is away that is when you stay back to work on your own.*" Henry responded with a nod to his teacher and nothing else on the topic was discussed between them.



# 5 Discussion of Research Findings

## 5.1.1 A student with a disability expressions of perceptions and experiences of belonging, being accepted and/or supported in physical activity classes

Henry expressed that he preferred to have his class organized into team activities and to work together with his classmates instead of being by him-self. These statements from Henry could be related to his experiences of being socially included. Social inclusion is the positive personal interactions with classmates that contribute to feelings of acceptance and liking each other (Sherrill, 2004). From Henry's statements it could be understood that he prefers to be in team activities because it is then he has interactions with his classmates which are enjoyable and desirable. Henry reported that he would rather be together with classmates during activities than to be by himself doing an individual activity and this could be related to the concept SICGA.

Social Inclusion Competence Goal Area (SICGA) is a concept by Sherrill (2004) that can be defined as social behaviors which encourage inclusion in exercise and sports activities. Team activities could give opportunities to acquire social behavior such as working together, taking turns and being encouraging during interactions. Henry had indicated that he preferred team activities and was observed encouraging his classmates. For example after his team would score during floor hockey Henry gave his classmates high-fives. Henry's displays of encouraging and supportive behaviors to his classmates could be a contributing factor to encouraging an inclusive environment. Henry's displays of support and encouragement may influence his classmates to also support and encourage others and thus encouraging inclusive environment.

An inclusive environment means feeling like you belong, are accepted and that you feel you are supported and also where individuals identify themselves as being part of the whole, for example as part of the class (Sherrill, 2004). Henry reported that he did not feel that his classmates ever notice he has a disability and he justified his statement with giving an example that he warms up exactly like the rest of the class. This could indicate that Henry feels that he belongs and is accepted in the class because he can complete the same exercises as his classmates. Also, Henry receives support in warm-ups through help from his friends

pushing his wheelchair to get speed which is also facilitating Henry to feel he is in an inclusive environment. It may be possible that Henry's classmates do notice that Henry requires support and help because he has a disability even though they do not discuss this with Henry explicitly. Henry's classmates may influence Henry's experience that he belongs in activities during physical activity class because of the support and help they give to him.

Henry reported that he thought that his classmates were supportive of each other, in situations for example where his team lost a game. At the end of the floor hockey match, it was observed that the two teams in the class made circles in front of the benches and each team chanted the team name and exchanged high-fives amongst each other. The team which Henry was a member of had lost the match. Despite the loss, Henry and his classmates supported each other by cheering and acknowledging to one another that they had enjoyed the match.

Henry gave examples of when he could not participate in his recess activity and physical activity class. In both examples Henry provided the reason he could not participate was because soccer was the activity and the equipment and setting was not wheelchair appropriate. Henry does not have the opportunity to participate in soccer because the field is too large and the grass is difficult to drive on with a wheelchair. Henry had expressed during the interview that he had a preference of having physical activity classes in the gymnasium and not having classes outside. From the observations and interview with Henry, there were no adaptations or changes made to the soccer activity so that Henry could participate. Possibilities of adaptations to soccer activity during physical activity class may be to change the equipment which is used. For example, a lighter or deflated ball which cannot move as quickly could slow down play so it is not as fast paced. Adaptations to the rules of soccer could be used such as all team players must make contact with the soccer ball before a goal attempt can be made. Adaptations to the environment could be to play on a smoother surface such as an unused parking lot, or to play soccer inside of the gymnasium.

Henry also discussed that sometimes the class goes on field trips on physical activity days and Henry stays at the school and does his strength training program. These examples of Henry not participating with classmates and friends during physical activity classes, recess and field trips are instances where possible improvements could be made in facilitating inclusion. As mentioned, adaptations to the soccer activity could give Henry an opportunity to participate. It was not asked of Henry the reason why he was not able to be included on field trips. It could be possible that adaptations to field trip activities could also be made which would allow for

Henry to participate. From the conversation which took place between the teacher and Henry during the interviewing of Henry, it seems that there is an understanding that Henry must stay behind on field trip days. However, it was unclear if any efforts or plans were in place to attempt to support Henry to be able to participate in field trip days. This was an example of where Henry was unable to participate and therefore could not experience inclusion, social inclusion, support, acceptance, or feeling like he belonged.

Henry reported that he felt it is easier for him to make friends during physical activity classes and at recess as compared to other subjects, and that the social aspect of school is that which he feels is most important. Henry had also expressed that after he has come into the network of friends that he has, he has started looking forward to going to school. It could be proposed from these statements that the reason that Henry has the network of friends that he has is because of his participation in physical activity classes. It could also be proposed that if Henry did not participate in physical activity classes he would only have recess time to make friends. These suggestions are important to highlight because they show the impact that physical activity participation can play in some students social experiences of school as a whole.

Henry mentioned an example of a ritual that he has with a group of friends within his class. Henry reported that he and his friends use special nicknames for one another, instead of using each other's real name. The group of friends exchange nicknames which are reference from a popular television show. The ritual of using nicknames is specific to Henry and his group of friends. Henry did not specify explicitly, however it could be possible that this ritual is an aspect of the network that Henry referred to which has made his experiences in school more positive. Henry mentioned that he finds it easier to participate in recess activities if he is together with his friends. It could be suggested that Henry's friends give him the support and encouragement to participate and therefore facilitate his participation and in turn inclusion in recess activities. The Department of Ministry (2009) reported that for many students' it is social relationships and feeling of belonging to their peer group which motivates them the most to participate in their schools society (Department of Ministry, 2009). This could indicate that there is a significant importance in ensuring that all students have an opportunity to be included into settings where social relationships can be formed. Therefore, participation in physical activity classes could be the arena where an opportunity for social relationships to develop.

Henry expressed that his classmates knew that he has CP because he had at one time told the class and since that time none of his classmates have mentioned anything about his disability. The sharing of experiences in a meaningful way could be a significant guiding principle which Henry used when explaining his disability to his class. The guiding principle states that it is important to share what they have experienced and the feelings they had with that experience (Rye, 2001). Henry indicated that he felt that it was not important or necessary to discuss his disability during the interview and he mentioned that he had experienced being bullied before because of his disability. The guiding principle of helping students to talk about shared experiences could be beneficial for Henry. This principle suggests that students need to learn to talk to one another, allow students to express their opinions (Rye, 2001, p. 101). This principle could be beneficial for Henry so that he has the communicative tools to express himself if there is a time where he feels he needs to talk about his disability with his classmates or others. It could be interpreted from Henry's statements that it is unnecessary to discuss his disability. Possibly, Henry is fearful that the mentioning of his disability may create opportunities for him to be bullied as he had experienced in the past.

### **5.1.2 How and in what ways does an elementary student with a physical disability perceive and experience that he or she benefits from physical activity classes?**

Henry expressed that he has two goals in physical activity class, one for strength training and the other an interval time loop. The goals were individual and they were goals which he set for himself. This suggests that Henry's goals are related to the task-goal-perspective. The task-goal-perspective is related to where the individual focuses their efforts for instance on self-oriented improvements, learning and skill expertise (Dunn & Dunn, 2006). Individuals who follow the task-goal perspective judge their own capabilities in relation to experiences of trying and completion of tasks. Expressions related to the task-goal-perspective which were observed and reported of Henry were effort and determination. Effort and determination were illustrated with Henry's example of what he thinks about while in an activity "*working out and nothing else than training, that is my only focus*". Henry also reported that from his participation in physical activity classes that he learns to take care of his body a lot more. From this quote could also relate Henry's experiences to achievement motivations in physical activity classes.

The main goal in task-oriented-motivation is to create an acceptable outcome or to work out a challenge for the individuals own reasons not to show off one's ability (Biddle & Mutrie, 2008). A possible motivation for Henry to adhere to physical activity class was that he experiences it easier to complete daily activities because he has more energy especially on days he had physical activity classes. Henry gave an example that he felt he had more energy to do homework in the evening on days when he had physical activity classes.

The goals which Henry discussed were in relation to his physical activity class and therefore could be termed as his sport self-efficacy beliefs, which is defined as "unique to the physical activity environment if a student holds an opinion of his ability to complete a particular degree of performance" (Sherrill, 2004). Studies show those who have a high sport self-efficacy are more likely to demand to be included and to have modifications be made to tasks in order for them to meet their personal needs and goals (Sherrill, 2004). In Henry's case, it could be that he demonstrated his sport self-efficacy in his beliefs about his ability to make friends in the physical activity class and recess. Henry's comment that he feels that "*...Yeah in gym class and recess I have it the easiest to make friends at least at this school here, because that is when I can open myself a little more instead of just looking down at a page.... Yeah because then I can show the real me, that is how I can be my real self in activities*". Henry seems to have a belief that when he feels like himself, it is then that he is able to create friendships and that are unique to physical activity class and recess.

From the discussion with Henry it is possible that he relates to expectation efficacy more so than outcome efficacy. For example, Henry has a belief that with determination and focus he will complete his goal in strength training and interval time loop training. Henry did not indicate any result he was anticipating after completing his goals in interval time loop training and strength training in particular. This suggests that Henry does not have a belief that his actions will result in any particular specific outcome. Henry did indicate that he experiences more energy after participating in physical activity classes, wherein he does perform his strength training and interval time loop training. Henry did not explicitly express he had a goal for his physical activity class however it could be suggested that Henry does in fact have a belief that his participation in physical activity classes will result in higher energy levels from completion of his training goals which is outcome efficacy.

### **5.1.3 How do teachers influence perceptions and experiences in physical activity class a student with a physical disability?**

The Threat-to-self-esteem suggests that when the situational circumstances convey caring, concern and help is suitable, precise, and encouraging, help may translate into promising self-perceptions (Goodwin, 2001). Henry's teacher and teacher assistant were able to fulfill all of these prerequisites. During the interview, Henry expressed that he felt that some of the activities were not easy for him to complete but that since he received help to work through the difficulties, he enjoyed the activities. This suggests that the help that Henry received from his teacher was supportive and encouraging and therefore Henry perceived the help in a positive, non-defensive way. Goodwin (2001) suggests that self-supporting help can possibly stimulate independence and therefore a perception of a strengthened feeling of power over ones surroundings. Henry's statement of his preference of trying activities first before getting help suggests that he does feel independence and have confidence in his abilities. It could also be suggested that Henry is confident in his own abilities when receiving help from teachers or classmates.

An example of the ZPD was observed in Henry's physical activity class and exemplifies how help can be precise and suitable. The interaction which took place between Henry and his teacher assistant when receiving guidance to complete a passing technique for floor hockey was an example of the ZPD. Mahn and Steiner (2000) as cited in Wells and Claxton (2002) imply that the elements which build the ZPD, the individuals, their opinions and observations, the artifacts and setting are interconnected and that a bringing together of these elements is critical to the building of the ZPD. A harmonization existed between Henry and his teacher assistant, during the task of learning a technique. The teacher assistant used language (the artifact) to explain what he wanted Henry to do as well as, using physical touch to move Henry's arms into the position where the teacher assistant wanted him to be. It is possible that Henry would not have understood what his teacher assistant wanted him to do if he had not used physical touch to guide him. This could have resulted in a weakening of the ZPD, because the harmonization of the elements did not exist. It was not asked of Henry during the interview, however it could have been an interesting to know if the teacher assistant and Henry have developed this way of learning which they find most helpful or effective. Perhaps in the past, Henry and his teacher assistant have experienced difficulty in the learning of new skills or in finding a way of explaining how and what the body should do during a new skill.



An example of the ICDP guiding principle of giving meaning to student experiences was reported by Henry during his interview. The principle suggests for teachers to make the way that they teach to be meaningful to the students personal involvement to the subject must be incorporated. Henry's teacher assistant shared a story with Henry about having been in an accident and how he had to train to recover. Although it was not expressed, Henry may feel that it is easier to have open communication with his teacher assistant after hearing a personal story. The story from Henry's teacher assistant also could have an effect on Henry's self-efficacy beliefs.

Bandura (1986) as cited in Biddle & Mutrie (2008) suggests that social comparison information is significant in self-efficacy beliefs, and in this situation Henry may relate to his teacher assistant. The success or failure the other individuals had in past experiences will have an impact on self-efficacy expectations and plans of being physically active in the future (Biddle & Mutrie, 2008). The beliefs that Henry has in relation this ability to stick with his weight training workout could be affected by his knowledge that his teacher assistant was able to stick with his recovery workout. Henry's beliefs that he will get results after completing the workout could be related to his self-efficacy expectations. Henry's self-efficacy expectations could be positively influenced from his knowledge that his teacher assistant was able to recover from his accident. Henry may use the past experiences of his teacher assistant to compare to his own situation; since Henry's teacher assistant was successful in his recovery workout program, it may influence Henry's beliefs that he can complete his workout program too.

The ICDP guiding principle to give praise and acknowledgement was indicated in Henry's interview. The principle suggests that a teacher could give compliments and recognition to each student or to the class when students try to work together, listen to directions, or when work is done to the best of one's ability (Rye, 2001, p. 98). Henry indicated in his interview that he is pushed by his teacher to try hard in physical activity classes. It was observed during the class that the teacher would give suggestions to Henry of how he should complete a pass to a classmate. Henry did what his teacher suggested and was successful in completing the pass. There was no praise or recognition given to Henry by his teacher after completing the pass. Later, during the activity Henry completed a pass to a classmate and his teacher made a point of acknowledging Henry by clapping and giving a thumbs-up. It could be suggested that Henry's teacher gave him praise when he completed a technique without the direction or

encouragement because the teacher was trying to help Henry to become independent and confident in his abilities. As mentioned above, the way in which help is given has an impact on the perceived abilities of the individual receiving help.

When Henry is pushed hard from his teacher, it is possible that Henry learns about what his body limits are and this could be related to Bandura's fourth source of influence to self-efficacy which is judgments of physiological states (Biddle & Mutrie, 2008). If an individual knows how to keep an eye on physiological cues, it may result in improving efficacy perceptions (Biddle & Mutrie, 2008). For example, a higher attentiveness to bodily warning signs such as being exhausted or in pain could help to continue a workout regime of suitable intensity (Biddle & Mutrie, 2008). Henry gave an example of how he is aware of his physiological state, *"yeah, then I was so tired that I could not do anymore! Then I had given all I had..."* In the quote, Henry had successfully completed an interval time loop. It could be suggested that Henry had been able to give his best effort while also not pushing himself so hard that he experienced discomfort or an unwillingness to complete the activity again in the future.

In relation with the Achievement goal theory the goal perspectives which individuals assume in different situations can be persuaded by situational influences as well as individual decision to choose either activity or ego goals (Dunn & Dunn, 2006). For example, situational influences could be teacher beliefs and expectations such as if task-goals or ego-goals are more desirable in the physical activity setting. In reference to the "push" that Henry receives from his teacher, it is possible that the teacher was trying to encourage Henry to complete the task to the best of his ability. This could suggest that the teacher was supporting Henry to achieve a task-goal, which focuses on self-oriented improvements, learning and skill expertise. The task-goal-perspective could help Henry or other students with physical disabilities to experience of achievements, have positive perceptions of their competency, and give effort and determination in physical activity classes.

#### **5.1.4 How do classmates influence perceptions and experiences in physical activity class for a student with a physical disability?**

Henry expressed that he would receive help during warm-up activities from his friends in the form of pushing his wheelchair to generate speed. Henry did not routinely ask for help in physical activity class, but he stated that he felt that if he needed help that his classmates and

friends would be easy to ask. He also felt that his classmates were thoughtful and responsive to his needs. These statements could indicate that Henry feels his classmates help him when they see he needs assistance. Also, the help he receives encourages him because it helps him to complete the tasks required of him, such as completing laps during warm-ups. These examples of help could translate into promising beliefs in one's abilities; self-supporting help stimulates independence and therefore a perception of a strengthened feeling of power over ones surroundings (Goodwin, 2001).

It is important to keep in mind that help has the potential to weaken the gaining of new abilities or the use of and preservation of abilities which the individual already has. Vagueness can develop if it is not clear if the individual needs or wants help or the way in which it should be given (Goodwin, 2001). However, Henry states that he usually tries to do a task on his own first, than help will be accepted if he struggles. This suggests that there is not a risk for a weakening in gaining new abilities or keeping up the abilities he has already acquired. From the data collected the assumption could be possible that Henry feels in control in physical activity class and has confidence in his ability to work independently if he makes decisions to do so (Goodwin, 2001).

Henry explained that he and the rest of the class have a list of activities that the teacher makes and that he tries to follow with the list as best he can and complete the exact same activities like the others. It could be suggested that Henry's beliefs in his self-efficacy are related to imitating his classmates. Self-efficacy may also be developed through imitation and modeling processes (Biddle & Mutrie, 2008).

In the case of Henry, he stated that he attempts to follow the same list of activities as his classmates. This suggests that he tries to some degree, to imitate his classmates. Watching those around you to be successful or fail, and making social comparisons could have an impact on efficacy beliefs (Biddle & Mutrie, 2008). However, Henry did not indicate explicitly that he compares himself to any specific classmate but he did indicate he is conscious and aware of his participation in the exact same activities as his classmates. Therefore, this could indicate that Henry makes judgements of his self-efficacy based on his participation in the exact same activities as his classmates. Positive judgements of self-efficacy are more likely to occur when Henry views his success during activities as self-improvements. On the other hand, it is possible that if Henry continuously compares himself

against his classmates or ego-orientation that it could create feelings of frustration and possible end in participation (Biddle & Mutrie, 2008).

## **5.2 Key Findings and Final Considerations**

### **5.2.1 Classmates and friends**

Stainback and Stainback (1992) discuss the importance of friendships and the opportunity to participate in extracurricular activities. Students do not just learn from teacher-student interactions but it is evident that what is learned in school is also learned through student-student interactions (Stainback & Stainback, 1992). Friendships and the chance to develop friendships are frequently an outcome of students participating in extracurricular activities (Stainback & Stainback, 1992). Extracurricular activities are activities that students participate in during the school day or after school outside of regular instruction. These activities can be supported by the school, local community and neighborhood groups. Opportunities to participate in extracurricular activities throughout the school years, time and again results in new or more resilient friendships with classmates (Stainback & Stainback, 1992). Participation in extracurricular activities can offer students a setting to learn what is appropriate to share and how to interact with each other (Stainback & Stainback, 1992). These ideas which were taken from 1992, show the importance which was identified over twenty years ago to the participation of students in activities. The meaning of including these statements is to suggest that participation in physical activity classes can also give an opportunity for the development of friendships between classmates.

A significant finding in this study was the important role classmates and friends made in perceptions and experiences of being socially included in physical activity classes. As a reminder, Henry had reported he felt it is easier for him to make friends during physical activity classes and at recess as compared to other subjects, and that the social aspect of school is what he feels is most important. Also, Henry had also expressed that after he has come into the network of friends that he has now that he has started looking forward to going to school. Active participation in physical activity classes could be a starting point for the facilitation of social inclusion of students with physical disabilities. As Henry discussed he feels like himself and believes that others also feel like themselves in physical activity classes, as compared to other subjects and therefore it is easier to make friends in this setting.

Similarly, Spencer-Cavalier and Watkinson (2010) found in their study that participants indicated having friends as being important to their perceptions of being included. The theme of having friends was shown to be important to student beliefs about feeling included or not included in physical activity classes. Spencer-Cavalier and Watkinson (2010) also determined in their study that friends seemed to be one of the most significant factors for children with disabilities in physical activities to feel like they belong, are accepted and are valued.

Being socially included is also recognized by Spencer-Cavalier and Watkinson (2010) as being important in experiences of children with disabilities in physical activities. It could be suggested therefore that friends could help to facilitate participation and inclusion in activities because of the support and encouragement they offer to one another. SICGA also identifies the importance that friends make in encouraging of inclusion in sports and exercise settings for students with and without disabilities.

### **5.2.2 Self-efficacy and participation in physical activity classes**

Encouragement, support, and having fun were associated with friends and feeling included in this study. Having friends in physical activity class who support and encourage physical activity is vital to wanting to participate in physical activities and self-efficacy (Sherrill, 2004). High self-efficacy and high goal perspectives could be two crucial elements for individuals with disabilities to have positive experiences in inclusive setting (Sherrill, 2004). Therefore this could be significant in facilitating social inclusion in which students be given the opportunities to increase their self-efficacy beliefs.

Bandura says that successes promote efficacy judgments (Biddle & Mutrie, 2008). Designing of physical activity programs for a student with a physical disability through the use of formative assessments could be used as a way of increasing self-efficacy. It has been suggested by Vickerman (2007) that formative assessments may possibly impact a student self-concept, self-esteem, and motivation. Formative assessment maybe a tool to help create an illustration of students strong and weak points and by recognizing possible obstacles to participation that can then create opportunities to overcome them (Vickerman, 2007). The use of formative assessment could be a plan for achieving success in physical activity classes and by doing so increasing self-efficacy for those who use it.

Assessments which include explanations and clarifications from the student about his or her work can be used to get insight into how students perceive their abilities and/or competences in physical activity. Student descriptions of how their bodies feel while exercising may help them to comprehend the signals that their bodies give during physical activity, such as exhaustion or pain (Vickerman, 2007). Banduras' says that judgements of physiological condition can influence individual self-efficacy (Biddle & Mutrie, 2008). If an individual knows how to keep an eye on physiological cues, it may result in improving efficacy perceptions (Biddle & Mutrie, 2008).

Participation in physical activity classes may be impacted positively through the use of some concepts related to the enrichment perspective. Interaction between students with and without disabilities has been shown to have positive effects on the students without disabilities also. Research from Scheepstra, Nakken, and Pijl (1999) has shown that students without disabilities who were in an inclusive setting with both students without disabilities and students with disabilities for one year, socialized equally with students without and with disabilities. The Enrichment Perspective would agree with this statement, it states that adjusting and being open to the needs and unique attributes of people with varying requirements and aptitudes, enriches all pupils and educators equally (Befring, 2001). In line with this thinking it could be suggested that physical activity classes which foster these ideas and give all students opportunity to participate in physical activity classes would benefit all students.

The Enrichment Perspective proposes that there is potential for students to become the instructors and social supports for each other in contexts when teachers place importance on variation between students (Befring, 2001). This idea could be used in physical activity classes as well, through peer interactions or peer tutors. The use of peer tutors could potentially result in positive relationships between the tutor and tutee and this help to facilitate positive relationships with other classmates. In line with this thinking, it is possible to suggest that peer tutoring could help to facilitate social inclusion of students with physical disabilities.

### **5.2.3 Reflections**

In retrospect, the phenomenon of the perceptions and experiences to being a participant in physical activity class was illustrated in this study. In this study, creating a thick thorough description of the phenomenon was the intended purpose. The use of in-depth descriptions of

the phenomenon through narrating the environment with information about where and when the study took place, the school setting, and the perceptions of the student with a physical disability. By completing this resulted in a thick description of the phenomenon. In other words, the case study was able to use the statements from Henry as well as observations to recreate the situation and as much of the context as possible. Also, the statements from Henry and the observations made, supported the views and opinions and characteristics in this case study.

It would have been interesting to have included more participants in the study to gain knowledge on the subject of participation in physical activity classes for students with physical disabilities. Having more information to compare between the participants could have identified factors which are important to participation, different from were found in this study. This study only used one participant because of the time restraint. The time used to find the participant was longer than what had been expected and with consideration to the time remaining for data collection, the choice was made to use one participant.

Also, having the opportunity to do a follow up interview would have given an opportunity to answer some questions and clarify topics which were raised during discussion of the findings. After reflection, Henry's statement referring to his current network of friends and the positive results that have come from him begin in this "new network of friends" could have been interesting to investigate deeper. It could have been interesting to hear what Henry reported as being the motivation or support he received from this group to result his new desire to attend school. Conducting an unstructured interview with the participant instead of semi-structured interview could have been another aspect which could have been done differently. The unstructured interview could have given the opportunity to switch continuously to the way the participant responded to questions, instead of following a list of questions. The unstructured interview would have been more of a conversation, where topics come up and are discussed spontaneously, instead of following a prescribed list of questions.

Also, having the opportunity to observe Henry more frequently over a longer period of time could have given richer data which would give a clearer picture of Henry's participation and attitudes in physical activity class. It would have been interesting to have more than one observer of the phenomenon as well. Observers of different gender or age could possibly result in a richer description of the phenomena. Several observers allows for longer overall observation time of the phenomenon (Gall, Gall, & Borg, 2007). The use of video-taping

could have been useful to capture interactions which the observer may have missed and allow for re-living what had been observed to ensure all aspects were recorded accurately.

#### **5.2.4 Possibilities in the future**

Possibilities for future research could be to increase opportunities for students with and without disabilities to interact in positive ways and one suggestion could be through peer tutoring. Investigation of the experiences and perceptions of students with disabilities who have peer tutors in physical activity classes may be interesting future case study research. It could also be beneficial to investigate how peer tutors could impact social inclusion and participation in physical activity classes.

To improve the current knowledge of what inclusion is and what features make inclusion possible in physical activity settings could be researched through further investigation using the student perspective. It would be interesting to support this investigation using an Ecological framework, such as that of Bronfenbrenner (1979). Bronfenbrenner's (1979) Ecological framework states that behavior changes as a result of the interaction between an individual and their environment. The Ecological framework could be used to investigate the student and his or her experiences and to include how the family members, classmates and school influence those experiences (Bronfenbrenner, 1979). Spencer-Cavalier and Watkinson (2010) stated that,

“Obtaining information from children is essential to understanding their thoughts, feelings, development, and behavior, and their perspectives are valued and important contributions toward understanding them and their experiences.” (p. 291)



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# Attachment 1: Interview Guide

## Background Questions

- 1) What was your favorite sport/game when you were young?
  - a) Who did you play with?
- 2) Are you part of any form of sport outside of school?
  - a) If so, which?
    - b) How long have you been involved?
    - c) Are any of your classmates also participate in these sports?
- 3) Since you started participating in physical activity, do you feel there has been changes in:
  - i) a) Physical condition-
    - ii) i) Has your health gotten better?
    - iii) ii) Have you become stronger?
    - iv) iii) Have you become happier?
    - v) iv) If you think back to your first physical activity class of this year, how has your shape become different?you have when you are in physical activity class?
    - vi) Do you learn anything new in physical activity class?
      - (1) About yourself?
      - (2) About sport?
      - (3) About physical activity?
      - (4) Other?
  - b) Social relationships
    - i) Have you learned anything about our classmates?
    - ii) Have you learned about winning and losing, individually or on a team?
      - (1) How to win
      - (2) How to lose.
    - iii) Do you feel like you have a lot of friends from your physical class?

- iv) Do you have a different friendship with friends from physical activity class then you have with friends from other classes? If so, what is different?
  - v) Do you find it easier to make friends in physical activity than in other subjects? What do you think the reason is for this?
- c) General interests in sports or extracurricular activities.
- i) Have you ever been interested in participating in extracurricular activities, but chose not to participate because you did not know the rules or because you were scared to because of your physical condition?
  - ii) After you have participated in an activity in physical activity class, do you feel that it is easier to participate in that same activity at break time?

### **Participant & Classmates**

- 4) Does your class talk about your physical disability in physical activity class?
- a) How does everyone talk about it?
  - b) Do you think it is okay to talk about it?
  - c) Do you feel that it is easier to talk with everyone or just some of your friends about your physical disability?
- 5) Do you feel comfortable and accepted in your physical activity class?
- a) In which subject do you feel the most included in your class?
  - b) Why do you think you feel more comfortable in that class?
  - c) What do you think makes you feel the most comfortable in that class?
    - i) Friends?
    - ii) Teacher?
    - iii) Classroom
    - iv) Other
- 6) Do you feel comfortable asking classmates for help in physical activity class?
- a) Which of your classmates do you usually ask?
    - i) What do they help you with?
  - b) What do you need the most help with?

- 7) Do you have a special teacher or assistant to help you in physical activity class?
  - a) If yes, what do they help you with?
  - b) If no, have you ever had a special teacher or assistant help you in physical activity?
  
- 8) Does the class get to choose what activities play in physical activity class?
  - a) Does the class get to choose any equipment?
    - i) Balls
    - ii) Markers
    - iii) Jerseys
    - iv) Other
  - b) Does the class get to choose to play inside or outside?
  
- 9) Do you get to choose which activities to play?
  - a) Do you get to choose which equipment you use?
    - i) Balls
    - ii) Markers
    - iii) Jerseys
    - iv) Other
  
  - b) Do you get to choose to play inside or outside?
  
- 10) What do you wish you could change about physical activity class?
  - a) For example: Have someone from your family or another class participate?
  - b) What is your favorite place for a physical activity class?
  - c) What would your number one choice be to do in physical activity class?
    - i) Why do you like that best?
  
- 11) If you could, how would you like physical activity class to be:
  - a) Organized (small or large groups, individual)
  
  - b) Setting and equipment

- i) Do you enjoy best activities which are slower? Why?
  - (1) For example: Bocce or yoga?
- ii) Or, do you like best activities which are high paced? For example Soccer?

12) Are there any specific activities where you like better than others?

- a) What are they?
- b) How are they better?

13) Do you feel that your classmates are:

- a) Helpful- Willing to give you help if you ask?
  - i) Offer to help you without asking?
- b) Caring- Do they ask you if you are enjoying the activity?
  - i) If you were sad or had hurt yourself, would you get comforted from one of your classmates?
- c) Understanding-
  - i) Do you get enough time to get ready when you are doing activities?
  - ii) Are they encouraging of your participation, for example tell you that you made a nice play or move?
- d) Respectful-
  - i) Are you called for any special name in physical activity which you are not called in other subjects?
  - ii) Do you feel like you are heard?
  - iii) Are your opinions heard?
  - iv) Can you think of a time where your classmate asked your opinion about how to do an activity?
    - (1) Technique
    - (2) Rules
    - (3) Advice
    - (4) Other

14) Is there a time during class you feel different because of your disability?

- a) Beginning of class and introduction to activity.



- i) Getting ready, changing.
  - ii) Showering
- b) During Activity.
- i) What activity do you feel most alike your classmates? Why?
  - ii) Can you think of a way to change the activity so that you feel more a like?
  - iii) Do you have any suggestions about how you could change an activity so tht you could feel more like your classmates?
  - iv) Do you need to take more breaks during class, longer than the others?
- c) Conclusion of activity and end of class.
- i) Can you think of a time that you had to leave class early because you needed longer time:
    - (1) changing?
    - (2) Showering
    - (3) Other
  - ii) If you think about past classes, is there a time when you could not participate the entire time of the class? Why did you have to stop?

### **(1) Participant & Teacher**

- 15) Do you ever tell your teacher when you do not understand an activity?
- a) Can you think of an example where you needed a better explanation of an activity from your teacher?
- 16) Do you feel comfortable telling your teacher when you feel you need a break or stop an activity?
- a) Can you think of a time where you needed to stop or take a break.
    - i) What do you say to your teacher?
    - ii) What did your teacher answer back?
- 17) Does your teacher understand the activities you like and are best at?
- a) Has it always been like that?
  - b) Can you think back to what was better?
  - c) Why was it better?

- d) If you think back, did you have a physical activity teacher before that knew what you liked better and were better at? What was different then?

18) Is your teacher:

- a) Helpful- Willing to give you help if you ask?
  - i) Offer to help you without asking?
  
- b) Caring-
  - i) Does her or she ask you if you are enjoying the activity?
  
- c) Understanding-
  - i) Is your teacher patient?
  - ii) Is your teacher encouraging? Do you get support from your teacher when doing activities?
  - iii) Tell you that you made a nice play or move?
  - iv) Tell you that you are improving?
  
- d) Respectful-
  - i) Does your teacher call you by another name in physical activity class?
    - (1) For example: the speeder?



# Attachment 2: Observation Worksheet

Subject: \_\_\_\_\_ Time: \_\_\_\_\_ Place: \_\_\_\_\_

Observe	Time/Activity/Alone/Group	Comments
<p><i>Physical Condition</i> Does P follow after?</p> <p>Does P lead?</p> <p>Does P work together?</p>		
<p><i>Mental Health</i> Body Language</p> <p>Smiling Laughing</p>		
<p><i>Social Relationships</i> Initiation of interaction</p> <p>Pattern in interaction?</p>		
<p><i>Sport &amp; Activity</i> Participation High</p> <p>Participation Low</p> <p>Adapted Activities Participation</p>		
Observe	Time/Activity/Alone/Group	Comments
<i>Adapted Activities</i>		

<p>Rule Changes</p> <p>Equipment Changes</p> <p>Class follow Same activity?</p>		
<p><i>Asking for Help</i> Who is asked?</p> <p>Is help Given?</p> <p>How is help given?</p> <p>What P needs most help with?</p>		
<p><i>Special Teacher/ Assistant</i> What do they do?</p>		
<p><i>Teacher &amp; Class Choice</i> Equipment Markers Jerseys Inside/outside</p>		
<p><i>Teacher and P Choice</i></p>		

<p>Equipment</p> <p>Markers</p> <p>Jerseys</p> <p>Inside/ Outside</p>		
<p><i>Classmates</i></p> <p><b>Helpful-</b></p> <p>Give help</p> <p>Offer help</p>		
<p><i>Classmates</i></p> <p><b>Caring</b></p> <p>Physical contact</p> <p>Hugs</p> <p>High fives</p> <p>Pats on back</p>		
<p><i>Classmates</i></p> <p><b>Understanding</b></p> <p>Patient</p> <p>Encouraging</p>		
<p><i>Classmates</i></p> <p><b>Respectful</b></p> <p>Name used</p> <p>Listened to</p>		
<p><i>Teacher &amp; P</i></p> <p>Communication</p>		

<p>Explain activity</p> <p>Participant initiation (need break)</p>		
<p><i>Teacher</i></p> <p><b>Helpful</b></p> <p>Gives help</p> <p>Offers help</p>		
<p><i>Teacher</i></p> <p><b>Caring</b></p> <p>Checking how P is: Enjoying</p>		
<p><i>Teacher</i></p> <p><b>Understanding</b></p> <p>Patient</p> <p>Gi Ros</p> <p>Approve technique/moves</p>		
<p><i>Teachers</i></p> <p><b>Respectful</b></p> <p>Name used</p> <p>Listen to</p> <p>Treat P same as others</p>		

# Attachment 3: Permission from NSD

Norsk samfunnsvitenskapelig datatjeneste AS  
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårfagres gate 29  
N-5007 Bergen  
Norway  
Tel: +47-55 58 21 17  
Fax: +47-55 58 96 50  
nsd@nsd.uib.no  
www.nsd.uib.no  
Org.nr. 985 321 884

Siri Wormnæs  
Institutt for spesialpedagogikk  
Universitetet i Oslo  
Postboks 1140 Blindern  
0318 OSLO

Vår dato: 14.09.2011

Vår ref: 27740 / 3 / MAB

Deres dato:

Deres ref:

## TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 17.08.2011. Meldingen gjelder prosjektet:

27740	<i>A Qualitative Study: Pupils with disabilities perceptions related to Inclusive Physical Education classes</i>
Behandlingsansvarlig	Universitetet i Oslo, ved institusjonens overste leder
Daglig ansvarlig	Siri Wormnæs
Student	Amanda MacInnis

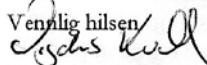
Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

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

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

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/prosjektoversikt.jsp>.

Personvernombudet vil ved prosjektets avslutning, 01.10.2012, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen  
  
Vigdis Namtvedt Kvalheim

  
Marte Bertelsen

Kontaktperson: Marte Bertelsen tlf: 55 58 33 48  
Vedlegg: Prosjektvurdering  
Kopi: Amanda MacInnis, Tøyenhøgda 3 A, 1487 TØYENHAUGEN

Avdelingskontor / District Offices:

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





## Prosjektvurdering - Kommentar

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Prosjektnr: 27740

Utvalget består av en elev med en fysisk funksjonshemming i alderen 10 til 13 år.

Utvalg av informant skjer ved at student tar kontakt med ulike skoler som videreformidler informasjonsskriv til potensielle informanter. Dersom informant ønsker å delta i prosjektet, og foreldre/foresatte samtykker til deltagelse, vil informant/foreldre/foresatte svare til lærer som gav informasjonsskrivet. Lærer vil så videreformidle kontakt med student. Dersom student får mer en én informant vil student foreta et tilfeldig utvalg av informant. Jf. e-post mottatt 07.09.2011, og informasjonsskriv.

Prosjektet går ut på å intervjuer elev, samt observere elev i gymtimer. Eleven vil være anonym ovenfor resten av klassen ved at student/lærer informerer muntlig til klassen at det er besøk av en student som vil "følge med i gymtimen". Jf. e-post korrespondanse 07.09.2011 og 09.09.2011 og jf. telefonsamtale 13.09.2011.

Det gis skriftlig informasjon og innhentes skriftlig samtykke fra foreldre/foresatte i prosjektet. Revidert informasjonsskriv mottatt av ombudet 12.09.2011 finnes tilfredsstillende under forutsetning av at følgende tilføres skrevet:

- Behandlingsansvarlig institusjon, samt institutt.
- Kontaktinformasjon til veileder.
- Informasjon om at elev vil være anonym ovenfor resten av klassen.
- Korrekt dato for prosjektslutt og anonymisering.

Les mer her: [http://www.nsd.uib.no/personvern/forsk\\_stud/informasjon.html](http://www.nsd.uib.no/personvern/forsk_stud/informasjon.html)

Personvernombudet ber om at revidert informasjonsskriv ettersendes ombudet før prosjektet tar til, jf. telefonsamtale 13.09.2011.

Det vil i prosjektet bli registrert sensitive personopplysninger om helseforhold (funksjonsnedsetting).

Informant vil være anonym i publisering fra prosjektet.

Prosjektslutt er 01.10.2012. Ved prosjektslutt skal lydopptak slettes og datamaterialet anonymiseres. Med anonymisering menes at direkte personidentifiserbare opplysninger som navn slettes, og at indirekte personidentifiserbare opplysninger som alder, kjønn, bosted og navn på skole endres eller slettes.

# Attachment 4: Information Letter

Study Title: Pupils with disabilities perceptions related to Inclusive Physical Activity classes.

My name is Amanda MacInnis, I am 26 years old, from Canada and have lived for the past three years in Hakadal. I have taken a bachelor in Human Kinetics in Canada and I am now a student at the University of Oslo, there I am taking a Master study in Special Needs Education. In relation to this, I am conducting a research study.

Your child is invited to take part in a research study in winter 2011. Please read this information sheet before deciding if you will be a participant, it is important that you understand what this research is about and what it will include.

This study will research the physical activity classroom, focusing on the social experiences of students with disabilities. The goal of this research is to learn what makes social inclusion successful for students with disabilities, in physical activity classes.

The information gathering period of the study in which you will be included, will happen in the winter 2011. All personal information about your child will be anonymous. Participation for this study is completely voluntary and you may quit the study at any time without reason. This study will not interfere with the normal school work or grades of the participant or any extracurricular activities or appointments.

Participants will be asked to take part in the following:

- a) One interview lasting approximately one hour.
  - a. Interview will be tape recorded for data analysis purposes.
  - b. Example interview question: Do you enjoy your physical activity class? If so why? Do you look forward to physical activity classes?
- b) Observation of two physical activity classes, participant must simply be present in class. There will be no contact or interaction between participant and researcher.
  - a. Field notes, consisting of a check list will be recorded from the observations portion of the study.
  - b. Example of field notes: social interactions- giving of praise, physical interactions- assistance in activity and high-fives.

The tape recording and field notes and check lists will be accessible only to the researcher and will be destroyed after the completion of the written report, in the autumn 2012. All information taken regarding the participant will follow the rules given by the National Data Service. This means that all information will be deleted such as age, gender, school name.

If you are interested in participating, please sign the bottom of this information sheet and the consent form attached. I will make contact with you soon after the return of these forms and will give future information about this study as well as answer any concerns or questions regarding participation that you may have. If you require further information before making your decision I can be researched by email at [amandama@student.uv.uio.no](mailto:amandama@student.uv.uio.no).

The University of Oslo, Department of spesialpedagogikk is responsible for this research study. Supervisor for this study is Siri Wormnæs, Førsteamanuensis with the University of Oslo. Email: [siri.womrnas@isp.uio.no](mailto:siri.womrnas@isp.uio.no).

Thank-you for taking the time to read this information sheet.

_____	_____	_____
Name of Guardian	Date	Guardian Signature

Telephone:

Email:

# Attachment 5: Consent Form

Project Title: Pupils with disabilities perceptions related to Inclusive Physical Activity classes.

- |  |            |
|--|------------|
|  | <b>Yes</b> |
| 1. I confirm that i have read and understand the information sheet and have had an opportunity to ask questions.   | 1.____     |
| 2. I understand that my child’s participation is voluntary and that we can stop participation at any time without reason.  | 2.____     |
| 3. I agree for my child to participate in this research project.   | 3.____     |
| 4. I consent for my child’s interview to be taken with a voice recorder.   | 4.____     |
| 5. I consent to have observation notes and worksheet to be taken of my child.  | 5.____     |
| 6. I consent that the use of anonymous references in an official publication.  | 6.____     |
| 7. I consent that my child’s information to be collected in this study can be saved (after it has been anonymous) on a private computer of the researcher, while the project is ongoing. | 7.____     |

Name of Guardian	Date	Guardians Signature
Telephone:		
Email:		

Researchers name	Date	Researchers Signature
Telefon: 47 26 21 33		
E-post: amandama@student.uv.uio.no		