Per Midthaugen

Learning the difference

On-the-job training of PE teachers, and its effect on upper secondary students

DISSERTATION FROM THE NORWEGIAN SCHOOL OF SPORT SCIENCES • 2011

ISBN nr 978-82-502-0463-8

ABSTRACT

Handling differences may be seen as a key qualification in a complex and plural society. Intercultural learning is a conception which emphasizes the importance of being aware of and accepting differences. Physical Education [PE] may be particularly advantageous in learning to deal with differences and to promote intercultural learning in schools. In the mid-1990ies, Erdmann & Giess-Stüber of the German Sport University in Cologne started to develop a program, which was later labeled "Intercultural Movement Education" (Erdmann, 1999a). In 2004, the University of Freiburg received support from the European Union [EU] for a project titled; "The Development of Intercultural Competence through Sports in an expanding EU" (Giess-Stüber & Blecking, 2008). Related to this project, Grimminger (2009) has developed a PE teacher training program which has been carried out and tested in German schools. This project has adapted the teacher training program to Norwegian conditions and implemented it in upper secondary schools. The main research question for this study is: Did the training program have the intended effect among students?

The intervention included seven upper secondary schools from Eastern Norway. 16 PE teachers from five of the schools took part in an on-the-job teacher training as intervention group, while 10 PE teachers from two schools represented the control group. The classes consisted of 16-18 year old students. Each class was measured twice, before teacher training and after three months. The intervention group consisted of 352 students, with complete measurements by 306 students (86.9%). The control group consisted of 220 students, with complete measurements by 173 (78.6%).

The students in the intervention group as a whole, compared to the control group, showed significantly higher results on self-concept. Students of teachers who reported having implemented most of the course content benefited the most from intervention, compared to the students of the low implementing teachers and the control group. The achievements of these students of high implementing teachers indicated an effect on improved self-concept, increased openness and higher satisfaction, both in PE and school as a whole.

Another finding is that the two high implementing schools represent two opposites in a socio-demographic context. This indicates that the training has a larger effect than the socio-demographic influences. This supports the assumption that intercultural learning approaches can be conducted independent of immigrant background or gender.

The results suggest that the effort and degree of implementation among the teachers are decisive indicators for student outcomes. In order to facilitate increased implementation in further training approaches, experiences from this study propose that the teacher training should be conducted at the start of the school year and that all PE teachers at the same school should participate. This could improve cooperation among colleagues, implementation of student activities, as well as stimulate reflective teaching discussions between the PE teachers.

Due to the findings of the study, an important future perspective must be to incorporate the contents of this teacher training into Physical Education Teacher Education, where the goals of the training may be integrated with the intentions of the curriculum.

Key words: difference, intercultural learning, physical education (PE), upper secondary students, strangeness, uncertainty, teacher training.

ACKNOWLEDGEMENTS

This project was carried out at the Department of Coaching and Psychology (SCP), Norwegian School of Sport Sciences (NSSS), in the period 2007-2010. I would like to express my gratitude and appreciation to all of you that have contributed to make this thesis possible.

I would especially like to thank:

All PE teachers, students and schools which participated in this project.

Prof. Ralf Erdmann, my supervisor at NSSS, for the willingness to share all of your knowledge in the field, and scientific guidance in this process. I sincerely appreciate your efforts reading my numerous drafts and giving me constructive feedback. Your patience and genuine comments helped this work to be realized in its present form.

Prof. Hallgeir Halvari, Buskerud University College/NSSS, for providing essential statistical advice and encouragement in the analyses. Thank you for always having time for me in the final stage of the project.

PhD, Elke Grimminger, University of Freiburg, for making the effort to introduce me to the didactical concept of the teacher training, and for your constructive responses during this project. I also want to express gratitude to both you and Prof. Petra Giess-Stüber, University of Freiburg for your great hospitality during my research stay at the Institute for Sport and Sport Science in Freiburg in April 2008.

Ass. Prof. Marc Esser-Noethlichs, Oslo University College, for all the cooperation in translating your measurement device into Norwegian and for making valuable comments throughout the study.

Head of Department (SCP), Ass. Prof. Nicolas Lemyre, for all support and important contributions to make it possible to finish my thesis in time. Advisor at the Department (SCP), Annika Bodemar, for all important and unimportant discussions during the workdays and for being a genuine friend.

Colleagues at the Department of Physical Education (SKP), Gunn Engelsrud, Astri Andresen, Inger-Åshild By, Reidar Säfvenbom, for always showing interest in my project and giving me the possibility to introduce and test the training approach on PE teacher students at NSSS.

All my fellow PhD students and other colleagues at NSSS, past and present, for the social interaction and conversations about both science and life in general. Special thanks to: Hilde, for all energetic conversations and for being an inspiring friend. I really appreciate your constructive comments during the final review of this thesis. Solveig, for being my friend already from my first steps into “Brakka” in August 2007. Elsa, for always having cookies in your office and for all your support in the process. Trond, for all 10 o’clock apple breaks and for our common interest in running. Ingunn, for also sharing my running interest and for valuable comments on statistics. Paul Andre, thank you for always having time to providing statistical guidance and being supportive on my work.

My family, in-laws and friends, for your encouragement and understanding during these three years. I appreciate and value each one of you!

Most of all I want to thank my wife, Kristin, for your unconditional support, understanding and patience throughout this process. Thank you for being my best friend and the love of my life!

Oslo, October 2010
Per Midthaugen

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

PE:	Physical Education
IL:	Intercultural Learning
NSSS/[NIH]:	Norwegian School of Sport Sciences [Norges idrettshøgskole]
EU:	European Union
SELF:	Self-concept
OPEN:	Openness
UNCERT:	Uncertainty
RA1:	Rational argumentation style 1
RA2:	Rational argumentation style 2
SOCIO:	Sociometric measurement
SatPE:	Satisfaction with PE
TotSAT:	Total satisfaction with school
TotEVAL:	Total evaluation of PE at posttest
STS:	Sensitivity towards strangeness
STDS:	Sensitivity towards differences and strangeness
STDS-Q:	Sensitivity towards differences and strangeness - Questionnaire
DIFF:	Difference
SYMP:	Sympathy
NFS:	Need for security
LOC:	Loss of control
METH:	Method competence
EB:	Educational beliefs
AA:	Acculturation attitudes
KNOW:	Knowledge
ANOVA:	Analysis of Variance
MANOVA:	Multivariate Analysis of Variance
BS:	Bootstrapping
BC:	Bias-Corrected
BCCI:	Bias-Corrected 95% Confidence Interval
NSD:	Norwegian Social Science Data Service

1 INTRODUCTION

The phenomenon of *difference* is considered the starting point for this thesis. Biological, personal, social and cultural differences between individuals, groups and populations are indispensable in our everyday life, and may provoke both negative and positive feelings. These differences are increasing in modern societies due to e.g. globalization, technology and migration, and for all people in heterogeneous societies it becomes more and more important to develop a competence that could be constructive and useful in meeting and experiencing differences (Giess-Stüber & Grimminger, 2008a). Both nationally and internationally it is highlighted that differences and cultural diversity are positive aspects for social development (White Paper[1], *St.meld* nr.17, 2005-2006; United Nations, 2004). The referred cultural, linguistic and ethnical differences are also challenging the Norwegian educational system, with the necessity of dealing with increased heterogeneity and cultural diversity. A White Paper on education and research in Norway (*St.meld* nr.30, 2003-2004) argues that the school is the arena where this new diversity in society is highly reflected, and this involves both new challenges and opportunities for the teaching staff. The Knowledge Promotion[2], *Kunnskapsløftet*, (Norwegian Ministry of Education and Research, 2006) emphasizes the importance of the school in building and maintaining the diversity in students'[3] backgrounds and premises. A clear value base and a broad cultural understanding are fundamental elements of an inclusive social community and of a learning community where diversity is acknowledged and respected. Regardless of gender, age, social, geographical, cultural or linguistic background, all students shall have equal opportunity to develop themselves through working with their subjects in an inclusive learning environment. Thus, in order for the schools and the teachers to maintain and deal with this heterogeneity among students, it seems vital to develop certain qualities and competencies.

---

[1] A White Paper (*Stortingsmelding)* is a policy report presented by the Norwegian Government to the Parliament and presents the Government's policy on a given issue.

[2] "Knowledge Promotion" (*Kunnskapsløftet)* is the new Norwegian curriculum reform. The reform leads to a number of changes in the school's content, structure and organization. The reform started in August 2006, and as of fall 2008 covers all students at all levels in primary and secondary education. (http://www.regjeringen.no/nb/dep/kd/tema/andre/Kunnskapsloeftet.html).

[3] Students in this sense are children and young people, age 6-18, who attend public school in Norway.

Accordingly, Burden, Hodge, O'Bryant and Harrison (2004), make a claim that teacher education must strive to adequately prepare teachers for working with a variety of students from different social, ethnic and cultural backgrounds. Teachers are not only required to be "competent" in dealing with culturally heterogeneous groups, but also to be competent in educational processes that can stimulate and promote a constructive contact towards differences among students (Giess-Stüber & Grimminger, 2008b). An official Norwegian report (NOU, 2003:16) requests that teachers have multicultural expertise and knowledge pertaining to students' different starting points and strategies. In cooperation with other teachers and parents, the teacher has the responsibility for the children's upbringing in a diverse multicultural society. The situation today indicates that both teacher education and schools have great challenges in meeting these requirements (Giess-Stüber, 2006a).

1.1 BACKGROUND / CONTEXT

Other European countries have made important efforts to address this diversity challenge in education (cf. Bender-Szymanski, 2000; Sercu & Raya, 2007). *Intercultural competence* is one conception evolved in order to meet these challenges in dealing competently with differences and cultural diversity (Fantini, 1995), and may be seen as the ability to deal with cultural differences in a constructive manner, depending on the requirements of the situation or relationship. Handling differences and intercultural competence seems to be key qualifications for a life and growing up in our society today, and suggests being a promising conception for intervention in school (Giess-Stüber & Grimminger, 2008a). Intercultural competence requires intercultural learning, and the main goal is to become aware of and to accept differences (Erdmann, 1999b). These differences are not only manifested by ethnicity, but are perceived in structurally similar ways by situations related to gender or social topics as well. This approach develops both the individual and society, but it is also risky. Difference is the basis for conflict (Erdmann, 1999b). Consequently, in the realm of schools, the students (and teachers) need to become aware and reflect on feelings of own and others uncertainty when being confronted with differences and strangeness, in order to learn to deal with them in an adequate manner (Erdmann, 2001).

Physical Education [PE] may be particularly advantageous in learning to deal with differences (Bröskamp, 1994; Giess-Stüber, 2006a). Accordingly, endeavours have been made to develop the concept of intercultural competence in the context of movement, Physical Education [PE][4] and sport (cf. Erdmann, 1999a; Giess-Stüber, 2005a; Giess-Stüber & Blecking, 2008; Grimminger, 2009). In the mid-1990ies, most of the educational research regarding intercultural learning did not include the possible contribution of PE and sports. To fill this gap, Erdmann & Giess-Stüber at the German Sport University in Cologne initiated the development of a program, which was later labeled, "Intercultural Movement Education" (Erdmann, 1999a). Taking into account major characteristics of physical activities (e.g. personal responsibility, immediate feedback, emotional event, unmediated presentation), a concept was developed in order to improve the interaction between different social and cultural groups. The major intention was to ameliorate the theoretical grounds for interventions, aiming at an improvement of the management of intercultural conflicts (Erdmann, 2001). A German nationwide study of programs with similar intentions (Michels & Schulz, 1999) showed a frequently observed breakdown once a program reached its formal end. The programs had mainly been run by sport clubs and organizations, and the gap between the high commitment in practice and the absence of a theoretical conception as a baseline for the initiatives seemed to be the reason for the lack of results.

The theoretical work and first practical attempts demonstrated that the basic structure of most social conflicts is similar (Erdmann, 1999b). These conflicts are not merely restricted to ethnic groups, but are typical of any conflicts between subgroups in any given society such as; men and women, rich and poor, young and old, disabled and "normal", or even between fractions of a class in PE (Erdmann, 2001). Soon, the problem occurred that conflicts often required decisions on limits and values, such as the rights of the weaker part. Consequently, the Cologne group had to identify a widely accepted

[4] PE (Physical Education) in this paper is to be understood as the school subject for movement, physical activities and sport in the countries mentioned. PE is incorporated in most English-speaking countries and corresponds with the Norwegian term "Kroppsøving".

baseline for the program, and decided to take the code of international human rights[5] as unconditional limit. Although interpretations of human rights may differ (Byram, 1997), and despite the inherent problems of using a westerly dominated figure (Erdmann, 2001), the international human rights seemed to be the most general and formally accepted standard. In line with the international human rights, Hoffman and Maduro (1996) present two principles which make a good foundation in an educational setting and for this theoretical framework:

1. The principle of 'inclusive thinking', or 'non-exclusion'. This means that all participants in the learning process have equal access to learning opportunities, and should not be obstructed by categories constructed by others on the grounds of race, sex, culture or class.
2. The principle that all interaction has to respect the uniqueness of each individual. This means that all educational methods, as well as all social policies and other organizational arrangements, need to be measured against this criteria.

Even though the intentions of the "Intercultural Movement Education" were the prevention of intercultural conflicts, the project became aware that this was too ambitious and had to reduce it to a more realistic model. As a minimum, the aim of the project was to contribute to a more rational conflict management (Erdmann, 1999b). As a result, a theoretical framework was developed, with the basis of the role of identity development (Erdmann, 1999b; 2005) and social-psychological considerations in the perception and dealing with differences and strangeness (Giess-Stüber, 1999; 2005b; 2006b). Increasingly, the question was posed whether culture is the most appropriate category in which to describe the differences. This perspective may tempt one to attribute, too quickly, difficulties and conflicts apparent in heterogeneous groups to culturally determined causes (Giess-Stüber, 2008a). The overlapping of cultural background with those which arise from social lifestyles, gender issues or others may then easily be overlooked. Thus, the concept seemed to have an increased attention on key concepts like difference, strangeness, and identity. The focus became more directed towards a

[5] On December 10, 1948 the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights. Following this historic act the Assembly called upon all Member countries to publicize the text of the Declaration. (see http://www.un.org/Overview/rights.html, 2007)

development of the students' awareness to perceive and accept differences, dealing with experiences of strangeness and uncertainty, and having the ability to resolve problems and conflicts (Erdmann, 2005).

Within the last decade several research works and publications have been rendered in this context (cf. Erdmann, 1999a; 2005; Giess-Stüber, 1999; 2003; 2005a; Thiele, 1999; Noethlichs, 2005; Grimminger, 2005). In autumn 2004, the University of Freiburg received support from the European Union [EU] for a project titled "The Development of Intercultural Competence through Sports in an expanding European Union"[6]. This is a cooperative project between Germany, Poland, Czech Republic and France, intended to develop educational sport programs to improve the intercultural competence among teachers and teacher students (Blecking & Giess-Stüber, 2006). Related to this project, a comprehensive report has been published (Giess-Stüber & Blecking (eds.), 2008), and Grimminger (2009) has developed a PE teacher training program which has been carried out and tested in German schools. The results indicate a significant increase in teachers' competence regarding intercultural learning and education. Yet it remains uncertain whether the trained teachers will exert expected resultant effect towards the students.

Nevertheless, results suggest that PE might be a promising arena to develop intercultural competence among students, but emphasize the importance of PE teachers being intercultural competent themselves (Giess-Stüber & Grimminger, 2008b). Giess-Stüber (2008a) states that the concept of intercultural competence in PE does not seek to promote a totally different kind of education, but rather allow for association with what is already familiar and encourages reflexivity among the teachers. However, the main goal for developing intercultural competence in PE teachers should be that these efforts in the long term are beneficial for the students' outcomes. This thesis address by those means a contribution in the educational process of teachers and their role as agents for a future change within students.

[6] Comenius 2.1-prosjekt 2004-2007: "Entwicklung interkultureller Kompetenz durch Sport im Kontext der Erweiterung der EU". (http://www.isoc.siu.no/isocii.nsf/projectlist/119019)

1.2 AIM OF THE STUDY

While Grimminger's (2009) doctoral work related to this EU project focused on the teachers, my main focus will be on the students. The question is whether the students will profit by having a PE teacher attending a teacher training program regarding intercultural learning.

The first part of the project is to adapt and implement the teacher training program (cf. chapter 3.1) from Grimminger towards PE teachers in Norwegian upper secondary schools. This work will be done in cooperation with Grimminger, to ensure that both the written material as well as the practical experiences will match the original and thus can make a good foundation for the Norwegian concept. This includes the theoretical framework, the presentations, the didactical experiences and the questionnaires utilized in order to evaluate the teacher program. This on-the-job training gives the teachers a theoretical conception, together with practical experiences, activities and lectures which intend to enhance intercultural learning.

The second part of the project will examine whether the PE teachers attending the teacher training program convey their (intercultural) competence to the students. The main research question for the study is: Does a PE teacher training program regarding intercultural learning have an effect on the development of relevant outcomes among students? The focal point in the effect measurement is the students' sensitivity towards differences and strangeness (for details on these student measurements see chapters 3.2 and 5.3). The further intention of the study is to contribute to theoretical and practical instructions and guidelines for a more rational handling of differences and strangeness among teachers and students in PE. If the teacher training program indicates a positive effect among the students, then further work should be to implement this program in the on-the-job training of teachers and – hopefully – in the education of PE teacher students.

The plan for the project group of intercultural movement education (Erdmann, 1999a) was to develop both a theoretical framework (Erdmann, 1999a; Giess-Stüber, 2005a) and a teacher training for intercultural school interventions (Grimminger, 2009). This process

of the project group of "Intercultural Movement Education" could be described as follows:

1) The development of a theoretical framework (Erdmann / Giess-Stüber).
2) A theory-founded teacher training program with evaluation (Grimminger).
3) An application of the theoretical framework in teacher training in order to examine its effects on the targeted group, the students (Midthaugen)

This study focuses on the third part and is the first investigation in this line targeted on the students. The aim is to examine the effects on students resulting from on-the-job training of their teachers. It is not designed to test how wide the results can be generalized. The question is whether the developed concept has the intended effect among the students, whereby the teachers function as medium. We have the theoretical sequence and we know that the teacher training has gained positive results among teachers (Grimminger, 2009). Therefore, we decided to take a further step towards the final goal. In order to investigate possible relevant outcomes among students, the development of measurements was initiated to examine the approach (Esser-Noethlichs, 2010). The primary goal is to confirm the applicability of the theoretical concept in the field. Erdmann (1988) argues for sequences of studies in social science with small samples with the consistency of its results as criterion. This study is an early contribution in such a sequence. It represents the final step of the project on intercultural development and the first attempt to examine the targeted consequences at the student level. For further methodological considerations on empirical research in such an educational setting, see chapter 5.1 (p.56).

1.3 STRUCTURE OF THE THESIS

After a brief introduction of the project and the general aim of the study research (chapter1), the theoretical perspectives (chapter 2) and the theoretical foundations for the intervention are elaborated (chapter 3+4). Further, the research design and some important methodological considerations are presented (chapter 5). The intervention procedure and the development of the measurement devices are an extensive part of the

method section (chapter 6). Additionally, this leads us to the analysis and interpretations conducted in this study (chapter 7), which form the basis for the results and related discussions in chapter 8. Further, some important considerations regarding strengths and limitations on the findings of this study are reflected and discussed (chapter 9). Finally, this leads to some concluding remarks based on this project, together with some thoughts on further research perspectives and additional studies in this realm (chapter 10).

2 INTERCULTURAL LEARNING THROUGH PHYSICAL EDUCATION

This chapter gives an overview of some research literature on intercultural competence and intercultural learning, and presents this thesis' understanding and interpretation of the terms (chapter 2.1). Further, the key aspects of intercultural learning are presented, focusing on the terms difference, strangeness and identity development (chapter 2.2). Chapter 2.3 describes how intercultural learning could be linked to sports and PE, and how PE could function as an opportunity for change among students. The final argumentation in this chapter (2.4) discusses terms related to intercultural competence and why intercultural learning is chosen as a framework for this study. It also discusses the important role of PE in such school interventions as compared to other school subjects.

2.1 INTERCULTURAL COMPETENCE REQUIRES INTERCULTURAL LEARNING

International educational literature use the term intercultural learning about education where the purpose is to develop mutual knowledge about and understanding between individuals and groups anchored in different cultures (Hjort et.al. 1993, Ekstrand 1994, Lahdenpëra (ed.) 1995, Luchtenberger 1995). The United Nations Educational, Scientific and Cultural Organization [UNESCO] defined intercultural education and understanding as an objective already in 1976 (Unesco, 1983). In previous decades, a range of proposals and conceptions has been developed, in order to prepare future generations in the demands of increased cultural diversity in almost all European countries (Giess-Stüber, 2008a). Criticism of a deficit orientation and the assimilation ability in the 'educational policy for foreigners' in the 1970s gave rise to the development of an intercultural pedagogy (Auernheimer, 2003; Luciak, 2006). Within intercultural learning and pedagogy the aim is to facilitate knowledge and acceptance of other cultures, and it is explicitly addressed to the immigrant and to the native population (Giess-Stüber, 2008a). The further aim is to dissolve hierarchical relationships, accept equitable differences, reduce prejudices and highlight our mutual dependency within the world community. Intercultural learning promotes critical awareness with respect to institutional discrimination and social inequalities (Giess-Stüber, 2008a).

The main goal of intercultural learning is seen as the development of intercultural competence. Although the term *intercultural competence* is widely used in the field of intercultural education, there is by no means consensus in the understandings of the concept (Fantini, 1995, 2007). Some stress the development of global knowledge, others on intercultural sensitivity, or else they emphasize the evolvement of certain traits or skills. A similar situation seems to exist in Scandinavia where cultural, intercultural and multicultural competence is used interchangeably without common definitions of any of these terms (Pihl, 2000). In order to ensure the applied understanding of the concept, we will start with a short introduction of the main elements of intercultural competence; (1) inter-, (2) culture and (3) competence, leading us to an applicable understanding of the term.

The prefix "inter-"

Internationally, terms like multicultural, cross-cultural and anti-racist education are also used in the field of intercultural education (Lahdenperä (ed.), 2004), but the term *inter-*cultural is preferred because it expresses the objective that cultures have a mutual effect on each other. *Intercultural* describes the reference of cultures to one another differently than the term multicultural, and the main goal of intercultural education is enrichment on both sides (Giess-Stüber, 2008a). Moreover, *intercultural* implies an interaction, which may provide an impact on both of the involved members and their respective culture resulting in common modification.

Even if the theoretical definitions of the terms intercultural and multicultural education differ, in practical use they are often used synonymously both in USA (Ekstrand, 1994) and Scandinavia (Pihl, 2000). Historical and social conditions and the educational subject structure in each country characterize the content of the terms and which term that is most used in each of the Scandinavian countries. Swedish and Danish educational research and education systems use the term intercultural education (Madsen & Steenhold, 1987; Hjort et.al., 1993; Lahdenperä (ed.), 1995). In Sweden the term intercultural education is also often used synonymously with multicultural and multilingual education (Lahdenperä (ed.), 1995). In Norway the term intercultural

education is currently not used much. The term multicultural education was introduced in recent Norwegian educational research related to educational studies of the Sami (Pihl, 2000). Multicultural education is the term which dominates in Norway at the moment. But even though the term is quite new in Norway, this thesis will consequently use the term *intercultural* because it describes the objective of mutual relationship and interaction between cultures, and is considered the most common term in international literature and research.

The term "culture"

The term "culture" represents the source of the individuals' identification. This may be interpreted as all intellectual constructions that human beings produce in their communicative and interactive processes (cf. Hildenbrandt, 1994; 1997). The mode of expressions a social group has developed, and the variety of languages, dialects, tools, religions, rules, values and norms etc., which influence their daily life, may represent what we understand as "culture". At the same time, the habits – represented by the way an individual eats, dresses, celebrates, socializes or moves – manifest the individuality of the customs of the particular society the person feels to be part of (Erdmann, Cabrera-Rivas & Schulz, 2008). The term "culture" is restricted to those facets which are perceived worthwhile to be transmitted to the next generation in a society. This often implies a hierarchical structure where the majority controls the cultural facets which are worth the transference.

A rich repertoire of expressions is the remarkable characteristics of human beings, and man's existence relies on communication (Erdmann, Cabrera-Rivas & Schulz, 2008). Everything we perceive and which affect us will be transformed into an expression in order to be communicated and exchanged with others. The ability to communicate and express oneself is a source of satisfaction, often accompanied with self-confidence. This seems understandable if one is experiencing life with the secure feeling of being capable of mastering almost every situation. In contrast uncertainty and stress may result from the subjective feeling of the lack of ability to communicate (Erdmann, Cabrera-Rivas & Schulz, 2008).

The way an individual perceives oneself attached to a certain social group is called cultural identity (Cabrera-Rivas, 1999). The awareness of own cultural identity may be assumed as the need and capability to interact, and provides the feeling of security when confronted with unknown others or unfamiliar cultures (Erdmann, Cabrera-Rivas & Schulz, 2008). An important cultural expression related to PE is the "culture of movement". To emphasize the culture of movement in the educational context implies to attract the attention of adolescents and have them learn and practice various kinds of activities, games, dances and sports. Since movement implies expressions – interpreted by others – movement education should incorporate more than merely movement skills and techniques. The various forms of activities in PE will hopefully provide opportunities to reflect on and develop own cultural identity. Culture and cultural affiliation are understood as adaptable, and in a state of flux (Giess-Stüber, 2008a). Intercultural differences should not be overemphasised, and intracultural differences should not be suppressed (ibid). Hence, culture may be seen as generated and modified by its participants within its surroundings.

The term "competence"

In the broad definitions of competence, the emphasis is on its importance to children and young people's adaptation, development and mastering of new situations (Ogden, 2002). Lerner (1986) defines competence as a capability or readiness that makes children able to evaluate the demands of the environment and to which extent their own qualifications match these. Competent children are, according to Lerner (1986), flexible, both cognitive and behavioral. They adapt to the new environment or change the environment in addition to a better adaptation related to their personal goals. Lerner (1986) is particularly concerned with the impact children's competence have on their adaptation to new challenges and environments, and his concept of competence appear as an alternative to the concept of intelligence (McClelland, 1973).

Garmezy (1989) explains competence as the skills, capabilities and knowledge that promote children's cognitive, social and emotional coping and adaptation. A definition that emphasizes the cognitive aspect is formulated by Masterpasqua (1989), which

defines competence as cognitive, emotional, behavioral and social characteristic of faith in, and expectations, that one is able to take advantage of these qualities. Firstly, this definition is based on a sense of competence as a capacity in the form of learned knowledge, skills and attitudes, and secondly it draws a distinction between observed competence and self-perceived competence. In order to act competently, one must believe that one is able to use the learned competence to master the challenges, conflicts and stress in different situations. This perception is shared by Bandura (1977a, 1995), who considers this belief in own competence and performance as "self-efficacy beliefs". Thus, it is not enough to be competent, but one must also believe that one is able to use this competence to master the challenges in different situations.

There surely exist plural understandings of the term competence and related terms that are used to describe similar conceptions. Knowledge is often the most important aspect in school, and students' ascribed intelligence has a high prestige while school performance bears priority. But there are other perspectives. Garbarino (1985), for example, answers the question of what the goal is for children and young people's development as follows: "The answer is competence, the ability to succeed in the world. Competency is the currency of development" (p.75). Elsen and St.John (2007) claims that there is a considerable acceptance among researchers that competence not only involves cognitive development, but also changes in attitude and the development of certain skills and strategies. In view of this, they suggest that the term *competence* is wide enough to comprehend the knowledge, affective and skill components needed to achieve and learn successful communication in an intercultural context. The development of competence could therefore be seen as a learning process. According to Bø and Helle (2008), learning may be a process of behavioral, expressive or reflexive character. Behavioral character implies that the individual acts in a different way after the learning process. Expressive character means that the learner has an inner experience related to the learning process, and reflexive character connotes that the individual thinks differently after learning. Intercultural learning seeks to enable pupils to develop in all these areas.

The understanding of intercultural competence / learning in this study

For this thesis' intentions, *intercultural competence* is understood as the ability to deal with differences and strangeness in a constructive manner, depending on the requirements of the situation or relationship. These differences may be such as gender, ethnicity, social background, education, age, physicality, disability, family situation, etc. *Intercultural learning*, in the realm of school and PE, is understood in this thesis as the development of the students' ability to perceive and accept differences, to deal with own feelings of strangeness and uncertainty, and have the ability to resolve problems and conflicts (Erdmann, 2005). As cited in the introduction, intercultural competence appears as a key competence for a life and growing up in our society today (Grimminger & Giess-Stüber, 2008a). Intercultural competence requires intercultural learning, and in order to deal with differences in an adequate manner, intercultural competence seems to be a promising conception for intervention in school (Grimminger, 2008).

However, a considerable amount of other theoretical conceptions has also been developed to improve social interactions and to contribute to social development among human beings. Theoretical concepts like *social competence* (cf. Bandura, 1977b; Gresham & Elliot, 1990; Schneider, 1993), *interpersonal competence*, (cf. Buhrmester et al., 1988; Spitzberg & Cupach, 1989), *emotional intelligence* (cf. Salovey & Mayer, 1990; Goleman, 1995; Mayer & Salovey, 1997), *anti-racist education* (cf. Aluffi-Pentini & Lorentz, 1996) and *cooperative learning* (cf. Cohen, Brody & Sapon-Shevin, 2004) are some of the theoretical frameworks that seem closely related to intercultural competence. Most of the concepts have some traits or skills that are equal with the intentions of intercultural competence. But what kind of similarities and distinctions seem to exist between this diversity of frameworks?

The main focus of intercultural approaches is more on learning to deal with differences and experiences with strangeness (chapter 2.2.1) as a motive for learning (Auernheimer, 2003). Social learning approaches seem to focus more on similarities and common sense, and development of social skills is also usually guided by the norms and standards of the dominant group. A common goal, however, is to prepare students for society (Esser-

Noethlichs, 2010). Grimminger (2009) points out that theories related to the development of social competence have many characteristics in common with intercultural competence. Cooperation, empathy and acknowledgement are fundamental pedagogical principles in both social and intercultural learning. Putallaz and Gottman (1982) describe socially competent children as mainly positive, able to solve conflicts and clarify disputes. Furthermore, they are aware of the group norms and social rules, able to communicate clearly, to establish and maintain social relationships, and they have a positive self-perception. This definition is in high accordance with how one wants to develop intercultural skills of teachers and students in PE. So what are the main distinctions between social and intercultural competence?

The principal distinctions are related especially towards two aspects. At first, *conflicts* are viewed as an inevitable part of life and should be used as an incentive for learning (Erdmann, 2003). The development of social learning and social skills also emphasizes the ability for conflict management and to solve conflicts, but they seem to have a main goal in preventing and avoiding conflicts. To put intercultural and social competence in the same footing, could therefore endanger us to ignore the important function of conflicts. Secondly, intercultural competence is based on the *awareness of power structures* and power relations. Power constellations such as native-immigrant, insider-outsider, and majority-minority, surely affect social interactions (Giess-Stüber, 2006a). These constellations are often the source of the conflict itself. Accordingly, the teachers should be aware of the institutional power given to them as communicators of knowledge and the power to give sanctions and rewards to learners (cf. Erdmann, 1986; Cothran & Ennis, 1997). Without the awareness and reflective dealing with such constellations, the teachers will not be able to perform intercultural learning in their classrooms.

It appears that the concept of intercultural competence has developed the most concrete and practical suggestions for the aimed teacher intervention in this study. Thus, the further theoretical framework will focus on aspects of intercultural learning in the realm of PE in school. However, as presented in the introduction, Giess-Stüber (2008a) poses the question whether culture is the most appropriate category in which to describe the

differences. This perspective may tempt one to attribute, too quickly, difficulties and conflicts apparent in heterogeneous groups to culturally determined causes (Giess-Stüber, 2008a). Because of this, a theoretical framework was further developed, with the basis of social-psychological considerations in the perception and dealing with differences and strangeness (Giess-Stüber, 1999; 2006b), and the role of identity development (Erdmann, 1999b; 2005). The theoretical baseline outlined below therefore pays increased attention to the key concepts; *difference*, *strangeness*, and *identity*.

2.2 DIFFERENCE AS KEY ELEMENT

Differences are considered as starting point for this concept. Differences are pointed out from a (ego-) centric point of view, and assigned differences always imply comparisons on the basis of a more or less reflected standard of reference (Giess-Stüber, 2006a). Experiencing differences plays an important role in the personal development, and as an incentive for the progression of a social group or society. Differences in a plural society may be looked upon as restricted to ethnic distinctions, but these structures are typical to any distinctions between subgroups within a given society (Erdmann, 2005). This refers to subgroups such as young and old, men and women, poor and rich, healthy and unhealthy, or even between fractions of a class in PE (Erdmann, 2005). Perceived differences such as motoric skills, body image, familiar and unfamiliar activities, outfits, behaviors, etc. may provoke patterns and reactions which might lead to devaluation of the minority/outsider or to pressure by the majority/insiders towards assimilation.

Biological, personal, social and cultural differences between e.g. individuals, groups and populations are indispensable in our everyday life, and may provoke both negative and positive feelings. Already when people generate a first impression, they perceive the other person or situation in a more or less comfortable way, dependent on e.g. expectations, associations, and related experiences (Fiske & Taylor, 1991; Gudykunst, 1987). Differentiation and stereotyping is natural for all people, because it helps provide individual guidance and orientation. On the other hand, it could limit our perception and lead to misunderstandings, prejudices and the feeling of uncertainty (Giess-Stüber, 2006a). Within social interactions, feelings of security and acceptance on the one hand, or

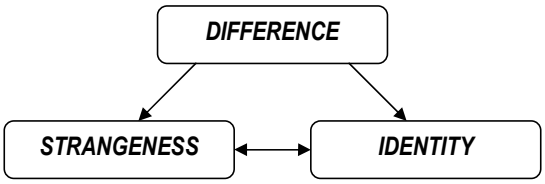
uncertainty and threat on the other, seem to be the major poles (Erdmann, 2003). However, almost everywhere we are strangers and consequently in some way or another different to the rest. Perceived difference is a cause for experiences of *strangeness* (Erdmann, 1999b). Thus, experiences and reflections with strangeness, linked to the confrontation with difference, are important issues to further explore theoretically.

A positive self-image is considered to be necessary to risk uncertainty related to open social interactions. The acceptance of differences may provoke doubts upon one's previously unquestioned standards, and how one is dealing with these doubts is decisive. There are two possible options (Erdmann, 2003):

1. One feels menaced and is therefore holding tight to former ideas and beliefs in fear for the unknown. One is blaming the intruder.
2. One is open for new ideas and beliefs; one sees possibilities instead of threat and is open to modify one's identity.

According to Erdmann (2003) the latter option is linked to a positive self image. An individual is only risking uncertainty in social interactions provided that the individual has a good self image and feels accepted. Enhancing and developing *identity* and self-awareness is of great importance to handle differences and strangeness in a constructive way. In order to acquire this, the goal is to develop a positive self-image through working with own identity. Consequently, the important issue is not the differences themselves, but how we are able to deal with them. Related to the previous discussion, the three key concepts *difference*, *strangeness* and *identity* form a triangle in the intercultural learning process.

Figure 1: Key concepts in intercultural learning



2.2.1 STRANGENESS

The term *strangeness* is a social construct where individuals consider differences as strange, unfamiliar or unknown related to own worldview, and a feeling of strangeness is perceived when such differences appear to be subjectively important and significant (Erdmann, 1999b). As already indicated, the perceived difference is a cause for experiences of strangeness. A comparison between the familiar and the strange will let us become aware of differences, because the stranger represents something we are not ourselves. Differences between people are often felt as strange, because the stranger or strange situations unnerves and questions the persons own knowledge. This can generate an uneasiness or even fear, where concepts like xenophobia may illustrate the consequences of this phenomenon (Auernheimer, 2003).

When evaluating differences as strange or unfamiliar situations, persons or activities, some persons might feel uncertain and insecure. Such perceived difference is a cause for experiences of strangeness. Different response patterns, so-called "self-protection strategies" (Grimminger, 2007), become visible and may consist of:

- Retreating and avoiding the situation
- Faltering (blushing, embarrassed laughter, insecurity, fumbling, hesitation)
- Protesting, verbal and / or physical aggression
- Foolishness, joking, or pranks

Other more severe reactions may be devaluating the unfamiliar and/or excluding the stranger. All these strategies may arise because the situation feels strange and unknown for the persons involved. Through this feeling of strangeness, identity may be confirmed or threatened. The communication is influenced by the self-perception of the participating individuals and by the assumed characteristics of the strangers (Giess-Stüber, 2003). A closer consideration of the term *strange* and its interpretation turns out to be a useful beginning for approaching relevant dimensions of the phenomenon of strangeness.

In English the adjective *strange* is being used synonymously with *new, unfamiliar* or *unusual*, which are relatively neutral wordings. However, in the English language it is

often used in the expression of surprise and may have both positive and negative attributions. Synonyms like *odd, funny* or *weird* may indicate a certain irritation caused by the stranger, while emotional involvements like *astonishing, interesting* or *exciting* contain more positive assessments. Hence, a differentiation between constructive and destructive manners seems more sensible, because it gives a clear distinction between educational efforts and more problematic strategies towards strangeness (Noethlichs, 2005).

Strangeness emerges through social distinctions according to specific criteria (e.g. gender, clothing, skin colour, body image, language, religion, etc.). Differences themselves do not provoke a reaction, but an evaluation in the sense of feeling strangeness might do (Erdmann, 1999b). In doing so, it is possible to observe different forms of reactions such as uncertainty, exclusion, defensiveness and aggression, but also curiosity, attention and engagement. Sociological theories might point towards two main roots for exclusion, disintegration and animosity in social interaction: *power* and *personality* (Giess-Stüber, 2003):

1. *Power:* Social units are based on values and standards, and the majority has the power to accept or deny new members. In order to maintain the structures of the receiving society, the entrance for the strangers underlies specific conditions, e.g. political strategies.
2. *Personality:* To enhance personal certainty, individuals often differentiate, form stereotypes, act as always or maintain familiar standards. Everything new or strange symbolizes uncertainty and may provoke a personal crisis. Another way of living, unfamiliar behaviour, different and unknown traditions become threatening and self-confidence might be affected.

Both aspects show that animosity and exclusion are not due to the specific characteristics of the foreigner, but to the need for certainty, continuity and prosperity of the receiving society. In order to protect the majority's privileges, different defense strategies may be applied, such as exclusion, systematic misunderstanding, suppression of differences, or exoticism (Giess-Stüber, 2006a).

In Physical Education we can meet strangeness in the shape of persons, movements, activities and games, and very often strangers or strange things are ignored, refused or excluded (Giess-Stüber, 2006a). Consequently, in the realm of schools, the students (and teachers) need to reflect on feelings of own and others' uncertainty in the meeting with differences and strangeness, in order to cope with them in an adequate manner. It is important to have in mind that the majority, the privileged group, bears the major responsibility for this process. The ability to solve conflicts and deal with differences in an adequate manner requires a society where individuals are inclined to and ready for integration (Auernheimer, 2003).

Constructive interaction with strangeness requires high-level competence in dealing with uncertainty. Differences are perceived as being distinct from what is familiar; situations or persons cannot be reliably evaluated and limited possibilities for control are available. Erdmann (2005) argues, on the basis of interactional identity concepts, that a disposition towards *openness* and a toleration of *uncertainty* presupposes a coherently-felt approach to identity, combined with experiences of acceptance and belonging. In this sense the advancement of a positive self-reference is closely allied to the pedagogic intention of promoting a constructive interaction with strangeness. This requires high-level competence in dealing with own uncertainty and *self-awareness*. Thus, identity development is considered of high importance for dealing with differences and strangeness.

2.2.2 IDENTITY DEVELOPMENT

Reflections on strangeness, differences and its psychological consequences to individuals can only be perceived in relation to own identity (Grimminger, 2009). The term *identity* indicates that there exists a distinction between the own and the other, which means that individuals possess some specific and unique characteristics (Erdmann, 1999b). The study of identity may be understood as the study of who I am and how my biology, psychology and society interact to produce that subjective sense of the person who is "genuinely me" (Kroger, 2000). Identity may be understood from many perspectives, and this dissertation takes a psychosocial approach to identity. This approach seeks to

integrate the roles played by both society and an individual's intrapsychic dynamics and biology in developing and maintaining personal identity (Kroger, 2000).

According to recent theoretical conceptions, identity is considered as the (temporary) result of the individual's active evaluation and thereby differentiating between the self and the other (Erdmann, 1999b). Modern theoretical concepts describe identity as a mental construct of the individual (Keupp, 1997). This construction results from a continuous process, in which the individual develops and modifies its identities. The plural "identities" indicate that identity is to be seen as a *patchwork* consisting of somehow different, yet coherent identities, according to the situation the individual is confronted with (Keupp et al., 1999). This is in contrast to the commonly used familiar application of the term, which looks at identity as a stable and consistent unit (Erdmann, 2003). The identity of an individual is rather a product of the interaction between the elaborated and continuously evaluated presentation of a person with its social environment, which begins with the perception of difference (ibid.).

The conception of identity in relational terms indicates its connection to situations, its historical reference, and in principle its modifiability (Erdmann, 2003). Consequently, working on one's identity might be described as a process, in which past experiences of the individual will filter and color the reflections from the interaction with the outer world and by that modify the noticed self. This encourages and leads to hints for practical consequences and development possibilities for own identity. Social interactions between individuals imply relating identities (Grimminger, 2008). The ability to accept and acknowledge differences require positive past experiences and self-evaluations (Erdmann, 2003).

The realization, representation, acceptance and accreditation of identity is to be found in social (power-specific) relations (Keupp et al., 1999), such as in a learning environment in school. Two basic human needs of identity development emerge from this; *acceptance* and *membership* (Taylor, 1994). The importance of membership and acceptance among peers as a means to gain confidence and security becomes evident on the one hand. On

the other, it seems comprehensible if the confrontation with strangers is perceived menacing (Erdmann, 2003). The reasons for misunderstanding may be illustrated by the "looking glass self" as a model. This model has a long tradition in (social) psychology and can still be used as a good illustration of the individual development of the self (Erdmann, 2003). The model emphasizes that we can only accumulate knowledge about ourselves by observing others and their reactions. We cannot see and become aware of ourselves as individuals with specific values, abilities or deficits without the interpretation of relevant feedback received from our social surrounding.

According to Erdmann (2003), the situation becomes more complicated with respect to values and preferences or customs and taboos. These abstract figures, once again being socially constructed and wrapped into cultural norms, are "inherited" and generally accepted by the individuals without ever questioning them. These "inherited" major parts of the culture ensure the continuance of a society. Participating in and knowing the customs, norms, and modes of living according to the surrounding values offers the individual the feeling of membership and feeling of security in this social unit. This sense of being "on the right side of the track" and belonging to the society does not provoke any critical reflections or questions about one's values or ways of individual behaviour. Such an unconscious pattern prevails especially for members of the majority (Erdmann, 2003). Granting and accepting that an existing minority or subculture may live according to different values and beliefs might raise uncertainty and doubt about the system of the majority. Thus a potential conflict arises and the noticed, felt or even projected and attributed difference becomes a source of threat. Even without language barriers, communication remains difficult because it will hardly take place on an equal basis. For the individual who wants to maintain or build up an identity in asymmetrical social relations, will be confronted with complications or even encounter this as an idle effort in relations of extreme repression (Krappmann, 1969)

Identity development is not only the adjustment process between insider and outsider, balancing between own wishes and expectations of other, but also a permanent relational work of situative experiences. In this evaluating reflecting process, the individual

interprets, values and integrates their experiences. The facets of identity, which form the so-called "patchwork identity" (Keupp et al., 1999), originate from the reflection of these situative self-awarenesses and self-experiences. Although the individual strives to join all experiences to a subjectively coherent general view, there are utterly possible ambivalences within the partial identities (Keupp et al., 1999). The summarization of all biographical experiences and evaluations of the person, on the basis of their identities, creates the sense of identity.

According to Hausser (1995) this sense of own identity includes three components: self-concept, self-esteem and self-efficacy. *Self-concept* is based on generalized self-perceptions (cf. partial identities) and provides knowledge about one's individuality. The *self-esteem* component originates from generalized self-evaluation, and expresses evaluations about the quality and level of respect with oneself and consists of a mosaic of compressed evaluations. From these evaluations the individual feelings emerge of how well, useful and consistent the person generally considers oneself to be. A positive or negative self-esteem arises from the subjective evaluation of how far away the individual is from the fulfillment of their individual- or society-imbedded standards (cf. Keupp et al., 1999). Situations where the individual sees personal control of the events constitute *self-efficacy*, e.g. expectations which are generally subjectively explainable, predictable and exert one's influence on events (Hausser, 1995). Self-efficacy describes the expectation of having the personal possibilities to cope with the situation at hand and the necessary resources at one's command. A high self-efficacy leads to an active and confident discussion with the given situation, while a low self-efficacy instead leads to fear as well as evasive and defensive strategies (Bandura, 1977a).

Keupp et al. (1999) consider identity work as being a continuous process of interaction, which the responsible individual is occupied with throughout life. In summary, it can be maintained that identity work implies the preparation of a conflict-oriented state of tension. It does not consist of balance, freedom of contradiction, or congruence, but instead of a subjectively defined measure in ambiguity and challenge. This basic tension is the source of the dynamism in the identity development process (Keupp et al., 1999).

In conclusion, the identity development within this framework focuses on acceptance and membership, experiencing differences and acknowledging them, and enhancing confidence and cooperation (Auernheimer, 2003). The acceptance of one's own inner diversity and the acceptance of the plural forms of identity are prerequisites for being able to live with heterogeneity and multiple memberships in society (Bilden, 1997), such as the experienced differences in a learning environment like PE in school.

2.3 INTERCULTURAL LEARNING THROUGH PE – A CHANCE OF MODIFICATION

Physical Education differs from the other school subjects especially because it is related to and based on movement (Giess-Stüber, 2006a). Since the *body* can be considered to be the primary reference for the individual in developing their identity and equally is serving as signal and screen for projections, physical activities are seen as an important field for interventions (Erdmann, 1999b). In comparison with other subjects, PE is still rated positively by children in school (Jònsson 1994; Imsen 1996; Giess-Stüber, Didierjean, Fialova, Heine & Mielcarek, 2008), and this positive attitude to the subject is certainly a good prerequisite for intercultural learning goals. According to Erdmann (2001) three major arguments stress the importance of physical activities (rather than competitive sports) in reaching a more rational conflict management between social groups: First, (1) the modification of tasks may be arranged more easily in motor activities than in other fields. (2) Anthropological concepts stress the importance of physical experiences with and within the surrounding world and (3) the unmediated physical impressions and experiences, the difficulties to dissemble and the relative independence from spoken language are assumed to be advantages in the field of intercultural education. Accordingly, PE can be a training ground for interpersonal relationships, in which respectful and responsible exposure to the strengths and weaknesses of others can be developed. The acceptance and sense of belonging to various social groupings can be experienced at first hand. (Giess-Stüber et al., 2008)

The Norwegian curriculum in PE (Norwegian Ministry of Education and Research, 2006) emphasizes that the social aspects of physical activities mean that PE is important for strengthening one's self-image, identity and multicultural understanding. In addition, the

diversity of sporting cultures offers opportunities for discovering oneself, to position oneself with others during sport and to perceive either the dissimilarity or similarity of others (Giess-Stüber et al., 2008). Bröskamp (1994) sees the possibilities of both positive and negative contribution from sport activities, and developed a term called "bodily strangeness". He emphasizes that in the real world there is no doubt that bodily differences in sport may lead to further strangeness and reproduction of already existing barriers. But in the awareness that sport may produce strangeness, we must not overlook that sport and PE organized in a social-realistic form could be the most important contributor to a well-regulated meeting with bodily strangeness, and how to deal with it (Bröskamp, 2008).

As the discussion above shows, some considerable arguments are seen to be favourable for the use of PE as a main arena for teacher intervention. But PE itself, or simply having the theme of interculturality included in the lessons, does not encourage constructive interaction with differences and strangeness in children and adolescents. Lessons cannot simply be drawn up from a table of contents. A carefully planned specialist teaching program is essential (Giess-Stüber, 2008a). Activities must be selected according to the heterogeneity of the students, and should be made an enjoyable experience for everyone. Even so, it seems a great challenge to include those students with negative experiences in PE. From a pedagogic perspective, reflexive interculturality in PE requires an educationally selected, accentuated or modified type of sport. Hence, different learning activities[7] are developed in this realm (e.g. Neuber, 1999; Gramespacher & Grimminger, 2005; Gramespacher, 2008; Grimminger, 2007) in order to enhance acceptance and membership, and to stimulate for a constructive interaction with differences and strangeness through PE. And to initiate, implement and reflect on this intercultural learning activities, the students need to have well-educated and competent teachers. Thus, it seems appropriate to address more attention to the teacher's role in the learning process of the planned intervention.

[7] Some of the learning activities used in the Norwegian teacher training are presented in appendix 10.

3 ENHANCING INTERCULTURAL COMPETENCE OF PE -TEACHERS

The essential work on practical-didactical guidelines for this concept has the aim of easing the way towards beneficial interventions for PE-teachers in schools. Giess-Stüber (2005b, 2008a), Giess-Stüber and Blecking (eds.) (2008), Giess-Stüber and Grimminger (2008a, 2008b) and Grimminger (2009) contributed to some new pedagogic-didactic perspectives in the promotion of intercultural competence among PE teachers, which will be outlined in chapters 3.1 and 3.2. However, great challenges are met trying to implement such didactic guidelines towards the teachers (chapter 3.3). To sum up, some considerations are made regarding the practical implications for the teacher training in Norway (chapter 3.4)

3.1 REFLEXIVE INTERCULTURALITY IN PE-TEACHERS

According to Giess-Stüber (2008a), the current, programmatic perception of 'intercultural learning' in sport is experiencing increased and inflationary usage. In order to competently handle the challenges of increasingly heterogeneous groups in schools and sport clubs, established concepts such as 'social learning' or 'cooperative learning' are being re-labeled as 'intercultural learning. In deference to the corresponding developments, reflexive interculturality through sport is considered a heuristic method which leads to concrete suggestions for PE (Giess-Stüber, 2008a).

Reflexive[8] interculturality among PE teachers assumes a mindset that is orientated towards promoting equal opportunity, reducing discrimination and further developing social justice (Giess-Stüber, 2008a). Awareness and knowledge of the multifaceted features of differences in modern societies should be increased. These features of difference may be social inequality between natives and immigrants, integration requirements, gender issues, social dimensions and also the phenomenon of physical strangeness. The learning topic of reflexive interculturality, understood in this sense, is

[8]According to Giess-Stüber (2008a) is the term reflexive interculturality referring back to Hamburger (1999). Analogues can be made with the concept of reflexive modernisation, reflexive pedagogy and also reflexive co-education.

therefore no longer the universality or the relativity of cultures, but rather the social construction of one's self and what is considered strange, along with societal preconditions and consequences (Giess-Stüber, 2008a). Reflexive interculturality is conceived as an educational method that, instead of seizing on cultural differences and working on them, allows a dialogue between cultural contexts and therefore contributes to the treatment of these experiences reflexively so as to enable an appraisal of individual self-understanding and world understanding in a rational and discursive manner. In this respect we are moving, to some extent, beyond the horizon of intercultural education (Giess-Stüber, 2008a). Given the important role of reflexive interculturality and intercultural competence among teachers, the teaching staff requires appropriate support and further education (Grimminger, 2008). However, this broad objective of reflexive interculturality should not only be the concern of individual teachers or a single subject, but should be regarded as a cross-disciplinary task which is part of the entire school climate (Giess-Stüber, Grimminger, Schmerbitz & Seidensticker (2007; Giess-Stüber, 2008a; Giess-Stüber & Grimminger, 2008b).

Reflexive interculturality in PE has as goal to promote constructive interaction with strangeness and uncertainty among children and adolescents (Giess-Stüber, 2008a). The students should be able to perceive the strange, unfamiliar and unknown not as a threat, but as an opportunity for change and enrichment. Educative PE does not only pursue the development of the pupils' physical and motor dimensions, but also emphasizes the social references, emotions, cognitions and moral values (Giess-Stüber, 2008a). Gessmann (2000) stresses that only through connecting motor and cognitive capacities with independent actions and psycho-social components can sport learning become an enduring experience. Producing reflexive interculturality in PE can be seen as advancing an individual's development in dealing with differences, uncertainty and experiences of strangeness, without the motor aspects fading in the background. Within PE, strangeness can be made tangible in the most diverse ways. Familiar and foreign cultures of sports and movement activities can be developed simultaneously in order to promote a constructive interaction with differences and strangeness through PE (Grimminger & Gramespracher, 2005; Giess-Stüber, 2008a).

3.2 THE DEVELOPMENT OF A TEACHER TRAINING CONCEPT

For PE teachers to be able to initiate, implement and reflect on intercultural learning through PE, Grimminger (2005; 2008; 2009) developed and evaluated a teacher training concept. Grimminger's doctoral-dissertation, "The promotion of intercultural competence of sports teachers - development and evaluation of a teacher training concept", is a central component for the intended teacher intervention elaborated in this thesis. Her dissertation focused on the development and evaluation of a continuing education concept among in-service PE teachers in Germany. One of the objectives of my thesis is to adapt and implement this German-developed concept into Norwegian schools, and conduct a similar training approach towards upper secondary PE teachers.

The didactical guidelines and principles developed by Giess-Stüber (1999; 2005b; 2008a) and further slightly modified by Giess-Stüber and Grimminger (2008a), contributed to more concrete and practical suggestions for the implementation of intercultural competence through PE. Thematically, the didactic guidelines are divided into two categories: (1) experiences of strangeness as a motive for learning and (2) team tasks setting as a challenge. As basis for these categories, two general principles are pointed out; (a) reflections on the experiences and (b) equal participation. On the next page an overview and some features of each principle are presented (fig 3.1). The guidelines suggest how PE can be arranged didactically in order to promote intercultural learning and education processes. However, by using the term 'didactical guidelines', it becomes clear that it concerns no recipe, but rather a didactical-oriented help to plan, implement and reflect on intercultural education (Grimminger, 2009). Furthermore, openness and flexibility of the teachers are necessary principles for staging intercultural learning. But it must also be accepted that not every difference-based conflict can be solved through empathy, readiness to compromise and/or didactic creativity (Giess-Stüber, 2008a).

Table 1: Didactic guidelines on interaction with differences and strangeness in sport and physical activity

DIDACTIC GUIDELINES ON INTERACTION WITH STRANGENESS IN PHYSICAL EDUCATION	
GENERAL PRINCIPLES **A. Reflections on experiences of strangeness** - Reflection is crucial to turn experiences of strangeness into knowledge and understanding - Different strategies in dealing with strangeness must be recognized and examined by the teacher - Ensure that these intercultural competencies may also be applied outside PE **B. Equal participation** - Based on the participation of all students - Establish a climate where differences are acknowledged as equal - Opinions can be freely expressed and discussed	
1. EXPERIENCES OF STRANGENESS AS MOTIVE FOR LEARNING **- Encountering strangeness** - Experiencing situations which create feelings of strangeness - Modify familiar activities into something new and unfamiliar - New and unknown activities (e.g. from different countries) may be presented **- Self-relativisation: recognizing one's own ethnocentricity** - Recognize own identity and lifestyle as one of many - Create awareness and acceptance for the foreign - On the basis of activities from their own culture, this may be compared with variations from others **- Differentiation of the perception of the familiar and strange** - For individual guidance, we often form dichotomous categories (familiar vs. strange, we vs. the others) - Differences between categories are emphasized, while differences within groups are ignored - A balanced understanding of the own and the unfamiliar may counteract this **- Removing differentiation: recognizing cross-cultural elements** - A balanced understanding of own and foreign provides the opportunity to see universal or cross-cultural elements - Differences fade into the background and similarities come fore (e.g. playing different versions, cops and robbers) - The difference is no longer regarded as so strange as before	**2. THE CHALLENGE OF TEAM TASKS** **- Promotion of conflict management – learning through action, autonomy and openness** - Develop skills in conflict management and ability to negotiate - Provide scope for own decisions and actions - Discussion about movement situations - openness about solution strategies - Important with some limits - to help engage the students (e.g. develop their own games with assigned equipment) **- Conveying acceptance – enhancing identity** - Acceptance and recognition of the multiplicity of learning levels, styles and tempo - Acceptance can be conveyed in different ways (verbal / non-verbal assessments, teacher-student, student-student) - Even if motor achievement can give immediate feedback itself, the students need acceptance from a 'significant other' **- Conveying membership – enhancing identity** - Membership of numerous social groups should be supported - Sensitizes one towards different behavioral tendencies and rules irrespective of social situation **- Perception and overstepping the boundaries** - Overstep new boundaries, in meeting own uncertainty - Both new and unfamiliar activities, body contact and extreme sports may extend such limits

Note: *Based on Giess-Stüber, 2008a; Giess-Stüber & Grimminger, 2008a.*

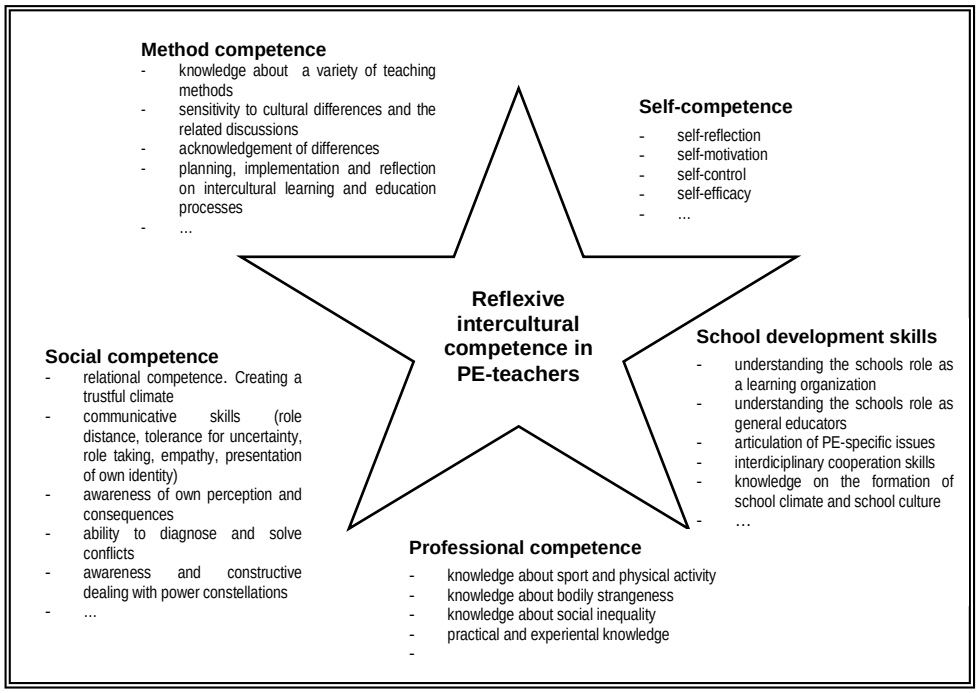
Through following these didactic guidelines for reflexive interculturality in PE, the perspective should not end with initiating sport situations just for the students to try out and develop situation-specific competencies. This could mislead the efforts into aimlessly doing things for the sake of doing something (Giess-Stüber, 2008a). Intercultural educational PE should ensure that these competencies can also be applied outside the methodically engendered situations. For this to occur, reflecting on experiences of strangeness and team tasks as a challenge play an important role. This seems vital, because only mental reflection turns the perceived and experienced into knowledge and understanding (Neuber, 1999).

Grimminger (2008, p.304) asserts that "if intercultural competence is a key competence for being a teacher in our modern society, then teaching staff require appropriate support and continuing advanced training". The intention of her teacher training concept is therefore the implementation of theory-evaluated opportunities to develop and promote intercultural competence through PE lessons (Grimminger, 2009). The rationale for selecting the content and methods to achieve desired goals is naturally derived from theory. However, teachers do not need to know all the details of the theoretical background. From the perspective of teachers, didactic and methodical principles seem more relevant. That is why priority must be given to the planning, arrangement and reflection of intercultural learning and to how the theoretically intended objectives in the teaching practice can be achieved (Grimminger, 2009).

Intercultural competence among PE teachers is mainly comprised of two components (Grimminger, 2008, p.305). First, it is the ability to deal constructively with differences, cultural multiplicity and the resulting uncertainties for pedagogic interaction. Second, it is a didactic and methodological competence to initiate intercultural learning within PE, to implement it and to reflect on it, with the concrete aim of encouraging a constructive dealing with strangeness (intercultural competence) among the students. These components can be classified, from a theoretical point of view, into the 'big five' teacher competencies (Miethling & Giess-Stüber, 2007); method competence, self-competence,

school development competence, professional competence and social competence. A detailed overview of these reflexive competencies in PE teachers is presented in fig. 2:

Figure 2: Reflexive intercultural competence in PE-teachers. The 'big five' teacher competencies



Note: *Based on Grimminger, 2009 p.57.*

As the figure shows, the concept of intercultural competence in PE teachers seems to be a complex model with a plurality of competencies and skills. However, possessing intercultural sub-competencies is not equal to acting in an interculturally competent way (Grimminger, 2008). According to the limited duration of her teacher training (4 hours), Grimminger focused mainly on method- and professional competence, because this seemed most important to prepare the teachers for initiate, implement and reflect on intercultural learning. Since behaviour patterns are determined from an interaction

between personal and situative parameters (Erdmann, 1988), the performance[9] of these different competencies of intercultural competence depend on a number of factors. Beside the factors from educational psychology such as fatigue or motivation, *power structures, educational beliefs,* and *acculturation attitudes* appear as central indicators in which actions are performed (Grimminger, 2009).

The *power structures,* as constituent of the school context and as a framework for action, are important for the realization of intercultural competence. School as a public institution assigns certain roles to the interacting individuals. In general, an asymmetrical power relation exists because the teachers are the ones mostly equipped with power resources and apply these towards their students (Erdmann, 1987). In situations of cultural overlapping, the power constellations between majority-minority and insider-outsider may come to light. These may often lead to conflicts resulting from an entitled and "inherited" right to decide, claimed by the majority or the insiders. This should also be taken into consideration in the realization of reflexive interculturality (Grimminger, 2009).

The concept *educational beliefs* partly encompasses the professional identity of teachers, but also includes the teachers' theoretical and practical knowledge, values and norms (Grimminger, 2009). Educational beliefs may be understood as convictions and perceptions of teaching and learning (Hartinger, Kleickmann & Hawelka, 2006). The distinction between the possession of knowledge and the performance of knowledge is central. Beliefs are eventually about controlling the selection, and which knowledge and strategies are to be used in solving the situations (Grimminger, 2009). Thus, educational beliefs may function as a framework for teachers' actions and may either enhance or limit the intercultural performance (Grimminger, 2008). For further details about educational beliefs, theoretical expectations and measurements see chapter 6.2.3.

[9] Performance in this sense is to be understood as the ability to initiate, implement and reflect on intercultural learning in PE, and the ability to deal competently with differences and strangeness.

Acculturation attitudes are perceptions of the relationship between majorities and minorities (Grimminger, 2009), and may be regarded as a group of beliefs on the theme of interculturality and immigration. These acculturation attitudes arise from the orientation of the respective group members with regard to two questions (Berry, Kim, Power, Young & Bujaki, 1989), and may be dichotomized depending on the objectives regarding the protection of own identity and how to approach the interaction.

Table 2: Acculturation attitudes as a function of objectives

ACCULTURATION ATTITUDES		- Is it considered to be of value to maintain cultural identity and characteristics?	
		Yes	**No**
- Is it considered to be of value to maintain relationships with other groups?	**Yes**	*Integration*	*Assimilation*
	No	*Separation/Segregation*	*Marginalization*

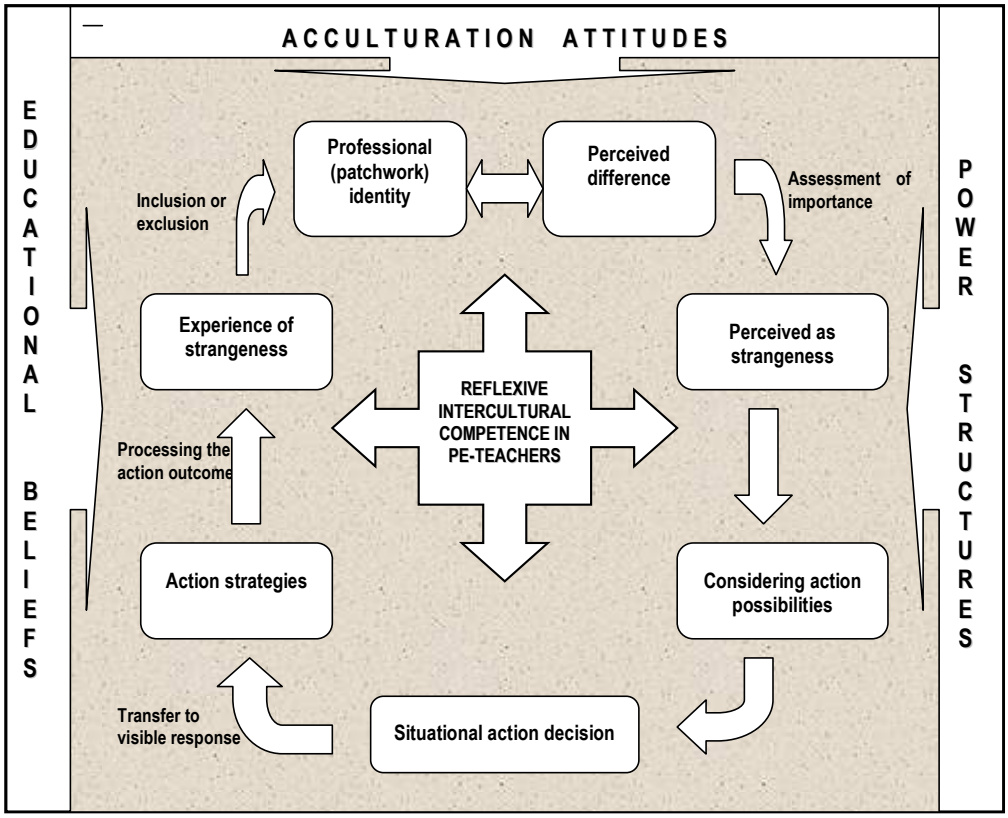
Note: *Berry et al. 1989, p.187*

The table above shows that attitudes either tend towards the minority adapting to the majority (assimilation), the minority being isolated by the wishes of the majority (segregation), or that all groups receive a certain degree of cultural integrity (integration) resulting in a combined and new cultural setting. Teachers who are assimilation- or segregation-orientated restrain the arrangements of intercultural learning, because their own orientation is taken as a norm for the basis of evaluation, and the adjustment to culturally heterogeneous classes is necessary (Grimminger, 2008). Integrative-oriented teachers will probably arrange intercultural learning in a pluralistic understanding of integration. The aim is a synthesis between own and foreign culture(s) which is perceived as enriching for all parts (Grimminger, 2008). For further details on expectations and the measurements of acculturation attitudes among teachers, see chapter 6.2.3.

Finally, to describe the interplay between reflexive intercultural competence, performance indicators, identity and how to deal with differences and strangeness, Grimminger (2009) offers an integrative concept and a model to understand these

relations (fig.3). This figure shows, in short, how differences may eventually lead to inclusion or exclusion, depending on the teachers' professional identity and the perceived importance of the differences. Moreover, it describes how the teachers' intercultural competence and the influence from the performance indicators affect the decisions of action strategies and the situational outcome:

Figure 3: Integrated model of reflexive intercultural competence of PE teachers with performance indicators and the interaction with strangeness



Note: *Based on Grimminger, 2009 p.64.*

The presented development towards a didactical approach for enhancing intercultural competence in PE teachers, derived from Grimminger (2009), seems to provide a solid base for a teacher training intervention in Norway. The question remains as to how this

content should be introduced to the teachers in order to make them inclined and ready to implement intercultural learning in their PE lessons.

3.3 CHALLENGES IN TEACHER TRAINING

In the educational system in Norway, teachers are considered the most important factor in the learning process of students (White Paper, *St.meld.* nr.31, 2007-2008). Undoubtedly, teachers are a significant factor to ensure that curriculum intentions are implemented into practice. However, it is important to bear in mind that schooling and teaching are not the only responsible context for initiating and developing all the competencies children and adolescents should acquire. Nevertheless, the school is an arena where almost everybody attends, and thus it seems like an appropriate goal that life skills should be emphasized and developed in this context. As a result, teacher interventions, such as promoting intercultural competence in PE teachers, are considered a valuable contribution for implementing the intentions of the curriculum.

Grimminger (2009) assumes that only interculturally competent teachers who themselves can handle constructively with cultural diversity, openness and insecurity are able to promote these abilities in children and adolescents. They must possess methodological competence in order to encourage, accompany and reflect over intercultural learning and educational processes within students. If the prerequisites for intercultural learning are not embedded in the organisational structure and ingrained in the teaching staff, then the conceptual approaches towards the systematic promotion of intercultural learning in PE will remain fruitless (Giess-Stüber & Blecking, 2008). Consequently, this subchapter will deal extensively with this key issue for implementation; teachers as agents for change.

Sercu and St.John (2007) address some important questions related to challenges in teacher development:

> How can teachers help learners acquire intercultural competence, if they are not intercultural learners themselves? How can they promote change in the skills and attitudes of their students, if they are unable to see a need for change in themselves? How can they encourage reflectivity among their students, without developing a capacity for critical reflection themselves?
> (Sercu & St.John, 2007, p.59)

From their point of view, it has become clear that for the teachers to operate as agents for change, teachers themselves needs to become achievers of personal and professional change. Which challenges are then to be met in the process of initiating changes and developments within the teachers?

According to Sercu and Raya (2007), the content and approaches teachers select in their classrooms are mainly determined by the teachers' *educational beliefs*. Changing teachers' educational beliefs therefore seems to be a prerequisite for changing teaching practice, and the understanding of these belief structures of teachers is important for improving their professional preparation and teaching practices (Calderhead, 1996; Pajares, 1992). Thus, in order to create changes in their practice, it appears essential to support teachers in reconsidering their educational beliefs and "to empower teachers for change" (Sercu & Raya, 2007 p.8).

However, the teachers' beliefs are considered "a messy construct", mainly because of the problems in defining it (Pajares, 1992). According to Rokeach (1968), all beliefs have a cognitive, affective and behavioral component. The cognitive component represents the knowledge, the affective component is capable of arousing emotions, and the behavioral component activates required action. Beliefs, attitudes and values serve as an individual's belief system. Attitudes may be seen as a group of beliefs around an object or situation predisposed to action, while values house an evaluative and judgmental function with an imperative to act (Rokeach, 1968). As a consequence of these underlying states, beliefs are difficult to directly observe or measure but must be inferred from what people say, intend and do (Pajares, 1992).

Pajares (1992) ponders over the fact that beliefs seem hard to change, and perhaps this is the reason why resolute investigators have given little attention to this domain. The early experienced and powerful beliefs seem to outweigh the clearest and most convincing evidence and contradiction, and once beliefs are formed, individuals have a tendency to build causal explanations round these beliefs (Pajares, 1992). In educational research, it seems that educational beliefs are quite resistant and difficult to change both among

teachers and teacher students (Sercu & St.John, 2007). Similar results are found in PE, where the previous experiences as learners in school are hardly changed through teacher education, and these pre-beliefs remain the most influential factor in personal teaching practice (cf. Templin & Schempp, 1989). However, even if teachers' beliefs may be hard to change, it is not impossible to change teachers' educational beliefs and teaching practice.

Sercu and St.John (2007) argue that educational beliefs *do* change over time, e.g. with growing expertise and through reflective teaching practice. Teaching experience is an important factor in the development of professional competence, and as a teacher gathers expertise, teaching decisions may be more and more intuitive and automated. Consequently, it seems probable that growing expertise and teacher development, surely, could change teachers' beliefs. However, as Beijaard and Verloop (1996) argue, these teachers' context-specific conceptions seem to stabilize, and make the teachers less open-minded towards new teaching practice. This could then presumably be a limiting factor in teacher interventions and the continuing education of teachers.

Reflective[10] *teaching* also has potential in changing teachers' beliefs and teaching practice (Sercu & St.John, 2007). Reflective teaching implies that change involves cognitive renewal, where new perceptions enable the teacher to move beyond existing thinking and make deeper understanding. But an important assumption is that this is done *by* the teachers and not done *to* them. According to Sercu and St.John (2007), this certainly requires a critically reflective approach, where the teachers are willing to reflect on themselves, and challenge and question their own convictions. These efforts imply an awareness of own beliefs and the ability to differentiate between those beliefs that are reliable and those less reliable (Sercu & St.John, 2007). But even if these beliefs are possible to change, what beliefs should be focused on in this cluster of knowledge, beliefs, attitudes and values?

[10] The terms *reflective* and *reflexive* (p.26) are introduced by different authors but are related. Reflective (Sercu & St.John, 2007) is mostly a cognitive renewal, while reflexive (Giess-Stüber, 2008a) involves a mindset which also includes emotions and self-understanding.

According to Pajares (1992), the term "educational beliefs" is broad and difficult to operationalize. Thus, it is essential to point out what the educational beliefs are *about*. As an example, Grimminger (2009) focuses on educational beliefs regarding to initiate, implement and to reflect on intercultural learning in school. Furthermore, she considers acculturation attitudes as a group of beliefs regarding interculturality and immigration. According to the importance of these teachers' educational beliefs, they might be considered as functioning as a major performance indicator within the implementation of intercultural learning.

If teachers are going to operate as agents for change, how teachers perceive their relevant/accordant skills becomes important. Bandura (1977a) introduced the concept of "self-efficacy beliefs", which may be seen as an individual's judgment of his/her competence in performing specific tasks within a given domain. According to Bandura (1997), these efficacy beliefs are formed by past performance accomplishments, vicarious experiences, verbal persuasion and physiological/emotional states. Most influential is the past performance accomplishments, and if the teachers view their earlier experiences as successes then self-efficacy beliefs will generally increase, while in the face of failure in similar situations, the efficacy beliefs will decrease. Another source which is important in our context is the verbal persuasion. The strength of the persuasive influence has been hypothesized to depend on the prestige, credibility, expertise and trustworthiness of the persuader (Feltz, Shorts & Sullivan, 2008). In this case, we see the importance that the educator in the teacher training, in addition to being interculturally competent, should be trained for being a good coach and verbal persuader as well.

The theory of self-efficacy has, moreover, been proposed as a cognitive explanation for differences in abilities to carry out challenging tasks, and suggests being one of the most influential psychological constructs mediating achievement and performance (Feltz et al., 2008). If this is so, then teachers' efficacy beliefs might shed light on their academic, social and professional inclinations and choices (Pajares, 1992). As a result, the teachers' self-efficacy beliefs regarding the implementation of intercultural learning could be added as a performance indicator. A common conceptualization of teacher self-efficacy is

that it refers to teachers' beliefs in their ability to influence valued students outcomes (cf. Soodek & Podell, 1996; Wheatley, 2005). On the basis of this construct, teacher self-efficacy may be conceptualized as individual teachers' beliefs in their own abilities to plan, organize and carry out activities required to attain given educational goals (Skaalvik & Skaalvik, 2007). Self-efficacy theory (Bandura, 1977a; 1995) is developed within the framework of social cognitive theory, and Feltz et al. (2008) have some thoughts regarding the role of individuals as agents for their own functioning in this context:

> In social cognitive theory, individuals are viewed as proactive agents in the regulation of their cognition, motivation, actions, and emotions, rather than as passive reactors to their environment. As agents, people use forethought, self-reflection, and self-regulation to influence their own functioning.
> (Feltz et al., 2008, p.4)

These considerations may be fruitful when comprehending teachers as the agents for change. They accentuate the importance for the implementation that the teachers feel competent and inclined to implement intercultural learning in their PE lessons. Bandura (1977a) proposed that efficacy beliefs are the primary determinant of people's levels of motivation to accomplish a specific goal, and this is reflected in the challenges they undertake, the effort they expend in the given activity, and their perseverance in the face of difficulties.

Bender-Szymanski (2000) has conducted a study on cultural diversity among PE teachers where self-efficacy was taken into account. The purpose of her research was to identify individual changes in novice teachers that occur in the process of interaction with pupils from foreign cultures. She identified two types of teacher strategies for coping with cultural diversity after a two years probation period in German schools;

(1) *Synergy-oriented mode:* Regarded experiences with pupils from different cultural backgrounds as personal developmental progress.

(2) *Ethno-oriented mode:* Consider it necessary for foreign pupils to assimilate the norms and rules of the dominant culture.

The novice teachers developed towards two different directions during their first two years of practice, despite the fact that all of these teachers reported as being synergy-oriented when finishing their teacher education. Remarkably, the teachers who were

considered ethno-oriented after the practice had an indication of decreased self-efficacy beliefs and resignation, while the synergy-oriented had an increased self-efficacy during this two year period. These relations were also pointed out by Grimminger (2009) and could be further investigated as a performance moderator in this study.

From this discussion it becomes evident that to be an agent of change, the teacher must become an achiever of change. Since intercultural competence is located between personal conviction and professionalism, the training should not only be skill-oriented, but must consider the person as a whole and their professional development (Grimminger, 2008). According to Grimminger (ibid), it is a matter of finding a balance between the teaching contents, the theoretical viewpoint, and the importance of personal circumstances, expectations, desires and interests, which may differ among participants. Sercu and St.John (2007) emphasize that teacher development initiatives must "involve teachers in targeting and tackling their own beliefs, so that the dimensions of their belief framework do not limit innovation, but, instead, support the ongoing renewal of professional practice" (Sercu & St.John, 2007, p.59). The question then remains, how the didactics of teacher education should support this renewal of professional practice?

In teacher training, learning should be understood as an extension of the teachers' action competencies (Grimminger, 2009). PE teachers, in the context of school-internal training, should develop a disposal for behavioral options and action possibilities for the implementation of intercultural learning in PE. Learning as experience-based education means, that after the learning process *may* learners behave, think, and act differently, but they are not obliged to do so nor demonstrate changed behavior. As a result, the teacher training is not about the placement of recipes - although this is often desired and expected by teachers - but is an assistance and aid for developing autonomous behavior (Grimminger, 2009). Action orientation and experience-based learning should represent central didactic principles of teacher development and teacher education. In this sense, Richards (1989) states important principles in order to enable teacher development interventions (cited from Sercu & Raya, 2007, p.9):

1. Teachers are not viewed as entering the program with deficiencies, but emphasis is on empowering teachers to become autonomous learners.
2. Educational and methodological theories serve as a starting point for reconsidering one's teaching practice, not as a doctrine to be adhered to.
3. The training must help teachers see particular aspects of their teaching, and the focus is on expanding and deepening awareness, on discovery and inquiry.
4. The programs are experiential and work bottom-up. Teacher input is fundamental, and areas for development are directly related to the teachers' own situations.

With these principles in mind, the importance of being a modest and educative guide on the teachers' premises seems vital. Furthermore, transfer effect towards students can only be expected if the training content is considered applicable and useful by the teachers involved. Grimminger's (2009) teacher training, regarding intercultural competence in PE, was based on the didactic principles of teacher training from Bartz, Mosing & Herrmann (2004), and had a principal participant-, practice- system- and scientific orientation in the planning and implementation phase.

Participant orientation means involving the teachers in the design of the training to ensure that the content is considered useful. In Grimminger's (2009) study this was achieved through focused interviews with PE teachers who where likely to participate in the training. *Practice orientation* guarantees the link between teacher training and school practice, while *system orientation* ascertains that the teachers learn that the implementation in school practice is possible. Grimminger (2009) tried to secure this with a link between theoretical input, didactical guidelines, practice examples and discussing practical implementation in day-to-day school practice. The essential issue was to show the teachers opportunities of how the new content can be addressed without further major effort under everyday school conditions. A *scientific orientation* connects the new content to the existing curricula, in the light of research and theoretical ideas (Bartz et al., 2004). And even if teachers do not need to know all details of the theoretical background for practical implementation in schools, it is important to integrate this into scientific discourse. They have to be convinced about the worth, value and goal of the training (Grimminger, 2009). They must be persuaded about the necessity of the training,

and be demonstrated its applicability into daily teaching practice. In order to promote intercultural learning, the PE teachers should be able to choose their teaching content and theoretically be able to justify the lessons (Grimminger, 2009).

3.4 PRACTICAL IMPLICATIONS FOR THE INTERVENTION IN NORWAY

Intercultural competence in PE teachers is conceived as a complex construct (Grimminger, 2008). Knowledge and didactical skill, personal attitudes and approaches, biographical experiences and pedagogical conviction of its effectiveness, seem to be important requirements for being able to break down unavoidable ambivalence and uncertainty in dealing constructively with differences and cultural diversity (Giess-Stüber, 2008b). Thus, the development of intercultural competence is never concluded, but must be understood as a never ending process of development. Strategies for changing the teachers into intercultural performers seem to require that the teacher themselves develops intercultural competence and intercultural sensitivity (cf. Burden et al., 2004; Grimminger, 2009).

The main objectives of Grimminger's (2009) training were (1) the acquisition of knowledge about conditions in the context of intercultural learning in PE, including its myths and opportunities and the phenomenon of (bodily) strangeness and (2) the teachers should be qualified for planning, implementing and reflecting on intercultural learning processes in PE. In addition, she emphasized the performance indicators; educational beliefs, acculturation attitudes and power constellations. Because of her school-internal teacher training concept, with a maximum of four hours, she was not able to focus on more aspects of intercultural teaching competencies. Furthermore, this chapter presents some of Grimminger's (2009) main findings and suggestions for improvements that made some practical implications for this thesis' intervention.

The quantitative findings from the teacher survey indicated that the PE teachers see themselves as being more competent on intercultural issues after the course, i.e. they feel more competent to plan, to implement and to reflect on intercultural education in their PE classes (Grimminger, 2009). Also, the performance indicators defined in theory were

mostly changed in the theoretically anticipated direction to increase the likelihood of staging intercultural learning in PE. In summary, the *educational beliefs* averages shifted towards a performance enhancing direction, and scepticism about the effectiveness of intercultural education was reduced. The *acculturation attitudes* did not show such clear conclusions as those relating to educational beliefs. Regarding emphasis on power structures in her theory, this was not directly measured, but was an important aspect to focus on in the training, e.g. because of the possible influence these power relations have in learning situations (Erdmann, 1986; Cothran & Ennis, 1997).

The teacher interviews, conducted four to six weeks after the training, pointed out that the training concept was regarded as useful in the day-to-day school life for the PE teachers, and their own experiences of practice seem to have a sensitizing and promoting effect regarding intercultural issues (Grimminger, 2009). The changes in the performance indicators in the quantitative findings could not explain to what extent the teachers had implemented intercultural learning in PE. Only through the qualitative interviews it became evident that the implementation did not depend primarily on the teachers' development of competence during the training, but rather on the structural, organisational and personal skills as framework for performance.

Similarly, Sercu (2007) found that by far the most mentioned reason to not teach intercultural issues in foreign language teaching was lack of time. The same results are to be found in PE in Norway, where the PE teachers report a clear disparity between curriculum intentions and the amount of time that the subject is assigned (Jacobsen et al., 2001; Mamen et al., 2002). Thus, it seems essential that the content of the teachers' development is easily to be implemented in the already existing teaching practice.

According to Erdmann (1988), results can only be interpreted meaningfully for future applications when a theoretical conception precedes the empirical process. Grimminger's (2009) results illustrate the importance of a theoretical foundation for teacher education concepts, where theory is continually related with practice. However, in her evaluation of the teacher training, Grimminger (2009) points out a number of factors to improve, and

suggestions for further examination and development of the conception. These concluding remarks could be divided into two main categories; (1) developing the teacher training approach, and (2) research perspectives and questions raised in this context. These are suggestions for further examination and development of the training concept (Grimminger, 2009, p.117, 153-154).

Table 3: Suggestions for further examination and development of the teacher training program

SUGGESTIONS FOR FURTHER EXAMINATION AND DEVELOPMENT OF THE TEACHER TRAINING	
(1) Developing the teacher training concept:	
o At least **two more thematic events** should take place in the teacher training o Teachers requested **more practice**. o The teacher training needs **stronger links between theory and practice.** o Teachers need more practice in **how to conduct and manage the reflection questions with students**	o Teachers request more cross-disciplinary focus and examples of activities o Course **must fulfill the frameworks already given in PE**, for instance in terms of hours per week. o More about difficulties that typically arise in the meeting with specific cultures o A website could be established
(2) Research perspectives and questions:	
o Develop the teacher training approach under different conditions to test and review its strengths and weaknesses o For further statistical coverage of the effectiveness of the training approach, create the need for the same training approach in a quasi-experimental design with a population. o The results pose the question as to whether an ethnic-oriented behavior is the result of Burnout-symptoms, which originate on account of low self-efficacy beliefs. This interaction is in other studies to be reviewed. o In the perspective above should an investigation with teachers be carried out to review the empirical relationship of identity (self- concept, self-esteem, self-efficacy, self-motivation) and how to deal with strangeness. o Further research could develop facets of intersectional competence or an interdependent competence, for instance a competence for the constructive dealing with the interdependent social categories of gender, social status and ethnicity. o **Which effect the reflexive intercultural teaching has on the development of intercultural competence in children and adolescents still remains open. The empirical verification of the assumed effectiveness is a responsible and forward-looking task of Sport Pedagogy** .	

Note: *Based on Grimminger, 2009, p.117, 153-154; author's highlights in bold*

In table 3, some of the features are highlighted, meaning that these aspects are taken into specific considerations for the improvements of the intended teacher intervention in Norway. In this way, the findings and perspectives from Grimminger (2009) give some practical implications for the training, and thereby give consequences for the research design of this study. The most important improvements will be an increased amount of thematic events, more focus on practice with its links to theory, and extended training in how to manage the reflection situations with students. Due to the limited amount of time in PE, it is also important to present the content in regard to the organizational framework already given in this context. Furthermore, the effectiveness of the teacher training is tested under Norwegian conditions, to test and review its strengths and weaknesses. But most important, the question regarding the assumed effectiveness of intercultural teaching towards adolescents should be tested for empirical verification in this study.

In addition, focusing on the same factors as Grimminger, such as educational beliefs and acculturation attitudes, it seems appropriate to examine the importance of teachers' self-competence and self-efficacy beliefs and how this affects the teachers' dedication, performance and implementation of intercultural learning. For these intentions the developed Norwegian Teacher Self-Efficacy Scale (Skaalvik & Skaalvik, 2007) may be an important contributor. They found strong support for six separate dimensions of teacher self-efficacy, which will be discussed further in the methodological considerations (see chapter 6.2.3).

However, the main objective is for the teachers to be able to implement and transfer their competence towards the students. Thus, it is crucial to ensure that the teacher training has a good quality under Norwegian conditions as well. In the next part some extended discussions on the development of relevant outcomes among students and how to conceptualize this will be presented.

4 THE DEVELOPMENT OF RELEVANT OUTCOMES AMONG STUDENTS

In order to develop students in such an intervention, one has to be able to grasp which facets are important in the meeting with differences and strangeness for the students. In his doctoral work, Esser-Noethlichs (2010) concentrated on investigating mechanisms of perceptions and attributions of differences and strangeness, with the major goal of developing a theory-based measuring instrument in the realm of intercultural learning approaches. This instrument is developed on the basis of the theoretical work of "intercultural movement education" and "intercultural education within and through sports" (Erdmann, 1999a; Giess-Stüber, 2005a), and is aimed to be a important indicator in order to evaluate training programs with respect to increased sensitivity towards differences and strangeness. As a result, a major part of the theoretical and methodical considerations regarding the conceptualization (chapter 4.1.1) and the operationalization (chapter 4.1.2 and 6.3) of students' intended outcomes is in line with his work (Esser-Noethlichs, 2010).

4.1 SENSITIVITY TOWARDS DIFFERENCES AND STRANGENESS (STDS)

As presented earlier (chapter 2.2 and 2.2.1), *difference* and *strangeness* are key elements within intercultural learning. Hence, the sensitivity towards differences and strangeness among students is assumed as an important indicator of the targeted development. Esser-Noethlichs (2010) describes this *sensitivity towards differences and strangeness* (STDS) as a multifaceted construct referring to perceptions of difference and strangeness, as well as to a competence of dealing with perceived differences and strangeness constructively. Being sensitive in this context is understood as meeting differences and strangeness consciously and with consideration (Esser-Noethlichs, 2010).

4.1.1 CONCEPTUALIZATION OF STDS

In this matter, it needs to be differentiated between the "*sensitivity*" and "*sensibility*" towards differences and strangeness. Sensitivity stresses a more thoughtful and considerate approach, and is associated with perceptiveness, understanding, insights, empathy and awareness of the feeling of other persons. Sensibility, on the other hand, is

more understood as being a kind of hyper-sensitivity, and may primarily be associated with defensiveness, overloaded negative/positive emotions or touchiness. Thus, this intervention primarily intends to develop an intercultural sensitivity, not sensibility, among students (and teachers).

Moreover, sensitivity is related to *openness*, which is often a prerequisite for learning something new. In our context, openness is considered an attitude towards perceived differences and strangeness. This attitude of openness implies receptivity to new ideas, behaviors, cultures, people, environments, experiences, etc., which are perceived as different from the familiar, conventional ones or from one's own perceptions and understandings (Esser-Noethlichs, 2010). Thus, "openness" is assumed as a relevant facet in order to achieve better mutual understanding within social and intercultural interactions.

Sensitivity towards differences and strangeness is considered a multifaceted construct with the *attribution* or the *perception of difference* as its starting point, which might lead to perceptions of strangeness. When the difference is difficult to understand and consequently related to feelings of uncertainty, then something or someone is perceived as strange. However, this perception of strangeness appears confusing because these experiences are difficult to categorize and arrange into existing cognitive patterns (cf. Auernheimer, 2005). The lack of information creates uncertainty, and personal experience with strangeness should contribute to the development of empathy and more differentiated insights and understandings about strangeness as a social construction (Esser-Noethlichs, 2010). Dealing further with strangeness helps to clarify or even change our picture of the perceived stranger, and might re-construct the "new" or "unusual" into the "familiar". This process might be associated with the process of accommodation, following the terms given in Piaget's learning theory, and which demonstrates the principle of dealing with strangeness in a constructive sense. Assimilation, the first step in Piaget's learning theories, adapts the perceived outside world into the existing cognitive structures without changing them, while accommodation is understood as the cognitive process where a re-arranging of existing cognitive

structures takes place. According to the analogy above, the perception of difference might be more related to Piaget's process of assimilation, while perceptions of strangeness and attempts to deal with strangeness seem to be related to accommodation (Esser-Noethlichs, 2010). Table 4 presents sub-facets of sensitivity towards differences and strangeness, and introduces some practical implications related to these:

Table 4: Facets of STDS and practical implications (Esser-Noethlichs, 2010)

Facet of STDS	Practical implications
Perception of differences	- Noticing the difference - Starting point for experiences of strangeness - Awareness of various perception and attribution patterns
Experiences of strangeness	- Empathy for being perceived as a "stranger" - Willingness to accept the implicit uncertainty and deal with it constructively - Appreciation of differences and strangeness
Personal meaning	- Willingness or (intrinsic) interest in dealing with differences and strangeness in more differentiate ways - Supportive of an attentiveness within interactions
Openness/ open-mindedness	- Dominance of data-driven perception - More careful and more differentiated interpretations of the object of perception
Self-relativism	- Learning to accept and respect differences or otherness - Critical reflections about judgmental tendencies when dealing with differences and strangeness - Support of openness and empathy for "otherness" or for being perceived as different
Awareness: Basic knowledge and insights about the social construction of differences and strangeness	- Promotion of a more rational conflict management

As the table shows, the sensitivity towards differences and strangeness (STDS) consists of multiple facets, and every experience within each facet has some practical implications for the individual development in this context. The further operationalization of the sub-facets of the sensitivity towards differences and strangeness are presented in the method section of this thesis (chapter 6.3.1, p.79)

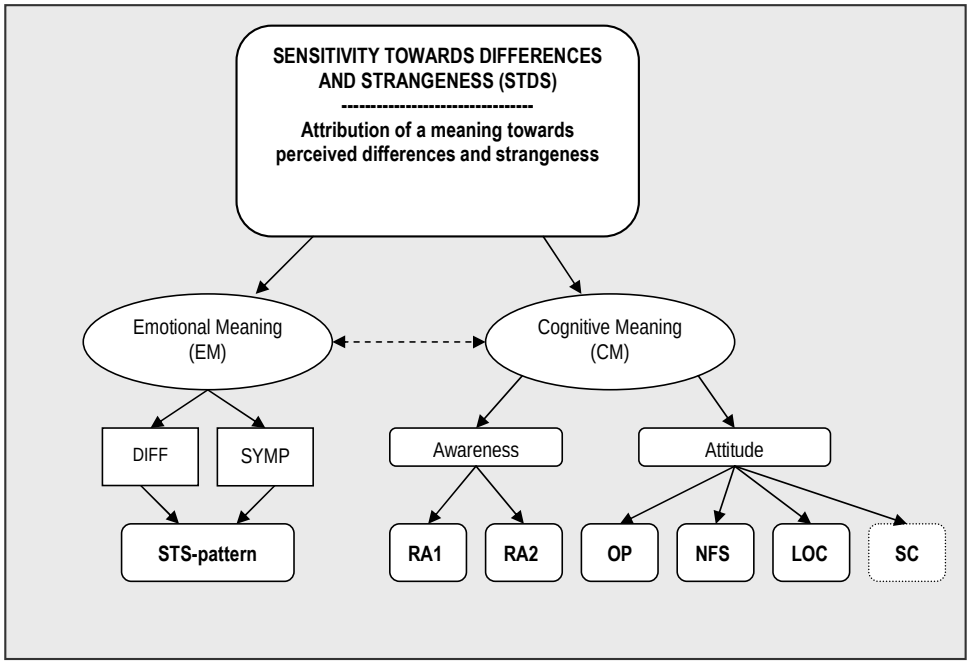
4.1.2 OPERATIONAL MODEL OF STDS

The purpose of the operationalization is to derive observable and representative indicators out of theoretical assumptions (Kleven, 2002). Thus, the arguments of the operational model are based on the conceptualization of sensitivity towards differences and strangeness (chapter 4.1), and the measurement device and item pool are further discussed in chapter 6.3. According to Esser-Noethlichs (2010), the general structures and patterns in the way people deal with differences and strangeness are assumed to show some stability. The focus of operationalization therefore needs to be put on the inter-personal or more general aspects such as feelings and understandings of differences and strangeness. This includes uncertainty, related attitudes and understandings of intercultural structures leading to perceptions of differences and strangeness. The purpose of the operational model is to structure the relevant dimensions and facets of the constructs into possible relevant indicators. The attributed meaning towards perceived differences and strangeness is expected to help developing indicators for this measurement, and is structured in two dimensions (Esser-Noethlichs, 2010):

1. The attribution of an emotional meaning (EM)
2. The attribution of a cognitive meaning (CM)

The dimensions are linked with each other but separated for analytical purposes in order to develop a structured item pool. Furthermore, as figure 4 shows, the cognitive dimension is separated in two sub-facets; awareness and attitude. This is because the respective items are referring more to cognitive aspects than to emotional dimensions. However, regardless of the operationalized structure, it is important to bear in mind that the two dimensions will probably interact within a strangeness related situation.

Figure 4: Operational model of STDS



Note: *DIFF: Difference, SYMP: Sympathy, STS: Sensitivity towards strangeness, RA1-2: Rational Argumentation/Attribution, OP: Openness, NFS: Need for Security, LOC: Loss of Control, SC: Self-concept)* (Modified after Esser-Noethlichs, 2010, p.49)

When intending to measure an attributed emotional meaning, *difference* and *sympathy* are expected to represent relevant dimensions for an operationalization of an emotional evaluation of perceived differences (Esser-Noethlichs, 2010). People assign differences in order to demarcate themselves from others, and the dimension of difference could be used as a demonstration of feeling different or similar to another person. This demarcation is made because it is meaningful for the person. On the other hand, an obvious demonstration of similarities with another person could indicate that the person is a significant other in the sense of social affiliation. Being neutral on this matter shows that the person or situation is of lesser personal relevance. The dimension of "sympathy" is intended to indicate whether the object of perception is perceived in a positive or negative way. This personal meaning indicates a "willingness" to deal with the perceived

person or situation. A positive emotional meaning in the willingness to get to know the other person represents a higher attribution of sympathy, while the opposite, being negative indicates less sympathy towards the object of perception. The scoring on both dimensions provides a possibility to be combined in an STS-pattern (sensitivity towards differences and strangeness), which indicates an emotional feeling of difference, together with a willingness to get to know that person in spite of the differences. This moderate, but principally positive judgment of perceived differences and strangeness indicates a sensitive attributed emotional meaning. Sensitive in this sense is here understood as a way of better controlling one's own feelings when dealing with differences and strangeness (Esser-Noethlichs, 2010). Exaggerated or overwhelming emotions are more a bias which may further provoke irrational and unfair judgment of other persons or social groups. These emotions could lead to patterns in the attributed emotional meaning which could indicate the phenomena of exotiscm (very positive) or xenophobia (very negative).

Emotional attributions may be evaluated and controlled by cognitive procedures, for instance when people try to understand other persons' behavior even though they lack information about the stranger. This attribution of a cognitive meaning towards differences and strangeness may provoke misunderstandings and conflicts. A more rational way of dealing with differences is to be more sensitive towards stereotypes and prejudices, and hence rationality may help one maintain better control of handling difficult emotions such as uncertainty (Esser-Noethlichs, 2010). Causal attributions often vary in rationality, and an *awareness* of hypothetical argumentations and attribution strategies (RA1-2) may indicate a potential sensitivity towards differences and strangeness. The span of different rationality levels in causal argumentation strategies related to persons and situations is supposed to differentiate between different levels of STS (Esser-Noethlichs, 2010). Dealings with feelings of uncertainty in a more rational way require a balanced development of the identity, and furthermore *attitudes* are important because they represent parts of our identity. Attitudes may be understood as "the learned, relative stable tendency to respond to people, concepts and events in an evaluative way" (Zimbardo & Gerrig, 2002:550), and attitudes are usually related to cognitive, affective, and behavioral aspects (Esser-Noethlichs, 2010). Measuring relevant

attitudes as openness, need for security, loss of control and self-concept may give information about students' potential capacity for tolerating and dealing with related uncertainty in a constructive way.

The presented main facets of the operational model (figure 4) are understood as latent constructs, as underlying assumptions. Chapter 6.3.1 (p.79) presents the item pool and the measurement device in detail. This also includes the process of adapting the questionnaire into a Norwegian version.

4.2 PEER GROUP RELATIONS AND LEARNING ENVIRONMENT

A learning environment inclined towards intercultural learning should be based on equal participation, acceptance and membership (Grimminger, 2009). Ommundsen and Lemyre (2007) express that a learning environment includes how the teacher interacts with the students and how the teacher communicates the content and the educational values. This learning climate may enhance or limit the students' outcomes and achievements.

As discussed previously (p.21), two human basic needs of identity development emerge in such learning environments; *acceptance* and *membership* (Taylor, 1994). Social membership is fundamental for experiencing acceptance (Keupp et al., 1999). Every individual unites several memberships. Different situations activate different memberships and the suitable values and norms of the respective group. Consequently, every individual can take the status of the outsider or insider according to the situation and group constellation. Missing acceptance do not only complicates a succeeding identity work, but may bring this to failure (Grimminger, 2008). The "battle of acceptance" (Honneth, 1994) at a personal and social level becomes increasingly relevant and also more uncertain. Individuals are responsible themselves for the construction and stability of their social network. On that account they need relational- and alliance capabilities. Indeed, material and cultural resources determine the size of the "social capital", so social disparities in the economic area affect the individual level of the identity work. The ability for negotiating as a further identity resource is a prerequisite to master the variety and diversity in all social environment relations. It is a matter of

always negotiating new rules, norms, purposes and ways of living (Grimminger, 2008). In addition, the individual should develop sensitivity, self-reflection, solidarity, ability for conflict management and open-mindedness for ambiguity (Keupp et al., 1999). Keupp et al. (ibid) considers these characteristics as basic for a successful identity development, through experience and exploration of people and situations, instead of dejecting them with unclearness and vagueness.

The realization, representation, acceptance and accreditation of identity is to be found in social (power-specific) relations (Keupp et al., 1999), such as in a learning environment in school. In addition to the power relations between insider and outsiders, there is also a power asymmetry between the teacher and the students in the classroom. Cothran and Ennis (1997) discuss these power relations between teachers and students in PE. Their results show that the teachers are not the primary power holder in the classroom, and that students and teachers share control of the learning environment. Teachers feel their power has eroded, and they settle for an environment that maintains order rather than educational focus. These power structures between teachers and students seem to be affected by the teachers' ability to create trustful and motivational learning climates. But power relations function between different subgroups. In a learning environment both teaching structure and peer interaction seem important. And for the students to intervene and solve conflicts, it is vital that teachers allow them to do so. A sociometric group investigation of student relations is planned to grasp the essence of peer relations in each classes' learning environment in PE (for further details on sociometric measurement, see chapter 6.3.2).

4.3 CHALLENGES IN DEVELOPMENT AMONG ADOLESCENTS

The development of intercultural competence among adolescents requires that students should be able to reflect consciously about the learning process and own personal identity. Pubertal changes surely affect much of the development in early adolescence, but according to Kroger (2000), the rate of biological change for both genders declines by the age of 15 to 16, in the start of mid-adolescence. The strategy for an intervention for intercultural learning purposes could therefore be suitable for 16-18 year old students.

This student age group is represented in upper secondary schools in Norway, and should be a natural target group for this thesis intention. In addition, mid-adolescents move more towards participation in community roles, focus attention even more on the peer group, and the bodily changes are no longer the source of great apprehension or anxiety (Kroger, 2000). The latter argument concerning bodily changes should be considered of special importance in a subject like PE. On the other hand, it must be noted that for some students, observable pubertal changes are just beginning in the 15- to 17-year-old age span. So there is no doubt that there will be much individual variability in an upper secondary classroom, but not as frequently as in the early adolescents. For the students, girls show more accelerated pubertal changes (e.g. growth spurt) compared to boys. In spite of this, few differences have been found dependent on gender when measuring intercultural sensitivity among adolescents (Hammer, Bennett & Wiseman, 2003).

In Norway, The Knowledge Promotion Reform (KPR), a comprehensive curriculum reform, was introduced in autumn 2006 (see p.1). The reform covers primary school (ages 6-13), lower secondary school (ages 13-16) and upper secondary education and training (ages 16-19). Norway has a relatively uniform upper secondary school, where students choose either general studies or vocational training. Inside these main paths there are many sub-paths to follow. General studies and vocational training are offered side by side, often in the same school building. Everyone between the ages of 16 and 19 has a statutory right to three years' upper secondary education leading either to higher education, or to vocational qualifications. The age group between 16 and 19, where many of the adolescents are past their pubertal changes, and most of them are still enrolled in the public school system, are therefore considered well suited for intercultural learning approaches.

5 RESEARCH DESIGN

In line with the presented aim of this study, the main intention of this chapter is to present this study's research question and design. At first, some methodological considerations on applied field research are made (chapter 5.1), following the introductory remarks given in chapter 1.2 (p.6). Furthermore, this chapter includes the research question and main expectations (chapter 5.2). This includes a model illustrating the theoretical framework and the basis for the intervention. This model also intends to function as an initial tool for analysis in the results and discussions, and some theoretical expectations in students' outcomes are outlined. Finally, this chapter gives an overview of the controlled intervention research design used in this study (chapter 5.3).

5.1 PRELIMINARY CONSIDERATIONS ON APPLIED FIELD RESEARCH

For the application-oriented empirical science, the field research can be regarded as paradigmatic (König, 1979). The empirical research in the field focuses probabilities in contrast to causal logic in closed settings, such as in mathematics or philosophy. The objective of applied research is to improve the situation in the field (Phillips, 1987), and this requires a sequence of studies, which are gradually improved and modified step by step (Erdmann, 1988). Theoretical concepts/assumptions are needed to construct different sequences of testing and develop measurements, and to conceptualize applications in the field. Through field research one examines whether these assumptions function as expected.

In order to examine the theoretical assumptions, empirical measurements are required. However, most of the examined terms in social science and in this study, are hypothetical, and cannot be measured directly (Kleven, 2002), e.g. sensitivity, attitudes, beliefs They require theorizing/modeling to gain explanatory value on the one hand, while on the other hand becoming concrete and possible to be measured in studies (Erdmann, 1988). That because core assumptions of the models are usually not directly testable (Cronbach & Meehl, 1955). Moreover, the more complex the data and the more diverse the statistical processing is, the more likely that these transformations will be

significant sources of error (Erdmann, 1988). Discussions on construct validity can be perceived in a similar direction. Construct validity refers to the consistency between the theoretical definition of the concept and the measurement of the expected outcomes within the concept (Shadish, Cook & Campbell, 2002). The measurement, or the operationalization of terms, consists of choosing indicators which in the best possible way represent the concept (Cook & Campbell, 1979), i.e. in our context the measurement of the (1) sensitivity towards differences and strangeness and (2) peer group relations among students. These are meant to be indicators of the students' intercultural competence.

The empirical testing of assumptions should be done by selecting samples/groups which are relevant. In educational research this often implies using already existing groups, such as classes in school. However, empirical research in such complex fields shows numerous variables which may bias the results. A control group design shall reduce biases in the measurements by detecting compatible parallel groups. By parallelization, one controls the possible influencing variables even if one does not know them. In applied research one never knows all facets that might play a role. For better control over the circumstances in the field, Erdmann (1988) suggests small sample studies. These could be rather economically and easily conducted in the field, and could be modified and included in a sequence of testing. This flexible and progressive approach to empirical testing of theoretical assumptions pays its tribute to the complexity and variability of the field.

If empirical testing is based on theory it is possible to formulate questions that decide on indicators and measurements. However, even if they are theory based, one cannot assume that such measurement scales have strong power. They only bear some assumptions about construct validity and might not have been properly developed and tested. The use of different operationalizations and measurements on the same concept could improve the construct validity (Messick, 1995). Thus, a combination of several measurement scales/indicators could be conducted. If they are based on a common theory their results should be *consistent* in the expected direction (Erdmann, 1988). One might also look for

convergent and divergent paths and relationships between the scales, which are also in line with the assumptions. Such consistency in the assumed relationships between the measurement scales also indicates that assumptions function as expected.

The aim of these measurements of indicators is the consistency in the results, not the level of significance and the amount of explained variance. Hence, the primary criterion for determining the quality of a finding is the consistency of various theoretically rectified methods/studies. So, if the theoretical hypotheses are clear, even consistent results and tendencies in the theoretically anticipated direction would give practical hints for effect. The more frequent one finds consistent results in different samples or with various methods, the more likely one's assumptions become, which may justify its practical application (Erdmann, 1988). Thus, a common power analysis will not be an appropriate indication of the strength of such study. If the results show this consistency within several methods and studies, the assumptions thereby become gradually validated. In this field study, it was therefore decided to have a multi-method approach with quantitative and qualitative data consisting of surveys, self-reports, and interviews. These were gathered in order to have various indicators within the process of intervention. If these data from different scales and operationalizations among students (and teachers) are *consistent* with the expectations, it can be seen as strengthening the theoretical assumptions.

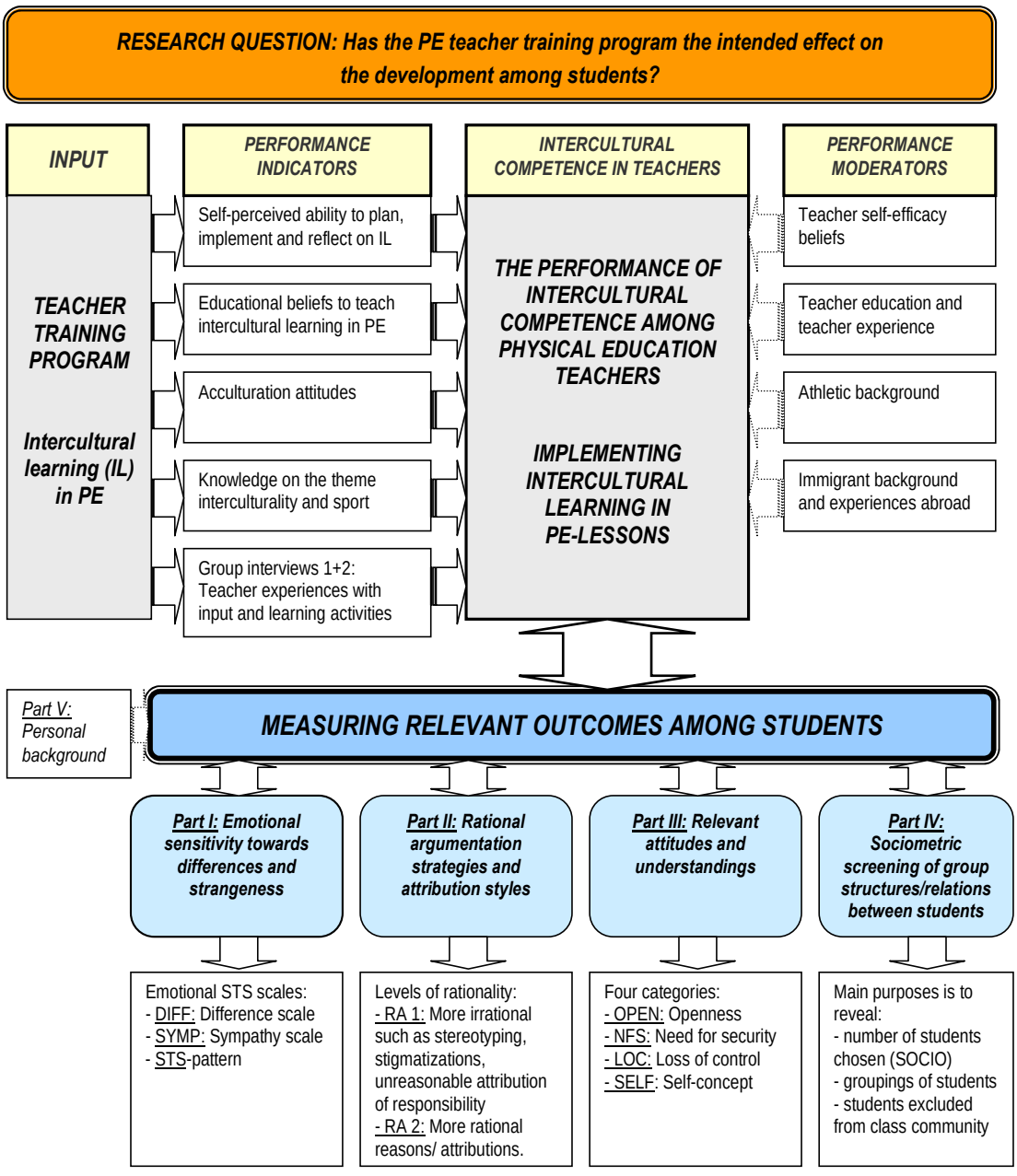
5.2 RESEARCH QUESTION AND EXPECTATIONS

The first part of my project is to adapt the teacher training program from Grimminger (chapter 3.1) to Norwegian conditions and implement this in upper secondary schools. Such on-the-job training gives teachers a theoretical conception, along with practical experiences, activities, lectures, discussions and reflections which intend to enhance intercultural competence among teachers. The main part consists of examining whether the PE teachers attending the training program carry forth their (intercultural) competence to the students, and the research question for the study is: ***Has the training program the intended effect on the development among students?*** We should recall that the question is whether an effect of the measures can be found, and not how general it can

be assumed. The question is whether the teacher training has the expected effect on the students. The focal point in the effect/outcome measurement is the relevant and intended outcomes among students outlined in theory (cf. chapter 4). The PE teacher training program is the one developed by Grimminger (2009) and adapted into the Norwegian context. The effect of the development in students is measured through the questionnaire developed by Esser-Noethlichs (2010), and in addition a sociometric measurement of group relations. Further discussions about the operationalization of terms and these measurement procedures will be conducted related to the research design (chapter 5.3) and methodological considerations on measuring the outcomes among students (chapter 6.3).

To illustrate the relations between the theoretical terms and the basis for intervention, figure 5 presents a theoretical model which found the basis for an analytic framework for the results and discussion of this thesis.

Figure 5: Overview and theoretical model – Intercultural learning in PE



The upper section in figure 5 illustrates the teacher part of the intervention. The training focuses on making the teachers aware of intercultural learning processes, and intends to get the teachers to be willing to implement it in their PE lessons. In order to examine teachers' outcomes and to assess and control the training, performance indicators and possible moderating variables will be measured. Main performance indicators are: (1) self-perceived ability to plan, implement and reflect on intercultural learning, (2) educational beliefs regarding intercultural learning, (3) acculturation attitudes, and (4) knowledge on the theme interculturality and sport. In addition, during the intervention, group interviews with the teachers may contribute to understand and explain some of the performance and implementation towards the students. This is especially related to teacher experiences with input and student activities. This could indicate how inclined the teachers are to implement intercultural learning in their classrooms. On the right side of the figure, some performance moderators are suggested, also in line with theoretical expectations. The further operationalizations and measurements concerning performance indicators and moderators are outlined in chapter 6.2.3.

The outcomes among students, represented by the lower section of the model (fig. 5), will be measured through four main areas; (1) emotional sensitivity towards differences and strangeness, (2) rational argumentation strategies and attribution styles, (3) relevant attitudes and understandings, and (4) sociometric screening of group structures and relations between students. This will be further outlined in the operationalization of intercultural sensitivity among students in the next part (chapter 6.3), but the main theoretical expectations for this group are:

- Increased sensitivity towards differences and strangeness
- More rational reasons/attributions in their argumentation and attribution styles
- Relevant attitudes will be affected in a positive manner, such as more openness, improved self-concept, less need for security and more comfortable in the loss of control situations
- A more including learning environment shown through changed group relations in the classes. Fewer students falling outside class community.
- More coherent choices among students

In order to investigate these expectations, the planned field intervention must focus on the relevant aspects. Both students and teachers have corresponding control groups in order to measure these expected outcomes. The research design of this study is further outlined in the next chapter.

5.3 RESEARCH DESIGN

The research design is a quasi-experimental pre-post control group design, which intends to measure relevant effects in outcome variables among the students in the teacher training intervention group. Below is an overview of intended inputs and measurements among students and teachers in this intervention.

Table 5: Research design – Intercultural learning in PE

		JANUARY - FEBRUARY 2010		MARCH 2010			APRIL 2010
T E A C H E R S	**IMPLEMENTATION OF GERMAN-DEVELOPED TEACHER TRAINING** **CONTROL GROUP COMPARISON**	**PRETEST** Survey to intervention group (n=16) and control group (n=10)	**TEACHER TRAINING** Input 1: NIH (3,5 hours) Input 2: In the intervention schools (2,5 hours)	3-4 weeks	**TEACHER TRAINING** Input 3: In intervention schools (2 hours) **FOCUSED GROUP INTERVIEW 1** At each intervention school (n=5)	3-4 weeks	**FOCUSED GROUP INTERVIEW 2** In the intervention schools, teacher evaluation (n=5) **POSTTEST** Survey to intervention group (n=16) and control group (n=10), included teacher evaluation to intervention group (n=16)
S T U D E N T S	**MEASUREMENT OF STUDENTS' OUTCOMES** **CONTROL GROUP COMPARISON**	**QUESTIONNAIRE PRETEST (T1)** Survey (STDS) and sociometric measurement of intervention group (n=411) and control group (n=265) T1 response rate: I-groups n=365 (88,8%) C-groups n=213 (80,4%)					**QUESTIONNAIRE POSTTEST (T2)** Survey (STDS) and sociometric measurement of intervention group (n=365) and control group (n=213) Both T1 og T2 responses: I-groups n=306 (83,8%) C-groups n= 172 (80,8%)

The upper section (white rectangles) in table 5 indicates the teacher part of the intervention, with the adaptation, implementation and process assessment of the teacher

training. Basically, it consists of 3 thematic events (inputs 1, 2 and 3, see appendix 10), where the two first inputs are theoretical and practical events regarding intercultural learning. Input 3 is no specific input, but more encouraging, reinforcing and enhancing the original inputs towards the teachers. In addition, to control for the training outcomes among teachers, pretest and posttest survey, two focused group interviews during and after training, and one evaluation questionnaire are conducted. The pretest and posttest survey is carried out among the control teachers. The total length of the intervention is approximately 3 months, lasting from the end of January until the end of April. The additional and supplementary part was to measure the outcomes and experiences of those teachers participating in the training. This process assessment of teachers was done in order to control the teacher training and to contribute to a more comprehensive understanding of the results among students. For more details concerning teacher recruitment and teacher training intervention, see chapter 6.1 and 6.2.

The teachers' data were collected due to the two steps included in this pilot study; adaptation of the program, and testing its effect among students. The main part, represented by the lower section, (grey rectangles in table 5) illustrates the measurement of expected outcomes among students. The intention was to investigate possible effects as a result of the teacher training. Intended effects/outcomes among students were measured through quantitative surveys and sociometric measurement at baseline (T1) and post-intervention (T2), in comparison to the control group. These measurements were conducted before and after the training, and the period between T1 and T2 was approximately 3 months. More details regarding students' measurements are outlined in chapter 6.3. The detailed description of the planning, implementation and methodological considerations regarding the intervention procedure follow.

6 INTERVENTION PROCEDURE

6.1 INTERVENTION SAMPLE – SELECTION AND RECRUITMENT PROCESS

When the participants of the study are not randomly assigned, the procedure is called a quasi-experiment. In order to recruit students, their teacher was considered as the key to getting access to the students. Hence, the selection of the intervention sample focused on the recruitment of schools and teachers, and this would lead to a linkage from the teachers to recruit student participants.

The challenging recruitment process of schools and teachers was a complex task. In comparing several schools, one must strive towards relatively parallel schools. In comparing between intervention schools and control schools, it is important to consider variations which could affect the results. Thus, the recruitment should adequately take into account that schools differ in their geographical location, study programs, school "culture" and background of the student populations. Basically, this parallelization of schools make sure that the possible outcomes can be attributed to schools/teachers and their work and not to selection processes before intervention. This was a major challenge and this process of sample recruitment is outlined below.

Initially the plan was to recruit three schools in this intervention, where one school was the intervention school and two schools functioned as control schools. One of the control schools should not receive any form for training, while control school 2 should receive a training course clearly beside the intention of the teacher training at the intervention school. This design was planned due to possible Hawthorne-effect, because the schools receiving training could probably improve just because they got some attention. But this would mainly influence the teachers, because the training is conducted directly towards them and only indirectly on the students, using the teacher as a medium. Students would only get attention when conducting the baseline and post-intervention survey out in the classes. Therefore, it was considered that the danger of biased conclusions due to Hawthorne-effect would be relatively small on the students, mediating the input of the training by the teachers.

Because of the precise theoretical assumptions, and the character of being an applied pilot study with a small sample (cf. chapter 5.1), the recruitment process rather focused on the number of teachers appropriate for participating in the training. Due to the planned practical activities in the teachers' sessions it was decided that approximately 15-20 teachers were appropriate in the intervention group for a good quality of training. The estimate for students participating would then be approx. 20-25 students per teacher resulting in 300-400 students in the intervention group. At least 10 teachers in the control group were considered suitable for the comparison, resulting in roughly 200-250 students in the control group. This would ensure that the study could handle a respondent rate of 75% and still have a control group with at least 150 students. It was important to have a sufficient number of students in order to perform potential sub-group analysis based on e.g. demographic variables such as gender and immigrant background. As already stated, teachers were supposed to elect one class they were teaching in PE, so the recruitment of both teachers and students would have to start with getting participants among the teachers. It was considered easier to recruit teachers into a free of charge teacher training, than to function as control group. The control group teachers were therefore given the opportunity to get the same training after the intervention was done, a measure that might hopefully contribute in reducing the Hawthorne effect as well.

After these considerations, it was decided to recruit teachers at schools who were quite similar in variables which could have an anticipated effect in students. This could be factors like geographical location, demographic variables (sex, age, and cultural/social background), study programs and school policy/school culture. To investigate these factors, Statistics Norway was contacted for an overview of relevant schools in the Oslo and Akershus counties. Unfortunately their data was incomplete, and only referred to school size, number of students in each study program and age group. One representative for Statistics Norway was contacted in order to get more detailed data, but data about immigration background in upper secondary schools were not registered at Statistics Norway. Since immigration background was supposed to influence the effect in students, Oslo County Council was contacted in order to get information about schools which they considered quite similar on the above mentioned variables. The researcher also requested

that extremes on both sides of the scale (only natives or only immigrants at schools) should preferably be avoided. This contact resulted in concrete names of schools that were contacted. The same procedure was conducted with Akershus County Council, which is a region in the Eastern part of Norway, just outside Oslo. These two counties (Oslo and Akershus) were chosen mainly due to quite heterogeneous student groups in the urban areas, and to limit the travel distances in the intervention.

The process towards each school was mainly as follows. The initial contact with each school was an e-mail sent to the principal of the school with a short description of the project, and information stating that the researcher would contact the principals by phone within a few days in order to tell more about the project and to investigate whether the project was of interest to the school. In this process, a total of 12 upper secondary schools were asked to participate. There were several paths along the road from initial contact to approval/rejection from the teachers, but five main sequences (A-E) were detected and are presented below:

Table 6: Five main sequences of teacher recruitment (A-E)

APPROVAL (5 schools)	REJECTION (7 schools)
A. *Principal gives contact information to head of PE, and head of PE leads the recruitment of teachers at own school. Gives response and contact information on participating teachers by mail. (2 of the intervention schools, 7 teachers)*	C. *No response after initial contact or after second request (1 school)* D. *Principal gives contact information to head of PE, but no response from him/her after two requests (3 schools)*
B. *Principal gives contact information to head of PE, which arranges a meeting with potential PE teachers at the school. Researcher attends the meetings to further inform about the project. After the meeting some or all of the teachers are willing to participate in the project. (3 of the intervention schools, 11 teachers)*	E. *Principal gives contact information to head of PE, but he/she says no to participation due to lack of time. (3 schools)*

This led to the total amount of 5 intervention schools and 18 teachers recruited for the teacher training. The intention of the control group was to use schools that did not attend the teacher training, but that were positive and interested in participating later. However, because the number of teachers interested and recruited was only 18, the researcher decided to select other schools similar to the intervention schools to function as control schools. These were recruited through other school contacts in the same area, and made it possible to recruit schools and students quite parallel to the intervention schools. Based on the demographic data of the students in the intervention schools, mostly students with academic specialization and mainly 3rd grade students were requested. This might not be the optimal recruitment, but the baseline measurements showed similarity on intervention and control students in line with argumentation on important factors and variables. For further discussion on this matter, see strengths and limitations of the study (chapter 9).

After this recruitment process the project included seven upper secondary schools from Eastern Norway. However, 2 of the original 18 teachers recruited had to drop-out before teacher training due to work overload or maternity leave. Thus, 16 PE teachers from five of the schools took part in an on-the-job teacher education as intervention group, while 10 PE teachers from two schools represented the control group. Participants were these teachers' 16-18-year old students in PE, where the teachers chose one of their classes to be measured. Each class measured at baseline (before teacher training) and posttest after three months. The intervention group included 352 students at baseline, with complete measurements by 306 students (86.9%). The control group consisted of 220 students at baseline, with complete measurements by 173 (78.6%) at similar dates. In table 7 an overview of the sample is presented. For further details, see chapter 8.1.

Table 7: General overview of research sample – Intercultural learning in PE

INTERVENTION SCHOOLS	CONTROL SCHOOLS
Number of schools: n=5	*Number of schools: n=2*
Teachers: n=16	*Teachers: n=10*
Students: n=352 *Complete T1+T2: n=306 (86.9%)*	*Students: n=220* *Complete T1+T2: n=173 (78.6%)*

6.2 TEACHER TRAINING INTERVENTION

The preparation, planning, implementation and evaluation of the teacher training contained some important steps for the intended student outcome of this study. The main parts were the (1) adaptation of the German teacher training to Norwegian conditions, (2) the development of the input, content and purposes for the thematic events with the teachers, and (3) the process assessment of the teacher training. These parts will be discussed prior to the discussions on how to measure student outcome. Even if the measurements of students' outcomes are the main part of this study, this chronological sequence is chosen to follow the line of argumentation in the same way as the research process, and to ensure that the adaptation of the program functioned similar to the one applied in the original version (Grimminger, 2009).

6.2.1 ADAPTATION OF THE GERMAN TEACHER TRAINING

One of the most crucial and important parts was to ensure the quality of the German developed teacher training (Grimminger, 2009) towards upper secondary PE teachers in Norway. This work was done in close cooperation with PhD Grimminger and professor Erdmann, who are experts within the theoretical framework and content of the teacher training. The adaptation process contained five parts, in a step-by-step procedure

1. Adaptation and improvements of the training content: In order to improve the training and course content, some of the suggestions of Grimminger (2009) were followed (see p.44). This concerned in particular the increased amount of inputs focused towards the teachers, stronger links between theory and practice, and focusing on how to implement course content in the frames already given in PE. Researcher also went on a research visit and excursion to Freiburg in April 2008, in order to participate in and observe the teacher training with German participants. Both PE teachers and instructors in sport clubs were represented. The researcher had extended discussions with Grimminger over a period of three weeks.

2. Adaptation of the teacher training materials and relation of the content to Norwegian curriculum. Teacher compendium[11] translated by researcher with PhD at NIH having German as mother tongue and 11 years of residence in Norway. The adaptation included some related goals of the Norwegian curriculum in order to legitimate the course content in Norwegian schools, and was built into this part of the compendium. The adaptation of the teacher training also included a translation from German into Norwegian of the surveys used in Grimminger's study.

3. Testing the teacher training and materials in a Norwegian upper secondary school: This part included the preparation, planning and implementation of main parts of the training concept in an upper secondary school in Eastern Norway. This school was similar to the participating schools, but not included in the study. The testing of teacher training and material was applied together with the teacher surveys (both baseline and posttest measurements).

4. Improvements based on the experiences from the teacher training test pilot: After the experiences and the teacher feedback from the test pilot, it was decided to focus especially on the key aspects in the compendium, such as difference, strangeness and identity, and some adjustments were made on the power-point presentations. The teachers also suggested more focus on how to relate activities to theory, meaning that activities should better illustrate the theory presented. The final teacher training aimed to improve the clarification on the relationship between practical activities and theory towards the teachers. The questionnaires to the teachers had no revisions.

5. Testing out the improvements and the final version of the teacher training: Inputs 1 and 2 were carried out with teacher students at NIH. The students were age 20 to 38 years old and some of the students already had many years of experience of working as a PE teacher. The feedback was positive regarding the course content, the didactics of the

[11] Thanks to PhD Dagmar Dahl, at the Norwegian School of Sport Sciences (2008) for the translation of the compendium. The compendium is available upon request from the author.

teacher training, and the relationship between practical activities and theory. No major changes were made before the intervention.

6.2.2 TEACHER TRAINING INPUT

The planned teacher training ended up with three thematic events (Inputs 1, 2 and 3), where the intention was to combine theory and practical learning activities. The evaluation of the training consisting of focused group interviews and surveys was implemented in the teacher training as a part of discussion, revision and evaluation. The plan of the teacher training is presented below.

Table 8: Plan of Teacher Training inputs[12] and evaluation

JAN	**INPUT 1** (3.5 hours) *- 120 mins theory + discussion. Teacher compendium with theory and activities* *- 90 mins learning activities (communication, membership and cooperation)* *- Pretest survey (handed out 1 week before and completed before training)*
FEB	**INPUT 2** (3 hours) *- 90 mins learning activities (floorball/basket, dealing with uncertainty/strangeness)* *- 90 mins summary + theory + discussion*
MAR	**INPUT 3** (2.5 hours) *- 60-90 mins: Focused group interview 1 (experiences + discussion)* *- 60 mins: Repetition input 1+2 and review of more activities (Activity booklet)*
APR	**EVALUATION** (2 hours) *- 60-90 mins: Focused group interview 2 (evaluation + experiences + discussion)* *- Posttest survey and evaluation survey. (completed and sent within 1 week)*

This was the initial plan for the teacher training. However, as the intervention was put to action, some minor revisions hade to be made. Inputs 1 + 2 should be conducted at NIH while input 3 should be implemented out in the schools. Group interviews were planned to be made within groups of teachers mixed from different schools. Evaluation was also

[12] The presentations and sessions with practical activities at each teacher input are presented in appendix 10

planned to take place at NIH. Before and during discussions in input 1 of the teacher training, we became aware of great practical challenges of gathering all the teachers at the same time. In cooperation with the teachers, it was decided after input 1 that the rest of the training would mainly be done out in each school respectively. Even though this led to considerably more time used and logistical challenges to carry through the teacher training, the potential positive outcome for the teachers was the most important argument for changing the initial plan. After inputs 1 and 2, an activity booklet[13] was developed before input 3 to the teachers. This supplemented the activities in the teacher compendium (Grimminger, 2007) and consisted of additional activities and complete sessions developed by the researcher. These were well-known PE activities modified in order to enhance the students' awareness towards differences and strangeness, coping with own uncertainty in PE, and focus on acceptance and membership among peers in the learning environment.

6.2.3 MEASURING TEACHERS' OUTCOMES AND EXPERIENCES

Process assessment of teachers' outcome and experiences was examined through quantitative surveys before and after the intervention. The baseline survey was sent to the intervention teachers by mail 1 week before teacher training, and collected at teacher training input 1. The control group baseline survey was handed out one week before the first visit to the control schools, and collected at this visit on similar dates as intervention group. The posttest survey for the intervention teachers was handed out at group interview 2, and collected through mail or by visiting the schools (e.g. related to student measurement at posttest). The posttest survey to the control group teachers was handed out and collected while visiting schools for student measurements at posttest.

The measurement of teachers' outcomes also consisted of focused group interviews with intervention group teachers at each school, both during and after intervention. The first interview was done 3-4 weeks after teacher training inputs 1 and 2, and the second interview at the end of the intervention period. For further details on the time schedule for teacher inputs, teacher measurements and student measurements, see appendix 11.

[13] Activity booklet is available upon request from the author

The intervention teachers also received an additional evaluation survey for open-ended questions and possibilities for further comments. The teacher part of the research design is outlined below to illustrate the teacher measurements conducted in this study.

Table 9: Teacher part of the research design

		JANUARY - FEBRUARY 2010		MARCH 2010			APRIL 2010
TEACHERS	**ADAPTATION AND IMPLEMENTATION OF THE GERMAN-DEVELOPED TEACHER TRAINING (Grimminger, 2009)**	**BASELINE** Survey to intervention group (n=16) and control group (n=10)	**TEACHER TRAINING** Input 1: NIH (3.5 hours) Input 2: In the intervention schools (2.5 hours)	3-4 weeks	**TEACHER TRAINING** Input 3: In intervention schools (2 hours) **FOCUSED GROUP INTERVIEW** At each intervention school (n=5)	3-4 weeks	**FOCUSED GROUP INTERVIEW 2** In the intervention schools, teacher evaluation (n=5) **POSTTEST** Survey to intervention group (n=16) and control group (n=10), **SURVEY - ASSESSMENT OF TRAINING** Additional survey to intervention group (n=16)

First, it is important to note that these teacher measurements are not the main intention of this study, which is to measure the relevant possible effects among students. However, this assessment of the process would be able to control whether the results are relatively similar to the German training (Grimminger, 2009), and it could examine whether the teachers have reached some understanding and extension of their competence related to intercultural learning. In this matter it could also be an indicator for the quality of the Norwegian training. Nevertheless, the most important aspect of the process assessment of teacher training was that the results from the respective schools and teachers could be used to explain some of the results of the outcome measures among students. In table 10 an overview of teacher measurements, their purpose and expectations (in line with Grimminger) is presented:

Table 10: Teacher devices, purposes and theoretical expectations in the assessment of the teacher training

	Devices - Teachers	Purpose	Expectations (after training)
1	Survey (both intervention and control teachers)	Measuring performance indicators (T1-T2) 1) METH: Self-perceived ability – Method competence intercultural learning	1) PE teachers will feel subjectively more competent to plan, implement and reflect on intercultural learning in their physical education
		2) EB: Educational beliefs to teach IL	2) PE teachers will be more convinced that intercultural education is important for all children and young people.
		3) AA: Acculturation attitudes	3) PE teachers will score higher on the pluralistic understanding of integration and will promote the implementation of intercultural learning.
		4) KNOW: Knowledge interculturality and sport	4) Greater knowledge on interculturality and sport, especially the myths related to sport and integration
		Measuring performance moderators (T1) 1) Teacher self-efficacy beliefs, 2) Teacher education and teacher experience, 3) Athletic background, 4) Immigrant background and/or experience abroad	Moderators; variables theoretically expected to affect the results of the teachers' performance. Only measured at baseline and controlled for in the results.
2	Evaluation survey (only intervention teachers)	(1) Training content, (2) Applicability in PE, (3) Organization and climate, (4) Course supervisor (5) General impression of own outcome	Mean scores – comparing with German results - to control for the quality of the Norwegian training
3	Focus group interviews (only intervention teachers)	Teacher experiences with input and learning activities, evaluation of the teacher training, inhibiting and promoting factors	Discussions related to quantitative results, give a better understanding of the teachers' outcomes and degree of implementation.

In the following section these teacher variables are discussed. The complete surveys and interview guides are presented in the appendix. (Baseline survey, appendix 5, posttest survey, appendix 6; evaluation survey, appendix 7; interview guide 1+2, appendix 8).

Teachers' performance indicators measured at baseline and posttest

Performance indicators are measured in order to investigate whether there are relationships between teacher results and student outcomes. The measurement of performance indicators among teachers was made both before and after intervention, and

followed the considerations outlined in the theoretical framework (chapter 3.2). It consisted of the following main variables:

Table 11: Performance indicators measured at teacher baseline and posttest

Performance indicators		***No. of items***
METH	*Self-perceived ability – Method competence intercultural learning*	3 (4)
EB	*Educational beliefs to teach intercultural learning*	9
AA	*Acculturation attitudes*	10
KNOW	*Knowledge on interculturality and sport*	8

1) METH: Self-perceived ability – Method competence intercultural learning

The self assessment of which didactic and methodological competence the teacher has achieved regarding the planning, implementation and reflections regarding intercultural learning within PE. Consists of three main questions with quite similar wordings, example; *How competent do you feel to plan intercultural learning sessions in your class?* Response categories on a 5 point scale from little (0)[14] to very good (4). The expectation, in line with Grimminger (2009), is that the conducted training approach will improve the methodological skills of PE teachers, i.e. after training teaching staff will feel subjectively more competent to plan, implement and reflect on intercultural learning in their physical education. A high score on method competence will probably increase the chances of successful implementation towards the students.

2) Educational beliefs to teach intercultural learning

As previous discussed (chapter 3.2 and 3.3), the teachers' educational beliefs could affect the implementation of the teacher training content among students. Grimminger (2009, p.66) outlined some theoretical expectations on this relationship in her work:

[14] The value 0 (zero) was chosen to follow Grimminger's response categories and coding and to compare with her results. However, the author is aware of the potential problems in using the value of zero in mathematical procedures (e.g. multiplication)

- The more PE teachers are convinced that intercultural education is important for all children and young people, the more they are inclined to promote intercultural learning in their PE lessons.
- The more PE teachers are convinced that physical education can contribute to intercultural learning, the more willing they are to conduct intercultural learning in their physical education.

The educational belief (EB) scales followed the work of Sercu et al. (2005), but were adapted to the context of sport and PE (Grimminger, 2009). The scales originally consisted of 20 items, but the Norwegian version decided to only use the 9 items that are relevant according to the Principal Component Analysis of Grimminger (2009). According to her analysis, teachers' educational beliefs can be divided into three dimensions/components:

Table 12: Dimensions of Educational Beliefs (EB)

Dimensions of Educational Beliefs		***No. of items***	***Min. value***	***Max. value***
EB1	Intercultural learning has an effect among students; cross disciplinary implementation is well suited	4	0	12
EB2	Scepticism towards intercultural learning; only necessary if the schools have students with immigrant background	3	0	9
EB3	PE has sport motoric skills as main task, and cannot contribute to intercultural learning.	2	0	6

Response categories on a four-item scale (3=agree completely, 0= disagree completely), and some items were recoded in order to follow the theoretical direction of the dimensions. The items concerning educational beliefs and acculturation attitudes were mixed in the survey, and regrouped into subscales in the data-analysis (same procedure as Grimminger).

3) Acculturation attitudes

The acculturation attitudes (AA) followed the scales of Van Dick, Wagner, Adams & Petzel (1997), and consisted of 11 items with the same response categories as EB. AA

could be divided into three different sub-scales: assimilation, segregation and integration. It is expected that high scores on assimilation and segregation would limit teacher performance, while a high score on the integration scale will promote the implementation of intercultural learning (cf. chapter 3.2). Grimminger (2009) presented the following main expectations regarding the teachers' acculturation attitudes.

- PE teachers, who demand the segregation of minorities, tend to carry out less intercultural learning in their PE lessons.
- PE teachers having assimilation expectations of the minorities place less value on the promotion of intercultural learning in their PE-lessons.
- PE teachers pursuing a pluralist understanding of integration are more likely to promote intercultural learning in their PE lessons.

4) Knowledge on interculturality and sport

This was a performance indicator that could measure the knowledge in interculturality and sport, especially the myths related to sport and integration. It was expected that the teachers learned that sport needs to be modified in order to promote integration, and that "sport for all" is not true in all contexts. This was initially an 8-item dichotomous variable with two response categories (agree/disagree). However, it was decided that a greater span of responses would be collected, following the same response categories as the other items in educational beliefs and acculturation attitudes.

Teachers' performance moderators measured at baseline

The measurement of possible performance moderators, variables which theoretically could be expected to affect the results of the teachers' performance, is further discussed. These variables were only measured at baseline, and are outlined below:

1) Teacher self-efficacy beliefs

As described in the theoretical framework (chapter 3.3), teacher self-efficacy beliefs may be conceptualized as teachers' own beliefs in their abilities to plan, organize and implement intercultural learning activities. Teacher self-efficacy has been found to predict both teaching practices and student learning, although using different instruments

(Skaalvik & Skaalvik, 2007). The measurement made in this study was conducted with the Norwegian Teacher Self-Efficacy Scale (NTSES), which was developed and tested bySkaalvik & Skaalvik (2007) in a Norwegian context[15]. They developed a 24-item scale, with 4 items measuring each of six dimensions.

Table 13: Norwegian Teacher Self-Efficacy Scale – Sub-scales, purposes and examples of items

SUB-SCALE	CONTENT	EXAMPLE OF ITEM
Instruction	Focuses on teacher's expectation of being able to instruct students, explain subject matter, advise students on their work, and answer questions to improve students' understanding.	*"How certain are you that you can provide good guidance and instruction to all students regardless of their level of ability?"*
Adapting Education to Individual Student Needs	Adaptation to individual student needs strongly emphasized in Norwegian curriculum. Key element in the movement towards inclusive education. Focuses on teacher's expectations to address the diversity of students' needs and abilities.	*"How certain are you that you can provide a realistic challenge for all students even in mixed ability classes?"*
Motivating Students	Measure the teacher's expectation of being able to motivate students. Important task for all teachers, since optimal learning depends on student motivation.	*"How certain are you that you can wake the desire to learn even among the lowest achieving students?"*
Keeping Discipline	Focus the teacher's ability to maintain order and discipline among students in the lessons.	*"How certain are you that you can get students with behavioral problems to follow classroom rules?"*
Cooperating with Colleagues and Parents	Measure teacher's expected ability to cooperate extensively with colleagues and parents, and making decisions together with colleagues/parents. Increasingly required in the Norwegian curriculum.	*"How certain are you that you can cooperate effectively and constructively with other teachers, for example, in teaching teams?"*
Coping with Changes and Challenges	Focus teacher's ability to cope with ongoing changes and new challenges. During the past 15 years, Norwegian schools have undergone a number of reforms, and the demands put on teachers have changed simultaneous.	*"How certain are you that you can teach well even if you are told to use instructional methods that would not be your choice?"*

The dimensions that related most to the expected teacher outcomes in this training concept in particular are; *"adapting education to individual student's needs*", and *"coping with changes and challenges"*. In the analyses this will have a certain attention, together with the total teacher self-efficacy score and its possible relationship to students'

[15] Thanks to Prof. Einar M. Skaalvik, NTNU, for providing the Norwegian version of the questionnaire. This scale is not included in the appendix 5 version of the questionnaire, but is published (English version) in Skaalvik and Skaalvik, 2007.

outcomes. One hypothesis was that high self-efficacy at baseline could be associated with successful implementation towards the students, and that low self-efficacy in teachers could limit the implementation. For further discussions, see chapter 8.2.1.

2) Teacher education and teacher experience

At baseline, the degree of education and experience as a PE teacher were also measured. In addition it was asked whether the teacher had had further education in the same topic before. The expectation was that teachers having a higher degree of education and much experience could more easily implement the course content towards the students.

3) Athletic background

The pretest measured whether the teacher was currently and/or had been a competitive athlete. The teachers were also asked about more leisure-based activities. The teachers were asked to write down which activities they were doing at present, and whether these activities were on a competitive level or a leisure based level. The same question was posed regarding activities done earlier in life. The anticipation was that competitive teachers were less inclined to focus on social learning goals in the classroom, while more leisure based activities among teachers could be beneficial for the implementation of intercultural learning in their PE lessons.

4) Immigrant background and/or experience abroad

Similar as among students, teachers with immigrant background (themselves or parents born outside Norway) were expected to be more sensitive to these matters, and to see the importance of intercultural learning in school. The teachers with experience abroad (living more than 6 months abroad) were also expected to better and more intuitively understand the importance of developing these competencies in school.

Focused group interviews with teachers in the intervention group

The focused group interviews for teachers should gain a better understanding of the student outcomes as well as evaluate the teacher training. According to Patton (2002), we have to ask people questions about feelings, thoughts, and the meanings people attach to

their actions, and that the purpose of interviewing is to enter into this other person's perspective. Johnsen and Turner (2003) points out that the strengths of interviews are to provide in-depth information, and it is good for measuring attitudes and most other content of interest. Hence, these group interviews among teacher should initiate discussions about the training, exploring a specific set of issues. Focus group interviews are distinguished from the broader category of group interviews by the explicit use of group interaction to generate data (Kitzinger & Barbour, 1999). Instead of asking questions of each person in the group, focus group researchers encourage participants to talk to one another. In this way the teachers could exchange experiences and points of view, comment on each other, and receive feedback on their own teaching. Moreover, the focused group interviews stimulated further discussion on the topic between the colleagues at each school. The interview guides for the two focused group interviews during and after intervention are presented in appendix 8, but the main contents of the group interviews follows.

The focused group interview 1 was conducted related to input 3 with the teachers. This input consisted mainly of a resume of the content presented earlier, and some further activities were also presented and discussed with the help of an activity booklet, arranged by the author related to this project. This interview focused on the (1) application of course content in PE lessons, the (2) teachers' main impression of the course content so far, and questions about (3) possible changes or what the teachers were missing in the training (interview guide 1, appendix 8).

Group interview 2 with the teachers functioned as a summarization of the teacher training. The researcher intended to get further responses on the experiences and thoughts concerning the training, and some hints for further improvements of the training. The key aspects of interview guide 2 were (for details, see interview guide 2, appendix 8):

A. General summary / impression of the teacher training
B. Awareness of the theme intercultural learning
C. Students' learning and potential change during intervention
D. Teacher challenges in implementation of course content and PE in general

6.3 MEASURING RELEVANT OUTCOMES AMONG STUDENTS

The measurement of relevant outcomes among students are done by two approaches in this study, (1) by a measurement device "Sensitivity towards differences and strangeness" and (2) through a sociometric measurement of group structure. The student part of the research design is presented to get an overview of the approaches.

Table 14: Overview of student measurements and number of respondents

		JANUARY - FEBRUARY 2010	MARCH 2010	APRIL-MAY 2010
STUDENTS	**MEASURING RELEVANT EFFECTS/OUTCOMES** **MEASUREMENT OF STUDENTS' OUTCOMES THROUGH SURVEYS AND SOCIOMETRIC MEASUREMENT**	**PRETEST (T1)** Survey and sociometric measurement of intervention group (n=411) and control group (n=265) T1 response rate: I-groups n=365 C-groups n=213		**POSTTEST (T2)** Survey and sociometric screening of intervention group (n=365) and control group (n=213) Both T1 og T2 responses: I-groups n=306 C-groups n= 173

6.3.1 MEASUREMENT OF SENSITIVITY TOWARDS DIFFERENCES AND STRANGENESS

Measuring sensitivity is a challenge; how should one ask for sensitivity without students responding with social desirability? Some efforts are made to measure related constructs like intercultural sensitivity (Bennett, 1993), social skills (Gresham & Elliott, 1990), and social self-efficacy in a diverse student population (Fan & Mak, 1998), but there seem to be a lack of devices to measure the relevant outcomes of this intervention. Being aware of the difficulties in finding relevant indicators for effects in this intervention, we continues to refer to the attempt of Esser-Noethlichs (2010), which has developed a measurement device intended to measure the effects of intercultural learning interventions. This work has the same theoretical framework as this thesis, and the device is an English version tested both internationally and in Norway through seven sub-studies. Initial reports indicated that further development should be required, but in spite of the provisional character, it was decided to be used in this project. The reason for this was especially because of the nature of the survey, with the main intention of measuring sensitivity towards differences and strangeness among students. It was also due to the pilot character

of this study, the awareness that it is the first study to test whether there is an effect or not among students. So even if the survey is still provisional, the Esser-Noethlichs (2010) "Sensitivity Towards Differences and Strangeness Questionnaire" (STDS-Q) is an important indicator for my study. The previously presented main facets of the operational model in STDS (chapter 4.1.2) are understood as latent constructs and cannot be directly observed. The next part presents the item pool and the measurement device in detail. This also includes the process of adapting the questionnaire into a Norwegian version.

NORWEGIAN VERSION OF THE STDS-QUESTIONNAIRE

The adaptation, translation and minor changes of the questionnaire were done in cooperation with Esser-Noethlichs, to ensure a common understanding of the meaning, phrases and items which comprised the scales. The most important revision was to translate the survey from English into Norwegian. This translated version was tested out on students from one upper secondary school from the same area as the intervention and control group in Norway, and showed no need for major revisions. The distribution of the measurements was equal, and the students understood all text without questions. The three parts of this measurement device are outlined below (for full version of questionnaires and all item details, see appendix 2+3):

STSQ, part I, is a semi-projective device which focuses on an emotional valuation of perceived differences and strangeness. Six pictures showing different persons or situations which are used as stimuli for the treatment of two scales; difference and sympathy. Responses were made on a 5 point scale. The combination of responses of the two scales may be transferred into a STS-pattern. The pictures represent different demarcations such as gender, skin color and bodily appearance. For the Norwegian version, two new pictures were added (pictures 1 and 2), while picture 3 from the initial version (Esser-Noethlichs, 2010) was removed.

STSQ, part II, is a semi-projective device which focuses on the first cognitive dimension of the STS; the awareness of attribution and argumentation styles. Each of

the five characteristic situations includes six suggested arguments related to each situation separately. Responses were made on a 4 item scale (1= most improbable, 4= most probable). The items represent two scales; RA1, which consists of irrational argumentation such as prejudices and stereotyping, and RA2, which indicates a more rational argumentation among students.

STSQ, part III, is a statement item pool supposed to measure selected attitudes, insights and understandings related to differences, strangeness and relevant aspects in the realm of intercultural issues. 21 items represents the sub-scales: Openness, Need for security, and Loss of control. Responses were made on a 4 point scale (4= agree completely, 1= disagree completely). In the process of translating the questionnaire and adapting it to Norwegian conditions, it was decided to add an additional scale. This was discussed with both Grimminger and Esser-Noethlichs and consisted of 5 items related to self-concept and comparison with others, based on the works of Erdmann (1987) and Neuber (2000). This additional scale was called Self-Concept (SELF) and was integrated in part III.

Table 15: Sensitivity Towards Differences and Strangeness Questionnaire (STDS-Q) – Main contents and purposes of the Norwegian version

	Device - Students	Purpose
1	STSQ – Part I	Measuring emotional sensitivity towards differences and strangeness 1) STS-pattern – combined DIFF and SYMP score
2	STSQ – Part II	Measuring rational argumentation strategies and attribution styles 1) RA 1 – More irrational argumentation 2) RA 2 – More rational argumentation
3	STSQ – Part III	Measuring relevant attitudes and understandings 1) O – Openness 2) NFS – Need for security 3) LOC – Loss of control --- 4) SELF – Self-concept

From these theory-derived devices some main expectations/hypotheses among students in this study were;

1. Increased emotional sensitivity towards differences and strangeness. (↑ STS-pattern)
2. More rational reasons/attributions in their argumentation and attribution styles. (↑ RA2; ↓ RA1)
3. Relevant attitudes will be affected in a positive manner, such as more openness, higher score on self-concept, less need for security and more comfortable in loss of control situations. (↑ OPEN; ↑ LOC; ↓ NFS; ↑ SELF)

In addition, a few demographic variables are placed at the beginning and the end of the device. The purpose is to enable for later categorizations of the samples into sub-groups related to theoretical expectations. These include aspects such as gender, school level, study program, experience abroad, and immigrant background. One additional satisfaction scale, comprised of 3 items (satisfaction with school, class and PE), was included because this could affect how inclined the students were to follow the intentions of their teacher. This could also be a direct indicator if their contentment had changed during intervention. As a post-measurement an evaluation of aspects in PE from T1 to T2 was added. In order to get direct feedback on e.g. teacher behaviour, new activities in PE, learning climate, cooperation with peer students, they were to rate whether these aspects had improved or got worse based on a 7 point scale (-3=worse, +3=better, 0= no change).

6.3.2 SOCIOMETRIC MEASUREMENT OF GROUP STRUCTURE

Due to the expected indications of the data, the provisional character of the STDS-Q should not limit the interpretations of its findings. However, in order to reduce a *construct underrepresentation* (cf. Messick, 1995) of the complex phenomenon called "intercultural learning", it was decided to apply a sociometric measurement as additional indicator. This screening could more precisely investigate group structures and changes among students during intervention. This is closely related to relevant behaviour which could be expected through PE activities in the group/class during this intervention. Changes in these sociometric measurements could indicate a more including learning

environment with focus on acceptance and membership, and that student's choices were based on the strengths of peers, instead of choosing just friends.

The sociometric measurement consisted of 4 questions, each of them representing different facets of social interaction among peers. In the introduction the students were asked to just pick students enrolled in their PE class, not more than 3 students on every question. The questions and their purposes are presented in table 16:

Table 16: Questions and their purposes in the sociometric measurement device

	QUESTION	PURPOSE
1	Which three students of your PE class would you rather tell a secret?	Most personal facet. Who do students really trust and rely on in the PE class, and well enough to share their secrets.
2	Imagine that in physical education you can choose who you want on the team in a running relay. Which three students of your PE class would you choose?	Most competitive facet. Students might pick peers that are fast and well trained, or they might stick to their friends. See if they choose related to the strength of peers or not.
3	Imagine that in physical education you must do a difficult exercise that requires securing. Which three students of your PE class would you prefer to help you?	Facet regarding trust and reliability, but not as personal as in question 1. Investigate whether they choose other students than their friends, in order to use the different strengths of peers, here possibly represented by strength and trustworthiness.
4	Imagine that you are to work out rules for a new game in physical education. Which three students of your PE class would you rather work with?	Facet regarding cooperation and membership. Investigate whether students choose the same as in previous questions or use peers with strengths related to more creative and cooperative skills.

This data was primarily used for evaluating change in the total number of different students chosen on all questions from pre- to posttest. The results could reveal a more including learning environment shown through changed group relations in the classes. It could also indicate whether fewer students are falling outside the class community. This could indicate if students are trying to include more of their peers in the PE lessons. The data may also be used in an even more sophisticated manner, with the possibility to investigate other purposes. This analysis might be conducted in order to see more details

of how the group structure has changed during the intervention. In this work the Soziogramm-Editor 2.1[16] will be applied for analysis.

6.3.3 MEASUREMENT PROCEDURE AMONG STUDENTS

According to the ethical considerations (chapter 6.4) and the correspondence with the Norwegian Social Science Data Services (NSD), the measurements among students were only conducted by the researcher himself. This was partly because of the personal nature of the sociometric measurement (students had to write names, but the names were anonymized in the data analysis), and the importance of honesty among students and their knowing that their teacher would not have access to the data. Before measurements, the students were assured in the informed consent and also orally that only the researcher had access to the data.

Most of the measurements were done within the first 20 minutes of a PE lesson. The participating PE teachers decided on a suitable time, within the frames of a two week period at baseline and posttest. This was in order to make the measurement as smooth as possible in relation to the teachers' initial plans for the period. In addition, the time frame within two weeks was given, to control that the length of the intervention period between classes was approximately similar and did not exceed 3 weeks in difference. The plan was to have a 3 month intervention time from late January until late April. However, minor adjustments had to be made in order to follow some of the teachers' requests. But the time between baseline and posttest was in the range between 10 and 14 weeks, with most of the classes having a 12 week period. The differences in duration of measurement periods were similar in the intervention and control group. Due to methodological and ethical considerations, the researcher conducted all the data collection and teacher training inputs himself, which consisted of a total of 61 visits to the seven upper secondary schools over a period of three months. A detailed overview of all teacher training inputs/measurements and student measurements at each school is outlined in appendix 11.

[16] This German software is programmed 2001-2008 by Martin Prabst, based on the idea of Monika Braun, in order to analyze sociometric measurements in school classes.

6.4 ETHICAL CONSIDERATIONS

Careful considerations and good cooperation with the Norwegian Social Science Data Service (NSD) were important for fulfilling all ethical guidelines in the intervention process. All material was submitted and approved for use by NSD (appendix 1). Some comments were provided on changes that were necessary before the survey could be carried out. To avoid providing detailed information about third parties, students were not asked about the origin of their mother and father separately. Instead, they were asked the question: "Were either of your parents born in another country?", and the response alternatives consisted of different continents and/or similar geographic areas. To find out whether both parents were born in different parts of the world, it was possible for students to mark several boxes in the question.

Another important consideration was related to the responses on the sociometric measurement. It was suggested that they had to write their own names and the names of their peer students, so that it would be easier for students to fill out the sociogram instead of using codes. It was an important point that this would be anonymized after collection and that all surveys are filled out and given directly to the researcher himself, without the teachers having any access to the material. It is also important to note that no negative formulations were used, e.g. of the character; “who do you *not* want to work with?” Since this could be perceived of as being personal in nature, it was by NSD pointed out that all classes had to be fully informed about this both orally and in writing.

Due to different age groups among students, different informed consents were administered. For students under 18 years old, an informed consent was given for both students and parents. For students over 18 years of age, informed consent was given just to the students themselves. In dialogue with NSD, it was decided that it would not be necessary to obtain written consent from all students and parents. Informed consent, where the consequences and the ability to withdraw without question were clearly explained, was therefore developed and administered. In addition, it provided general information about the teacher training, and information regarding whether the students were in the intervention group or control group (for details, see appendix 4). After these

changes were made the material was submitted for examination and approved for implementation (for details, see appendix 1).

For teachers, a similar informed consent was also developed which described the impact the study entailed. For use of the results and quotes from interviews in the thesis, written consent was also obtained from each teacher in the intervention group (appendix 9).

7 ANALYSIS AND INTERPRETATIONS

7.1 PREPARING DATA FOR ANALYSIS

All data and analyses were entered and performed with the PASW Statistics 18.0 (former versions known as SPSS, Statistical Package for the Social Sciences) by the researcher himself. Before conducting the statistical analysis for the outcome variables the data was screened, the scales and scale reliability were calculated (7.1.1), and missing analysis were conducted (7.1.2). Finally in this part some considerations about the use of statistical techniques are discussed (7.1.3).

7.1.1 CALCULATING SCALES AND SCALE RELIABILITY

The outcome variables and the scales which were calculated followed the measurement devices and originally consisted of the following scales (in bold):

Table 17: Student devices, purpose and initial outcome variables

	DEVICES – STUDENTS	*PURPOSE AND OUTCOME VARIABLES*
1	Sensitivity towards differences and strangeness Questionnaire *STSQ – Part I* (6 pictures)	Measuring emotional sensitivity towards differences and strangeness - Difference-scale (DIFF) - Sympathy-scale (SYMP) - STS-pattern (**STS**)
2	*STSQ – Part II* (5 situations)	Rational argumentation strategies and attribution styles - Rational argumentation 1 (**RA1**) - Rational argumentation 2 (**RA2**)
3	*STSQ – Part III* (21 item pool)	Relevant attitudes and understandings - Openness (**OPEN**) - Self-concept (**SELF**) - Need for security (**NFS**) - Loss of control (**LOC**)
4	*Sociometric screening* (4 questions)	Screening of group structure and relations between students in different situations - Total numbers of students chosen (**SOCIO**)

The scales calculated mainly followed the outcome variables discussed previously. However, since STSQ is no standardized test, some new factor analyses and scale reliability calculations were made with the data of this study. Factor analysis of part I and part II gave scales similar to STSQ. But for the factor analysis in part III, some changes were made. This particularly concerned the original scale *Need for Security* (NFS), which, through new factor analysis, had another item pool and was renamed *Uncertainty* (UNCERT). This is also in line with Esser-Noethlichs (2010) suggestions that it would be helpful to specify parts of the STSQ in the direction of developing an uncertainty scale. His research showed that uncertainty is a determinant factor for the ways people perceive and deal with differences and strangeness. So before calculating the reliability of the scales, a principal component analysis (PCA) with varimax rotation was done. The Bartlett score had a value of .7 which showed it was adequate to run factor analysis (Pallant, 2007). Scree plot and eigenvalues showed that four factors should be most appropriate for dimension reduction. A reduction from the original 21 items, due to a low score on communalities, resulted in 13 items in PCA with varimax rotation (table 18).

Table 18: Rotated Principal Component Analysis for part III of STDS-Q

Part III items (translated Norwegian to English, see original items in appendix 2) * recoded in the analyses	**Component**			
	1	**2**	**3**	**4**
8. I am an insecure person	**.748**			
19. Having responsibility makes me feel uncertain	**.744**			
12. It is difficult for me to stand in front of a group and talk	**.665**			
14. Having to make decisions makes me feel uncertain	**.647**			
3. To meet different kinds of people is enjoyable		**.682**		
11. The uncertain outcome is the reason for the excitement in competition		**.584**		
1. Open-mindedness helps understanding		**.579**		
5. Sitting in a group of strangers provokes uncomfortable feelings*	-.384	**.476**		
16. It is important to me that I'm not the worst student in the group*			**.762**	
4. I think it is important to compare myself with others*			**.642**	
20. It is not so important how well I do, it is progress that is important to me			**.611**	
10. Planning ahead helps provide security				.803
9. I like unforeseen events*		-.343		.610

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

The dimension reduction showed 3 components which had internal consistence, and contained at least 3 items (the dimension 4, consisting of items 9 and 10, was excluded in further analyses because it was only a 2-item scale). Only one of the dimensions (Openness scale, component 2) was similar with Esser-Noethlichs (2010) findings. Component 1 had some similar items as the former LOC and NFS scales, but a new Uncertainty scale was established. Also component 3, including three of the new items added in the Norwegian version, formed a new scale called Self-concept. The dimension reduction and the PCA then ended up with following components/subscales:

- Component 1: *Uncertainty scale (UNCERT; item 8, 19, 12, 14)*
- Component 2: *Openness scale (OPEN; item 1, 3, 5*, 11)*
- Component 3: *Self-concept scale (SELF; item 4*, 16*, 20)*

After principal component analysis on all parts of STSQ, the scale reliability was examined. Below are an overview of initial scales in STSQ, new scales calculated in this study, and reliability coefficients for all measurements of the scales (for item details, see appendix 2 & 3)

Table 19: Measurement scales, scale reliability and items included

SCALE STSQ PART I	*ITEMS*	*α ALL*	*α T1*	*α T2*	*ITEMS INCLUDED*	*EXC.*
Difference (DIFF)	6	.80	.79	.79	1a,2a,3a,4a,5a,6a	
Sympathy (SYMP)	6	.75	.75	.76	1b,2b,3b,4b,5b,6b	
STS-pattern (STS)	6	.63	.63	.60	STS1,2,3,4,5,6	
SCALE STSQ PART II	*ITEMS*	*α*	*α*	*α*	*ITEMS INCLUDED*	*EXC.*
Rationality level 1 (RA1)	12	.60	.60	.59	Sit1: 2, 4, 5, 6 Sit2: 2, 3, 4, 5 Sit3: 3, 5 Sit4: 4, 5	
Rationality level 2 (RA2)	11 (12)	.50	.46	.48	Sit 1: 1, 3 Sit 2: 1, 6 Sit 3: 1, 2, 6 Sit 4: 1, 2, 3, 6	4
INITIAL SCALES STSQ PARTIII	*ITEMS*	*α*	*α*	*α*	*ITEMS INCLUDED*	*EXC.*
Openness (OPEN)	4 (5)	.45	.45	.46	1, 3, 5*, 11	13

NEW SCALES PART III	ITEMS	α	α	α	ITEMS INCLUDED	EXC.
Uncertainty (UNCERT)	4	.67	.67	.70	8, 12, 14, 19	
Self-concept (SELF)	3	.43	.43	.50	4*, 16*, 20	
ADDITIONAL SCALE	ITEMS	α	α	α	ITEMS INCLUDED	EXC.
Satisfaction (TotSAT)	3	.74	.72	.80	SAT school, class, PE	

The table shows acceptable reliability scores at all scales ($\alpha \geq 0.60$) except low reliability scores on RA2, OPEN and SELF. Some comments are made regarding these concerns:

RA2: The low alpha score resulted in analysis of excluding items for increasing alpha value. Original scale reliability analysis was conducted with 1 item deleted. This resulted in alpha=0.50. This is considered a moderate score, but by deleting one more item, alpha score increases only by 0.01. It was decided to use the same scale as STSQ, part II even if alpha was considered moderate.

OPEN: In the nature of being an original scale in the STSQ part III, and that the factor solution grouped the items into one dimension, it was decided to include the scale in the further analysis.

SELF: Alpha score was just moderate (T1 α=43, T2 α=50), but the items were considered very consistent. The three items on self-concept were stable throughout each factor analysis, not depending on the number of fixed factors. Because of the strong link to the theory and the consistent factor analysis, this scale was used further in the analysis.

The analysis continued by also adding the scale reliability of the satisfaction with school, class and physical education (TotSAT). This could be an additional indicator if something relating to climate had happened during intervention. This was measured both at baseline and post-intervention in both groups, and therefore could be expected to change among those students who had positive experiences with their teacher after training. This scale could also explain why some students have more effect than others. If the students are satisfied with school, class and physical education, they are probably more inclined to change in such a school setting. The total satisfaction could also indicate

progress in the school climate and the learning environment in class and PE. A separate score in satisfaction with PE was calculated, as this could give some other results directly related to the school subject of PE. This could also be an indicator for the learning environment from baseline to posttest.

7.1.2 MISSING DATA ANALYSIS

Missing data analysis was conducted and missing imputation included every respondent that had answered at least 2/3 of the items on each outcome variable. For statistical functions in PASW (SPSS), one can specify the minimum number of items on a scale that must have non-missing values. Due to the different number of items in every outcome variable, the percentage was in the range between 66.7% and 75%. On the scales with only 3 items the students had to answer all 3 items to be included. It should be noted that the number of non-missing did not increase much due to this process, because the number of missing was initially low (in the range from 2 to 20, N=479). All outcome variables and the number of missing before and after conducting missing values in functions are listed below:

Table 20: Outcome variables and number of missing before and after missing analyses

OUTCOME VARIABLES	MISSING		ITEMS REQUIRED FOR NON-MISSING	MISSING AFTER COMPUTING	
STSQ PART I	*PRE*	*POST*	*ITEMS (%)*	*PRE*	*POST*
Difference (DIFF)	8	0	4 / 6 (66.7%)	0	0
Sympathy (SYMP)	11	0	4 / 6 (66.7%)	0	0
STS-pattern (STS)	11	0	4 / 6 (66.7%)	0	0
STSQ PART II	*PRE*	*POST*	*ITEMS (%)*	*PRE*	*POST*
Rationality level 1 (RA1)	18	3	8 /12 (66.7%)	2	2
Rationality level 2 (RA2)	20	2	8 / 11 (72.7%)	3	2
STSQ PART III	*PRE*	*POST*	*ITEMS (%)*	*PRE*	*POST*
Openness (OPEN)	6	4	3 / 4 (75.0%)	0	0
Uncertainty (UNCERT)	6	4	3 / 4 (75.0%)	2	4
Self-concept (SELF)	2	4	3 items (100%)	2	4

SOCIOMETRIC SCREENING	PRE	POST	ITEMS (%)	PRE	POST
Number of students (SOCIO)	2	5	Must have filled out sociometric screening. Count of number of students chosen		

After the missing data analysis, the number of missing of any of the outcome variables was in the range from 0 to 5, which is considered low, when total number of student participants were N=479. The further analysis was then conducted with these new computed variables. However, it should be noted that there was a relatively high number of missing values on pretest, compared to posttest. The reasons for this could be several, but one aspect that may have contributed to this was that before the student posttest the researcher emphasized the importance of answering all questions if possible. The importance of only one number being crossed out for each question was also conveyed, because at pretest many crosses were made between response alternatives and this led to several missing data at pretest. Regarding missing values on the sociometric questionnaire, further analysis had to use these respondents only. Nevertheless, there is not a high amount of missing data (T1: n=2, and T2: n=5). After checking the surveys, these respondents had not filled out any information on the page with the sociometric measurement, and therefore had to be excluded from analysis.

7.1.3 CHOOSING STATISTICAL TECHNIQUES

In order to choose appropriate statistical analyses for the measurements, some discussions regarding the nature of the data and the definition of change are outlined.

Parametric and non-parametric data

Continuous variables are often referred to as parametric data, while categorical/ordinal variables are considered as non-parametric in nature (Pallant, 2007). Parametric statistics are more powerful, but they make assumptions about the data that are more stringent. For example, they assume that the underlying distribution of scores of the population is normal. One other alternative is to use the non-parametric alternative, even if these tests are found less sensitive in detecting a relationship or a difference among groups. These still come with assumptions, but less stringent ones. The initial analysis of the differences between intervention group and control group in this study used both alternatives. Giving

similar results, it was decided to analyze the data with the parametric alternative. This was also due to the exploration of student data that showed normal distribution on all outcome variables, and the number of respondents (N=479) was considered suitable. Given the small sample within teachers (N=26), and to maintain the possibility of comparing results directly with the German teacher training (Grimminger, 2009), the non-parametric alternative was chosen for these data.

Definition of change between pretest and posttest

According to Twisk and Proper (2004), there are many different ways to define "change", and different definitions of "change" used in the analysis can influence the results of a study. For continuous outcome variables, they tested the differences between three different analyses to evaluate the effect of the intervention; (1) absolute change, (2) analysis of covariance (ANCOVA), and (3) residual "change" analysis. They claim that for most research situations, the absolute change is calculated. However, there is a chance that the change between baseline and follow up is related to the initial value by chance, and the general idea behind ANCOVA and the analysis of residual change is that these methods correct for this phenomenon called regression to the mean (Twisk & Proper, 2004). Due to this argumentation, this study will use residual change scores to evaluate effect of the intervention, i.e. a linear regression analysis was performed between the follow-up measurement and the baseline measurement. This difference between the observed value at the follow up and the predicted value by the regression analyses in the first step was used as the outcome variable in the analysis to evaluate the effect of the intervention.

7.2 STATISTICAL ANALYSIS AND PROCEDURES ON STUDENTS' OUTCOMES

As stated, all statistical analyses on students were conducted in the PASW statistics version 18. There are two groups in the present study, thus the independent variable is a dichotomous one (intervention group = 2, control group = 1) in further analyses. In order to be included in the data analysis, participants had to answer 2/3 (67%) of the items in scales (see chapter 7.1.2). Because of this, the sample size in the analysis of variables varies between 469 and 479.

The research question was tested with t-tests, repeated-measures multivariate analysis of variance (MANOVA), ANOVA, correlations, and testing of relationships in the path diagram by bootstrapping. All change-scores were calculated using the standardized residual scores in regression analysis which seems to be the most appropriate because it corrects for the phenomenon of "regression to the mean" (Twisk & Proper, 2004).

Table 21: Research question, type of variables and the statistical test performed

QUESTION	TYPE OF VARIABLES	STATISTICAL TEST
Is there difference between control group and intervention group at baseline?	One categorical independent variable → intervention/control Two or more continuous dependent variables → relevant outcome variables	Independent samples t-test
Is there a change on relevant outcome variables among students from baseline (T1) to post-intervention (T2) between intervention and control group? If significant MANOVA (p<.05)	One categorical independent variable → intervention/control Repeated measures (T1+T2) on continuous outcome variables	Repeated Measures Multivariate Analysis of Variance (MANOVA)
Which outcome variables have changed from baseline to T2 in the intervention group?	One test for each continuous outcome variable.	Follow-up Repeated measures One-way ANOVA
Which correlations exist between the residual change scores in all outcome variables?	One categorical independent variable → intervention/control Two or more continuous dependent variables → relevant outcome variables	Pearson's bivariate correlations between all outcome variables (Spearmans rho between intervention vs. control and the outcome variables)
Are there significant indirect paths between intervention vs. control and the correlated outcome variables?		Test of indirect links in the path diagram by Bootstrapping procedure (Preacher & Hayes, 2008)

First, the group differences at baseline on every outcome variable and demographic background were examined by using an independent sample t-test. Then, the differences between intervention and control group on the outcome variables on students were explored with the repeated measures Multivariate Analysis of Variance (MANOVA). When the research question is overall difference among groups, this multivariate

approach to repeated measures investigates whether one of the groups, on average, scores higher or not on the collected set of measures than another (Tabachnick & Fidell, 2007). They also argue that unequal sample size in the groups provides no special difficulty in this analysis, and that unequal *n* only creates difficulties in interpretation in designs with more than one independent variable. The repeated measured MANOVA results then need to be followed up, with follow-up tests to determine on which outcome variables the groups differ, usually tested with the help of analysis of variance (ANOVA). Therefore, several one-way ANOVA analyses were made to detect which outcome variables were different between the groups. These differences were explored further with bivariate correlation analysis, investigating the relationships between the outcome variables in a path diagram. These relationships developed a process model which was tested through path analysis and bootstrapping procedures (Preacher & Hayes, 2008).

Path analysis is a straightforward extension of multiple regression (Everitt & Dunn, 1991). Its aim is to provide estimates of the magnitude and significance of hypothesized causal connections between sets of variables. This is best explained by considering a *path diagram*. An input path diagram is one that is drawn beforehand to help plan the analysis and represents the causal connections that are predicted by our hypothesis. An output path diagram represents the results of a statistical analysis, and shows what was actually found (Everitt & Dunn, 1991).

Bootstrapping is an additional method advocated for testing mediation, a resampling strategy for assessing indirect effects in mediator models, such as a path diagram. Bootstrapping is a nonparametric resampling procedure, which does not impose the assumption of normality of the sampling distribution (Preacher & Hayes, 2008). It involves repeatedly sampling from the data set and estimates the indirect effect in each resampled data set. Mediation hypotheses posit how an independent variable affects a dependent variable, through one or more potential intervening variables, or mediators (Preacher & Hayes, 2008). According to Baron and Kenny (1986) is a mediator a given variable that accounts for the relation between the predictor and the outcome variable. It is important that potential mediators should be grounded on the basis of theory, and that a

specific indirect effect does not represent the ability of a given mediator *M* to mediate the effect of *X* on *Y*. (Preacher & Hayes, 2008). "Rather, a specific indirect effect represents the ability of *M* to mediate the effect controlling for all other mediators" (Preacher & Hayes, 2008, p.887). Hence, a specific indirect effect for *M* represents that mediator's unique ability to mediate the relationship between *X* and *Y* (ibid).

According to Preacher and Hayes (2008), bootstrapping provides the most powerful and reasonable method of obtaining confidence limits for specific indirect effects under most conditions, and is preferred over methods that assume symmetry or normality of the sampling distribution of the indirect effect. Their primary recommendation is to use bias corrected (BC) bootstrapping whenever possible, and there is an increasing amount of research conducting these methods in educational and behavioral research (e.g. Bagøien & Halvari, 2010; Standage, Duda & Ntoumanis, 2006). In the process model analysis in this study, Preacher and Hayes' (2008) SPSS script is used for testing mediation, and for assessing indirect effects in the output path diagram.

Further statistical analysis controlled for different effect due to the students' demographic variables. These possible differences in student outcome, dependent on gender, school level and immigrant background, were investigated through using the demographic variable as a covariate in the bootstrapping procedure. If this procedure revealed differences between sub-groups due to the demographic variables, separate MANOVAs and follow-up analysis were performed for each of the sub-groups, e.g. girls and boys. When testing for different results in students' outcomes according to teachers' performance variables, the teacher variable was divided into characteristic sub-groups among the intervention teachers (e.g. high vs. low method competence) and MANOVAs for the difference in students' outcomes between the groups was performed.

7.3 INTERPRETATIONS OF TEACHERS' OUTCOMES AND EXPERIENCES

The interpretations of the teacher material was a supplement in the discussions regarding students' outcomes, and also a control for maintaining results in a similar direction as Grimminger's (2009) teacher training. The analysis followed mainly the statistical procedures of Grimminger in order to interpret the data in a similar way, but to test relationships between teacher variables and student outcomes separate MANOVAs were conducted.

Table 22: Teacher devices, purposes and statistical analyses

	Devices - Teachers	Purpose	Statistical analyses
1	Survey (both intervention and control teachers	Measuring performance indicators (T1+T2) 1) Self-perceived ability – Method competence intercultural learning 2) Educational beliefs to teach IL 3) Acculturation attitudes 4) Knowledge interculturality and sport Measuring performance moderators (T1) 1) Teacher self-efficacy beliefs, 2) Teacher education and teacher experience, 3) Athletic background, 4) Immigrant background and/or experience abroad	- Mann-Whitney U-test applied for comparisons of mean scores between intervention and control group (independent sample) (- Wilcoxon Signed Rank Test – comparing possible differences of pre and post of the intervention (dependent sample)) Sub-groups of teachers together with MANOVA on student outcomes (Possible follow-up and same path analyses and bootstrapping as presented in 7.2)
2	Evaluation survey (only intervention teachers)	(1) Training content, (2) Applicability in PE, (3) Organization and climate, (4) Course supervisor (5) General impression of own outcome	Mean scores – comparing with German results. Sub-groups of teachers together with MANOVA on student outcomes
3	Focus group interviews (only intervention teachers)	Teacher experiences with input and learning activities, evaluation of the teacher training, inhibiting and promoting factors	Qualitative analysis using MAXQDA[17] to categorize and examine interview data. Discussions in the context of the quantitative results.

The analyses in this study relate mostly to student outcomes, and the results from all teacher measurements are not presented. In addition to a process assessment of the training, teacher measurements are used to explain, understand and investigate student outcomes. Discussions regarding these matters are presented in chapter 8.2 and 8.3.

[17] MAXQDA is a software developed in order to categorize and analyze qualitative data, such as transcribed interviews

8 RESULTS AND DISCUSSION

The results and discussion are combined in this presentation. This is partly due to the wide range of analyses, and in order to limit the number of repetitions from the result to the discussion part. Every result and its belonging discussion are therefore gathered in thematic parts. Chapter 8.1 follows the primary aim of this study; the investigation of student outcomes in the intervention group, compared to the control group, on all relevant outcome variables from baseline to posttest. Secondary analysis will investigate whether various students experienced a different effect of the intervention as a result of the performance variables and the degree of implementation among the teachers (chapter 8.2). This later discussion intends to combine teachers' outcomes and experiences to supply/possibly explain some of the different effects on student outcomes. Finally, some comments are made based on the teacher experiences, on how to improve the teacher training and implementation strategies for the next intervention in this realm (chapter 8.3).

8.1 HAD THE TRAINING PROGRAM THE INTENDED EFFECT AMONG STUDENTS?

This is the primary analysis, which intends to investigate whether there is an effect on the outcome variables among intervention students in line with the assumptions. The presentation of intervention effects starts with the characteristics of the student sample, the descriptive statistics for the demographic variables and all outcome variables collected at baseline (table 23):

Table 23: Baseline student characteristics of intervention vs. control group

Characteristics (N=479)	Intervention (n = 306) N (%) or Mean ± *SD*	Control (n = 173) N (%) or Mean ± *SD*	*p*
Gender			
Girls	169 (55.2%)	94 (54.3%)	
Boys	137 (44.8%)	79 (45.7%)	
School level			
Vg 1	47 (15.4%)	40 (23.1%)	
Vg 2	97 (31.7%)	67 (38.7%)	
Vg 3	162 (52.9%)	66 (38.2%)	
Study program			
Academic	267 (87.3%)	122 (70.5%)	
Vocational	39 (12.7%)	51 (29.5%)	
Immigrant background (N=476*)			
Yes	120 (39.6%)	36 (20.8%)	
No	183 (60.4%)	137 (79.2%)	
Abroad experience (N=476*)			
Yes	66 (21.8%)	32 (18.5%)	
No	237 (78.2%)	141 (81.5%)	
Outcome variables			
DIFF	4.29 ± 0.70	4.25 ± 0.80	.53
SYMP	2.27 ± 0.71	2.26 ± 0.75	.87
STS-pattern	0.27 ± 0.26	0.25 ± 0.26	.48
RA1 (N=477*)	2.45 ± 0.36	2.48 ± 0.33	.33
RA2 (N=476*)	2.89 ± 0.32	2.89 ± 0.27	.94
OPEN	3.31 ± 0.40	3.28 ± 0.38	.46
UNCERT (N=477*)	2.13 ± 0.58	2.13 ± 0.62	.99
SELF (N=477*)	2.45 ± 0.56	2.43 ± 0.56	.78
SOCIO (N=477*)	6.02 ± 1.89	6.26 ± 1.84	.18
SatPE	4.78 ± 1.13	4.59 ± 1.32	.12
TotSAT	4.95 ± 0.82	4.90 ± 0.87	.57

Note. SD = Standard Deviation, *p* calculated with t-tests.
*lower number of respondents due to missing data, calculated after missing analyses

The most important result from the baseline characteristics is that the intervention and control group were quite similar on all demographic and outcome variables. Independent sample t-tests revealed no significant differences between intervention and control group on the main outcome variables (DIFF, SYMP, STS-pattern, RA1, RA2, OPEN, UNCERT, SELF, SOCIO), or in the additional indicators (SatPE, and TotSAT). The further primary analysis will initially compare intervention and control group as a whole, to explore whether there are changes in the students from baseline to posttest.

8.1.1 STUDENT CHANGES FROM BASELINE TO POSTTEST

The next table regarding intervention effects includes the calculated means and standard deviations for all outcome variables at baseline (T1), post-intervention (T2), and the calculation and preliminary analyses of difference between intervention and control group students.

Table 24: Baseline values, posttest values, and difference in values for students in I-schools and C-schools.

Outcome variables*	I–schools (*n*=306) Mean ± *SD* (Δ(SEM))	C–schools (*n*=173) Mean ± *SD* (Δ(SEM))	Difference in Δ (95% CI)	*p*(Δ)
DIFF (T1)	4.29 ± 0.70	4.25 ± 0.80		
DIFF (T2)	4.22 ± 0.69	4.16 ± 0.83		
Δ DIFF (T2-T1)	–0.07 (0.04)	–0.09 (0.06)	0.02 (–0.14, 0.17)	.825
SYMP (T1)	2.27 ± 0.72	2.26 ± 0.75		
SYMP (T2)	2.42 ± 0.74	2.32 ± 0.77		
Δ SYMP (T2-T1)	0.15 (0.04)	0.06 (0.04)	0.09 (–0.02, 0.20)	.107
STS-pattern (T1)	0.27 ± 0.26	0.25 ± 0.26		
STS-pattern (T2)	0.30 ± 0.26	0.27 ± 0.25		
Δ STS (T2-T1)	0.03 (0.02)	0.02 (0.02)	0.01 (–0.04, 0.06)	.655
RA1 (T1)	2.45 ± 0.36	2.48 ± 0.33		
RA1 (T2)	2.45 ± 0.34	2.49 ± 0.35		
Δ RA1 (T2-T1)	0.00 (0.02)	0.01 (0.02)	–0.01 (–0.07, 0.05)	.735
RA2 (T1)	2.89 ± 0.32	2.89 ± 0.28		
RA2 (T2)	2.93 ± 0.32	2.88 ± 0.29		
Δ RA2 (T2-T1)	0.04 (0.02)	–0.01 (0.02)	0.05 (–0.01, 0.11)	.133
OPEN (T1)	3.31 ± 0.40	3.28 ± 0.38		
OPEN (T2)	3.29 ± 0.41	3.21 ± 0.41		
Δ OPEN (T2-T1)	–0.02 (0.02)	–0.07 (0.03)	0.05 (–0.02, 0.12)	.173

UNCERT (T1)	2.13 ± 0.59	2.13 ± 0.62		
UNCERT (T2)	2.17 ± 0.59	2.13 ± 0.63		
Δ UNCERT (T2-T1)	0.04 (0.02)	0.00 (0.03)	0.04 (–0.04, 0.11)	.392
SELF (T1)	2.45 ± 0.56	2.43 ± 0.56		
SELF (T2)	2.50 ± 0.57	2.35 ± 0.58		
Δ SELF (T2-T1)	0.05 (0.03)	–0.08 (0.04)	**0.13 (0.04, 0.22)**	**.007**
SOCIO (T1)	6.02 ± 1.89	6.26 ± 1.84		
SOCIO (T2)	6.14 ± 1.89	6.31 ± 1.85		
Δ SOCIO (T2-T1)	0.12 (0.08)	0.05 (0.11)	0.06 (–0.20, 0.33)	.656
SatPE (T1)	4.78 ± 1.13	4.59 ± 1.32		
SatPE (T2)	4.81 ± 1.26	4.55 ± 1.36		
Δ SatPE (T2-T1)	0.03 (0.06)	–0.04 (0.06)	0.07 (–0.10, 0.24)	.419
TotSAT (T1)	4.95 ± 0.82	4.90 ± 0.87		
TotSAT (T2)	5.00 ± 0.97	4.90 ± 0.95		
Δ TotSAT (T2-T1)	0.05 (0.04)	0.00 (0.05)	0.05 (–0.08, 0.18)	.440

Note. I–schools= Intervention schools (n=5), C–schools= Control schools (n=2), *SD* = Standard Deviation, Difference-in-Δ is I–schools Δ minus C–schools Δ. The significant difference in bold.
*all data calculated after missing analyses.

As the table shows, only small differences have been obtained during intervention. The only outcome variable which indicates a significant difference between the groups is self-concept (SELF). However, because of several outcome variables in the study, a multivariate analysis of variance (MANOVA) was performed.

8.1.2 MULTIVARIATE ANALYSIS OF VARIANCE (MANOVA) ON OUTCOME VARIABLES

The repeated measures MANOVA tests whether there is a difference between intervention and control group from baseline to post-intervention, taking all outcome variables into account at the same time. In the MANOVA, the intervention versus control group was used as a between factor crossed with T1 and T2 assessments as the repeated measures factor. Before the analysis, it was chosen not to include the difference (DIFF) and sympathy scale (SYMP). This was because the scales in combination revealed the STS-pattern. Also the total satisfaction with school (TotSAT) and satisfaction with PE (SatPE) was not included because these were additional indicators, and not main outcome variables to be measured. Thus, STS-pattern, RA1, RA2, OPEN, SELF, UNCERT, and SOCIO comprised the dependent factors.

The MANOVA yielded a significant interaction for time and intervention vs. control group within subjects, [F (7, 455) = 2,045, p = .048; Wilks' Lambda = .97; partial eta squared = .03; observed power = .79]. The revealed significant differences between the intervention and control group within subjects from T1 to T2 gave reason for follow-up comparisons between intervention and control group in order to investigate which outcome variables were different among the groups. These comparisons investigated whether the students in the intervention group had an effect from having teachers which had participated in the on-the-job training, compared to control group. The next table shows the results from the follow-up analysis on the outcome variables.

Table 25: Results from follow-up repeated-measures analysis of variance (ANOVA) on outcome variables.

Tests of Within-Subjects Contrasts

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Time *	STS	.009	1	.009	.231	.631	.001	.231	.077
INTvsCON	RA1	.011	1	.011	.234	.629	.001	.234	.077
	RA2	.134	1	.134	2.499	.115	.005	2.499	.351
	OPEN	.116	1	.116	1.535	.216	.003	1.535	.235
	SELF	**.864**	**1**	**.864**	**7.132**	**.008**	**.015**	**7.132**	**.760**
	UNCERT	.096	1	.096	1.132	.288	.002	1.132	.186
	SOCIO	.268	1	.268	.271	.603	.001	.271	.081

a. Computed using alpha = ,05

The follow-up repeated-measures analyses of variance (ANOVA) indicated that there was a significant interaction effect of time and intervention for Self-concept [F (1, 455) = 7.13, p=.008][18]. Hence, the hypothesis that the intervention would have a significant positive effect on Self-concept from T1 to T2, relative to the control group is supported. The results for all other outcome variables do not support the hypothesis that the intervention would have a significant effect from T1 to T2, relative to the control group.

[18] The commonly used guideline to assess effect size, proposed by Cohen (1988), the partial eta squared score of .015 suggests a small effect size.

In sum, the research question on whether having a teacher who participated in the teacher training would have an effect among students, was partially supported. The results and inspection of mean scores indicate that the students in the intervention group had a significant positive effect on self-concept compared to the students in the control group. The self-concept scale is comprised of the following three items:

Table 26: Items included in the Self-concept scale (SELF)

Item in survey (see appendix 2)	Item formulation (translated from Norwegian to English)
Part III, item 4*	I think it is important to compare myself to others
Part III, item 16*	It is important to me that I'm not the worst student in the group
Part III, item 20	It is not important how well I perform, making progress is the most important thing for me

Note: ** indicates that item 4 and 16 are recoded in such way that a higher score on the scale indicates a positive outcome among the students.*

These items in the Self-concept scale (SELF) are closely related to how the persons see themselves related to others. An inspection of the mean values shows that the mean scores of SELF head in the theoretically anticipated direction on all three items, and the results support that the students in the intervention group had increased their self-concept significantly compared to the control group. However, the mean scores shows that the students in the control group had a decrease in the Self-concept (M_{T1}= 2.43 ± 0.56, M_{T2}=2.35 ± 0.58) while the intervention group students increased their scores (M_{T1}= 2.45 ± 0.56, M_{T2}= 2.50 ± 0.57).

A separate MANOVA and follow-up analysis were performed to examine whether all items in the scale differed between the intervention and control group. In the repeated measures MANOVA, the three items in the self-concept scale comprised the dependent variables, the intervention versus control group was used as a between factor crossed with T1 and T2 assessments as the repeated measures factor. As expected, results revealed a significant effect for the three items in total [F (3, 469) = 2,688, p = .046]. The follow-up analyses revealed the following differences between the intervention and control group; item 4 [F (1, 469) = 4.15, p=.04], item 16 [F (1, 469) = 2.79, p=.09], and item 20 [F (1,

469) = 1.30, *p*=.25]. This indicated for the intervention group students that items 4 and 16 had improved the most. This supported these students' reporting that it was less important to compare themselves with others, and they were less occupied with not being the worst student in the group. The reason for this finding in Self-concept could be that the teacher training emphasized the awareness of differences between students, and the importance of building confidence in every student's personal development, without comparing themselves with others. The training input and learning activities also focused on acceptance and membership in an including learning environment, which could have positively affected these results. Even if no other changes in outcome variables were found, there could be indirect links and mediator effects through Self-concept related to other variables (Preacher & Hayes, 2008). This investigation of possible mediator and indirect effects started with an inspection of the correlation matrix between outcome variables.

8.1.3 RELATIONSHIPS AND PATHS BETWEEN THE OUTCOME VARIABLES

At first, the correlations between the measures in intervention (2) vs. control (1), self-concept and the other outcome variables were investigated[19]. Bivariate correlations between all change measures emerge in table 27. The correlations are between residual change scores controlled for baseline value (post-measurements regressed on baseline measurements).

[19] For bivariate correlations between all measurements at baseline (T1) and post-intervention (T2), see table 35, appendix 12

Table 27: Bivariate correlations between residual change scores in outcome variables from T1 to T2

Measure (time)	1	2	3	4	5	6	7	8	9
1. Intervention (2) versus control (1)		--							
2. Change in Self-concept (T1-T2)	.15**	--							
3. Change in Uncertainty (T1-T2)	.04	-.10*	--						
4. Change in Openness (T1-T2)	.09†	-.02	-.18**	--					
5. Change in RA1 (T1-T2)	-.04	-.03	.12*	.04	--				
6. Change in RA2 (T1-T2)	.08†	-.03	.10*	.21**	.08†	--			
7. Change in STS-pattern (T1-T2)	.04	-.06	.02	.04	.07	.01	--		
8. Change in Sociogram (T1-T2)	.00	.03	.03	-.02	.02	-.07	.03	--	
9. Satisfaction with PE (T2)	.09*	.05	-.07	.10*	.08†	.01	.03	.04	--
10. Change in Total School satisfaction (T1-T2)	.04	.07	-.20**	.06	.01	.02	.03	-.05	.58**

Note. Pearson's correlations between all change variables (Spearman's point bi-serial coefficient is used between int vs.con and the change variables).
T1 = Baseline, T2 = Post-intervention, †p<.10, *p<.05, **p<.01 (two-tailed).
Change = residual score controlling for baseline value.

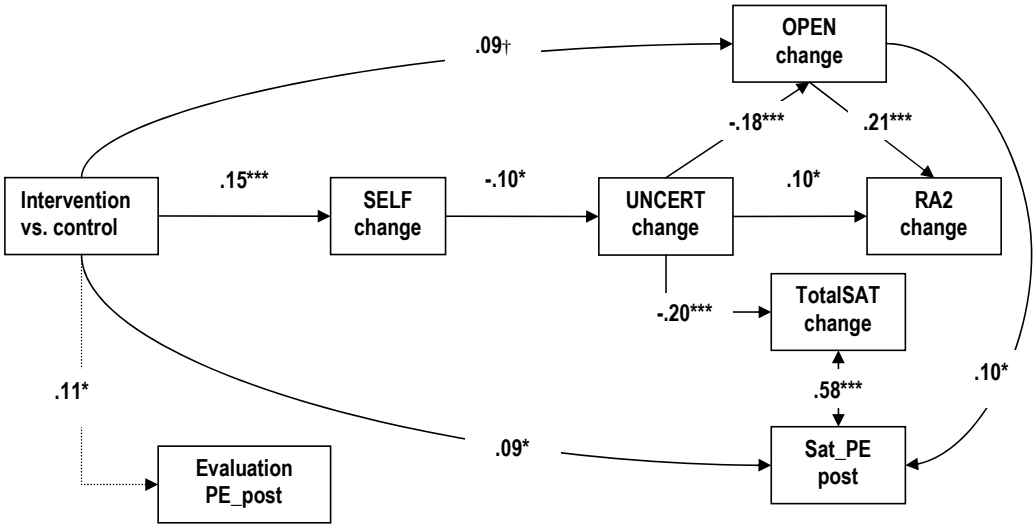
According to the previous results there are positive links between the intervention versus control group (Int. vs. control) and change in Self-concept (SELF) (r=.15, p=.001). The plan was to determine what SELF correlated with in order to find additional relationships in data. To control for differences in demographic variables, bivariate correlations between change in SELF and gender, study program, school level, immigrant background and experience abroad were tested. No significant correlations were found. These demographic variables were not taken into account for the further path analyses.

Table 27 shows negative correlations between change in SELF and change in UNCERT (r=-.10, p=.029). From these correlations it was found that a higher score on change in self-concept correlated negatively with Uncertainty change scores. This indicated that higher scores on self-concept for the students in the intervention group could be a possible mediator for a decreased Uncertainty score. This table also reveal negative correlations between change in UNCERT and change in OPEN (r=-.18, p=-.000). This indicated that lower scores on uncertainty for the students in the intervention group could be a possible mediator for a higher change in Openness score. In addition the intervention vs. control variable has a positive relationship with Openness (r=.09, p<.10), which indicates that students in the intervention group has increased their openness score as a direct effect of the intervention.

The additional outcome variables in relation to satisfaction with PE (SatPE) and total satisfaction with school (TotSAT) were also investigated through this procedure. The one indicator for satisfaction with PE (SatPE) showed significant positive correlation (r=.09, p=.04) with intervention vs. control, supporting that the intervention group as a whole experienced higher satisfaction with PE. The high correlation between Total satisfaction with school (TotSAT) and satisfaction with PE (r=.58, p=.00) is natural because SatPE is one of the three items of the TotSAT scale. In the posttest of the students, a six item PE evaluation scale was also added, which was an additional indicator of whether PE had changed from the first measurement. Even if it was just an indicator without baseline measurement, it correlated positively with the intervention group (r= .11, p= 0.02). These results indicate that students in the intervention group think that PE had improved during

and after the intervention. These and other significant relationships between the variables are presented in the path diagram in figure 6.

Figure 6: Output path diagram, bivariate correlations among outcome variables



Note: †$p < .10$, *$p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed).

In the nature of being the first study of its kind, where all outcome variables were initially equal, the explorative character of the output path diagram is considered helpful to investigate the associations between the outcome variables. This testing of possible indirect links and mediator effects could also be important in the building of hypotheses for later studies. One important finding in this output path diagram, is that the relationships between variables are consistent and in line with the assumptions. Thus, although overall main effects are scarce, this consistency in results may be perceived as a valuable confirmation for further testing these paths.

8.1.4 TESTING INDIRECT EFFECTS IN THE PATH DIAGRAM BY BOOTSTRAPPING

As presented in chapter 7.2 (p. 95), bootstrapping is an additional method advocated for testing indirect effects in mediator models, such as a path diagram. All indirect links in the path diagram were tested through bootstrapping procedures Bootstrapping was applied instead of multiple regressions, because it is recommended for small sample sizes (cf. Preacher & Hayes, 2008). The following tests of indirect paths were conducted in order to test the path diagram outlined in figure 6:

Table 28: Test of indirect paths, bivariate correlations emerged in path diagram (figure 6)

	Independent variable (IV)	Mediator (M)	Dependent variable (DV)	Point estimate	SE	Bootstrapping BC 95% CI	
						Lower	Upper
1	Int vs. control	Self-concept	Uncertainty	-.03	.02	-.083	-.004
2	Self-concept	Uncertainty	Openness	.02	.01	.001	.051
3	Uncertainty	Openness	Rational argumentation	-.04	.02	-.080	-.011
4	Self-concept	Uncertainty	Rational argumentation	-.01	.01	-.037	.001
5	Int vs. control	Openness	Rational argumentation	.04	.02	.001	.093
6	Int vs. control	Openness	Satisfaction with PE (T2)	.02	.02	.001	.076
7	Self-concept	Uncertainty	Total school satisfaction	.02	.01	.003	.055
8	Uncertainty	Total school satisfaction	Satisfaction with PE (T2)	-.15	.05	-.271	-.063
9	Int vs. control	Satisfaction with PE (T2)	Total school satisfaction	.11	.06	.012	.232

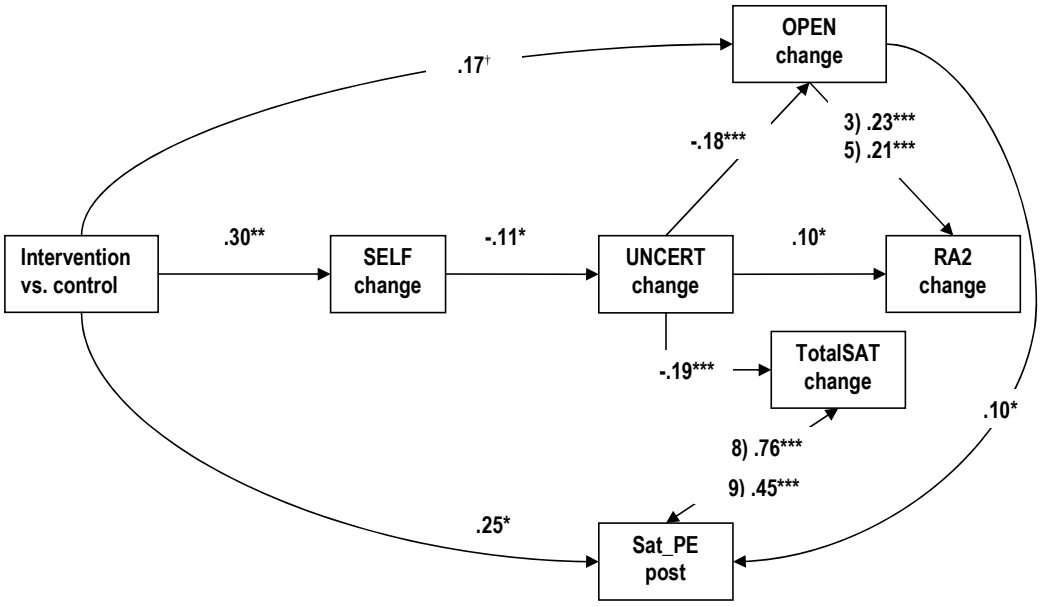
BC: bias corrected; 1000 bootstrap samples, *a-path* IV→ M, *b-path* M → DV.

All variables represent change from baseline to T2 (residual change scores), except Satisfaction with PE (T2)

(For bootstrapping matrix, see output 1, appendix 12).

In table 28, row 1, the paths between intervention vs. control (Independent Variable = IV), change in Self-concept from T1 to T2 (Mediator = M), and change in Uncertainty score (Dependent Variable = DV) were analyzed. The path between intervention vs. control and change in Self-concept was significant (Point Estimate, PE, for path a = .30, p < .01), as was the path between change in Self-concept and change in Uncertainty score (PE for path b = -.11, p < .05). There was a significant indirect link between intervention vs. control and change in uncertainty through change in self-concept, because the Bias-Corrected 95% Confidence Intervals (BCCI) did not include zero [path a X path b = -.03, *SE* = .02, BCCI: Lower = -.083 and Upper -.004]. All paths (1-9) in table 28 were investigated in a similar way, and detailed results of every path are presented in table 36, appendix 12. For the further discussion the interpretations of the findings are emphasized.

Figure 7: Path coefficients diagram between outcome variables (revealed in bootstrapping procedure)



Note: †$p < .10$, *$p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed).

In sum, the results significantly supported the indirect relations between the variables, also when being controlled for baseline measurements[20]. The results in row 1 (table 28) supported an indirect link between intervention vs. control and change in uncertainty, mediated through change in self-concept (INTvsCON → SELF → UNCERT). The negative score on the point estimate and BCCI means that the higher score of self-concept in the intervention group mediated a lower score on uncertainty. The associations seem logical because the teacher training emphasized building confidence in every student, focusing on acceptance and membership. A result of the increased self-concept would hopefully be that the students became less uncertain, which is indicated in this path.

The results in row 2 supported an indirect link between change in self-concept and change in openness, through change in uncertainty (SELF → UNCERT → OPEN). The positive point estimate on the indirect effect means that a higher score on change in self-concept is associated with a higher score on change in openness, mediated through lower score on change in uncertainty. As indicated in row 1, a higher self-concept could be associated with less uncertainty. Less uncertainty (e.g. in interaction or PE activities) is associated with greater openness. A student who is less uncertain is more likely to be more open towards new persons and/or situations.

The results in row 3 indicate that change in uncertainty has an indirect link to change in rational argumentation 2, mediated through change in openness (UNCERT → OPEN → RA2). The negative score on the point estimate indicates that a lower score on uncertainty is related to a higher score on RA2, mediated through a higher score on change in openness. The results in row 5 also supported a related link between intervention vs. control and change in RA2, mediated through change in openness (UNCERT → OPEN → RA2). The positive score on the point estimate means that being in the intervention group has an indirect link to higher rational argumentation, mediated through a higher score on change in openness. The results also support a direct effect of being in the

[20] Note: All paths were controlled by using measurement at Time 2 as dependent variable, and measurement at Baseline as Control Variable (CV), also giving similar Bias Corrected 95% Confidence Intervals (BCCI).

intervention group on change in openness. Both paths have significant positive correlations between openness and rational argumentation, where openness is suggested as being a mediator for rational argumentation. Being more open towards new persons or situations might be helpful in a more rational and constructive way of argumentation. This is an important indication for the goals of intercultural learning approaches, which is to deal with differences and strangeness in a more open and rational way.

The results of row 4 indicate support for indirect links between change in self-concept and change in RA2, mediated through uncertainty (SELF → UNCERT → RA2). However, this indicates a marginal indirect link because the BCCI include zero. Nevertheless, the positive score on the point estimate gives support for a higher score on uncertainty leading to a higher score on RA2. One possible explanation could be that higher uncertainty might reflect a tolerance towards differences, a sensitivity and acceptance of own uncertainty, and is therefore associated with a more rational way of dealing with the situations included in the student survey. You may still consider yourself uncertain, but you learn to cope with it, and still develop a more rational argumentation.

The results of row 6 indicate support for indirect links between intervention vs. control and satisfaction with PE, mediated through change in openness (INTvsCON → OPEN → SatPE). The positive score indicates that being in the intervention group leads to higher satisfaction with PE, mediated through higher openness. This link is related to the first path in row 9 where satisfaction with PE is directly positively associated with being in the intervention group as well (INTvsCON → SatPE → TotSAT). This indirect link further indicates that being in the intervention group is associated with Total satisfaction with school, mediated through higher satisfaction with PE. The strong correlation between SatPE and TotSAT is natural and is partly because SatPE is one item in the TotSAT scale, but also because contentment with school subjects would most likely contribute to a high well-being at school. This means that both being in the intervention group and being more open to new situations and persons are both associated with a higher well-being in PE. This is an important additional outcome for the intervention in this realm. It could support that intercultural learning approaches in PE also has the potential to

stimulate increasing satisfaction with PE, and further might lead to more positive experiences with physical activities for the students.

The results in row 7 supported an indirect link between change in self-concept and change in total satisfaction with school, mediated through change in uncertainty (SELF → UNCERT → TotSAT). The positive score on the point estimate means that a higher score on self-concept leads to higher score in total satisfaction with school, mediated through lower score on change in uncertainty. This association between self-concept and uncertainty is similar as in rows 1 and 4. In addition, the results in row 8 indicated an indirect link between change in uncertainty and satisfaction with PE at posttest, mediated through total satisfaction with school (UNCERT → TotSAT → SatPE). The negative score on the point estimate means that a lower score on uncertainty leads to higher satisfaction with PE at posttest, mediated through a higher score on total satisfaction with school. Hence being a potential mediator for many of the indirect links, Uncertainty should be treated as an important indicator for this study and similar interventions in later studies. The suggestions from Esser-Noethlichs (2010) that Uncertainty is a central theoretical concept and therefore could be a potential new scale and variable for the measurement device, is therefore supported in this study.

8.1.5 DISCUSSING THE DIFFERENCES BETWEEN INTERVENTION AND CONTROL GROUP

This investigation has shown that the model variables in figure 7 (SELF, UNCERT, OPEN, RA2, SatPE and TotSAT) have some important associations, which are consistent with the theoretical assumptions. The further considerations use this model as the primary outcome, and discussions are made especially related to the significant direct and indirect effects investigated in the previous section. The results reveal from small (r=-10 to .29) to medium (r=.30 to .49) strengths of correlations. The results indicate that the students in the intervention group had positive effects of being in a class with a teacher who participated in the teacher training, compared to the control group.

On the first hand, the positive effect in the intervention group is related to the students' self-concept. The items in the self-concept scale are closely related to how the persons

see themselves in relation to others. The results support that it became less important for the students in the intervention group to compare themselves with others, and they weren't that occupied with not being the worst students in the group. The intervention group students' higher scores on self-concept were mediating lower scores on uncertainty compared to control group. This increased self-awareness seemed to make the students tolerant to uncertainty, which is an important aspect in the intercultural learning processes. This score in uncertainty was associated with a higher openness, along with a higher reported total satisfaction with school. The results also support a positive association of being in the intervention group and satisfaction with PE. In addition, the six item total evaluation of PE only conducted at posttest correlated positively with the intervention group. This indicated that students in the intervention group tend to score higher on their evaluations ($r=.11$, $p=.02$), compared to the control group. Moreover, the intervention group had a marginal significant effect on openness, which was further associated with a higher degree of rational argumentation. This indicated that the students in the intervention group reported having become more open and more rational in their argumentation style after the intervention.

The reason for finding a positive direct effect on the variables self-concept, openness, and satisfaction with PE, and not on all outcome variables in the intervention group could be several. One possible explanation is the focus from input 2 of the teacher training, which emphasized the importance of the students being aware of the differences in the class, but still focusing on the individual development at their own level. The training focused more on the relationship between self-confidence, acceptance and membership in the learning environment. In addition the inputs discussed the importance of being aware of students' uncertainty in PE situations, and becoming more open towards these natural feelings emerging related to the subject of PE. One of the goals which engaged the teachers was how most students could gain a positive experience related to physical activity, and in which way they could develop both intercultural skills and motoric skills in the same setting. Due to this special emphasis in the continued training from input 2, it is considered likely that the outcome variables in the model could be the ones most probable to be affected. Even if the other outcome variables did not show significant

results or mediator relations in the process model, the mean values of the intervention group scored in the anticipated direction on most all outcome variables compared to the control group (table 24, p.101-102), and could therefore be characterized as consistent.

However, the relationship between uncertainty and rational argumentation (RA2) showed that reported uncertainty among students might be a mediator for a more rational way to accept and to be aware of differences. The reason for this relationship could be that admitting and accepting own uncertainty might lead to the same or even higher reported scores on the uncertainty scale, which also indicates a positive relationship to be more rational in the argumentation towards differences. These associations could be further investigated in later studies.

8.1.6 DID DIFFERENT EFFECT DEPEND ON SUB-GROUPS AMONG STUDENTS?

After examining these differences in the overall group of students, further investigations were made to find out whether special sub-groups had a better effect than others in the intervention. The correlation matrix between absolute change scores and the scores at pretest on all outcome variables indicates highest effect on those who have lowest score at baseline (table 37, appendix 12). These relationships between low score at baseline and change in outcome variables were further investigated by a median split on the self-concept variable, between the lowest score at baseline versus the highest score at baseline. The reason for examining the change in self-concept was that this was the strongest significant outcome variable in the MANOVA. A two-way between groups ANOVA with the new SELF variable and intervention vs. control as the two independent variables was conducted, in order to compare the students with initially low self-concept in the intervention group towards similar students in the control group. No interaction effects on the residual change scores in self-concept from T1 to T2 were found between the two groups. To compare more extreme scores it was decided to split the file into three scores on self-concept (low, medium, high), but no significant differences were revealed between high and low self-concept on the other outcome variables. The results indicated that students with a low self-concept at baseline did not have a larger effect of the intervention than students with high self-concept at baseline.

Did student effect depend on demographic variables?

After investigating potential differences regarding self-concept, further analyses were conducted to explore sub-group interactions for demographic variables on the student change in outcome variables. To check these interaction effects on the outcome variables the bootstrapping procedure (cf. 8.1.4) was controlled for using each of the demographic variables as covariate. No interaction effects were detected due to the demographic variables school level, immigrant background, experience abroad or study program.

However, it seemed that boys and girls experienced a different effect due to the intervention (see table 38, appendix 12, bootstrapping controlled for gender). Performing separate MANOVAs for girls and boys revealed that only girls showed a significant difference between the intervention and control group taking all variables into account. [Girls: I-group n=165, C-group n=91: F (7, 248) = 2,707, p = .010; Wilks' Lambda = .93; partial eta squared = .07; observed power = .90], [Boys: I-group n=133, C-group n=74, F (7, 199) = 1,501, p = .169; Wilks' Lambda = .95; partial eta squared = .05; observed power = .62]. Similar as for the whole group, follow-up ANOVAs showed significant differences only on self-concept also for the girls [F (1, 248) = 7.36, p=.007] (for further details see table 39, appendix 12). Inspection of mean values showed that the differences go in the theory-expected direction for the intervention group. Despite a lack of significance (see table 40, appendix 12), all changes within boys were also consistent in the expected direction on the variables investigated in the model. This indicates that girls experience a greater effect than the boys as a result of the intervention.

Some research in PE has shown that the activities are mostly related to boys' interests and leisure time activities (Imsen, 1996). In this intervention, the related activities and PE lessons were supposed to attract both girls and boys. Hence, a possible explanation for the girls to score significantly higher on the outcome variables could be that the new activities were considered more attractive. Inspection of mean values of satisfaction with PE indicates that girls score higher, while for the boys it seems that they are equally satisfied with the new activities as with the old ones.

In addition, some comments on the open-ended questions on the students' post-intervention measurement stated that girls thought the lessons in PE were considerably better because the activities were more fun and everybody could participate on their own performance level. The importance of these aspects for the learning environment was also focused on in the teacher training, so this indicates that the intervention teachers implemented some of these activities towards their students. For the boys, some reported that they missed some of the previously focused on activities such as soccer. Nevertheless, boys still maintained their same satisfaction with PE after the intervention.

As already found, there were no differences between the intervention and control group in terms of number of pupils in sociometric measurement (SOCIO). Neither was there any difference between boys and girls or the other demographic variables regarding the choice of peers. A closer inspection of the group relations also showed that there were small changes within classes regarding whom they chose from baseline to posttest. They had a clear tendency to choose the same names regardless of the question, and very often peers of the same sex. It may be that the questions caused them to too easily select friends instead of selecting based on characteristics of their peers. This could indicate a need for sociometric questions that are more direct and closely related to the dependent variables.

Further investigations regarding gender or other demographic variables[21] are not conducted here, but could be an aspect in the research design of similar intervention studies.

[21] The baseline scores on the dependent variables revealed some significant differences between the students due to the demographic variables (table 41, appendix 12). But as the analyses revealed (cf. 8.1), these differences did not seem to affect the results of this study. For other studies, further investigations on these differences might be considered, but this is not focused on in this study.

8.2 STUDENT OUTCOMES IN CONTEXT OF TEACHER MEASUREMENTS

According to the discussion in chapter 3.3 (p.35), focusing on the important role of teachers as agents for change towards students, this part will discuss student outcomes in the context of teachers' outcomes and experiences during and after training. Even if the results among students only showed differences on a few variables, the results of teachers could be used to build a greater understanding of these results. This following sub-chapter is for discussions on student outcomes in the context of the teacher measurements and group interviews during and after intervention. First, the teachers' performance variables and their possible effect on student outcomes will be discussed (chapter 8.2.1). Second, the results and discussions are outlined related to the high implementing teachers compared to the low implementing teachers in terms of the student outcomes (chapter 8.2.2).

The demographic frequencies of the teachers' characteristics at baseline are similar across intervention and control group on all variables (table 42, appendix 12). Moreover, the teachers in the two groups are not significantly different in regard to Teacher Self-efficacy. However, it should be remarked that an inspection of mean values reveals that intervention teachers score lower than the control teachers on the ability to cope with new challenges in school (TSE6-Cope). Initially this could be considered an obstacle for success among the teachers, especially because the training has an intention of creating changes within both teachers and students. Partly due to a low number of respondents (n=25) this difference is a non-significant finding (p=.11). But according to Cohen (1988) the calculation of effect size (*Cohen's d* = 0.7) suggests a medium importance of the finding, and this could be a possible moderator in the extent to which the teachers have contributed to students' outcomes.

8.2.1 TEACHERS' PERFORMANCE VARIABLES

In addition to the baseline variables presented above, some possible teacher performance indicators were measured before and after the intervention period in order to explain student outcomes. This comprised the following variables:

Performance indicators (T1+T2)

1) METH: Self-perceived ability – Method competence intercultural learning

2) EB: Educational beliefs to teach IL

3) AA: Acculturation attitudes

4) KNOW: Knowledge interculturality and sport

Performance moderators (T1)

1) TSE: Teacher self-efficacy beliefs

2) Teacher education and teacher experience

3) Athletic background

4) Immigrant background and experience abroad

As already stated, the initial tests showed no significant differences among intervention and control group at baseline. For the change scores[22] from baseline to post-measurement, the Mann Whitney[23] U Test revealed significant difference between intervention and control group regarding method competence (METH) (z=-2.17, p=.03, r=.42). An inspection of the median scores (Md_{T1}=1.67, and Md_{T2}=2.67) suggests that the intervention teachers have increased their method competence regarding intercultural learning. This scale is a self-assessment of which didactic and methodological competence the teacher has achieved regarding the planning, implementation and reflections on intercultural learning within PE. This is in line with Grimminger's (2009) expectations that the conducted training approach will improve the methodological skills of PE teachers. However, no other significant differences (EB, AA or KNOW) were found in the Mann Whitney U Test (table 44, appendix 12).

After revealing a difference between the intervention and the control group, the intervention teachers were selected and a Wilcoxon Signed Rank Test for repeated measures was conducted. Similarly as Mann Whitney, the only significant result indicated an increase in method competence from T1 to T2 (z =-3.44, p =.001, r = .86). The results further support the expectation that after training, the PE teachers will feel subjectively more competent to plan, implement and reflect on intercultural learning in their PE lessons (Grimminger, 2009). This result may be an indication of the didactical approach in the training. As discussed, such a high score on method competence could probably increase the chances for implementation towards the students.

[22] For all baseline values, posttest values and absolute change scores for teachers performance indicators in I-schools and C-schools, see table 43, appendix 12

[23] A significant Kolmogorov-Smirnov result shows violation of the assumption of normality in the data, which suggest choosing the non-parametric alternative (Pallant, 2007). Also a small number of respondents (n=26) suggests the non-parametric methods of calculation.

In order to investigate the relationship between teachers' method competence and the students' outcomes, a new variable was computed for the student analysis. In the repeated measures MANOVA the students of the teachers with high METH were compared to the students of the teachers with low METH (median split). High vs. low METH was used as a between factor crossed with T1 and T2 assessments as the repeated measures factor. All student outcome variables comprised as dependents (SELF, OPEN, UNCERT, RA1, RA2, STS, and SOCIO). The MANOVA yielded a non significant interaction for time and teachers' high method competence vs. low method competence within students, (F (7, 290) = 0,799, p = .58; Wilks' Lambda = .98; partial eta squared = .019; observed power = .34). The results suggested that there were no differences among student outcomes due to the score in method competence among teachers.

As previously discussed (chapter 6.2.3), a change of educational beliefs, acculturation attitudes and knowledge on interculturality and sport may increase the chances for implementation towards students. The results from the dimensions for these performance variables (EB1, 2, 3, AA1, 2, 3, and KNOW) indicate no significant changes among the intervention teachers from baseline to posttest on these variables. One possible explanation is that already at baseline, teachers scored high in a performance enhancing way on the variables. Therefore, there was not much potential for improvement in these during training. Another reason may be that educational beliefs (EB) and acculturation attitudes (AA) require more focusing, because they represent relatively stable convictions. During training the focus was more on the didactical approach, discussing the links between theory and practice, and to implement the content towards students.

Teacher self-efficacy beliefs may be conceptualized as teachers' own beliefs in their abilities to plan, organize and implement intercultural learning activities. One expectation was that teachers with High TSE score are more likely to implement new teaching in their classroom. The total self-efficacy score for teachers was collapsed into two groups (high TSE >= 5, and low TSE < 5). No significant differences were found when conducting a MANOVA between these groups regarding student outcomes (F (7, 276) = 0,453, p =.87). In the baseline it was found that teachers in the intervention group had a tendency

for lower scores on coping with challenges compared to the control group (TSE6-Cope, p=.11). An additional analysis was made by collapsing the TSE6 into low and high scores with a median split, revealing a non-significant result as well (F (7, 290) = 0,751, p =.87). For later studies it could be helpful to measure the teacher self-efficacy scale also after intervention, in order to see whether change in any of the dimensions relate to the degree of implementation and student outcomes.

The teachers' baseline characteristics were also tested on the student outcomes, such as the teachers' gender (male vs. female), age and teaching experience (experienced vs. novice), education (master vs. bachelor), athletic at present (yes vs. no), immigrant background/experience abroad (yes vs. no). Expectations regarding these demographic variables (chapter 6.2.3) suggested that they could impact the degree of implementation by the teachers. However, separate MANOVAs on each teacher variable using the student outcome variables as dependents revealed no significant differences between any of the groups (table 45, appendix 12).

The intervention teachers also received an additional evaluation survey with close-ended questions and possibilities for additional comments. This concerned the training content, applicability to PE, organization and climate, course supervisor, and general impression of own outcome. It was hypothesized that the teachers who were most satisfied with the course might implement more among students. The results showed a high contentment among all teachers (Mean= 52.9, range 41-60). Grimminger (2009) assessed the same in her training (Mean= 48.4, range 27-60), and suggested that teachers scoring below 48 did not approve of the training, while those scoring above 48 where satisfied with the training. A new variable was computed with high vs. low course satisfaction (cut point: 48). But as with the other MANOVAs, this analysis on student outcomes between high vs. low satisfaction with training among the teachers showed no differences between the groups.

A further analysis was done selecting optimal constellations of teacher variables according to the theoretical assumptions (chapter 6.2.3). This was an attempt to group

teachers according to teaching behavior which enhances intercultural learning (combination of experienced teachers, master education, high METH, high teacher self-efficacy, and high satisfaction with course content). This new variable was called optimal teacher background. But in spite of these combinations of success factors, a MANOVA analysis between optimal vs. less-optimal teacher background showed no differences between the groups regarding the student outcomes (F (7, 290) = 0,458, p =.87).

This chapter has investigated to what extent teacher variables may have influenced the effect among students. Although many theoretical expectations have been tested, there are no clear findings (table 45, appendix 12). Earlier on in the discussion (chapter 8.1), we saw that students had an effect from the intervention. But as we have seen, it seems this is not due to the teachers' performance variables. Similarly, Grimminger (2009) found that the changes in the performance indicators in her quantitative findings could not explain to what extent the teachers reported implementing intercultural learning in PE. The implementation did not depend primarily on the teachers' development of competence throughout the training, but rather on the structural, organisational and personal skills as framework for performance (Grimminger, 2009). Hence, with the help of the focused group interviews in this intervention, one had an opportunity to gain a deeper insight into their teaching and how much of the course content the teachers had managed to implement for school practice. These interviews were therefore the foundation for new analyses, which will be further discussed in the next chapter.

8.2.2 HIGH IMPLEMENTING TEACHERS VS. LOW IMPLEMENTING TEACHERS

The assessment survey indicated that all teachers were positive to the training content, and therefore had the potential to implement the content. The performance indicators, Educational Beliefs and Acculturation Attitudes, did not show significant differences between the intervention and control teachers, nor did they show any associations with student outcomes. The self-perceived ability to perform intercultural learning in their classroom (Method competence) was the only performance indicator that showed a significant improvement by the intervention teachers. However, there were no consistent

results between high score on method competence and large outcome among students (cf. chapter 8.2.1).

The differences between teachers became most visible in the group interviews, where the teachers reported about their implemented activities and experiences. These interviews revealed that some teachers had implemented more in their teaching than others. Hence, teachers reporting most student activities were selected and labeled "high implementing teachers" (6 teachers). While teachers reporting considerably fewer activities were called "low implementing teachers" (10 teachers). The decision of which teacher belonging to each group was an evaluation of the researcher based on teachers' feedback in the interviews. All teachers in the high implementing group had implemented at least 3 sessions with student activities during the intervention period, while teachers in the low-implementing group reported less effort to implement activities (more random selection of some student activities). The control group was still included in the analyses to have a reference point compared to the overall results. Table 29 shows the main characteristics of the three groups:

Table 29: Number of students and gender distribution of the new Teachers Implementing variable

VALUE AND LABELS; TEACHERS IMPLEMENTING VARIABLE		Gender		Total
		1 Girls	2 Boys	
1 Control group	Count	94	79	173
	%	54.3%	45.7%	100.0%
2 High implementing teachers	Count	55	47	102
	%	53.9%	46.1%	100.0%
3 Low implementing teachers	Count	114	90	204
	%	55.9%	44.1%	100.0%
Total	Count	263	216	479
	%	54.9%	45.1%	100.0%

After creating this new variable, the differences between student outcomes in the two groups of implementing teachers (high/low) and the control group were examined. For a comparison with the overall results revealed in chapter 8.1, only the outcome variables in the model (figure 7) are presented and compared. The MANOVA, path analysis, and bootstrapping procedure were performed for the students of the high implementing teachers compared to control group students, followed with an analysis of the students of the low implementing teachers compared with the control group. In spite of no systematic differences in gender between the groups, gender was controlled for in the analyses, keeping in mind the tendency from the earlier discussion that girls seem to receive some larger effect of the intervention than boys (chapter 8.1.6).

The first repeated measures MANOVA tested whether there is a difference between the students' outcomes of the high implementing teachers compared to the students in the control group. In the MANOVA, the high implementers versus control group was used as a between factor crossed with T1 and T2 assessments as the repeated measures factor. Before the analysis it was decided to include only the variables detected in the output path diagram from the overall analyses in chapter 8.1. The changes in SELF, UNCERT, OPEN, RA2, TotSAT and SatPE (T2) therefore comprised the dependent variables. To compare with the students of the low implementing teachers, the same analyses were performed using the low implementers versus control group as a between factor crossed with T1 and T2 assessments as the repeated measures factor. Both measures were controlled for gender.

The MANOVA performed on the students of the *high implementing teachers* yielded a significant interaction for time and high implementers vs. control group within subjects, (F (6, 261) = 3,822, p = .001; Wilks' Lambda = .92; partial eta squared = .08; observed power = .96). The revealed significant differences between the high implementers and control group within subjects from T1 to T2 on the combined dependent variables gave reason to consider the results for the dependent variables separately. For the students of the *low implementing teachers*, the MANOVA yielded a marginal significant interaction for time and low implementers vs. control group within subjects, (F (6, 362) = 1,841, p =

.09; Wilks' Lambda = .97; partial eta squared = .03; observed power = .69). The revealed marginal significant differences between the low implementers and control group within subjects from T1 to T2 on the combined dependent variables initially provided no reason for considering the results for the dependent variables separately. Nevertheless, for comparisons between the groups, the next tables show the results from the follow-up analysis for both groups:

Table 30: Results from follow-up analysis on outcome variables for students with high implementing teachers vs. control group students

Tests of Within-Subjects Contrasts

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Time * High-Implementing vs. control group	**SELF**	**.850**	**1**	**.850**	**6.171**	**.014**	**.023**	**6.171**	**.697**
	OPEN	.204	1	.204	2.593	.109	.010	2.593	.361
	UNCERT	.013	1	.013	.156	.693	.001	.156	.068
	RA 2	.003	1	.003	.064	.800	.000	.064	.057
	TotSAT	**1.784**	**1**	**1.784**	**8.165**	**.005**	**.030**	**8.165**	**.812**
	satPE	**4.869**	**1**	**4.869**	**12.866**	**.000**	**.046**	**12.866**	**.947**

Computed using alpha = ,05.

Table 31: Results from follow-up analysis on outcome variables for students with low implementing teachers vs. control group students

Tests of Within-Subjects Contrasts

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Time * Low-Implementing vs. control group	**SELF**	**.546**	**1**	**.546**	**4.694**	**.031**	**.013**	**4.694**	**.580**
	OPEN	.066	1	.066	.817	.367	.002	.817	.147
	UNCERT	.032	1	.032	.453	.501	.001	.453	.103
	RA 2	.197	1	.197	3.798	.052	.010	3.798	.494
	TotSAT	.591	1	.591	1.351	.246	.004	1.351	.213
	satPE	.139	1	.139	.534	.465	.001	.534	.113

Computed using alpha = ,05.

The follow-up repeated-measures analyses of variance (ANOVA) for the students of the high implementing teachers (table 30) indicated that there was a significant interaction

effect of time and high-implementers for Self-concept [*F* (1, 261) = 6.17, *p*=.014, partial eta squared =.02], Total school satisfaction [*F* (1, 261) = 8.17, *p*=.005, partial eta squared =.03], and Satisfaction with PE [*F* (1, 261) = 12.87, *p*=.000, partial eta squared =.05]. Hence, the assumption that the students of the high implementing teachers would have a significant positive effect[24] on Self-concept, Total satisfaction with school and Satisfaction with PE from T1 to T2, relative to the control group is supported (controlled for gender). The results for the other outcome variables (OPEN, UNCERT, and RA 2) do not support the assumption that the students of the high implementing teachers would have a significant positive effect from T1 to T2, relative to the control group.

The MANOVA for the students of the low implementing teachers detected a marginal significant value (*p*=.09), which initially gave no reason for further investigation. However, for comparison towards the high implementing group, the separate ANOVA (table 31) for the students of the low implementing teachers revealed a separate interaction of time and low-implementers for Self-concept [*F* (1, 362) = 4.69, *p*=.031, partial eta squared =.01], and RA 2 [*F* (1, 362) = 3.80, *p*=.052, partial eta squared =.01]. Due to this MANOVA, the expectation that the students of the low-implementing teachers would have a significant positive effect on the outcome variables, compared to the control group, is not significantly supported.

These results indicated that the high implementing teachers contributed to the observed changes for the overall group. Some indications are made that the associations between the outcome variables are due to the effort from the high implementing teachers only, which gives hints to increased focus on implementation strategies in the training. In order to investigate all associations between outcome variables of students of high vs. low implementing teachers, it was decided to conduct bivariate correlations and the bootstrapping procedure separately for the two groups, still using the control group as a reference.

[24] The commonly used guideline to assess effect size, proposed by Cohen (1988), suggests a small effect size for partial eta squared scores from .01 to .05.

Figure 8: Bivariate correlations between outcome variables among students of <u>high</u> implementing teachers vs. control group

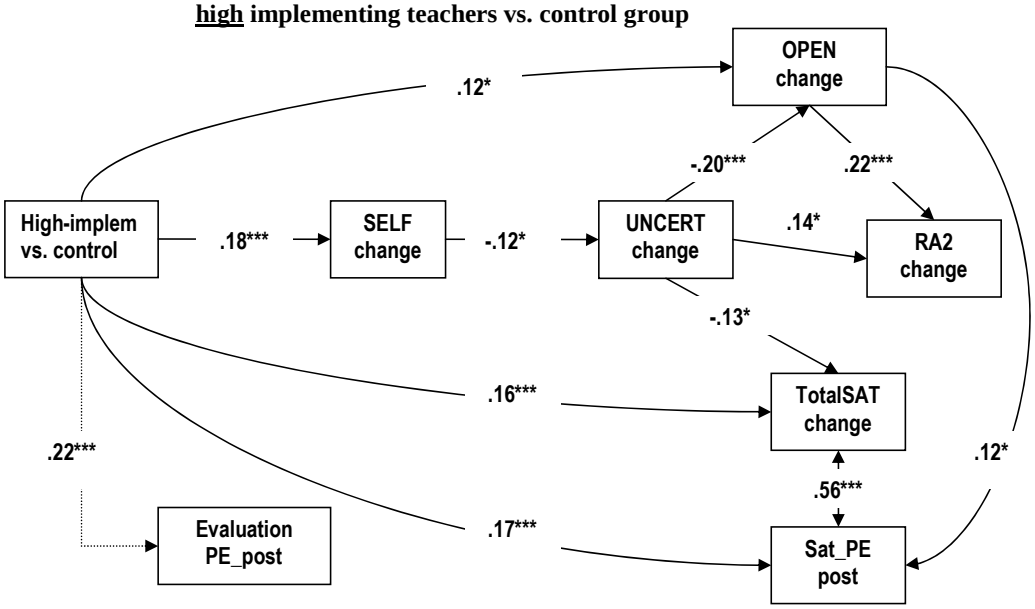
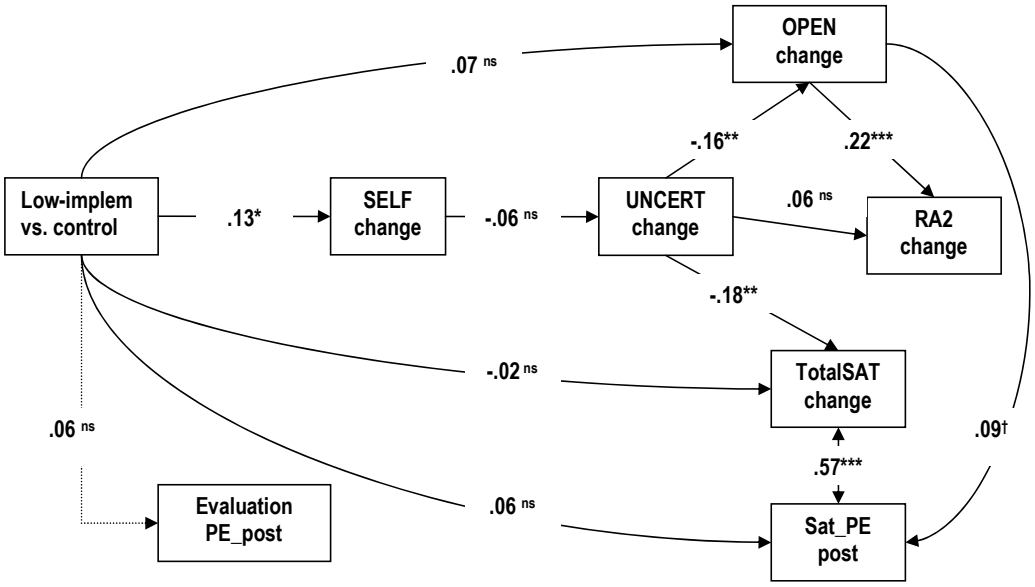


Figure 9: Bivariate correlations between outcome variables among students of <u>low</u> implementing teachers vs. control group



Note (figure 8 & 9): ns $p > .10$, †$p < .10$, *$p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed).

The comparison of the bivariate correlations for the two groups shows that for students of the high implementing teachers there exist stronger assumed relationships between the variables in the model, than among students of the low implementing teachers. This indicates higher consistency between the variables among students with high implementing teachers. The correlation matrix of the students of low implementing teachers revealed six non-significant correlations compared to students of the high implementing teachers. However, the non-significant scores were still in the expected direction for these students, as compared to the control group. The student sample was considerably higher among the low implementing teachers (n=204) compared to the students of the high implementing teachers (n=102). This unequal number of respondents means that significant correlations would be easier to obtain in the low-implementing group. In spite of this, it was the students of the high implementing teachers who gained stronger correlations even though the number of respondents was substantially reduced. This indicated that students of the high implementing teachers had a larger effect of the intervention, compared to students of the low implementing teachers. For students of the high implementing teachers, significant positive correlations were found between being in the intervention group and change in Self-concept, Openness, Satisfaction with PE, Total satisfaction with school, together with higher score on the total evaluation item scale after intervention. For students of the low implementing teachers, being in the intervention group only correlated positive for change in Self-concept, while the other associations were non-significant. However, it should be remarked that even though the correlations were stronger for the students of the high implementing teachers, the strength of the correlations, according to Cohen (1988), is still considered small.

In order to test the indirect paths and possible mediator effects for student outcomes of the high implementing teachers, the same bootstrapping procedure as for the overall group was conducted (cf. 8.1.4). For the students of the low implementing teachers, no indirect paths were investigated and resampled by bootstrapping, because of the lack of significant relationships in the model. The only mutual correlation paths for the students of low and high implementing teachers were row 3 (UNCERT→ OPEN → RA2) and row 8 (UNCERT→ TotSAT → SatPE). This could indicate that these correlations exist

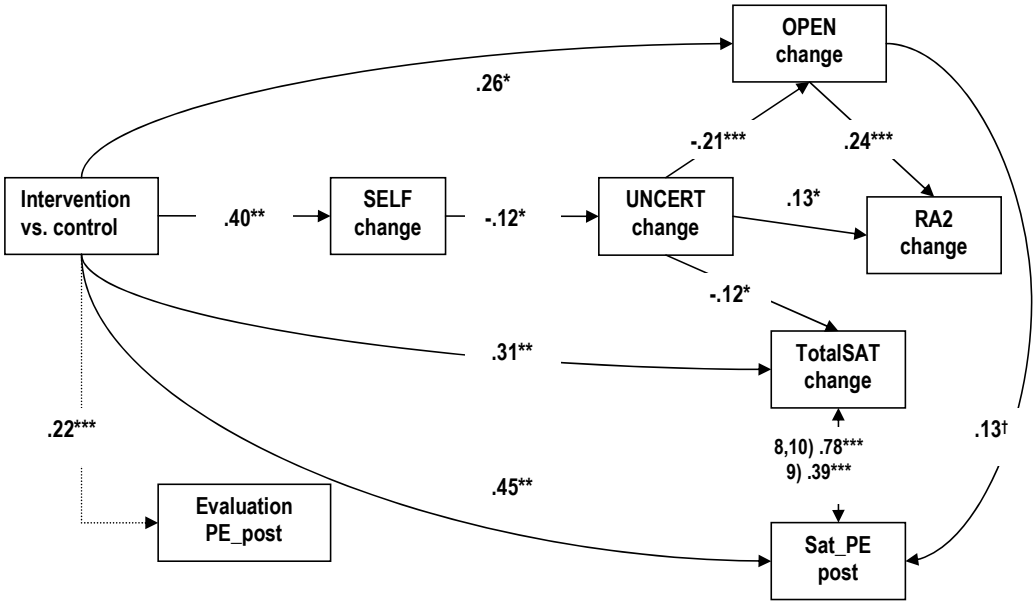
independently of being part of the intervention. Bivariate correlations for control group revealed negative correlations between Uncert and Open (r=-.19, p=.014), and positive correlation between Open and Ra2 (r=.24, p=.002), as found for the overall group. These findings support that these correlations exist in all three groups (high implementing/low implementing/control group), which was also indicated in the overall correlation matrix for all outcome variables at T1 and T2 (table 35, appendix 12). Row 8 indicates that less uncertain students are more satisfied with PE, mediated through satisfaction with school. These correlations are also found in both implementing groups, but not in the control group. This could indicate that this indirect link is present only in intervention group. Below are the bootstrapping procedure and path coefficients modeled after bootstrapping for students of the high implementing teachers vs. control group presented.

Table 32: Test of indirect paths, bivariate correlations emerged in path diagram for students of high implementing teachers vs. control group

	Independent variable (IV)	Mediator (M)	Dependent variable (DV)	Point estimate	SE	Bootstrapping BC 95% CI	
						Lower	Upper
1	Int vs. control	Self-concept	Uncertainty	-.05	.03	-.124	-.002
2	Self-concept	Uncertainty	Openness	.02	.02	-.001	.070
3	Uncertainty	Openness	Rational argumentation	-.05	.02	-.109	-.010
4	Self-concept	Uncertainty	Rational argumentation	-.02	.01	-.058	.001
5	Int vs. control	Openness	Rational argumentation	.06	.03	.001	.140
6	Int vs. control	Openness	Satisfaction with PE (T2)	.03	.03	-.005	.118
7	Self-concept	Uncertainty	Total school satisfaction	.01	.01	.000	.043
8	Uncertainty	Total school satisfaction	Satisfaction with PE (T2)	-.10	.04	-.183	-.016
9	Int vs. control	Satisfaction with PE (T2)	Total school satisfaction	.17	.06	.055	.299
10	Int vs. control	Total school satisfaction	Satisfaction with PE (T2)	.24	.09	.066	.428

BC: bias corrected; 1000 bootstrap samples, *a-path* IV→ M, *b-path* M → DV.
All variables represent change from baseline to T2 (residual change scores), except Satisfaction with PE (T2)

Figure 10: Path coefficients between outcome variables among students of high implementing teachers vs. control group (revealed in bootstrapping procedure)



Note: †$p < .10$, *$p < .05$, ** $p < .01$, *** $p < .001$ (2-tailed). *(For bootstrapping matrix, see output 2, appendix 12)*

In sum, the results indicate stronger links and consistency between the changes in outcome variables among students of the high implementing teachers vs. control group, compared to the overall group results (chapter 8.1). The results support that being in the intervention group has a positive effect for the students having a high implementing teacher (e.g. improved OPEN, SELF, SatPE, TotSAT). For the students with low implementation teachers, only marginal significant differences (p=.09) were found taking all outcome variables into account in the MANOVA, and the bivariate correlations revealed non-significant findings between the variables. However, similar as for the students of the high implementing teachers, all measures were going in the anticipated direction from T1 to T2, compared to the students in the control group.

The high implementing teachers were representing only two of the five intervention schools. One question that appears is whether there are characteristics with the two

schools or with the teachers or students represented at the implementing schools which affect the results. The high implementing teachers represented two schools with different socio-demographic backgrounds. The first school consisted of a high dominance of immigrant background students (75.9%), while the other represented an average percentage of students with immigrant background (36.2%), considering that they are from Eastern Norway. The geographical location of the schools represented opposite poles regarding socio-economic status as well. Regarding gender distribution the one school was represented mostly by boys (56.3%), while the other school had a higher number of girls (63.0%)[25]. This indicates that the training has a larger effect than the influence of the socio-demographic context, and that the training seems to function towards different areas and school contexts. An important aspect for the intercultural learning approaches is that the training should be conducted independent of student backgrounds, because the basic structure of most social conflicts between sub-groups is similar (Erdmann, 1999b). These results support that the training seems to function as expected independent of demographic variables such as gender or immigrant background.

Investigations were also made if any of the classes or schools had participated in similar or related training programs, but none of the schools/teachers reported having done so. Hence, the most important question seems to be whether the teacher implements the content or not. A discussion should therefore be made regarding the didactics of the training and how to improve the possibilities for teacher implementation. These and related discussions about possible improvements of the teacher training are outlined in the next part.

8.3 TEACHER TRAINING EXPERIENCES AND POSSIBLE IMPROVEMENTS

The intervention teachers' experiences on the application of the teacher training was comprised of two main components; the assessment survey of the teacher training, and the focused group interviews during and after intervention. The assessment survey showed that all teachers were mainly positive to the training content (cf. chapter 8.2.1). Hence, the focused group interview had the potential of grasping some more reflected

[25] For details on the descriptive characteristics of the two high implementing schools, see appendix 12, table 46-47.

experiences and implementation challenges (chapter 8.3.1). These interviews, together with researcher's own experiences, also revealed some suggestions for improvement of the training (chapter 8.3.2).

As an introduction to this part some comments are made on the proceeding of the course from the researcher's perspective. The main intention of the training was to introduce the theoretical assumptions, together with didactical guidelines on how to plan, implement and reflect on intercultural learning in their daily teaching. Being the facilitator of the course it was important that the researcher himself was concerned about these issues and had the ability to convey this to the teachers. Although the researcher was unfamiliar with the German concept at the start of the project, the collaboration with key experts and a research visit in Freiburg helped the researcher to satisfactorily communicate the content to the teachers. Also the experiences from observing the training in Germany and conducting two partial trainings in Norway were seen as a strength before carrying out the on-the-job training in the intervention. However, since the main goal for this Norwegian training approach was student outcomes, some emphasis were made on the didactical and methodological competence in implementing the learning activities into the teachers PE lessons.

The main impression after the on-the-job training is that the teachers were satisfied with the course content and the way it was presented. They understood the links between theory and practice and they saw opportunities to include it in their teaching. They comprehended some of the underlying theory after the first input, but it seemed they needed more repetition and reinforcement of the content before they were inclined to promote it to the students. This was not surprising, as the researcher himself spent a considerable amount of time becoming familiar with the aims, intentions and course content. It was therefore carefully planned that the inputs and interviews would be conducted with some timeframe between them, a solution that received positive feedback from the participants.

Intercultural learning was a basic platform, but the didactic approach on difference, uncertainty and inclusive and accepting learning environments were key aspects throughout the course. An important step was to concretize the message so the terms were recognizable for the teachers. The focus was on the teachers being able to identify and understand these intercultural aspects, more than lecturing on the theoretical terms. To rather discuss the uncertainties associated with experiences of difference and strangeness worked well, together with the importance of being aware of the differences, both among the students in PE but also as an inevitable part of life. Along the way, the teachers also reported that they understood more of what was conveyed in the first theoretical input.

The researcher had some ideas for improving the training which were revealed through the course. These included in particular the benefit of being able to add the course to the start of the school year (e.g. Aug-Nov), and of all PE colleagues at the same school having the opportunity to participate (see further discussion in next chapter). This was in line with the researcher's considerations before the intervention, but was further amplified by the feedback from the teachers. However, not all suggestions from teachers seemed rational (e.g. lack of time), but were considered common arguments also found in similar interventions in school (cf. Sercu, 2007). These and other teachers' experiences with the course, challenges in implementation and their suggestions for improvements are presented below.

8.3.1 TEACHERS' EXPERIENCES WITH TRAINING AND IMPLEMENTATION CHALLENGES

The focused group interviews for teachers could gain a better understanding of the student outcomes as well as evaluate the teacher training. Focus group interviews use group interaction to generate data (Kitzinger & Barbour, 1999), and encouraged the teachers to talk to one another, and initiated for further discussion on the topic between the colleagues at each school. In this way the teachers exchanged experiences and points of view, commented on each other, and reflected on their own teaching. Some teacher training aspects related to the main findings from the teachers' group interview are presented (table 33), and extended discussions are made related to each aspect.

Table 33: Aspects from group interviews related to teacher training experiences

Aspect	Main finding from teachers' group interviews
Short intervention/ Lack of time	Some teachers report lack of time, and that they would like to implement more of the content towards their students if intervention were extended
Course content	Many teachers were more positive to course content after teacher training than when they agreed to participate
Theory vs. practice	Suggested that activities come first, then relate these to theory. Teachers preferred to conduct the activities themselves in order to get a better understanding of the activities in the classroom. Asked for more training related to reflection together with students
School year period	The teachers called for a similar course related to the beginning of the school year, and implement the course content in the formation and sense of decorum of the group.
Implementation in PE lessons	Teachers called for more obligatory implementation of the course content. Increased focus on practice and system orientation towards the teachers.
Cooperation with colleagues	Appreciated the cooperation with colleagues and having the opportunity to discuss teaching with fellow teachers during normal workday. Supported a higher awareness and reflections about own teaching.
General challenges in PE	Important part for the teachers that they could assess the students through the practical activities that the course involved, and that they could relate the content to the requirements of the curriculum.

Short intervention/Lack of time

Some of the common thoughts of the teachers were that they considered the intervention time short and they felt a lack of time for implementing the activities towards their students. Similarly, Sercu (2007) found that the far most mentioned reason for not teach intercultural issues in foreign language teaching was the lack of time. Teachers reported that they did not expect a change in their students because most of them did not think they had put enough effort into the implementation, and some admitted that a lot more urgent working tasks were prioritized. However, similar findings where teachers report lack of time are found in other intervention studies (cf. McCaughtry, Martin, Kulinna & Cothran, 2006), and this is therefore considered a common argument from the teachers. Still, as the results revealed, some teachers have had the time to implement activities into their teaching, so the other teachers who did not implement the content should also have been able to find the time to implement it. Hence, a longer intervention period than 3

months does not seem decisive for the possible implementation and the resulting student outcomes.

In contrast, most of the teachers did report that the length of the training itself (input 1, 2, 3 + evaluation) was accurate, with an appropriate number of hours in each session. Many teachers also showed satisfaction with that the researcher had visited the schools from input 2. It made them feel privileged and the training was well adjusted to their working day. At the same time they also considered the first input at the researcher's institute appropriate, as they were able to meet the other participants of the study, and understood that they were working towards a common goal of the research project. The gathering at the institute also gave the participants the feeling of an official input from the start and the importance of the doctoral work for the Norwegian School of Sport Sciences. The plan after the training period was to again gather the whole group of intervention teachers to evaluate the project and to facilitate possible networks between schools, but the start of the summer holiday made this difficult to organize. But the teachers requested this opportunity and it may be considered for future trainings (for further discussion on this matter, see cooperation among colleagues, p. 138).

Course content

An important task was to investigate to what extent teachers had acquired the main content of the course. Some control questions were therefore asked during the interviews, such as how they understood different terms, and how they would describe the course to a friend or colleague. Some teachers thought the course content was introducing a brand new pedagogical concept, while others thought that these were activities and education which they already emphasized. The following quote may reflect some of the common understandings among teachers:

> *I think that the intention of the course is that you have to look wider than what happens in the PE class. Those expressions that you introduced the first input related to strangeness and inclusion are somehow important concepts in the lives of young people and everyone really. I think that was really interesting and also that you managed to relate it to what is happening in school and in the context of PE. You can link what's happening elsewhere in everyday life with physical education.*
> (Teacher, group interview 2, translated by the author).

Many teachers were more positive to the course content after teacher training than when they agreed to participate. Some teachers wanted to participate because they were interested in and positive about the course information given prior to training, while some teachers participated because their head of department emphasized them to be a part of the training. In a power aspect, it seems difficult to reject what your leader recommends you to participate in. Those teachers who felt this pressure from leadership to participate were very honest in the interviews and admitted that they had been skeptical related to the content before training started. However, as the teacher experiences revealed, this skeptical attitude was changed to a more positive attitude during and after training.

One of the reasons for this change in attitude could be that during intervention (from input 2) there was increased focus on the awareness of differences and dealing with own uncertainty, along with including and accepting learning environments. These intercultural facets seemed to be easily recognizable for the teachers. In addition, attention was paid to the importance of every student being able to participate on their own level in PE, and the significance of membership and acceptance from peer students. The reason for this emphasis is that these concepts are key elements of intercultural learning, and the teachers were motivated to learn more about these concepts. Due to this, theoretical constructs such as strangeness were less emphasized in the training, but were included in the discussions through related terms such as uncertainty.

> *I do not associate strangeness in itself with something negative, but there are different ways to handle it. And those who are uncertain respond to strangeness, and feel unfamiliar with these situations in the gym. They are uncertain, and when they withdraw, they might just disappear. So I find it difficult to include those who really are outsiders and uncertain in the class. There should be a goal to include these students in a better way*
> (Teacher, group interview 2, translated by the author).

The above quote shows the relationships between experiences of strangeness, awareness of students' uncertainty, and the importance of an including and accepting learning environment. This emphasis on certain contents in the training could be one reason for the results of this study not comprised all outcome variables. Some of the teachers suggested a higher focus on key aspects already after input 1, but there were different opinions about the first theory section (for details on input 1, see appendix 10). Some

found it too long and detailed, while others saw it as an important basis for better understanding the course content. It is therefore proposed to retain this, but consider the opportunity to further accentuate the main aspects of the course content.

The combination theory / practice

One important aspect of the training was that the activities could be implemented and included into the existing PE teaching practice, only with some modifications of the tasks (Erdmann, 2003). Therefore, a special effort was made to reveal the links between the theoretical framework and practice, and didactical considerations regarding implementation and student activities were focused throughout the training. The PE teachers reported that they appreciated the emphasis that was put on practical activities in the course. This is natural, especially in PE where movement and physical activity are cornerstones for the learning situations, and the teachers themselves have positive experiences from their own education and athletic background. They also reported contentment with the discussions and didactical approach of the relationship theory and practice, and they found that these activities can be included with relatively simple measures in the current PE classes. Still they missed even more practical guidelines and advices about how to reflect with students related to the activities, which could be emphasized in the next round. The teachers suggested that the activities could be done first and then relate them to theory. This setting could also be more noticeable with current issues and themes for reflection with students. Such a relationship to theory can take place both in the gym and in lecture afterwards, and makes the training approach flexible.

Some teachers found it helpful to participate in the activities themselves, in order to get a better understanding of the activities in practice. In that way they experienced what it was like to be involved in the activities. Grimminger (2009) assumes that only teachers who personally handle differences, strangeness and uncertainty in a constructive manner are able to promote and be aware of these abilities in relation to children and adolescents. Simply gaining personal experience in becoming achievers of intercultural teaching could be emphasized in all trainings. The idea from the start was that all teachers should

conduct all practical activities. But since the participating teachers at each school were not enough to organize relevant practical sessions, various solutions were made to solve this. Some of the schools invited all PE and sports colleagues to participate in the practical activities. Another school used students to illustrate the activities, while yet another school only received verbal instructions and teaching plans. This last solution, however, did not seem to be reflected in a lack of benefit of the students, as this would prove to be one of the schools with the highest implementation to the student group (cf. chapter 8.2). For the teachers to attend activities was still considered the best choice, because, according to the teachers, they were better able to remember the importance of the various activities and reported carrying them out with students in a better way. This suggests that teachers, if possible, should personally participate. But the teacher training also seems beneficial through theoretical and practical guidelines and through observation of activities.

Implementation in PE lessons

As revealed in theory (p.34), *practice orientation* (Bartz et al., 2004) ensures the link between teacher training and school practice, while *system orientation* ascertains that the teachers learn that the implementation in school practice is possible. In order to get teachers to implement the course content/student activities in the best possible way, many considerations had to be made in advance. One of the most important contributions was that it should be perceived as meaningful to the teacher, and that the content could be transferred to teaching in a relatively simple way. If the teachers were convinced about the content they would probably implement it whether it was obligatory or not. During the intervention, several of the teachers expressed that they wanted more obligation on implementation towards students. They found that volunteering at this point had not been necessary, and that it caused too little pressure to make an extra effort. However, demanding obligation might also be considered a possible excuse for the teachers not participating properly. It was important for the researcher to follow the recommendations for teacher training outlined in chapter 3.3. One important aspect was that educational and methodological theories should serve as a starting point for reconsidering one's teaching practice, not as a doctrine to be adhered to (Richards, 1989, cited in Sercu &

Raya, 2007). This suggests that the teachers themselves should be allowed to choose how they might use the content in their own teaching. Following these didactical guidelines for teacher training, and after the experience from this study that several teachers implemented the content regardless of obligation (cf. chapter 8.2.2), it was decided that obligatory implementation should not be emphasized. The same suggestion is made for future training approaches.

School year period

The choice of school year period seemed important for facilitating implementation. Four out of the five schools suggested that it should have been conducted at the start of the school year in August. This was also the initial idea for the project, but due to some extended work in the adaptation and preparation phase, it was conducted during the period of January to May instead. The benefits of adding it to the start of the year include the fact that this is the time in particular during the school year when the learning environment in a class is formed and then there are often more activities initiated to improve class interaction. This is especially true for those who start in 1st class in upper secondary. These are often students who come from different schools, and the importance of creating a good and inclusive learning environment right from the start is vital. Other reasons why this period may be better is that there are few vacations and public holidays in the start of the year. In addition, teachers often do not have as much pressure on themselves for student assessment in this period. They may quite easily legitimize the use of some PE sessions in the beginning of school year to create possibilities for social interaction and to develop good frameworks for learning. However, if the teachers are convinced that this is important for the students, they could probably apply it during different periods of the year, which are partially revealed in this study.

Cooperation with colleagues

During the training and interviews, the teachers appreciated the cooperation with colleagues and having the opportunity to discuss teaching with fellow teachers during their normal workday. Pollard (2002) states that collaborating, dialoguing and reflecting with others enhance professional learning, reflective capability and personal fulfillment

among the teachers. In the theory, the term reflective teaching was introduced and it had a potential for changing both teachers' beliefs and teaching practice. According to Sercu and St.John (2007), reflective teaching certainly requires a critically reflective approach, where the teachers are willing to reflect on themselves, and challenge and question their own practice, convictions and beliefs. The group interview setting got the teachers to start discussing their teaching with each other. In the start of the first group interview, it became obvious that most teachers are not very experienced about sharing thoughts, ideas and reflections related to their own teaching. But after the experience, teachers asked for more time in their workday to discuss PE contents and experiences with one another. Almost every teacher reported a higher awareness towards own teaching in PE, which gives a potential for critical reflection about own teaching practice and give the opportunity to change educational beliefs or convictions. However, an important assumption is that this is done *by* the teachers and not done *to* them (Sercu & St.John, 2007). The way the researcher approached the group interview was through conversations about experiences with the training content, and thoughts regarding possible implementation. The interviews started with the teachers referring to personal teaching practice and experiences with activities, which always initiated discussion amongst the teachers without the researcher having to ask questions. Instead, the researcher's role was to control the themes to be discussed during the interview, and if necessary, share own experiences and theoretical reflections with the group. This was considered an efficient and fruitful way to stimulate reflective teaching among the colleagues, which could contribute to change both educational beliefs and teaching practice in the future.

However, doing a focused group interview with 2-6 teachers involved at the same time creates a possible bias since how much each individual speaks is very different. The teachers who were most enthusiastic talked a lot, while more reserved teachers did not say as much as they wanted. To ensure that everybody contributed to a certain extent, the common strategy for each topic was that every teacher gave a first input, before the discussion between teachers started. Also the wording in an interview situation may affect the answers, and each informant may perceive the questions differently according to their framework of understanding (Kvale, 2009). Hence, all teachers had the

opportunity to write detailed comments on the evaluation form. One improvement for further studies might be that what the teacher was actually doing could be reported in a logbook, in order to increase the possibility for being able to compare the content of the teachers' efforts with the student outcomes.

The building of possible teacher networks between schools was a possibility that was discussed before training. Many of the teachers liked the idea of discussions across schools and asked for this during the intervention. At the same time they considered this difficult to carry out, since it was challenging enough to coordinate the time schedule of teacher training and group interviews within each school. This was well illustrated by the fact that several of the teachers did not have the opportunity to attend the first common input, which was announced well in advance of the meeting. This was also the reason why most teacher inputs were conducted at each school. Nevertheless, one could presume that reflection across schools would provide a positive outcome for the teachers, because it would contribute to a mutual understanding, and the possibility to compare several teaching practices. Anyhow, as several of the teachers pointed out, first and foremost it is important that they can talk about PE and course content at each school. In this way the content could be reinforced, the teachers have the opportunity to give constructive feedback, and it might contribute to intensifying the efforts, attention and commitment from the teachers. Most teachers said it was only at the scheduled times for the group interviews that they had spare time to discuss their experiences. They said these reflections among teachers should be a natural part of school life, instead of the "paper bureaucracy and documentation of implementation, feedback and assessment of students" (cf. teacher quote, group interview 1). This wish for less documentation and bureaucracy at school are not for this teacher training to address, but should instead be a task for the politics of school development. At least these interviews give a clear signal that the teachers have requested more time to develop and reflect on their own practice with their colleagues.

Something that many teachers brought up in the interviews was that they preferred that all teachers at the school had participated in the course. In this way it would have been

more natural to use meetings in the PE section to discuss the content, and they would be able to work towards common goals. Interestingly, during training, it was also observed that several colleagues of the participating teachers were curious about the course content and were interested in copies of the teacher compendium and activity booklet. Some of them also expressed apologies that they had rejected participation from the beginning. For future trainings it should be recommended that all PE teachers at the same school attend the course. However, the broad objective of reflexive interculturality is not only the concern of individual teachers or a single subject, but should instead be regarded as a cross-disciplinary task which is part of the entire school climate (Giess-Stüber, 2008a). For cross-disciplinary purposes and for the promotion of intercultural learning for the whole school, a future task could be to recruit all teaching staff and leadership at one school for a school development intervention in this realm (cf. Giess-Stüber et al., 2007).

General challenges in PE

There was general interest in how the course could be transferred to the instruction but not at the expense of the ordinary teaching of the subject. Therefore, it was emphasized how the curriculum could be addressed while implementing the course content. Nevertheless, it seems as if this could be marketed even more clearly, preferably in the context of possible forms of assessment. The Norwegian curriculum demands a goal-related assessment of achievement of students. Although this was not really a theme for the course, it became an important part for the teachers that they could assess the students through the practical activities that the course involved, and that they could relate the content to the requirements of the curriculum. And although the researcher tried to downplay the importance of assessment in this training, it became a recurrent theme:

> *"I thought in terms of curriculum and the learning goals we have in physical education. How do you manage to link these activities to those? This is important because you have to accomplish both curriculum goals and the assessment of students".* (Teacher, group interview 2, translated by the author)

Accordingly, it was decided to discuss some of the major challenges in PE in general at group interview 2. Here, the teachers could more freely discuss what challenges occupied them the most in PE classes. Two common features were mentioned, (1) an inclusive education where you reach everyone, and (2) preparation of good and fair criteria for

evaluation. For the first feature an intercultural learning approach could surely contribute to meeting this challenge in PE. During the intervention the researcher always tried to focus on these activities being carried out based on both general and specific learning objectives in the curriculum. But it was still connected to the students' assessment as well, and some teachers wanted clear links between the curriculum, activities in the course, and how to assess students in such activities. This emphasis on assessment in PE is both a political question and an important debate for the future of PE in Norway and could be a research question for other studies. However, for the training, it is considered more important that the content retains its distinctive character, and continues to put little emphasis on assessment, but more emphasis on personal development, which is in line with the core curriculum. Moreover, it could be justified to run several sessions, without regard to assessment, but where the main goal is that students should develop themselves and their identity with others in physical activity, which also are reflected in the objective of the subject in the curriculum (Norwegian Ministry of Education and Research, 2006).

The results discussed previously in the chapter also indicate that the intervention has contributed that more of the students are being attracted to and satisfied with PE. Such results might be because the teachers has reached more of their students with emphasis on acceptance and membership in an including learning environment. Earlier in the discussion (chapter 8.1.6), we have also revealed that the girls, who have generally been somewhat less satisfied with PE than boys (Imsen, 1996), seem to have better outcomes in the activities. But despite this, the boys are still satisfied with the subject. This section therefore concludes with a quote that reflects some of this, from the teacher who implemented most of the course content towards students:

> *"I've run a whole session with only the exercises that we had as 1st input at the teacher course* (refer to cooperation/acceptance/membership see appendix 10). *The girls in particular said it was the most fun session they had had in physical education. And I asked "Why?" Well, they said that it was because of the feeling that everyone can join in. It's not like ball games some of which are naturally strong. So it was very positive. The boys were also pleased, but there was not much more than that their being satisfied and feeling everything was fine. Yet many of the girls, who are a bit resigned, joined in appropriately and said it was the best class I had given. It was a really good feedback!"*
> (Teacher, group interview 2, translated by the author)

8.3.2 SUGGESTIONS FOR IMPROVEMENTS FOR FURTHER TRAINING APPROACHES

Finally, some suggestions for improvement will be presented. There were great variations in the feedback from the teachers. As discussed, some teachers thought that the course content was introducing a new pedagogical concept, while some thought it was activities and education which they already emphasized in their teaching. Most important were the effort and degree of implementation from the teachers (cf. chapter 8.2.2), and interviews revealed that several teachers had implemented the student activities. In addition, every teacher felt more aware and reflective in terms of their own PE lessons, all were positive to the course content and the teachers would recommend the training to their colleagues.

From the initial idea of contributing to a better understanding of the results, the group interviews were also the basis for statistical analysis, e.g. to compare the teachers who reported high implementation with those who expressed low implementation. The teachers were also involved in concrete suggestions that will be tailored to improve the future teacher training. This part of the discussion has revealed elements that were important and well functioning in this project, but also some advice was given to substantiate an even better effect among both teachers and students in further research. These suggestions have been concretized and are presented in table 34:

Table 34: Concrete suggestions for the next teacher training

Suggestions for further improvements of the teacher training:
o **The training should be conducted related to the start of the school year**. For example: First two inputs before the beginning of semester start. Input 3 /group interview in Sep/Oct, and evaluation/ group interview 2 in Oct/Nov.
o **Further concentration on the cooperation between colleagues**. Awareness of the importance of reflections and discussions between colleagues within school and across schools. **Promote that all PE teachers at the same school participating in the training** for these reflective teaching purposes.
o Continue focus on the **link between theory and practice**. Always emphasize that **teachers themselves should participate in the activities** in order to personally become achievers of intercultural learning situations.
o More discussions, practical guideline and suggestions on **how to conduct and manage the reflection questions with students** are required.
o **Further clarify** the opportunity to meet **requirements of the curriculum with activities that promote intercultural learning**, and discuss this in relation to the ability to **assess each individual student**.
o For changing the entire school climate and for the purpose of cross-disciplinary tasks, **intercultural training approaches could include all leaders and teaching staff within a school.**

8.4 SUMMARY

The students in the intervention group as a whole, compared to the control group, showed significant higher results on self-concept. In addition, nearly all indicators went in the expected direction and the relationships between the variables showed consistency with the assumptions. However, the intended consequences of the teachers training were found especially among students of teachers who implemented most of the course content. The achievements of these students indicated a significant positive relationship in increased openness, improved self-concept, and higher satisfaction, both in PE and in school as a whole. In addition, students of these teachers evaluated the physical education lessons better than students of teachers with low implementation and the control group. This high consistency of results among students of those teachers, who reported having used most from the training program, indicates that the teacher training has had an effect among upper secondary students. Another important aspect is that the two high implementing schools represent two opposites in a socio-demographic context. This implies that the training has a larger effect than the socio-demographic influences. It is an important argument that intercultural learning approaches could be conducted independently of the student backgrounds (e.g. immigrant background, gender) and geographic location of the school. The expectation that teacher training will have an effect among students is supported in this study, given that the teachers make an effort to implement the content into their PE lessons.

These findings might be partially explained by the fact that the input to the teachers related mostly to the aforementioned variables. Emphasis was made on the openness and awareness towards differences. It was also important that all students should feel accepted in the learning environment and make progress at their level (without having to compare themselves with others), and thus thrive better in the subject. Possible indirect links that were significant among the students of the high implementation teachers included the increase in self-concept correlated with reduced uncertainty, and reported high uncertainty correlated with high rational argumentation (RA2). These results are also according to the teacher training input. Throughout the intervention, attention was given regarding the feeling of uncertainty which may arise in the meeting with persons,

situations and sports which are experienced as unfamiliar and strange. However, the positive relationship between uncertainty and RA2 was not initially expected, but was nevertheless found plausible (see p.114). Admitting own uncertainty among the students might be tolerable if they feel accepted in the learning environment and may still covariate with a more rational argumentation towards differences. This sequence needs further studies in order to be confirmed.

The intervention group as a whole showed consistent results between the indicators in line with the assumptions, compared to the control group. But the relationships were stronger and revealed higher consistency among students of those teachers who implemented most. There was therefore increased focus in the discussion on how to optimize the opportunities for the teacher to implement the course content and activities towards students. The interviews showed that teachers called for even stronger emphasis on the didactics of the link between theory and practice. They wanted to experience the activities themselves, and wished that one could be as specific as possible when it came to the reflection questions with the students. Most teachers also wanted these interventions at the start of the school year, where they could be manifested in 2-3 sessions, common for most of the PE classes at school. They also suggested and would prefer that all PE teachers in the same school should participate in the training program simultaneously. This is both to ensure the time allocated for reflective discussions of course content, but also the importance of working towards a common goal for all PE classes at school. These improvements of the teacher training program should be implemented when new teacher interventions are planned and carried out.

The combination of input at NIH and input in the schools received favourable feedback, as did the course as a whole. Group interviews were chosen to initiate reflection among colleagues, to reinforce the inputs, and to promote implementation. After training, all the teachers reported an increased awareness of their own teaching, which probably resulted that they were more reflective about the choices that were made. In spite of the danger of social desirability, this is an indication that reflective teaching has the potential to change both teaching practice and educational beliefs in teachers (cf. Sercu & St.John, 2007).

Hence, it is advised to follow some of the aspects that teachers suggest, which are also in line with the researcher's considerations. This applies particularly the improvement in the time of the school year the training is conducted, and that all PE teachers at the same school participate in the training. To further attend to the teachers' preferences, it may be considered to coordinate the content more in the direction of the curriculum and assessment of activities, but without losing the basic principles of intercultural learning. Nevertheless, efforts from the teachers are required for successful implementation towards the students.

9 STRENGHTS AND LIMITATIONS

This is a theory-guided, applied field study conducted in a control group design with a small sample. The tool for the researcher was the teachers as medium for change among students, depending on what the teachers implemented in their classrooms. Although the results and discussions supported an effect among students it was regarded small. Especially the main effect for the whole group was regarded scarce, and a clearer result could be expected. For the students of the high implementing teachers, a larger effect and higher consistency in line with the assumptions was found, however, the expectations was not confirmed on all outcome variables. The reasons for these results could presumably be explained within the main facets of the study; the theoretical assumptions, the teacher training conducted, and/or the measurements and their interpretations.

9.1 THEORETICAL ASSUMPTIONS AND TEACHER TRAINING

This project has a strong theoretical context which has been developed in the framework of "intercultural movement education" since the mid-1990ies (Erdmann, 1999a), and as of yet has resulted in an extensive EU project in 2004-2007, included a comprehensive publication report (Giess-Stüber & Blecking (eds.), 2008). In addition, the theoretical and didactical concept outlined from this project group, have been tested out in a teacher training approach in Germany (Grimminger, 2009). Hence, the theoretical assumptions are considered as strong in this thesis.

The teacher training program was adapted to the Norwegian context. Strength for the adaptation is that the work has been done in close cooperation with the staff behind the theory framework, EU project and teacher training, and they are considered first hand experts on this applied field of intercultural learning. The research visit to the University of Freiburg in particular, where the researcher observed the teacher training input, was considered important for the understandings and adaptation of the program. One limitation and possible threat to the trustworthiness of the study is the fact that the program has only been tested out abroad before being adapted to Norway. Both the translation phase and a different cultural context could affect the results, and some of the

information and intentions can be lost in transmission. National education policy and schools have different curriculums, school cultures and there may be different perceptions of what is perceived as challenges in the school and in the subject of PE. However, teacher assessments indicate that similar results are found in Norway, and that the strong collaboration with key experts has resulted that the project seems to have passed the borders without losing vital content. Moreover, the intention of this study was not merely to conduct the same training approach, but advance to promote and measure student outcomes using an adapted training approach in Norway.

In this research design a controlled pre-posttest intervention was conducted. A control group comparison in an applied field study should focus on recruiting as parallel schools as possible on factors which could affect the results, e.g. geographical location, number of students with immigrant background, school level, etc. Regarding this matter, the demographic characteristics of the schools recruited were considered similar, and the ratio of sub-groups (gender, immigrant background, and school level) was accordingly similar between intervention and control schools. And for the limited number of sub-groups which differed at baseline, the results were also controlled for using the demographic variables as covariate in the analyses. However, one still does not know what might have biased the results. Therefore, the parallelization of schools in the intervention and control group, in order to have them as equal as possible, had the assumption that any additional relevant variable exists in both groups and hence does not change the results.

The allocation of the seven schools to either the intervention or control group, was done partly related to when they agreed to participate in the intervention, and not determined by chance (randomization). After recruiting teachers to the training, the comparison teachers (without training) were recruited, based on the intervention school characteristics, in order to make the parallelization. The teachers at the two schools functioning as control group were given the opportunity to get the same training after all measurements were done in the intervention schools. This was in order to make them interested and willing to permit that the researcher could access their students during PE

lessons. Moreover, having different attention on the intervention and control schools could possibly extract a Hawthorne-effect among teachers. However, being a study focusing on student outcomes, the Hawthorne effect on teachers was not considered a major threat for student results. As long as the teachers are being used as a medium and a tool for change among students, it will be regarded valuable even if this effect has boosted the implementation towards students.

Strength of the design also included that teacher measurements were done simultaneously with student measurements. This allowed one to have opportunities to better explain and understand results among students. This multi-method approach contributed to being able to get feedback on questions that arose during the process. Such a course and final assessment of the process is considered as a strength for the interpretation of results in this study.

Another important point was the role of the researcher/course facilitator, who should know both his material and his target group. Regarding the knowledge of the material, including its theoretical background, the researcher did not have any specific knowledge of the theoretical basis at the start of the project. Hence, the researcher spent considerable time on reading literature, having discussions with key experts, on research visit to Freiburg, observations and pilot testing and performing own teacher training aimed at relevant groups. After two years, the knowledge in theory and experiences with the training was considered to be acceptable for facilitating the on-the-job training in the intervention. When it comes to the realm of PE in school, which the training was aimed towards, it was an advantage that the researcher had broad experience in the field. Through his master's degree in PE and eight years of experience in schools as a PE teacher (six of them in upper secondary), the researcher was familiar with the profession and how the workdays of the participating teachers emerged. This was also valuable knowledge in relation to the organization and implementation of the training program, and to develop additional activities in line with the intentions of the training. It also seemed that the participating teachers recognized the researcher’s experience and this made it easier to promote the course content. The teachers were more open to the

contents of the course when the training was facilitated by an experienced instructor who appeared to be competent. Hence, in total, the knowledge and experience of the researcher/course facilitator was considered to strengthen this teacher training.

9.2 MEASUREMENTS AND INTERPRETATIONS

One of the most important discussions before the intervention was the measuring device that was to be used to measure the effect of the students. The main goal for the measurements was to examine whether the theoretical assumptions functioned as expected. The main instrument which was used (Esser-Noethlichs, 2010) consisted of scales that had not been tested longitudinally. Nevertheless, since this instrument was based on the same theory as the didactical concept and the teacher training, this instrument was chosen for the measurements. Because of its underlying theoretical links consistent results were expected on the subscales.

The use of different operationalizations and measurement methods on the same concept could improve the construct validity (Messick, 1995). It was therefore decided to add a self-concept scale (part III) and four sociometric questions in the student survey. This was in order to have indicators which additionally could investigate group structures and changes among students during intervention. The additional indicators total satisfaction with school (TotSAT) and total evaluation of PE at posttest (TotEVAL) were also included in the questionnaire. The students could quite directly report their impressions of the situation between baseline and post-intervention, and these turned out to be important indicators for effects on the students. One could argue that every project in school which emphasize better cooperation, peer acceptance and learning environment, would affect the response set on the sociometric screening and satisfaction with school and PE. However, the control group comparison supports the application of the measurements within this pilot study. Moreover, the strength in the theoretical assumptions and following the argumentation on small sample regarding consistency in the results, seem to justify the use of these operationalization/measurements. Nevertheless, further testing and improvement of the indicators and measurements should be done, in order to gain stronger validity in later studies.

Measurements in non-randomized field studies also give a potential for regression towards the mean effect, and could be a potential limitation of the study. To correct this statistical challenge the change scores in the outcome variables were using standardized residual scores (see p.93), instead of absolute change scores. A further attempt to improve strengths was more powerful statistical analysis than Esser-Noethlichs (2010). His main methods applied mean score differences for statistical significance with non-parametric inference statistics. In contrast, the main analyses in this thesis used repeated measures MANOVA, follow-up ANOVAs, path analyses and the bootstrapping procedure. Accordingly, the results in this study are partly analyzed by testing assumed relationships in an output path diagram. Although path analysis has become very popular, Everitt and Dunn (1991) remind us that even if the path diagram appears convincing and reasonable, correlational data are still correlational. Path analysis can evaluate causal hypotheses, and in some situations can test between two or more causal hypotheses, but it cannot establish the direction of causality. However, the use of path analyses suits the procedure because it requires sound theoretical expectations, and the strength of the correlational data in this study are that all results are in line with the assumptions. Hence, the results from the output path diagram are consistent with theory, and make good reasons for further investigation, through bootstrapping modeling where assumed results are being resampled to confirm the assumptions. So having in mind the plurality of possible statistical methods, the statistical analyses chosen are regarded as sufficient in order to interpret the results of the measurements.

Some remarks should be made regarding internal validity. In other words, related to my study, a causal relationship is implied between teacher training with PE teachers, and development of the relevant outcomes among students attending their PE lessons. So given these expected relationships between outcome variables, is it plausible that the teacher training causes these relationships among students, or would the same relationship be obtained in the absence of treatment as well. To control for this effect, this study uses a control group comparison, which may be argued will limit the possibilities

that there is something else[26] than the teacher training which causes the effect. The attention given to the students in this study was similar, and the control group comparison also limited the threat of extra attention given to the student groups. Student-researcher contact occurred two times (pretest and posttest), both in intervention classes and control classes, and the information given was general and did not encourage any classes to make any special effort.

Another influence on internal validity which is mentioned is maturation. This is when an observed effect just might be due to the respondents growing older, wiser or becoming more experienced (Cook & Campbell, 1979). In an intervention among 16-18 year old students the danger for maturation in different ways among the participants could be likely. There could also be gender differences, because the girls and boys differ in their pubertal process. The preliminary results from pretest in my study also indicated differences between these subgroups on some outcome variables due to school level and gender. The control group comparison and the similar percentage of students on gender and school level in control group and intervention group eliminated most of this possible effect. In addition, gender and school level was controlled for in the analyses.

Regarding the development of teacher performance variables from baseline to posttest, this developed first and foremost in the method competence. This could be due to that the Norwegian training approach focused on developing methodology expertise in planning, implementing and reflecting on intercultural learning, more than to develop educational beliefs, knowledge and acculturation attitudes. The reason for a small effect on the EB, AA, and KNOW may also be that the teachers scored high on those already at baseline which could contribute to a possible ceiling effect (cf. Cramer & Howitt, 2004). Since the course did not emphasize to improve all variables equally, it is debatable whether the teacher training was the same as the German training. Anyhow, the main point was not to implement the same training, but to make an adapted training approach, which aimed to give students a benefit from having teachers who completed the course. Thus,

[26] According to Cook and Campbell (1979), this 'something else' could be referred to as *"history"*. This is a common threat when an observed effect might be due to events which take place between the pretest and the posttest, when this event is not part of the treatment.

Grimminger (2009) and this thesis had two different starting points. For process assessment and evaluation from the teachers, her teacher measurement instruments were included in the intervention. In addition, one must not forget the possibility for social desirability bias in such self-reporting surveys (cf. Nederhof, 1985). The danger is that teachers respond as they are expected to respond and how they believe the researcher wants. This is a potential bias for both of these studies. Nevertheless, these performance indicators are applied because they are currently considered the most convenient way in the assessment of the training and teacher outcomes, and are regarded as an additional measurement for explaining and understand the measured effects among students.

The idea behind such an applied, small sample study is to test whether the results are consistent with the assumptions (Erdmann, 1988). The aim was to test for the first time if the assumptions really have the expected effect. The intention is not the generalization, but to examine the validity of the assumptions based on theory. So by gradually applying it to different groups one can test how generally valid the assumptions hold. This thesis therefore represents a sequence that develops the concept further, and should be modified in order to bring new consistent results in the next study (cf. chapter 5.1). One should presume that even if schools and teachers are very different, the same approach would have the probability to give expected results also in another school and with other students. Therefore, one of the further perspectives is to improve the knowledge of the intervention, develop a training which could be even more efficient in the implementation of intercultural learning processes among teachers and students, and increase the probability for beneficial efforts in this area of intercultural education. This has been the initial step for further empirical research, and could be a foundation for larger samples and possible generalizations in later studies.

10 CONCLUDING REMARKS AND FURTHER PERSPECTIVES

In this closing chapter some concluding remarks, implications and hints for further research are given. The results from this study revealed that the intervention group as a whole, compared to the control group, showed significant higher results on self-concept, and nearly all indicators were consistent in the expected direction. However, students of teachers who reported to have implemented most of the course content/student activities were the most beneficial from intervention, compared to the students with low-implementing teachers and control group. The achievements of these students indicated a direct effect on improved self-concept, increased openness, and higher satisfaction, both in PE and school as a whole. The relationships between the outcome variables revealed higher consistency in the results of the students of the high implementing teachers. This suggests that the effort and degree of implementation among the teachers is a decisive indicator for student outcomes. An important finding is that the two high implementing schools represent two opposites regarding socio-demographic context. This indicates that the training has greater effect than the socio-demographic influences. It supports the assumption that intercultural learning approaches could be conducted independent of student background (e.g. immigrant background or gender) and geographical location. The findings in this dissertation give further questions and perspectives, and these could be investigated through the next studies in this realm.

Student perspectives

The measurements in this study were considered suitable due to the strong links to theory, but in a further perspective could an improvement of indicators be emphasized, or other measurements of the constructs could be revealed. This might for instance be modified scales in the survey, or the sociometric measurement questions could be linked more closely to the concepts of intercultural learning. Future research may also further investigate the relationships between variables that are found in this study (cf. figure 10, p.130), to test and possibly develop modified scales or additional indicators in new studies. There are indirect links and possible mediator effects which may be examined, such as the intervention group's negative correlation between self-concept and

uncertainty, and the positive relationship between uncertainty and rational argumentation. In the output path diagram Uncertainty is linked towards most of the other outcome variables in the model. This supports the importance of uncertainty as a key indicator, and a central concept for intercultural learning approaches. Accordingly, both teachers and students in this study report that they easily associate and recognize themselves in the term uncertainty. Hence, the concept of uncertainty seemed convenient to visualize the possible effects of strangeness, which may make it easier to understand the interaction between difference, strangeness and identity development. A central finding in this study was an increased score in the self-concept in the intervention group. Self-concept, as a general concept, might perhaps be too broad for measurements in this realm, and the items in the self-concept represented just one part of the wide term. A development in order to measure different parts of the self-related measurements in this realm (e.g. self-reliance, self-confidence, and self-efficacy) might be considered in later research.

The results gave an indication that the girls had a greater effect than the boys of the intervention. This relationship can be examined and tested further in the next intervention. It may be important to be aware that traditionally PE has been a subject on the boys' terms (Imsen, 1996). Yet, the results in this study show that the activities increase satisfaction with the subject among girls, while boys still maintain a high satisfaction. The relationships between gender and student outcomes could be examined more closely in further studies.

Nicholls, Licht and Pearl (1982) discuss some possible dangers in using personality questionnaires to measure personality, and ask whether self-report of a construct really predicts construct-related behavior. Hence, a future perspective in measuring student outcomes could be a mixed methods approach (cf. Teddlie & Tashakkori, 2003), where a combination of questionnaires, observations and interviews of the students, could grasp more and further explore and investigate the personal and behavioural development in intercultural learning interventions.

Teacher perspectives

It is important to have in mind that this intervention was not looking for a teacher effect directly, but primarily examined whether the content of teacher training is transmitted to students, giving them the intended effect on the measured variables. That is why the students' relevant outcomes have been emphasized. The majority of teacher variables also showed a direction of what was theoretically expected. Yet the teachers scored in a performance enhancing direction of educational beliefs (EB) and acculturation attitudes (AA) already at baseline, so the possibility of further development was small. Grimminger (2009) found significant growth in both EB, method competence (METH), and knowledge on interculturality and sport (KNOW), while similarly, AA was already scoring in a performance enhancing way at baseline. In my research, however, main finding on teacher variables was that teachers had improved their ability to plan, implement and reflect on intercultural learning (Method competence). Even if this finding did not affect student outcomes directly (p.119), it might still have contributed to help teachers to implement the course content towards students. Moreover, key terms like differences, uncertainty and accepting learning environments seemed as important theoretical aspects to focus in the teacher training approach. Therefore, an even stronger combination of my and Grimminger's approaches have the potential to change both the teachers' educational beliefs, knowledge on interculturality and sports, method competence and teaching practice, which may give students even greater outcomes.

It was the efforts the teachers made in implementing the content which turned out to be the most important aspect. Related to the foregoing, the question is whether there are other indicators which could be assumed and developed in order to find consistent relationships between teacher variables and student outcomes, and hence may be more predictive for implementation. This study showed that none of the performance variables could explain student outcomes either alone or in combination. So what makes some teachers implement, while others don't, is therefore a relevant question. First, teacher self-efficacy (TSE, see p.76) may also be measured after the intervention to see if there are changes here that might be of importance to students' outcomes. It was an impression through the interviews that teachers developed, especially in awareness and coping with

challenges related to the subject (TSE6), and the knowledge that they could adapt their teaching to individual needs (TSE2). Moreover, it should possibly be a more holistic approach of the teachers, given that they are the most important factor for successful implementation. Skaalvik and Skaalvik (2007) have examined the combination of teacher self-efficacy, burnout, collective efficacy and strain factors, while Bender-Szymanski (2000) has investigated the relations between self-efficacy, burn-out and synergy-oriented vs. culture-oriented teachers (see p.39). In order to form this holistic approach within teachers, these factors in combination could be important to investigate in further teacher training interventions. This might potentially explain more round the differences in the teachers' effort and degree of implementation, and how this affect student outcomes.

School and community perspectives

Intercultural competence could, and should surely, also be developed and supported by other subjects than PE. Demonstrations of fruitful approaches have been seen both in foreign language teaching (e.g. Raya & Sercu, 2007) and in social sciences (e.g. Eikeland, 2004). This broad objective of reflexive interculturality should not be the concern and duty of individual teachers, or of one school subject. It should rather be regarded as a cross-functional task within schools (Giess-Stüber, 2008a). Interculturality should be part of the entire school climate. However, as revealed through this thesis, some considerable arguments are seen to be favourable for the use of PE as a main arena for teacher interventions.

During interviews teachers reported that differences in itself is one of the biggest challenges in PE, not what the differences contain. Some teachers found gender differences were most difficult to prepare for, others the various performance and skill levels, while others thought that students' different cultural backgrounds and relationship to sports was difficult. Intercultural topics have links to many other facets (Erdmann, 1999b), and this study supports the view that there are not just cultural differences that are central to intercultural learning, but equally important is gender, physical abilities and social backgrounds as well. Grimminger (2009) states that educational research in the intersection of class, race, gender, sexuality and disability seems to be closely related to

intercultural competence. These interactions of differences are, according to Grimminger (2009), in the current debate round German gender studies tried to be explained with the term "intersectionality". Flintoff, Fitzgerald and Scraton (2008) discuss the challenges of working with intersectionality, and how to improve research and theorize 'difference' within schooling and PE. They acknowledge and argue for an ongoing focus on PE as part of the contribution of research around aspects like embodiment, identity and power. However, Walgenbach (2007) criticizes the concept "intersectionality" because it remains open for interpretation and is maybe too flexible in its application. Grimminger (2009) therefore pleads for the use of the concept 'interdependence', because this express the mutual dependence of the social categories gender, ethnicity and social status. Consequently, there are not the facets of an intersectional competence that needs to be developed, but an interdependent competence; a competence for the constructive dealing with the interdependent social categories gender, social status and ethnicity (Grimminger, 2009). However, it seems that up to now no theoretical or didactical conception presents the views of an intersectional or interdependent competence in PE, which rather may be a research perspective to pursue for further theoretical development in this realm.

An important future perspective must be to associate the contents of this teacher training to teacher education. In this way, the theoretical and practical basis is laid before the teachers start their professional career at school. The world evolves, and this is reflected also in Norway, due to e.g. increased immigration and globalization. More and more differences appear, and we must all learn to face these constructively with awareness, openness and acceptance. These are basic values that schools should convey, which also is emphasized by the curriculum. However, there should be a greater focus on transferring the good intentions in the core curriculum to the subject-specific curriculum. Competence goals of PE reflect to a limited extent the emphasis that bodily movement and PE are given for identity development, social skills and cultural understanding. Here may we as researchers and practitioners help teacher students, teachers, school administrators and politicians to see and recognize this opportunity. Hence, a plea is made for integrating elements of this teacher training into the education of future physical education teachers.

REFERENCES

Aluffi-Pentini, A. & Lorenz, W. (1996). *Anti-racist work with young people: European experiences and approaches*. Dorset: Russell House.

Auernheimer, G. (2003). *Einführung in die Interkulturelle Pädagogik.* (3 ed.) Darmstadt: Wissenschaftliche Buchgesellschaft.

Auernheimer, G. (2005). *Interkulturelle Kommunikation, vierdimensional betrachtet.* Retrieved May 15, 2008 from http://www.uni-koeln.de/ew-fak/paedagogik/ interkulturelle/ publikationen/muenchen.html

Bagøien, T.E & Halvari, H. (2010). Self-determined motivation in physical education and its links to motivation for leisure time physical activity, physical activity, and well-being in general. *Perceptual and Motor Skills, 111 (2),* 1-26.

Bandura, A. (1977a). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review, 84,* 191-215.

Bandura, A. (1977b). *Social learning theory*. Englewood Cliffs, N.J.: Prentice Hall.

Bandura, A. (1995). *Self-efficacy in changing societies.* Cambridge: Cambridge University Press.

Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.

Baranowski, T., Anderson, C., & Carmack, C. (1998). Mediating variable framework in physical activity interventions: How are we doing? how might we do better? *American Journal of Preventive Medicine, 15,* 266-297.

Baron, R. M. & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology, 51,* 1173-1182.

Bartz, A., Mosing, G., & Herrmann, D. (2004). *Fortbildungsdidaktik und Fortbildungsmethodik.* Bönen: Kettler.

Baumeister, R. F. (1997). Identity, Self-Concept, and Self-Esteem: The Self Lost and Found. In R.Hogan, J. Johnson, & S. R. Briggs (Eds.), *Handbook of Personality Psychology* (pp. 681-710). San Diego, California: Academic Press.

Beijaard, D. & Verloop, N. (1996). Assessing teachers' practical knowledge. *Studies in Educational Evaluation, 22,* 275-286.

Bender-Szymanski, D. (2000). Learning through Cultural Conflict? A longitudinal analysis of German teachers strategies for coping with cultural diversity at school. *European.Journal of Teacher.Education., 23,* 229-250.

Bennett, M. J. (1993). Towards Ethnorelativism: A Developmental Model of Intercultural Sensitivity. In R.M.Paige (Ed.), *Education for the intercultural experience* (pp. 21-71). Yarmoth, Me.: Intercultural Press.

Berry, J. W., Kim, U., Power, S., Young, M., & Bujaki, M. (1989). Acculturation Attitudes in Plural Societies. *Applied Psychology: An international review, 38,* 185-206.

Biddle, S. J. H. & Mutrie, N. (2008). *Psychology of Physical Activity. Determinants, well-being and interventions.* (2 ed.) London: Routledge.

Bilden, H. (1997). Das Individuum – ein dynamisches System vielfältiger Teil-Selbste. Zur Pluralität in Individuum und Gesellschaft. In H. Keupp & R. Höfer (Hrsg.), *Identitätsarbeit heute. Klassische und aktuelle Perspektiven der Identitätsforschung* (227-249). Frankfurt am Main: Suhrkamp.

Blecking, D. & Giess-Stüber, P. (2006). Kulturelle Differenz als Herausforderung und Chance. Eine Einleitung. In D.Blecking & P. Giess-Stüber (Eds.), *Sport bewegt Europa. Beiträge zur interkulturellen Verständigung* (pp. 5-8). Baltmannsweiler: Schneider Verlag Hohengeren.

Bröskamp, B. (1994). *Körperliche Fremdheit. Zum Problem der interkulturellen Begegnung im Sport.* Sankt Augustin: Academia.

Bröskamp, B. (2008). Bodily strangerhood(s) revisited. In P.Giess-Stüber & D. Blecking (Eds.), *Sport - Integration - Europe. Widening Horizons in Intercultural Education* (pp. 213-227). Baltmannsweiler: Schneider.

Buhrmester, D., Furman, W., Wittenberg, M. T., & Reis, H. T. (1988). 5 Domains of Interpersonal Competence in Peer Relationships. *Journal of Personality and Social Psychology, 55,* 991-1008.

Burden, J., Hodge, S. R., O'Bryant, C. P., & Harrison, J. (2004). From colorblindness to intercultural sensitivity: infusing diversity training in PETE programs. *Quest, 56,* 173-189.

Byram, M. (1997). *Teaching and Assessing Intercultural Communicative Competence.* Clevedon: Multilingual Matters Ltd.

Bø, I. & Helle, L. (2008). *Pedagogisk ordbok.* (2.utg) Oslo: Universitetsforlaget.

Cabrera-Rivas, C. (1999). Die Bedeutung kultureller Identität im Bildungsprozess. In: Gesellschaft für Tanzforschung (Hrsg.). *Jahrbuch Tanzforschung* (48-62). Bd. 9, Wilhelmshafen: Nötzel

Calderhead, J. (1996). Teachers: Beliefs and knowledge. In D. Berliner & R. Calife (Eds.). *Handbook of Educational Psychology* (pp. 709-725). New York: Simon & Schuster Macmillian.

Cohen, E. G., Brody, C. M., & Sapon-Shevin, M. (2004). *Teaching cooperative learning: the challenge for teacher education*. Albany, N.Y.: State University of New York Press.

Cohen, J.W. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale NJ: Lawrence Erlbaum Associates.

Cook, T. D. & Campbell, D. T. (1979). *Quasi-experimentation: design & analysis issues for field settings*. Boston: Houghton Mifflin Co.

Cothran, D. J. & Ennis, C. D. (1997). Students' and Teachers' Perceptions of Conflict and Power. *Teaching and Teacher Education, 13,* 541-553.

Cramer, D. & Howitt, D. (2004). *The Sage dictionary of statistics: a practical resource for students in the social sciences.* London: Sage Publications.

Cronbach, L. J. & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52,* 281-302.

Eikeland, H. (2004). *Historieundervisning og interkulturell læring* (Rep. No. 8/2004). Tønsberg: Høgskolen i Vestfold.

Ekstrand, L.H. (1994). Multicultural Education. In: T. Husén & T.N. Postlethwaite (Eds.) *The International Encyclopedia of Education, vol.7* (pp. 3960-3970). Oxford: Pergamon.

Elsen, A. & St.John, O. (2007). Learner automony and intercultural competence. In M.J.Raya & L. Sercu (Eds.), *Challenges in Teacher Development: Learner Autonomy and Intercultural Competence* (pp. 15-38). Frankfurt am Main: Europäischer Verlag der Wissenschaften.

Erdmann, R. (1986). Machtstrukturen im Unterricht. *Sportunterricht, 35,* 5-9.

Erdmann, R. (1987). *Relativierte Macht. Das Machtmotiv und seine sportpädagogischen Bedeutung.* Sankt Augustin: Verlag Hans Richarz.

Erdmann, R. (1988). Die Bedeutung empirischer Studien mit kleinen Stichproben für die Theoriebildung im sozialwissenschaftlichen Bereich. *Sportwissenschaft, 18,* 270-283.

Erdmann, R. (Ed.) (1999a). *Interkulturelle Bewegungserziehung*. (Bd. 19 ed.) Sankt Augustin: Academia Verlag.

Erdmann, R. (1999b). Ich bin Ich und Du bist Du. Zur Bedeutung der Identität für die interkulturelle Bewegungserziehung. In R.Erdmann (Ed.), *Interkulturelle Bewegungserziehung* (pp. 61-80). Sankt Augustin: Academia Verlag.

Erdmann, R. (2001). Intercultural Movement Education - Facets of Identity. In *16th Annual Congress of the European College of Sport Science* Cologne: Sport und Buch Strauss.

Erdmann, R. (2003). A meta perspective on self and identity. Paper presented at the 11th European Congress of Sport Psychology in Copenhagen, Denmark. Unpublished.

Erdmann, R. (2005). Erkenne den Unterschied: zum Umgang mit Unsicherheit, die Identitätsarbeit und interkulturelle Erziehung. In P.Giess-Stüber (Ed.), *Interkulturelle Erziehung im und durch Sport* (pp. 48-59). Münster: LIT.

Erdmann, R., Cabrera-Rivas, C. & Schulz, H.G. (2008). *Aspects of Culture and Health – Public Health and Setting.* Subproject of Health(a)ware, Comenius 2.1 EU-project 128737-CP-1-2006-DE-COMENIUS-C21.

Esser-Noethlichs, M. (2010). *Sensitivity towards strangeness (STS). Development of a measuring instrument and initial empirical results.* Dissertation from the Norwegian School of Sport Sciences, Oslo. Unpublised.

Everitt, B.S. & Dunn, J. (1991). *Applied Multivariate Data Analysis.* London: Edward Arnold.

Fan, C. & Mak, A. S. (1998). Measuring social self-efficacy in a culturally diverse student population. *Social Behavior and Personality, 26,* 131-144.

Fantini, A. E. (1995). Exploring Intercultural Competence: A Construct Proposal. *NCOLCTL Fourth Annual Conference,* 1-4.

Fantini, A. E. (2007). *A Central Concern: Developing Intercultural Competence*. Retrieved September 26, 2007 from htpp://www.sit.edu/publications/does/competence.

Feltz, D. L., Short, S. E., & Sullivan, P. J. (2008). *Self-efficacy in sport.* Champaign, Ill.: Human Kinetics.

Flintoff, A., Fitzgerald, H., & Scraton, S. (2008). The Challenges of Intersectionality: Researching Difference in Physical Education. *International Studies in Sociology.of Education, 18,* 73-85.

Garbarino, J. (1985). *Adolescent development: An ecological perspective.* Coloumbus, Ohio: Charles E.Merill Publishing.

Garmezy, N. (1989). The role of competence in the study of children and adolescents under stress. In: B.H. Schneider, G. Attili, J. Nadel & R.P. Weissberg (Eds.). *Social competence in developmental perspective.* Dordrecht: Kluwer Academic publ.

Gessmann, R. (2000). Vom Sportartenkanon zum offenen Bewegungskonzept. In Landesinstitut für Schule und Weiterbildung (Ed.). *Erziehender Schulsport. Pädagogische Grundlagen der Curriculumrevision in Nordrhein-Westfalen* (pp.56-85). Bönen/Westf.: Verlag für Schule und Weiterbildung, DruckVerlag Kettler.

Giess-Stüber, P. (1999). Der Umgang mit Fremdheit - Interkulturelle Bewegungserziehung jenseits von Ausgrenzung oder Vereinnahmung. In R.Erdmann (Ed.), *Interkulturelle Bewegungserziehung* (pp. 42-60). Sankt Augustin: Academia Verlag.

Giess-Stüber, P. (2003). Fremde und Fremdes erleben. *Sportpädagogik, 27(6)*, 4-8.

Giess-Stüber, P. (Ed.) (2005a). *Interkulturelle Erziehung im und durch Sport*. Münster: LIT.

Giess-Stüber, P. (2005b). Der Umgang mit Fremdheit - Interkulturelle Bewegungserziehung jenseits von Ausgrenzung oder Vereinnahmung. In P.Giess-Stüber (Ed.), *Interkulturelle Erziehung im und durch Sport* (pp. 67-75). Münster: LIT.

Giess-Stüber, P. (2006a). Handling strangeness and physical education. A didactical approach to enhance intercultural competence of teacher students. In E. De Vreede (Ed.), *Diversity in Education in an International Context. International conference International Association for Intercultural Education (IAIE)*.

Giess-Stüber, P. (2006b). Für ein produktiven Umgang mit Fremdheit im Schulsport. In D. Blecking & P. Giess-Stüber (Eds.), *Sport Bewegt Europa. Beiträge zur interkulturellen Verständigung* (pp. 151-168). Baltmannsweiler: Schneider Verlag..

Giess-Stüber, P. (2008a). Reflexive interculturality and interaction with strangeness in sport and through sport. In P.Giess-Stüber & D. Blecking (Eds.), *Sport - Integration - Europe. Widening Horizons in Intercultural Education* (pp. 228-242). Baltmannsweiler: Schneider Verlag.

Giess-Stüber, P. (2008b). Travelling through Europe. Estrangement and return. In P.Gieß-Stüber & D. Blecking (Eds.), *Sport - Integration - Europe. Widening Horizons in Intercultural Education* (pp.36-46 Baltmannsweiler: Schneider Verlag.

Giess-Stüber, P. & Blecking, D. (Eds.) (2008). *Sport - Integration - Europe*. Baltmannsweiler: Schneider Verlag.

Giess-Stüber, P. & Grimminger, E. (2008a). Kultur und Fremdheit als sportdidaktische Perspektive. In H.Lange & S. Sinning (Eds.), *Handbuch: Didaktik des Sports* (pp. 223-244). Balingen, Germany: Spitta Verlag.

Giess-Stüber, P. & Grimminger, E. (2008b). Reflexive interculturality as a development objective for schools and school sport. In P.Giess-Stüber & D. Blecking (Eds.), *Sport - Integration-Europe. Widening Horizons in Intercultural Education* (pp. 297-303). Baltmannsweiler: Schneider Verlag.

Giess-Stüber, P., Grimminger, E., Schmerbitz, H., & Seidensticker, W. (2007). Reflexive Interkulturalität als Schul(sport)entwicklungsperspektive - Skizze einer Schulfallstudie an der Laborschule Bielefeld. In N.Fessler & G. Stibbe (Eds.), *Standardisierung, Professionalisierung, Profilierung - Herausforderungen für den Schulsport* (pp. 143-159). Baltmannsweiler: Schneider Verlag.

Giess-Stüber, P., Didierjean, R., Fialova, L., Heine, C., & Mielcarek, M. (2008). Physical education in Germany, France, Poland and the Czech Republic. Perspectives for integration and interculturality. In P.Giess-Stüber & D. Blecking (Eds.), *Sport - Integration - Europe* (pp. 25-35). Baltmannsweiler: Schneider Verlag.

Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.

Gramespacher, E. (2008). Dealing with strangeness through play: a practical lesson. In P.Giess-Stüber & D. Blecking (Eds.), *Sport - Integration - Europe. Widening Horizons in Intercultural Education* (pp. 243-250). Baltmannsweiler: Schneider Verlag.

Gramespracher, E. & Grimminger, E. (2005). 'In vier Stunden um die Welt' – Schüler/innen der Staudinger Gesamtschule Freiburg ziehen in die sportliche Fremde. In P. Giess-Stüber (Ed.), *Interkulturelle Erziehung im und durch Sport.* (pp. 134-145). Münster: LIT.

Gresham, F. M. & Elliott, S. N. (1990). *Social skills rating system*. Circle Pines: American Guidance Service.

Grimminger, E. (2005). Förderung eines konstruktiven Umgangs mit Fremdheit im Schulsport - Skizze einer empirischen Schulsportstudie. In R.Laging & M. Pott-Klindworth (Eds.), *Bildung und Bewegung im Schulsport* (pp. 149-157). Butzbach-Griedel: Afra.

Grimminger, E. (2007). *Praxisreader. Interkulturelles Lernen in Bewegung, Spiel und Sport.* Teacher Training Compendium. Albert-Ludwigs-Universität Freiburg: Institut für Sport und Sportwissenschaft. Unpublished.

Grimminger, E. (2008). Promoting intercultural competence in the continuing education of physical education teachers. In P.Giess-Stüber & D. Blecking (Eds.), *Sport - Integration - Europe. Widening Horizons in Intercultural Education* (pp. 304-315). Baltmannsweiler: Schneider Verlag.

Grimminger, E. (2009). *Interkulturelle Kompetenz im Schulsport. Evaluation eines Fortbildungskonzepts*. Baltmannsweiler: Schneider Verlag.

Gudykunst, W.B. (1987). A model of uncertainty reduction in intercultural encounters. *Journal of Language and Social Psychology, 4,* 79-98.

Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). Measuring intercultural sensitivity: The intercultural development inventory. *International Journal of Intercultural Relations, 27,* 421-443.

Hartinger, A., Kleickmann, T., & Hawelka, B. (2006). Der Einfluss von Lehrervorstellungen zum Lernen und Lehren auf die Gestaltung des Unterrichts und auf motivationale Schülervariablen. *Zeitschrift für Erziehungswissenschaft, 9,* 110-126.

Hausser, K. (1995). *Identitätspsychologie*. Berlin, Heidelberg, New York: Springer.

Hildenbrandt, E. (1994). Ernst Cassirers Philosophie der symbolischen Formen und Aspekte einer Semiotik des Sports. In: G. Friedrich, E. Hildenbrandt & J. Schwier (Eds.). *Sport und Semiotik,* (pp. 69-82). Dvs-Schriften, Bd. 61. Sankt Augustin: Academia.

Hildenbrandt, E. (1997). Sport aus der Perspektive der Kulturphilosophie von Ernst Cassirers. In: E. Hildenbrandt (Ed.), *Sport als Kultursegment aus der Sicht der Semiotik,* (pp. 15-24). Dvs-Schriften, 81. Hamburg: Czwalina.

Hjort, K., Løngreen, H. & Søderberg, A.M. (1993). *Interkulturel kommunikation. Spændingsfeltet mellem det globale og det lokale.* Frederiksberg: Samfundslitteratur.

Hoffman, E. & Maduro, R. (1996). "Article One": an inter-cultural youth project in the Netherlands. In A.Aluffi-Pentini & W. Lorenz (Eds.), *Anti-racist work with young people: European experiences and approaches* (pp. 134-158). Dorset: Russell House.

Honneth, A. (1994). *Kampf um Anerkennung. Zur moralischen Grammatik sozialer Konflikte.* Frankfurt am Main: Suhrkamp.

Imsen, G. (1996). *Mot økt likestilling? Evaluering av grunnskolens arbeid for likestilling utført for Kirke- utdannings- og forskningsdepartementet.* Trondheim: Pedagogisk institutt, NTNUI.

Jacobsen, E. B., Moser, T., By, I. Å., Fjeld, J., Gundersen, K. T., Stokke, R. (2001). *L97 og kroppsøvingsfaget. Fra blå praktbok til grå hverdag? Lærernes erfaringer knyttet til den nye læreplanen i kroppsøving.* Hovedrapport 1, rapport 3/2001. Tønsberg: Høgskolen i Vestfold

Johnson, B. & Turner, L. A. (2003). Data Collection Strategies in Mixed Methods Research. In A.Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in Social & Behavioral Research* (pp. 297-319). Thousand Oaks: Sage Publications.

Jónsson, T. (1994). *Tiltak med tanke på forbedring av trivsel i kroppsøving. Innovasjon ved Haga skoli i Reykjavik.* Universitet i Oslo: Institutt for spesialpedagogikk.

Keupp, H. (1997). Diskursarena Identität: Lernprozesse in der Identitätsforschung. In H.Keupp & R. Höfer (Eds.), *Identitätsarbeit heute. Klassische und aktuelle Perspektiven der Identitätsforschung.* (pp. 11-39). Frankfurt am Main: Suhrkamp.

Keupp, H. Ahbe, T., Gmür, W., Höfer, R., Mitzscherlich, B., Kraus, W. & Straus, F. (1999). *Identitätskonstruktionen. Das Patchwork der Identitäten in der Spätmoderne.* Hamburg: Rowohlt Taschenbuch Verlag.

Kitzinger, J. & Harbour, R.S. (1999). Introduction. The challenge and promise of focus groups. In R.S. Harbour & J. Kitzinger (Eds.), *Developing Focus Groups Research. Politics, Theory and Practice.* London, Thousand Oaks, New Dehli: Sage Publications.

Kleven, T. A. (2002). Begrepsoperasjonalisering. In T.Lund (Ed.), *Innføring i forskningsmetodologi* (pp. 141-184). Oslo: Unipub.

König, E. (1979). Was leistet die empirische Erziehungswissenschaft für die Praxis? *Unterrichtswissenschaft, 7,* 263-268.

Krappmann, L. (1969). *Soziologische Dimension der Identität. Strukturelle Bedingungen für die Teilnahme an Interaktionsprozessen*. Stuttgart: Klett-Cotta.

Kroger, J. (2000). *Identity development: adolescence through adulthood.* Thousand Oaks, Calif.: Sage.

Kvale, S. (2009). *Interviews: learning the craft of qualitative research interviewing*. (2 ed.) Los Angeles, Calif.: Sage.

Lahdenperä, P. (Ed.) (1995). *Interkulturella läroprocesser. Interkulturell undervisning.* Stockholm: HLS Förlag.

Lahdenpera , P. (Ed.) (2004). *Interkulturell pedagogik i teori och praktik.* Lund: Studentlitteratur.

Lerner, R.M. (1986). *Concepts and theories of human development* (2.ed). New York: Random House

Luchtenberger, S. (1995). Intercultural communicative competence – a challenge in multicultural and anti-racist education. *European Journal of Intercultural Studies. 6 (2),* 12-32.

Luciak, M. (2006). Minority schooling and intercultural education: a comparison of recents developments in the old and new EU member states. *Intercultural Education, 17*(1), 73-80.

Madsen, A. & Steenhold, J. (1987). *Multietnisk pædagogik og interkulturell undervisning.* Herning, Danmark: Spesial-pædagogisk forlag.

Mamen, A. et al., (2002). Kroppsøvingsundervisningen i L97. Mange oppgaver – for lite tid? I: *Kroppsøving,* 1, 14-15

Masterpasqua, F. (1989). A competence paradigm for psychological practice. *American Psychologist, 44,* 1366-1371.

Mayer, J. D. & Salovey, P. (1997). What is emotional intelligence. In P.Salovey & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: educational implications* (pp. 3-31). New York: Basic Books.

McCaughtry, N., Martin, J., Kulinna, P. H., & Cothran, D. (2006). What makes teacher professional development work? The influence of instructional resources on change in physical education. *Professional.Development in Education, 32,* 221-235.

McClelland, D.C. (1973). Testing for competence rather than for "intelligence". *American Psychologist, 28,* 1-14.

Messick, S. (1995). Validity of psychological assessment. *American Psychologist, 50,* 741-749.

Michels, H. & Schulz, H.-G. (1999). Sportorganisation und interkulturellen Begegnung - eine kommentierte Befragung. In R.Erdmann (Ed.), *Interkulturelle Bewegungserziehung* (pp. 130-152). Sankt Augustin: Academia Verlag.

Miethling, W.-D. & Giess-Stüber, P. (2007). Persönlichkeit, Kompetenz und Professionelles Selbst von Sport- und Bewegungslehrern. In W.-D.Miethling & P. Giess-Stüber (Eds.), *Beruf Sportlehrer/in: Über Persönlichkeit, Kompetenzen und Professionelles Selbst von Sport- und Bewegungslehrern* (pp. 1-24). Baltmannsweiler: Schneider.

Nederhof, A.J. (1985). Methods of coping with social desirability bias: A review. *European Journal of Social Psychology, 15(3),* 263-280.

Neuber, N. (1999). Vom Gewohnten zum Ungewöhnlichen - Ansatzpunkte für eine Praxis der interkulturellen Bewegungserziehung. In R.Erdmann (Ed.), *Interkulturelle Bewegungserziehung* (pp. 112-129). Sankt Augustin: Academia.

Neuber, N. (2000). *Kreativität und Bewegung - Grundlagen kreativer Bewegungserziehung und empirische Befunde*. (vols. 45) St.Augustin: Academia.

Nicholls, J. G., Licht, B. G., & Pearl, R. A. (1982). Some Dangers of Using Personality Questionnaires To Study Personality. *Psychological Bulletin, 92,* 572-580.

Noethlichs, M. (2005). Die Sensitivität gegenüber Fremdheit (STS) und Interkulturelles Lernen im Sport. In P.Giess-Stüber (Ed.), *Interkulturelle Erziehung im und durch Sport* (pp. 38-47). Münster: LIT.

Norwegian Ministry of Education and Research [Kunnskapsdepartementet] (2006). *The Knowledge Promotion [Kunnskapsløftet]*.

NOU [Official Norwegian Report] (2003). *I første rekke. Forsterket kvalitet i en grunnopplæring for alle.* (vols. 16) Oslo: Statens forvaltningstjeneste.

Ogden, T. (2002). *Sosial kompetanse og problematferd i skolen: kompetanseutviklende og problemløsende arbeid i skolen*. Oslo: Gyldendal akademisk.

Ommundsen, Y. & Lemyre, P. N. (2007). Self-regulation and strategic learning: the role of motivational beliefts and the learning environment in physical education. In J.Liukkonen & Y. V. Auweele (Eds.), *Psychology for physical educators: student in focus* (pp. 141-174). Champaign, Ill.: Human Kinetics.

Pajares, F. M. (1992). Teachers' Beliefs and Educational Research: Cleaning Up a Messy Construct. *Review of Educational Research, 62*, 307-332.

Pallant, J. (2007). *SPSS Survival Manual. A Step by Step Guide to Data Analysis using SPSS for Windows.* (3rd ed.). Berkshire, UK: McGraw-Hill.

Patton, M. Q. (2002). *Qualitative research & evaluation methods*. (3rd ed.) Thousand Oaks, Calif.: Sage Publications.

Phillips, D. C. (1987). *Philosophy, Science and Social Inquiry: Contemporary Methodological Controversies in Social Science and Related Applied Fields of Research* . New York: Pergamon Press.

Pihl, J. (2000). Interkulturell og flerkulturell undervisning : fra honnørord til realitet? *Norsk pedagogisk tidsskrift, 84*, 308-319.

Pollard, A. (2002). *Reflective teaching.* London: Continuum.

Preacher, K.J. & Hayes, A.F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behaviour Research Methods, 40(3),* 879-891.

Putallaz, M. & Gottman, J. (1982). Conceptualizing social competence in children. In P.Caroly & J. J. Steffen (Eds.), *Improving children's competence: Advances in child behavioral analysis and therapy* (Volume 1 ed., pp. 1-37). Lexington: Lexington Books.

Raya, M. J. & Sercu, L. (2007). *Challenges in Teacher Development: Learner Autonomy and Intercultural Competence*. Frankfurt am Main: Europäischer Verlag der Wissenschaften.

Rokeach, M. (1968). *Beliefs, attitudes and values: a theory of organization and change*. San Francisco: Jossey-Bass.

Salovey, P. & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9,* 185-211.

Salovey, P. & Sluyter, D. J. (1997). *Emotional development and emotional intelligence: educational implications*. New York: Basic Books.

Schneider, B. H. (1993). Children's competence in context: The contributions of family, school and culture. In New York: Pergamon.

Sercu, L., Bandura, E. Castro, P., Davcheva, L., Laskaridou, C., Lundgren, U. …& Ryan, P. (2005). *Foreign Language Teachers and Intercultural Competence. An International Investigation.* Clevedon, UK: Multilingual Matters Ltd.

Sercu, L. & Raya, M. J. (2007). Introduction. In M.J.Raya & L. Sercu (Eds.), *Challenges in Teacher Development: Learner Autonomy and Intercultural Competence* (pp. 7-14). Frankfurt am Main: Europäischer Verlag der Wissenschaften.

Sercu, L. & St.John, O. (2007). Teacher beliefs and their impact on teaching practice: a literature review. In M.J.Raya & L. Sercu (Eds.), *Challenges in Teacher Development: Learner Autonomy and Intercultural Competence* (pp. 41-64). Frankfurt am Main: Europäischer Verlag der Wissenschaften.

Sercu, L. (2007). Foreign language teachers and intercultural competence. What keeps teachers from doing what they believe in? In M.J.Raya & L. Sercu (Eds.), *Challenges in Teacher Development: Learner Autonomy and Intercultural Competence* (pp. 65-80). Frankfurt am Main: Europäischer Verlag der Wissenschaften.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin.

Skaalvik, E. M. & Skaalvik, S. (2007). Dimensions of Teacher Self-Efficacy and Relations with Strain Factors, Perceived Collective Teacher Efficacy, and Teacher Burnout. *Journal of Educational Psychology, 99,* 611-625.

Soodak, L.C., & Podell, D.M. (1996). Teacher efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education, 12,* 401-411.

Spitzberg, B. H. & Cupach, W. R. (1989). *Handbook of interpersonal competence research*. New York: Springer-Verlag.

Standage, M., Duda, J.M. & Ntoumanis, N. (2006). Students' motivational processes and their relationship to teacher ratings in school physical education: A self-determination theory approach. *Research Quarterly for Exercise and Sport, 77(1),* 100-110.

St.meld.nr.17 [White paper] (2005). *2008 som markeringsår for kulturelt mangfold*. Oslo: Kultur- og kirkedepartementet.

St.meld.nr.30 [White paper] (2003). *Kultur for læring* Oslo: Kunnskapsdepartementet.

St.meld.nr.31 [White paper] (2007). *Kvalitet i skolen* Oslo: Kunnskapsdepartementet.

Tabachnick, B.G. & Fidell, L.S. (2007). *Using Multivariate Statistics.* (5th ed). Boston: Pearson Education/Allyn & Bacon.

Taylor, C. (1994). *Quellen des Selbst. Die Entstehung der neuzeitlichen Identität.* Frankfurt am Main: Suhrkamp.

Templin, T. J. & Schempp, P. G. (1989). *Socialization into physical education: learning to teach.* Indianapolis, Ind.: Benchmark Press.

Twisk, J. & Proper, K. (2004). Evaluation of the results of a randomized controlled trial: how to define changes between baseline and follow-up. *Journal of Clinical Epidemiology 57(3),* 223-228

Unesco (1983). *Introduction to intercultural studies*. Paris: Unesco.

United Nations (2007). *Human Development Report 2004. Cultural liberty in today's diverse world.* Retrieved August 23, 2007 from http://www.un.org/special-rep/ohrlls/ldc/Global-Reports/HDR%202004.pdf

Van Dick, R., Wagner, U., Adams, C., & Petzel, T. (1997). Attitudes toward acculturation: Preliminary evaluation of a questionnaire administered to six German samples. *Gruppendynamik-Zeitschrift fur Angewandte Sozialpsychologie, 28,* 83-92.

Walgenbach, K. (2007). Gender als interdependente Kategorie. In K.Walgenbach, G. Dietze, A. Hornscheidt, & K. Palm (Eds.), *Gender als interdependente Kategore. Neue Perspektiven auf Intersektionalität* (pp. 23-64). Opladen, Farmington Hills: Barbara Budrich.

Wheatley, K.F. (2005). The case for reconceptualizing teacher efficacy research. *Teaching and Teacher Education, 21,* 747-766.

Zimbardo, P.G. & Gerrig, R.J (2002). *Psychology and Life.* (16th ed.) Boston: Allyn & Bacon

LIST OF APPENDICES

The student and teacher materials used in the intervention are presented here. Furthermore some additional tables and outputs from bootstrapping procedures are attached. These are for supplementary information about certain topics, and are referred to from the text in the thesis. Most of the materials presented are used in Norwegian, and has not been translated into English. The teacher training compendium and activity booklet (also in Norwegian) are not included, but are available upon request from the author. More detailed results of the teacher interviews are also given on request. For any questions or interests in the materials, please contact: per.midthaugen@nih.no

1. Approval letters, Norwegian Social Science Data Services (NSD)
2. Baseline Questionnaire, Students
3. Posttest Questionnaire, Students
4. Informed Consent, Students
5. Baseline Survey, Teachers
6. Posttest Survey, Teachers
7. Evaluation Survey, Intervention Group Teachers
8. Interview guide 1+2, Intervention Group Teachers
9. Informed Consent, Teachers
10. Teacher training inputs 1, 2 and 3 (Power-point presentations + learning activities)
11. Detailed time schedule for teacher inputs, teachers' and students' measurements
12. Additional tables and bootstrapping matrices

APPENDIX 1:

Approval letters,

Norwegian Social Science Data Service (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

Per Midthaugen
Seksjon for coaching og psykologi
Norges idrettshøgskole
Postboks 4014 Ullevål stadion
0806 OSLO

Vår dato: 17.08.2009 Vår ref: 22381 / 2 / JE Deres dato: Deres ref:

TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 06.08.2009. Meldingen gjelder prosjektet:

22381	*Intercultural learning through Physical Education. The Adaptation and Evaluation of an in-service Teacher Education Program*
Behandlingsansvarlig	*Norges idrettshøgskole, ved institusjonens øverste leder*
Daglig ansvarlig	*Per Midthaugen*

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. 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, 31.12.2010, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Vigdis Namtvedt Kvalheim

Janne Sigbjørnsen Eie

Kontaktperson: Janne Sigbjørnsen Eie tlf: 55 58 31 52
Vedlegg: Prosjektvurdering

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

Per Midthaugen
Norges Idrettshøgskole
Seksjon for coaching og psykologi
Postboks 4014 Ullevål stadion
0806 OSLO

Dato: 25.11.2009 Vår ref: 22381/AH/RF Deres dato: Deres ref:

ENDRING AV FORSKNINGSPROSJEKT

Viser til endringsmelding mottatt 31.10.2009. Av endringsmeldingen framgår det at utvalget skal utvides til også å inkludere elever 16 til 19 år, i tillegg til lærere opprinnelig inkludert i utvalget. Det skal gjennomføres en spørreskjemaundersøkelse med elevene, samt observasjon. Videre framgår det at innsamling av lærerdata også har forandret seg fra å være individuelle intervjuer til å bli gruppeintervjuer.

Personvernombudet har ingen merknader til at de individuelle intervjuene av lærerne heller foregår som gruppeintervju. Den samme intervjuguiden som vedlagt til ombudet 06.08.09 vil benyttes.

For endringen knyttet til det nye utvalget med elever har personvernombudet følgende kommentar:

Personvernombudet legger til grunn at førstegangskontakt med elevene opprettes via skolens ledelse.

Observasjon av kroppsøvingstimer vil gjennomføres anonymt. Spørreskjemaundersøkelsen innhenter personopplysninger om elevenes syn på kroppsøving, læringsmiljø, gruppesamarbeid, kulturell bevissthet og sosiale ferdigheter. Det vil samles inn noen bakgrunnsvariabler knyttet til elevenes språkferdigheter og statsborgerskap, samt foreldrenes bakgrunn, så datamaterialet fra spørreundersøkelsen regnes som indirekte personidentifiserbart. Navneliste oppbevares separat fra resten av datamaterialet.

Personvernombudet har mottatt informasjonsskriv og finner det tilfredstillende forutsatt at det tilføyes at foreldre til elever under 18 kan få se spørreskjemaet dersom de ønsker det.

Elevene samtykker selv til deltakelse. Det innhentes et såkalt passivt samtykke fra foreldrene, dvs. at de må kontakte prosjektlederne dersom de ikke ønsker at deres barn skal delta.

For elevene over 18 år kan behandlingen hjemles i personopplysningsloven § 8 første alternativ, samtykke. For elevene mellom 16 og 18 år kan behandlingen hjemles i personopplysningsloven § 8 d). Elevene under 18 kan ikke gi et gyldig samtykke, men

ettersom prosjektet er av liten inngripende karakter og det ikke innhentes sensitive personopplysninger finner ombudet at også denne gruppen må forstå hva deltakelse i prosjektet innebærer og må selv kunne samtykke til deltakelse. Det legges vekt på at foreldrene får informasjon om prosjektet.

Prosjektet skal avsluttes 31.12.2010 og innsamlede opplysninger skal da anonymiseres. Personvernombudet minner om at anonymisering innebærer at direkte personidentifiserende opplysninger som navn/navneliste må slettes og indirekte personidentifiserende opplysninger må endres eller slettes.

Ta gjerne kontakt dersom noe er uklart.

Vennlig hilsen

Bjørn Henrichsen

Åsne Halskau

Kontaktperson: Åsne Halskau, asne.halskau@nsd.uib.no, 55588926

APPENDIX 2:
Baseline Questionnaire, Students (T1)

Innledning

Mennesker erfarer og opplever situasjoner forskjellig. Dette skjemaet handler om oppfatninger og holdninger omkring diverse temaer knyttet til dette. Du blir presentert for forskjellige spørsmål, som blir forklart underveis i skjemaet.

- *Husk og les all informasjon nøye, og svar på spørsmålene så ærlig og nøyaktig som mulig. Det er ingen svar som er "riktig" eller "feil" her, svar det som du tenker og føler rundt de ulike temaene.*
- *Husk å svare på alle spørsmålene.*

Alle opplysningene du gir behandles strengt konfidensielt. Av praktiske årsaker i databehandlingen ønsker jeg at du fyller ut følgende kode:

A	B	C	D	E

A: 2.bokstav i fornavnet til moren din
B: 2.bokstav i fornavnet til faren din
C: Den måneden du fyller år (tosifret)
D: Fødselsår (to siste siffer)
E: Kjønn (G for gutt, J for jente)

Tusen takk for at du er villig til å bidra i undersøkelsen!!

Sett kryss ved nåværende klassetrinn og studieretning

Klassetrinn: ☐ Vg1 ☐ Vg2 ☐ Vg3

Studieretning: ☐ Studieforberedende ☐ Yrkesfaglig

Ta stilling til utsagnene. Sett kryss for hvor du synes du ligger på skalaen

	Jeg liker meg ikke i det hele tatt 1	2	3	4	5	Jeg liker meg veldig bra 6
1. Hvordan liker du deg på skolen?	☐	☐	☐	☐	☐	☐
2. Hvordan liker du deg i klassen?	☐	☐	☐	☐	☐	☐
3. Hvordan trives du i kroppsøvingstimene?	☐	☐	☐	☐	☐	☐

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

1. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

---

2. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

3. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

---

4. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

5. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

---

6. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personene på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med disse personene?

Lite lyst	1	2	3	4	5	*Veldig lyst*

Del II: ***Prøv og sett deg inn i følgende situasjoner.***

1) *Forestill deg at mange personer går ombord på en buss. Alle passasjerene går forbi sjåføren, men bare en passasjer blir bedt om å vise billett.*

Hvilke grunner kan bussjåføren ha for å stoppe denne passasjeren?
Sett en ring rundt hvor sannsynlig hver enkelt påstånd høres ut for deg

1. Passasjeren virker mistenkelig.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Passasjeren ser annerledes ut.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Passasjeren oppfører seg usikkert	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Fremmede blir ofte spurt om å vise billett.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Bussjåføren liker ikke fremmede.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Bussjåføren har en dårlig dag	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelt forslag til andre grunner: _____

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

2) *Forestill deg en basketballkamp. Lag A har en ny spiller som forventes å bringe dem helt til topps i serien. Kampen er over, men de har tapt.*

Hvordan kan treneren forklare tapet?
Sett en ring rundt hvor sannsynlig hver enkelt påstånd høres ut for deg

1. Den nye spilleren var ennå ikke integrert i det nye laget.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Den nye spilleren klarte ikke å tilpasse seg laget.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Den nye spilleren spilte ikke så godt som forventet.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Laget jobbet imot den nye spilleren .	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Den nye spilleren forstyrret lagfølelsen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Laget må jobbe med å finne en ny kampstrategi.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle andre forslag: _____

3) *Yildiz er elev på en videregående skole. Utenfor hjemmet bruker hun vide klær og dekker til håret. Forrige uke søkte Yildiz sin familie om å frita henne fra kroppsøving fordi hennes islamistiske tro forbyr jenter å delta i idrett sammen med gutter.*

Hvordan kan rektoren ved skolen argumentere?

Sett en ring rundt hvor sannsynlig hvert enkelt argument høres ut for deg

1. Ulike religioner bør respekteres.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Kroppsøving kan tilpasses slik at det blir akseptabelt for alle.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Elevene må følge de gjeldende regler.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Elevene har selv mulighet til å velge øvelser i kroppsøving.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Undervisningen må gå foran individuelle overbevisninger.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Kroppsøving kan organiseres slik at jenter og gutter har undervisning hver for seg.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle andre argumenter: _____

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

4) *Forestill deg en bedrift som skal ansette noen i en lederstilling. Det står til slutt mellom en kvinne og en mann.*

Hvordan kan bedriften argumentere?

Sett en ring rundt tallet hvor sannsynlig hvert enkelt argument høres ut for deg

1. Erfaring og kompetanse er avgjørende for beslutningen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Evne til lederskap er avgjørende for beslutningen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Hvis kandidatene er likt kvalifisert, avgjøres det gjennom kjønnsfordelingen innad i bedriften.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Kvinner antas å være mer integrerende som ledere.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Menn antas å være mer effektive enn kvinner.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Mangfoldet ellers i bedriften avgjør beslutningen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle andre argumenter: _____

5) *Se for deg en elev som skal begynne på en ny skole. Både personer, situasjoner og omgivelser er stort sett ukjente for ham/henne.*

Sett en ring rundt tallet hvor sannsynlig hver enkelt påstand høres ut for deg

1. De nye omgivelsene gjør at eleven føler seg ukomfortabel.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Eleven føler seg usikker og desorientert.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Det er vanskelig å finne ut av hva som forventes av deg.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Eleven er trygg på å takle de ubehagelige følelsene raskt	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Å starte på en ny skole medfører ingen spesielle følelser.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Det er vanskelig å bli kjent med nye elever	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle forslag til flere påstander: _____

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

Del III: ***Vurder hver enkelt av de følgende påstander.***
Sett en ring rundt tallet for hvor enig eller uenig du er i påstanden.

1. Å forstå nye ting krever åpenhet.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
2. Personer er stort sett forskjellige.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
3. Å møte forskjellige typer mennesker er en fornøyelse.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
4. Jeg synes det er viktig å sammenligne meg med andre.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
5. Å møte fremmede skaper ubehag.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
6. Til tross for at livet stadig forandrer seg, så har kulturen noen faste verdier.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
7. Det er viktig å overføre kulturtradisjoner til neste generasjon.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
8. Jeg er en usikker person.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
9. Jeg liker uforutsette hendelser	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
10. Å planlegge i forkant gir en følelse av trygghet.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig

11. Det uvisse resultatet gjør at konkurranse er spennende.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
12. Det er vanskelig for meg å stå foran en gruppe å snakke	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
13. Frihet betyr at jeg kan gjøre som jeg vil.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
14. Det er vanskelig å ta avgjørelser.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
15. Jeg liker bedre aktiviteter med klare instruksjoner i stedet for åpne forslag.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
16. Det er viktig for meg at jeg ikke er den dårligste i gruppa.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
17. Skjebnen avgjør hvor mange venner jeg får.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
18. Det meste som skjer i livet mitt blir avgjort av andre personer.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
19. Det å ha ansvar får meg til å føle meg usikker.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
20. Det er ikke så viktig hvor godt jeg gjør det, det er framgangen som er viktig for meg.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
21. Det å ha ansvar gir meg mulighet til å vise hva jeg kan.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

Del IV: ***Ta stilling til spørsmålene nedenfor***

Vennligst skriv 3 navn fra kroppsøvingsklassen din (se vedlagt klasseliste) under hver av de 4 spørsmålene. Skjemaet vil kun bli lest av meg, og ditt eget navn og navnene du skriver vil umiddelbart bli anonymisert. Ingen i klassen vil vite hva du har svart.

Ditt navn: _____

a) Hvilke tre i klassen din ville du helst ha fortalt en hemmelighet?

1. _____
2. _____
3. _____

b) Tenk deg at du i kroppsøving kan velge hvem du vil ha med på laget i en løpestafett. Hvilke tre i klassen ville du velge?

1. _____
2. _____
3. _____

c) Tenk deg at du i kroppsøving må gjøre en vanskelig øvelse som krever sikring. Hvilke tre i klassen vil du helst skal hjelpe deg?

1. _____
2. _____
3. _____

d) Tenk deg at dere skal utarbeide regler for ett nytt ballspill i kroppsøving. Hvilke tre i klassen vil du helst samarbeide med?

1. _____
2. _____
3. _____

Avsluttende spørsmål om din bakgrunn:

1. Statsborgerskap i: _____

2. Språk du behersker? _____

3. Har du vært bosatt i andre land? JA ☐ NEI ☐

   Hvis JA, i hvilke land og hvor lenge?

   _____ (land) _____ (fra) - _____ (til)

   _____ (land) _____ (fra) - _____ (til)

   _____ (land) _____ (fra) - _____ (til)

4. Er noen av foreldrene dine av utenlandsk opprinnelse? JA ☐ NEI ☐

   Hvis JA, angi opprinnelsessted (kryss to om nødvendig)

   ☐ Annet land i Europa
   ☐ Midt-Østen
   ☐ Øvrige Asia
   ☐ Afrika
   ☐ Nord- Amerika
   ☐ Sør-Amerika
   ☐ Australia og Oseania
   ☐ Vet ikke

Tusen takk for at du var villig til å delta på denne undersøkelsen!

APPENDIX 3:
Posttest Questionnaire, Students (T2)

Innledning

Mennesker erfarer og opplever situasjoner forskjellig. Dette skjemaet handler om oppfatninger og holdninger omkring diverse temaer knyttet til dette. Du blir presentert for forskjellige spørsmål, som blir forklart underveis i skjemaet.

- *Husk og les all informasjon nøye, og svar på spørsmålene så ærlig og nøyaktig som mulig. Det er ingen svar som er "riktig" eller "feil" her, svar det som <u>du</u> tenker og føler rundt de ulike temaene.*
- *Husk å svare på alle spørsmålene.*

Alle opplysningene du gir behandles strengt konfidensielt. Av statistiske årsaker i databehandlingen ønsker jeg at du fyller ut følgende kode:

A	B	C	D	E

A: 2.bokstav i fornavnet til moren din
B: 2.bokstav i fornavnet til faren din
C: Den måneden du fyller år (tosifret)
D: Fødselsår (to siste siffer)
E: Kjønn (G for gutt, J for jente)

Tusen takk for at du er villig til å bidra i undersøkelsen!!

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

Del I: Ta stilling til spørsmålene nedenfor

Vennligst skriv 3 navn fra <u>kroppsøvingsklassen din</u> under hver av de 4 spørsmålene. Det holder å skrive fornavn. Hvis flere i klassen heter det samme, legg til første bokstav i etternavnet. Skjemaet vil kun bli lest av meg, og ditt eget navn og navnene du skriver vil umiddelbart bli anonymisert. Ingen i klassen vil vite hva du har svart.

Skriv ditt eget navn her: _____

a) Hvilke tre i klassen din ville du helst ha fortalt en hemmelighet?

1. _____
2. _____
3. _____

b) Tenk deg at du i kroppsøving kan velge hvem du vil ha med på laget i en løpestafett. Hvilke tre i klassen ville du velge?

1. _____
2. _____
3. _____

c) Tenk deg at du i kroppsøving må gjøre en vanskelig øvelse som krever sikring. Hvilke tre i klassen vil du helst skal hjelpe deg?

1. _____
2. _____
3. _____

d) Tenk deg at dere skal utarbeide regler for ett nytt ballspill i kroppsøving. Hvilke tre i klassen vil du helst samarbeide med?

1. _____
2. _____
3. _____

1. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

---

2. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

3. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

---

4. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

5. Ta en nøye kikk på bildet.

Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personen på bildet?

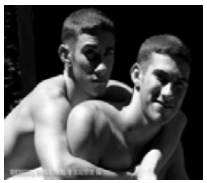
Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med denne personen?

Lite lyst	1	2	3	4	5	*Veldig lyst*

---

6. Ta en nøye kikk på bildet.



Kryss av for din vurdering av..

a)…hvor forskjellig oppfatter du deg selv sammenlignet med personene på bildet?

Ingen forskjell	1	2	3	4	5	*Stor forskjell*

b)…hvor lyst har du til å bli kjent med disse personene?

Lite lyst	1	2	3	4	5	*Veldig lyst*

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

Del II: Prøv og sett deg inn i følgende situasjoner.

1) *Forestill deg at mange personer går ombord på en buss. Alle passasjerene går forbi sjåføren, men bare en passasjer blir bedt om å vise billett.*

Hvilke grunner kan bussjåføren ha for å stoppe denne passasjeren?
Sett en ring rundt hvor sannsynlig hver enkelt påstand høres ut for deg

1. Passasjeren virker mistenkelig.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Passasjeren ser annerledes ut.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Passasjeren oppfører seg usikkert	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Fremmede blir ofte spurt om å vise billett.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Bussjåføren liker ikke fremmede.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Bussjåføren har en dårlig dag	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelt forslag til andre grunner: _____

2) *Forestill deg en basketballkamp. Lag A har en ny spiller som forventes å bringe dem helt til topps i serien. Kampen er over, men de har tapt.*

Hvordan kan treneren forklare tapet?

Sett en ring rundt hvor sannsynlig hver enkelt påstånd høres ut for deg

1. Den nye spilleren var ennå ikke integrert i det nye laget.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Den nye spilleren klarte ikke å tilpasse seg laget.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Den nye spilleren spilte ikke så godt som forventet.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Laget jobbet imot den nye spilleren .	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Den nye spilleren forstyrret lagfølelsen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Laget må jobbe med å finne en ny kampstrategi.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle andre forslag: _____

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

3) *Yildiz er elev på en videregående skole. Utenfor hjemmet bruker hun vide klær og dekker til håret. Forrige uke søkte Yildiz sin familie om å frita henne fra kroppsøving fordi hennes islamistiske tro forbyr jenter å delta i idrett sammen med gutter.*

Hvordan kan rektoren ved skolen argumentere?

Sett en ring rundt hvor sannsynlig hvert enkelt argument høres ut for deg

1. Ulike religioner bør respekteres.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Kroppsøving kan tilpasses slik at det blir akseptabelt for alle.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Elevene må følge de gjeldende regler.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Elevene har selv mulighet til å velge øvelser i kroppsøving.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Undervisningen må gå foran individuelle overbevisninger.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Kroppsøving kan organiseres slik at jenter og gutter har undervisning hver for seg.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle andre argumenter: _____

4) *Forestill deg en bedrift som skal ansette noen i en lederstilling. Det står til slutt mellom en kvinne og en mann.*

Hvordan kan bedriften argumentere?

Sett en ring rundt tallet hvor sannsynlig hvert enkelt argument høres ut for deg

1. Erfaring og kompetanse er avgjørende for beslutningen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Evne til lederskap er avgjørende for beslutningen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Hvis kandidatene er likt kvalifisert, avgjøres det gjennom kjønnsfordelingen innad i bedriften.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Kvinner antas å være mer integrerende som ledere.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Menn antas å være mer effektive enn kvinner.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Mangfoldet ellers i bedriften avgjør beslutningen.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle andre argumenter: _____

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

5) *Se for deg en elev som skal begynne på en ny skole. Både personer, situasjoner og omgivelser er stort sett ukjente for ham/henne.*

Sett en ring rundt tallet hvor sannsynlig hver enkelt påstand høres ut for deg

1. De nye omgivelsene gjør at eleven føler seg ukomfortabel.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
2. Eleven føler seg usikker og desorientert.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
3. Det er vanskelig å finne ut av hva som forventes av deg.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
4. Eleven er trygg på å takle de ubehagelige følelsene raskt	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
5. Å starte på en ny skole medfører ingen spesielle følelser.	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig
6. Det er vanskelig å bli kjent med nye elever	1 veldig usannsynlig	2 usannsynlig	3 sannsynlig	4 veldig sannsynlig

Eventuelle forslag til flere påstander: _____

Del III: ***Vurder hver enkelt av de følgende påstander.***

Sett en ring rundt tallet for hvor enig eller uenig du er i påstanden.

1. Å forstå nye ting krever åpenhet.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
2. Personer er stort sett forskjellige.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
3. Å møte forskjellige typer mennesker er en fornøyelse.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
4. Jeg synes det er viktig å sammenligne meg med andre.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
5. Å møte fremmede skaper ubehag.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
6. Til tross for at livet stadig forandrer seg, så har kulturen noen faste verdier.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
7. Det er viktig å overføre kulturtradisjoner til neste generasjon.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
8. Jeg er en usikker person.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
9. Jeg liker uforutsette hendelser	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
10. Å planlegge i forkant gir en følelse av trygghet.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig

NORGES IDRETTSHØGSKOLE
Spørreskjema til elever i videregående skole – basert på Esser-Noethlichs (2009)

11. Det uvisse resultatet gjør at konkurranse er spennende.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
12. Det er vanskelig for meg å stå foran en gruppe å snakke	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
13. Frihet betyr at jeg kan gjøre som jeg vil.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
14. Det er vanskelig å ta avgjørelser.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
15. Jeg liker bedre aktiviteter med klare instruksjoner i stedet for åpne forslag.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
16. Det er viktig for meg at jeg ikke er den dårligste i gruppa.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
17. Skjebnen avgjør hvor mange venner jeg får.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
18. Det meste som skjer i livet mitt blir avgjort av andre personer.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
19. Det å ha ansvar får meg til å føle meg usikker.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
20. Det er ikke så viktig hvor godt jeg gjør det, det er framgangen som er viktig for meg.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig
21. Det å ha ansvar gir meg mulighet til å vise hva jeg kan.	1 helt uenig	2 nokså uenig	3 nokså enig	4 helt enig

Tenk tilbake på kroppsøvingstimene fra du svarte på spørreskjema første gang og frem til i dag. Gi en vurdering av hvordan du synes disse kroppsøvingstimene har vært når det gjelder:

	Dårligere			Ingen forandring			Bedre
	-3	-2	-1	0	1	2	3
1. Samarbeidet med medelevene?	☐	☐	☐	☐	☐	☐	☐
2. Atmosfæren i klassen?	☐	☐	☐	☐	☐	☐	☐
3. Aktivitetene/øvelsene i timene?	☐	☐	☐	☐	☐	☐	☐
4. Lærerens oppførsel og væremåte?	☐	☐	☐	☐	☐	☐	☐
5. Lærerens dialog med elevene?	☐	☐	☐	☐	☐	☐	☐
6. Helhetsinntrykket av kroppsøving?	☐	☐	☐	☐	☐	☐	☐

Her kan du skrive flere ting som du har lyst til å kommentere i forhold til hva som har blitt gjennomført i kroppsøvingstimene i den samme perioden. (Bruk baksiden om nødvendig):

_____

_____

_____

_____

_____

_____

_____

Ta stilling til utsagnene. Sett kryss for hvor du synes du ligger på skalaen

	Jeg liker meg ikke i det hele tatt					Jeg liker meg veldig bra
	1	2	3	4	5	6
1. Hvordan liker du deg på skolen?	☐	☐	☐	☐	☐	☐
2. Hvordan liker du deg i klassen?	☐	☐	☐	☐	☐	☐
3. Hvordan trives du i kroppsøvingstimene?	☐	☐	☐	☐	☐	☐

Tusen takk for at du var villig til å delta på denne undersøkelsen!

APPENDIX 4:
Informed Consent, Students

A) Intervention Group Students
B) Intervention Group Parents and Students (under 18)
C) Control Group Students
D) Control Group Parents and Students (under 18)

Per Midthaugen
Doktorgradstipendiat
Norges Idrettshøgskole

Oslo, januar 2010

Til aktuelle elever

Samtykke om deltakelse i kroppsøvingsprosjekt

I forbindelse med mitt doktorgradsprosjekt ved NIH ønsker jeg å gjennomføre en undersøkelse ved din videregående skole, og vil svært gjerne at du som elev ønsker å delta. Hensikten med prosjektet er å gjennomføre og evaluere et etterutdanningskurs for lærere i kroppsøving, der hovedfokus er på hvordan man kan tilrettelegge for aktiviteter som legger vekt på å inkludere alle i kroppsøvingsfaget. Målet er at lærerne gjennom kurset selv skal kunne bli mer bevisst på dette temaet, og oppleve kurset som en støttespiller i å planlegge og gjennomføre slike aktiviteter i kroppsøving. Prosjektet skal også undersøke om elevene har noe utbytte av at lærerne deltar på slike kurs, derfor er det veldig viktig for prosjektet å få dine tilbakemeldinger som elev. Jeg håper derfor at du er villig til å være med på undersøkelsen.

Spørreskjema: Deltakelse i prosjektet innebærer at jeg ber deg som elev besvare et spørreskjema som vil bli gjennomført første gang før lærerkurset (januar 2010) og andre gang ca 2 måneder etter lærerkurset (mars-april 2010). Spørreskjemaets hensikt er å se om eleven har hatt noe utbytte av å ha en lærer som har gjennomgått kurset. Elevene kan forvente å svare på spørsmål knyttet til kroppsøving, læringsmiljø, gruppesamarbeid, kulturell bevissthet og sosiale ferdigheter. I forbindelse med å se på gruppesamarbeid, spørres det på en side i skjemaet etter navn på eleven og medelever. Dette er kun av praktiske hensyn i gjennomføringen, slik at elevene lettere skal kunne svare på spørsmålene. Navnene overføres til personkoder etter at data er samlet inn og forskeren er den eneste med tilgang til disse. For å kartlegge elevenes bakgrunn vil skjemaet også inneholde spørsmål knyttet til elevens statsborgerskap, eventuelle land elevene har bodd i utenom Norge, samt hvilken verdensdel foreldrene kommer fra opprinnelig.

Observasjon: Det er også viktig å se på praktiske erfaringer som lærerne har med egen undervisning for å se hvordan kursaktivitetene fungerer i skolehverdagen. Jeg ønsker derfor å komme for å observere enkelte kroppsøvingsklasser i én undervisningstime. Dette er kun for å få et helhetsinntrykk av gruppa og aktivitetene, og det vil ikke være en kartlegging av enkeltelever. Det vil ikke filmes eller gjøres lydopptak, kun forskeren som gjør notater underveis.

Viktig info: Målet for prosjektet vil hele tiden være å skape størst mulig utbytte for de deltakende lærere og elever, samtidig som resultatene fra studien kan danne grunnlaget for videreutvikling av kurset. Framover kan dette bidra til at kursinnholdet kan komme enda flere lærere og elever til gode. Resultatene av studien vil bli publisert som en avhandling, uten at den enkelte elev og skole kan gjenkjennes. Doktorgradsprosjektet forventes å være avsluttet til desember 2010. Etter at prosjektet er avsluttet vil opplysningene bli fullstendig anonymisert.

Det er helt frivillig å delta i prosjektet og du kan på hvilket som helst tidspunkt trekke deg uten å måtte begrunne dette nærmere. Forsker er i tillegg underlagt taushetsplikt og alle opplysninger vil bli behandlet strengt konfidensielt. Prosjektet er også innmeldt til og godkjent hos Personvernombudet for forskning. Har du spørsmål, eller ønsker å bli informert nærmere om undersøkelsen, kan du gjerne ta kontakt med meg på tlf 97 68 76 07 eller på mail: per.midthaugen@nih.no

Håper med dette at du samtykker i å delta på undersøkelsen, og setter stor pris på om du som elev er villig til å bruke noe av tiden i skoleåret 2009/2010 til å delta på prosjektet.

Med vennlig hilsen

Per Midthaugen

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole
E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58
Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE A

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole
E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58
Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

Per Midthaugen
Doktorgradstipendiat
Norges Idrettshøgskole

Oslo, januar 2010

Til aktuelle elever og foresatte

Samtykke om deltakelse i kroppsøvingsprosjekt

I forbindelse med mitt doktorgradsprosjekt ved NIH ønsker jeg å gjennomføre en undersøkelse ved din videregående skole, og vil svært gjerne at du som elev ønsker å delta. Hensikten med prosjektet er å gjennomføre og evaluere et etterutdanningskurs for lærere i kroppsøving, der hovedfokus er på hvordan man kan tilrettelegge for aktiviteter som legger vekt på å inkludere alle i kroppsøvingsfaget. Målet er at lærerne gjennom kurset selv skal kunne bli mer bevisst på dette temaet, og oppleve kurset som en støttespiller i å planlegge og gjennomføre slike aktiviteter i kroppsøving. Prosjektet skal også undersøke om elevene har noe utbytte av at lærerne deltar på slike kurs, derfor er det veldig viktig for prosjektet å få dine tilbakemeldinger som elev. Jeg håper derfor at du er villig til å være med på undersøkelsen.

Spørreskjema: Deltakelse i prosjektet innebærer at jeg ber deg som elev besvare et spørreskjema som vil bli gjennomført første gang før lærerkurset (januar 2010) og andre gang ca 2 måneder etter lærerkurset (april 2010). Spørreskjemaets hensikt er å se om eleven har hatt noe utbytte av å ha en lærer som har gjennomgått kurset. Elevene kan forvente å svare på spørsmål knyttet til kroppsøving, læringsmiljø, gruppesamarbeid, kulturell bevissthet og sosiale ferdigheter. I forbindelse med å se på gruppesamarbeid, spørres det på en side i skjemaet etter navn på eleven og medelever. Dette er kun av praktiske hensyn i gjennomføringen, slik at elevene lettere skal kunne svare på spørsmålene. Navnene overføres til personkoder etter at data er samlet inn og forskeren er den eneste med tilgang til disse. For å kartlegge elevenes bakgrunn vil skjemaet også inneholde spørsmål knyttet til elevens statsborgerskap, eventuelle land elevene har bodd i utenom Norge, samt hvilken verdensdel foreldrene kommer fra opprinnelig. Dere som foreldre kan få anledning til å se spørreundersøkelsen dersom dere ønsker det.

Observasjon: Det er også viktig å se på praktiske erfaringer som lærerne har med egen undervisning for å se hvordan kursaktivitetene fungerer i skolehverdagen. Jeg ønsker derfor å komme for å observere enkelte kroppsøvingsklasser i én undervisningstime. Dette er kun for å få

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole
E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58
Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE B

et helhetsinntrykk av gruppa og aktivitetene, og det vil ikke være en kartlegging av enkeltelever. Det vil ikke filmes eller gjøres lydopptak, kun forskeren som gjør notater underveis.

Viktig info: Målet for prosjektet vil hele tiden være å skape størst mulig utbytte for de deltakende lærere og elever, samtidig som resultatene fra studien kan danne grunnlaget for videreutvikling av kurset. Framover kan dette bidra til at kursinnholdet kan komme enda flere lærere og elever til gode.Resultatene av studien vil bli publisert som en avhandling, uten at den enkelte elev og skole kan gjenkjennes. Doktorgradsprosjektet forventes å være avsluttet til desember 2010. Etter at prosjektet er avsluttet vil opplysningene bli fullstendig anonymisert.

Det er helt frivillig å delta i prosjektet og du kan på hvilket som helst tidspunkt trekke deg uten å måtte begrunne dette nærmere. Forsker er i tillegg underlagt taushetsplikt og alle opplysninger vil bli behandlet strengt konfidensielt. Prosjektet er også innmeldt til og godkjent hos Personvernombudet for forskning. Har dere spørsmål i forbindelse med denne henvendelsen, eller ønsker å bli informert nærmere om undersøkelsen, kan dere gjerne ta kontakt med meg på tlf 97 68 76 07 eller mail: per.midthaugen@nih.no

Håper med dette at dere samtykker i å delta på undersøkelsen, og setter stor pris på om du som elev er villig til å bruke noe av tiden i skoleåret 2009/2010 til å delta på prosjektet.

Med vennlig hilsen

Per Midthaugen

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole
E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58
Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

Per Midthaugen
Doktorgradstipendiat
Norges Idrettshøgskole

Oslo, januar 2010

Til aktuelle elever

Samtykke om deltakelse i kroppsøvingsprosjekt

I forbindelse med mitt doktorgradsprosjekt ved NIH ønsker jeg å gjennomføre en undersøkelse ved din videregående skole, og vil svært gjerne at du som elev ønsker å delta. Hensikten med prosjektet er å gjennomføre og evaluere et etterutdanningskurs for lærere i kroppsøving, der hovedfokus er på hvordan man kan tilrettelegge for aktiviteter som legger vekt på å inkludere alle i kroppsøvingsfaget. Ved skolen der du går vil det i denne perioden ikke bli gjennomført lærerkurs, men resultatene som kommer fra dere vil bli sammenlignet med elever fra skoler der kurset har blitt gjennomgått.

Spørreskjema: Deltakelse i prosjektet innebærer at jeg ber deg som elev besvare et spørreskjema som vil bli gjennomført første gang i februar 2010, og andre gang i april 2010. Elevene kan forvente å svare på spørsmål knyttet til kroppsøving, læringsmiljø, gruppesamarbeid, kulturell bevissthet og sosiale ferdigheter. I forbindelse med å se på gruppesamarbeid, spørres det på en side i skjemaet etter navn på eleven og medelever. Dette er kun av praktiske hensyn i gjennomføringen, slik at elevene lettere skal kunne svare på spørsmålene. Navnene overføres til personkoder etter at data er samlet inn og forskeren er den eneste med tilgang til disse. For å kartlegge elevenes bakgrunn vil skjemaet også inneholde spørsmål knyttet til elevens statsborgerskap, eventuelle land elevene har bodd i utenom Norge, samt hvilken verdensdel foreldrene kommer fra opprinnelig.

Viktig info: Målet for prosjektet vil hele tiden være å skape størst mulig utbytte for de deltakende lærere og elever, samtidig som resultatene fra studien kan danne grunnlaget for videreutvikling av kurset. Framover kan dette bidra til at kursinnholdet kan komme enda flere lærere og elever til gode. Resultatene av studien vil bli publisert som en avhandling, uten at den enkelte elev og skole kan gjenkjennes. Doktorgradsprosjektet forventes å være avsluttet til desember 2010. Etter at prosjektet er avsluttet vil opplysningene bli fullstendig anonymisert.

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE C

Det er helt frivillig å delta i prosjektet og du kan på hvilket som helst tidspunkt trekke deg uten å måtte begrunne dette nærmere. Forsker er i tillegg underlagt taushetsplikt og alle opplysninger vil bli behandlet strengt konfidensielt. Prosjektet er også innmeldt til og godkjent hos Personvernombudet for forskning. Har dere spørsmål, eller ønsker å bli informert nærmere om undersøkelsen, kan dere gjerne ta kontakt med meg på tlf 97 68 76 07 eller på mail: per.midthaugen@nih.no

Håper med dette at dere samtykker i å delta på undersøkelsen, og setter stor pris på om du som elev er villig til å bruke noe av tiden i skoleåret 2009/2010 til å delta på prosjektet.

Med vennlig hilsen

Per Midthaugen

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

Per Midthaugen
Doktorgradstipendiat
Norges Idrettshøgskole

Oslo, januar 2010

Til aktuelle elever og foresatte

Samtykke om deltakelse i kroppsøvingsprosjekt

I forbindelse med mitt doktorgradsprosjekt ved NIH ønsker jeg å gjennomføre en undersøkelse ved din videregående skole, og vil svært gjerne at du som elev ønsker å delta. Hensikten med prosjektet er å gjennomføre og evaluere et etterutdanningskurs for lærere i kroppsøving, der hovedfokus er på hvordan man kan tilrettelegge for aktiviteter som legger vekt på å inkludere alle i kroppsøvingsfaget. Ved skolen der du går vil det i denne perioden ikke bli gjennomført lærerkurs, men resultatene som kommer fra dere vil bli sammenlignet med elever fra skoler der kurset har blitt gjennomgått.

Spørreskjema: Deltakelse i prosjektet innebærer at jeg ber deg som elev besvare et spørreskjema som vil bli gjennomført første gang i januar 2010, og andre gang i mars-april 2010. Elevene kan forvente å svare på spørsmål knyttet til kroppsøving, læringsmiljø, gruppesamarbeid, kulturell bevissthet og sosiale ferdigheter. I forbindelse med å se på gruppesamarbeid, spørres det på en side i skjemaet etter navn på eleven og medelever. Dette er kun av praktiske hensyn i gjennomføringen, slik at elevene lettere skal kunne svare på spørsmålene. Navnene overføres til personkoder etter at data er samlet inn og forskeren er den eneste med tilgang til disse. For å kartlegge elevenes bakgrunn vil skjemaet også inneholde spørsmål knyttet til elevens statsborgerskap, eventuelle land elevene har bodd i utenom Norge, samt hvilken verdensdel foreldrene kommer fra opprinnelig. Dere som foresatte (gjelder elever under 18 år) kan få anledning til å se spørreundersøkelsen dersom dere ønsker det.

Viktig info: Målet for prosjektet vil hele tiden være å skape størst mulig utbytte for de deltakende lærere og elever, samtidig som resultatene fra studien kan danne grunnlaget for videreutvikling av kurset. Framover kan dette bidra til at kursinnholdet kan komme enda flere lærere og elever til gode. Resultatene av studien vil bli publisert som en avhandling, uten at den enkelte elev og skole kan gjenkjennes. Doktorgradsprosjektet forventes å være avsluttet til desember 2010. Etter at prosjektet er avsluttet vil opplysningene bli fullstendig anonymisert.

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE D

Det er helt frivillig å delta i prosjektet og du kan på hvilket som helst tidspunkt trekke deg uten å måtte begrunne dette nærmere. Forsker er i tillegg underlagt taushetsplikt og alle opplysninger vil bli behandlet strengt konfidensielt. Prosjektet er også innmeldt til og godkjent hos Personvernombudet for forskning. Har dere spørsmål, eller ønsker å bli informert nærmere om undersøkelsen, kan dere gjerne ta kontakt med meg på tlf 97 68 76 07 eller på mail: per.midthaugen@nih.no

Håper med dette at dere samtykker i å delta på undersøkelsen, og setter stor pris på om du som elev er villig til å bruke noe av tiden i skoleåret 2009/2010 til å delta på prosjektet.

Med vennlig hilsen

Per Midthaugen

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

APPENDIX 5:
Baseline Survey, Teachers (T1)

Note: Norwegian Teacher Self Efficacy Scale not included. For published English version, see Skaalvik & Skaalvik, 2007 (cf. references p.172)

SPØRRESKJEMA TIL KROPPSØVINGSLÆRERE

Kjære kroppsøvingslærer

Lærere erfarer og opplever situasjoner forskjellig. Dette skjemaet handler om oppfatninger og holdninger omkring diverse temaer relatert til kroppsøvingsfaget og undervisningssituasjonen. Du blir presentert for forskjellige spørsmål, som blir forklart underveis i skjemaet. Husk og les all informasjon nøye, og svar på alle spørsmålene så ærlig som mulig.

Opplysningene du gir i skjemaet behandles strengt konfidensielt. Av statistiske årsaker i databehandlingen ønsker jeg at du fyller ut følgende kode:

A	B	C	D

A: 2.bokstav i fornavnet til moren din
B: 2.bokstav i fornavnet til faren din
C: Den måneden du fyller år (to siffer)
D: Fødselsår (to siste siffer)

Tusen takk for at du er villig til å bidra i undersøkelsen!!

PERSONLIGE OPPLYSNINGER:

1. Kjønn: ☐ mann ☐ kvinne

2. Nasjonalitet: _____

3. Alder: _____

4. Hvor lenge har du jobbet som kroppsøvingslærer? _____ år

5. Er noen av dine foreldre av utenlandsk opprinnelse?

☐ ja ☐ nei

Hvis ja, hvilket land kommer de fra? Mor: _____ Far: _____

6. Har du vært bosatt i et annet land enn Norge (i minst et halvt år)? (Bruk baksiden om nødvendig)

☐ ja ☐ nei

Hvis ja, hvor? _____ Hvor lenge? _____

hvor? _____ Hvor lenge? _____

7. Hva slags videregående skole underviser du på? (Kryss av flere om nødvendig):

☐ VGS med kun yrkesfaglige utd.program ☐ VGS med kun studiespesialisering

☐ VGS med kombinasjon av studiespesialisering og yrkesfaglige utdanningsprogram ☐ VGS med idrettsfag

NORGES IDRETTSHØGSKOLE
Spørreskjema til kroppsøvingslærere – Videregående skole *Basert på Grimminger (2008)*

8. Hva slags utdanning har du i kroppsøving og idrett? (Kryss av for høyeste oppnådde grad):

☐ Hovedfag/ Master ☐ Faglærer/ Bachelor

☐ Årsenhet/ Grunnfag ☐ Ingen

☐ Annet: _____

9. Hvilke idretter/aktiviteter holder du på med jevnlig nå, eller har drevet jevnlig før?(skriv inntil 3 av hver)

Idretter/aktiviteter	Som konkurranse	Som mosjon
Nå:	☐	☐
Nå:	☐	☐
Nå:	☐	☐
Før:	☐	☐
Før:	☐	☐
Før:	☐	☐

10. Har du hatt noen spesiell etterutdanning knyttet til temaet "sosial inkludering i kroppsøving" ?

☐ ja Hvis ja, hva slags? _____

☐ nei _____

KROPPSØVING OG INTERKULTURELL LÆRING:

I dette spørreskjemaet sees **interkulturell læring** som en **planlagt gjennomføring av læringssituasjoner**, som skal hjelpe elevene å bli bevisst på sin egen oppfatning og atferd overfor andre med forskjellige forutsetninger, egenskaper, væremåte, kultur og bakgrunn.
Spørsmålene nedenfor tar utgangspunkt i ovennevnte definisjon (sett kun ett kryss per spørsmål):

1. Hvilken kjennskap har du til interkulturell læring for øyeblikket?

☐ ingen ☐ noe ☐ middels ☐ god ☐ svært god

2. Hvor ofte fokuserer du på interkulturell læring i kroppsøvingsundervisningen?

☐ aldri ☐ sjelden ☐ av og til ☐ ofte

*3. Hvor kompetent føler du deg i **å planlegge** slike læringssituasjoner i kroppsøvingsundervisningen?*

☐ lite ☐ noe ☐ middels ☐ god ☐ svært god

4. Hvor kompetent føler du deg i ***å gjennomføre*** *slike læringssituasjoner i kroppsøvingsundervisningen?*

☐ lite ☐ noe ☐ middels ☐ god ☐ svært god

5. Hvor kompetent føler du deg i ***å reflektere og diskutere*** *om slike læringssituasjoner med elevene dine?*

☐ lite ☐ noe ☐ middels ☐ god ☐ svært god

GENERELLE HOLDNINGER TIL INTERKULTURELL LÆRING:

Hva er dine synspunkter på følgende påstander?	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1. Det er umulig å kombinere kroppsøving med interkulturell læring	☐	☐	☐	☐
2. Interkulturell læring bør ideelt sett bli formidlet via tverrfaglige opplegg	☐	☐	☐	☐
3. Barn av ulik etnisk bakgrunn burde gå på atskilte skoler	☐	☐	☐	☐
4. Alle etniske grupper i Norge bør opprettholde sin egen kultur	☐	☐	☐	☐
5. Interkulturell læring bør bare være et tema dersom skolen eller klassen har elever med innvandrerbakgrunn	☐	☐	☐	☐
6. På grunn av et lite antall kroppsøvingstimer, bør tiden hovedsaklig bli brukt på å utvikle motoriske ferdigheter	☐	☐	☐	☐
7. Innvandrere som kommer til Norge bør tilpasse sin atferd til norsk kultur	☐	☐	☐	☐
8. Et samfunn med et stort antall etniske grupper er sannsynligvis bedre i stand til å håndtere nye utfordringer	☐	☐	☐	☐
9. Hvis medlemmer av forskjellige etniske grupper ønsker å beholde sin kultur, bør de holde seg for seg selv	☐	☐	☐	☐
10. Jeg ønsker å fremme interkulturell kompetanse gjennom min kroppsøvingsundervisning	☐	☐	☐	☐
11. Fellesskapet mellom forskjellige etniske grupper i Norge ville vært lettere hvis medlemmene av gruppene fikk anledning til å beholde sin egen livsstil	☐	☐	☐	☐
12. Jo mer kunnskap barn og unge har om andre kulturer, desto mer tolerante blir de	☐	☐	☐	☐
13. Lærerne burde sørge for at studenter med ulik etnisk bakgrunn utelukkende snakker norsk i friminuttene	☐	☐	☐	☐

NORGES IDRETTSHØGSKOLE
Spørreskjema til kroppsøvingslærere – Videregående skole *Basert på Grimminger (2008)*

Hva er dine synspunkter på følgende påstander?	Helt enig	Nokså enig	Nokså uenig	Helt uenig
14. At det finnes mange forskjellige etniske grupper i Norge kan gjøre det vanskelig å løse problemer	☐	☐	☐	☐
15. Interkulturell læring bare forsterker eksisterende fordommer blant barn og unge	☐	☐	☐	☐
16. Forskjellige etniske grupper burde leve atskilt for å unngå konflikter	☐	☐	☐	☐
17. Interkulturell læring er like viktig for skoler og klasser der det ikke er elever med innvandrerbakgrunn	☐	☐	☐	☐
18. Innvandrere burde ikke vise sine utenlandske skikker i det offentlige	☐	☐	☐	☐
19. Det er ikke mulig for barn og unge å tilegne seg flerkulturell bevissthet og forståelse i skolen	☐	☐	☐	☐
20. Innvandrere til Norge bør oppdra barna sine slik at de hovedsaklig bruker norsk språk	☐	☐	☐	☐
21. Alle fag i skolen bør bidra like mye til å fremme flerkulturell bevissthet og forståelse blant barn og unge	☐	☐	☐	☐

IDRETT OG KULTUR:

Hva er dine synspunkter på følgende påstander?	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1. Forskjellige kulturer har ulik tilgang til idrett	☐	☐	☐	☐
2. I idretten finnes det skjulte måter å ekskludere på	☐	☐	☐	☐
3. På grunn av idrettens universelle natur er den spesielt godt egnet til integrering av personer med ulik bakgrunn	☐	☐	☐	☐
4. Sport er universelt og forbinder derfor ulike kulturer	☐	☐	☐	☐
5. Ulike holdninger til kropp og kroppspråk kan utløse konflikter i idretten	☐	☐	☐	☐
6. Sosiale ulikheter kan påvirke det som skjer på idrettsarenaen	☐	☐	☐	☐
7. Hver kultur har forskjellig forståelse av hva idrett er	☐	☐	☐	☐
8. Idrettslag er tilgjengelig for alle uavhengig av bakgrunn	☐	☐	☐	☐

APPENDIX 6:
Posttest Survey, Teachers (T2)

SPØRRESKJEMA TIL KROPPSØVINGSLÆRERE

Kjære kroppsøvingslærer

Dette skjemaet handler om oppfatninger og holdninger omkring diverse temaer knyttet til elevmangfoldet i skolen og i kroppsøvingsfaget. Du blir presentert for forskjellige spørsmål, som blir forklart underveis i skjemaet. Husk og les all informasjon nøye, og svar på alle spørsmålene så ærlig som mulig.

Opplysningene du gir i skjemaet behandles strengt konfidensielt. Av statistiske årsaker i databehandlingen ønsker jeg at du fyller ut følgende kode:

A	B	C	D

A: 2.bokstav i fornavnet til moren din
B: 2.bokstav i fornavnet til faren din
C: Den måneden du fyller år (to siffer)
D: Fødselsår (to siste siffer)

KROPPSØVING OG INTERKULTURELL LÆRING:

I dette spørreskjemaet sees **interkulturell læring** som en **planlagt gjennomføring av læringssituasjoner**, som skal hjelpe elevene å bli bevisst på sin egen oppfatning og atferd overfor andre med forskjellige forutsetninger, egenskaper, væremåte, kultur og bakgrunn.
Spørsmålene nedenfor tar utgangspunkt i ovennevnte definisjon (sett kun ett kryss per spørsmål):

1. Hvilken kjennskap har du til interkulturell læring for øyeblikket?

☐ ingen ☐ noe ☐ middels ☐ god ☐ svært god

2. Hvor ofte fokuserer du på interkulturell læring i kroppsøvingsundervisningen?

☐ aldri ☐ sjelden ☐ av og til ☐ ofte

*3. Hvor kompetent føler du deg i **å planlegge** slike læringssituasjoner i kroppsøvingsundervisningen?*

☐ lite ☐ noe ☐ middels ☐ god ☐ svært god

*4. Hvor kompetent føler du deg i **å gjennomføre** slike læringssituasjoner i kroppsøvingsundervisningen?*

☐ lite ☐ noe ☐ middels ☐ god ☐ svært god

*5. Hvor kompetent føler du deg i **å reflektere og diskutere** om slike læringssituasjoner med elevene dine?*

☐ lite ☐ noe ☐ middels ☐ god ☐ svært god

NORGES IDRETTSHØGSKOLE
Spørreskjema til kroppsøvingslærere – Videregående skole *Basert på Grimminger (2008)*

GENERELLE HOLDNINGER TIL INTERKULTURELL LÆRING:

Hva er dine synspunkter på følgende påstander?	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1. Det er umulig å kombinere kroppsøving med interkulturell læring	☐	☐	☐	☐
2. Interkulturell læring bør ideelt sett bli formidlet via tverrfaglige opplegg	☐	☐	☐	☐
3. Barn av ulik etnisk bakgrunn burde gå på atskilte skoler	☐	☐	☐	☐
4. Alle etniske grupper i Norge bør opprettholde sin egen kultur	☐	☐	☐	☐
5. Interkulturell læring bør bare være et tema dersom skolen eller klassen har elever med innvandrerbakgrunn	☐	☐	☐	☐
6. På grunn av et lite antall kroppsøvingstimer, bør tiden hovedsaklig bli brukt på å utvikle motoriske ferdigheter	☐	☐	☐	☐
7. Innvandrere som kommer til Norge bør tilpasse sin atferd til norsk kultur	☐	☐	☐	☐

Hva er dine synspunkter på følgende påstander?	Helt enig	Nokså enig	Nokså uenig	Helt uenig
8. Et samfunn med et stort antall etniske grupper er sannsynligvis bedre i stand til å håndtere nye utfordringer	☐	☐	☐	☐
9. Hvis medlemmer av forskjellige etniske grupper ønsker å beholde sin kultur, bør de holde seg for seg selv	☐	☐	☐	☐
10. Jeg ønsker å fremme interkulturell kompetanse gjennom min kroppsøvingsundervisning	☐	☐	☐	☐
11. Fellesskapet mellom forskjellige etniske grupper i Norge ville vært lettere hvis medlemmene av gruppene fikk anledning til å beholde sin egen livsstil	☐	☐	☐	☐
12. Jo mer kunnskap barn og unge har om andre kulturer, desto mer tolerante blir de	☐	☐	☐	☐
13. Lærerne burde sørge for at studenter med ulik etnisk bakgrunn utelukkende snakker norsk i friminuttene	☐	☐	☐	☐
14. At det finnes mange forskjellige etniske grupper i Norge kan gjøre det vanskelig å løse problemer	☐	☐	☐	☐
15. Interkulturell læring bare forsterker eksisterende fordommer blant barn og unge	☐	☐	☐	☐

Hva er dine synspunkter på følgende påstander?	**Helt enig**	**Nokså enig**	**Nokså uenig**	**Helt uenig**
16. Forskjellige etniske grupper burde leve atskilt for å unngå konflikter	☐	☐	☐	☐
17. Interkulturell læring er like viktig for skoler og klasser der det ikke er elever med innvandrerbakgrunn	☐	☐	☐	☐
18. Innvandrere burde ikke vise sine utenlandske skikker i det offentlige	☐	☐	☐	☐
19. Det er ikke mulig for barn og unge å tilegne seg flerkulturell bevissthet og forståelse i skolen	☐	☐	☐	☐
20. Innvandrere til Norge bør oppdra barna sine slik at de hovedsaklig bruker norsk språk	☐	☐	☐	☐
21. Alle fag i skolen bør bidra like mye til å fremme flerkulturell bevissthet og forståelse blant barn og unge	☐	☐	☐	☐

IDRETT OG KULTUR:

Hva er dine synspunkter på følgende påstander?	**Helt enig**	**Nokså enig**	**Nokså uenig**	**Helt uenig**
1. Forskjellige kulturer har ulik tilgang til idrett	☐	☐	☐	☐
2. I idretten finnes det skjulte måter å ekskludere på	☐	☐	☐	☐
3. På grunn av idrettens universelle natur er den spesielt godt egnet til integrering av personer med ulik bakgrunn	☐	☐	☐	☐
4. Sport er universelt og forbinder derfor ulike kulturer	☐	☐	☐	☐
5. Ulike holdninger til kropp og kroppspråk kan utløse konflikter i idretten	☐	☐	☐	☐
6. Sosiale ulikheter kan påvirke det som skjer på idrettsarenaen	☐	☐	☐	☐
7. Hver kultur har forskjellig forståelse av hva idrett er	☐	☐	☐	☐
8. Idrettslag er tilgjengelig for alle uavhengig av bakgrunn	☐	☐	☐	☐

Tusen takk for at du ville bidra i denne undersøkelsen!

APPENDIX 7:
Evaluation Survey,
Intervention Group Teachers

KURSEVALUERING – SPØRRESKJEMA TIL KROPPSØVINGSLÆRERE

Kjære kroppsøvingslærer

Som en avslutning på lærerkurset med temaet; "interkulturell læring i kroppsøving", ønsker jeg at du fyller ut dette spørreskjemaet. Din tilbakemelding vil bidra til å evaluere og forbedre kurset, slik at dette senere kan komme andre lærere til gode.

Opplysningene du gir i skjemaet behandles strengt konfidensielt. Av statistiske årsaker i databehandlingen ønsker jeg at du fyller ut følgende kode:

A: 2.bokstav i fornavnet til moren din
B: 2.bokstav i fornavnet til faren din
C: Den måneden du fyller år (to siffer)
D: Fødselsår (to siste siffer)

EVALUERING AV LÆRERKURSET (sett kun ett kryss per påstand)**:**

	Innhold og generelt inntrykk	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1	Temaet ble presentert på en faglig, helhetlig og god måte	☐	☐	☐	☐
2	Temaet ble presentert på en slik måte at jeg kunne forstå det	☐	☐	☐	☐
3	Temaet og presentasjonen var godt forberedt av kursholderen	☐	☐	☐	☐

4. Varigheten til lærerkurset synes jeg var..

   ☐ ..for langt ☐ ..akkurat passe ☐ ..for kort

5. Synes du det burde tilbys flere lærerkurs for å utdype temaet videre?

   ☐ ja ☐ nei

   Hvis ja, hva vil du spesielt lære mer om: _____

NORGES IDRETTSHØGSKOLE
Kursevaluering del 1- Spørreskjema til kroppsøvingslærere *Basert på Grimminger (2008)*

	Kroppsøvingsundervisning og anvendelighet	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1	Jeg har fått en rekke tips som jeg kan bruke i undervisningen	☐	☐	☐	☐
2	Lærerkurset har flere ganger motivert meg til å prøve noe nytt	☐	☐	☐	☐
3	Jeg har fått forslag til implementering av nytt innhold i undervisningen	☐	☐	☐	☐
4	Jeg har fått konkrete forslag til metoder jeg kan bruke	☐	☐	☐	☐
5	Jeg har fått konkrete tips rundt pedagogiske spørsmål	☐	☐	☐	☐
6	Mye av det som lærerkurset har gjennomgått, er i praksis urealistisk å få til i skolen	☐	☐	☐	☐
7	Det utdelte kursmaterialet gjør det enklere å gjennomføre de didaktiske grunnidéene i praksis	☐	☐	☐	☐
8	Jeg kan anbefale lærerkurset til andre kroppsøvingslærere	☐	☐	☐	☐
9	Jeg tror at jeg kan engasjere elevene gjennom aktiviteter som fremmer utviklingen av kulturell bevissthet og sosiale ferdigheter	☐	☐	☐	☐
10	Jeg kan forsvare nytten av slik undervisning overfor skeptiske lærerkolleger	☐	☐	☐	☐

	Organisering og miljø	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1	Det var en passende variasjon mellom teori og praktiske aktiviteter	☐	☐	☐	☐
2	Tidsbruken mellom presentasjon og selvstendig jobbing var gunstig fordelt	☐	☐	☐	☐
3	Det var et godt arbeidsmiljø på lærerkurset	☐	☐	☐	☐
4	Jeg følte meg komfortabel og trygg i gruppa	☐	☐	☐	☐

	Inntrykk av kursholder	Helt enig	Nokså enig	Nokså uenig	Helt uenig
1	Kursholderen var målrettet og faglig fokusert	☐	☐	☐	☐
2	Kursholderen var kompetent	☐	☐	☐	☐
3	Kursholderen tok utgangspunkt i behovene til deltagerne	☐	☐	☐	☐
4	Kursholderen skapte et godt arbeidsmiljø	☐	☐	☐	☐
5	Kursholderen benyttet en hensiktsmessig fordeling av undervisningsmetoder	☐	☐	☐	☐

Kritikk og forslag til forbedringer (bruk også baksiden av arket om nødvendig)

1. Dette hadde jeg godt utbytte av i løpet av lærerkurset: _____

2. Dette hadde jeg dårlig utbytte av i løpet av lærerkurset: _____

3. Dette ville jeg ha forandret eller forbedret på til neste lærerkurs: _____

Tusen takk for synspunkter og evaluering av kurset!!

APPENDIX 8:
Interview Guide 1+2,
Intervention Group Teachers

INTERVJUGUIDE 1 KURSEVALUERING – KROPPSØVINGSLÆRERE

Som en underveisvurdering ønsker jeg å snakke litt om erfaringene hittil med kurset. Noen stikkord for samtalen er:

- tanker rundt selve innholdet i kurset (teori+praksis)
- erfaringer fra undervisning der du har fått brukt noe av innholdet på kurset.
- hva dere ønsker av oppfølging og samarbeid videre.

Det viktigste i denne samtalen er at det er lærernes erfaringer og opplevelser som kommer fram. I denne sammenheng er både kritikk og ros like verdifullt. Dere vil være med å evaluere og forbedre kursopplegget slik at det kan komme andre lærere og elever til gode.

Dere kan når som helst stille spørsmål underveis, da samtalen vil foregå som en vanlig diskusjon mellom kolleger. Om dere ikke får sagt alt dere ønsker, så gjør ikke dette så mye, dere vil uansett få sjansen til å gi skriftlig tilbakemelding senere i prosjektet.

Hovedspørsmål	Oppfølgingspørsmål	Intensjon	Stikkord
1. Har du hatt noe undervisning der du har fått brukt noe av innholdet på kurset?	Hvordan var erfaringene fra de nevnte kroppsøvingstimene? (planlegging, gjennomføring, refleksjon/ diskusjon sammen med elevene Har det vært noen "kritiske" situasjoner som du vil fortelle om? Hvorfor har du ikke fått brukt så mye av kursinnholdet i kroppsøvingstimene?	Implementering av IKL i egen kroppsøving Erfaringer med IKL i egen kroppsøving Barrierer for å gjennomføre IKL	**Anvendelse i timene**
2. Hva er hovedinntrykket ditt når det gjelder tematikken og innholdet i kurset?	Interkulturell læring, forskjeller, usikkerhet, fremmedhet Er tematikken viktig i kroppsøving?	Vurdering av kurset fra dagens perspektiv	**Bevissthet rundt tematikken**
3. Hva føler du at du mangler eller savner i forhold til innholdet i kurset? Hva ønsker du videre?	Hva ønsker du? Hva trenger du? Andre muligheter for å formidle kursinholdet? (Hva har jeg gjort feil?)	Kursevaluering, åpent spørsmål	**Evaluering av kurset**
4. Har lærerkurset har ført til en økt bevissthet rundt egen undervisning?	Hvordan har du blitt mer bevisst på egen undervisning? Hva reflekterer du mer rundt?	Kurset som verktøy for selvbevissthet	**Bevissthet rundt egen undervisning**
5. Hvilke muligheter ser du for å bruke noe av kursinnholdet både i samarbeid emd kolleger og tverrfaglig ?	Hva slags muligheter ser du? (hvilke fag?, hvordan?, hvorfor?) Regelmessige møter med kollegene for å diskutere muligheter og aktiviteter?	Implementering av IKL i eget kollegium og ved egen skole	**Kollega-samarbeid og videre nettverk**

INTERVJUGUIDE 2 OPPSUMMERINGSSAMTALE – KROPPSØVINGSLÆRERE

Som en avslutning på lærerkurset ønsker jeg å snakke litt om erfaringene og tankene deres rundt kurset. Noen stikkord for samtalen er:

A. Generell oppsummering / hovedinntrykk

B. Bevissthet rundt tematikken

C. Elevenes læring

D. Lærerutfordringer

Det viktigste i denne samtalen er at det er lærernes erfaringer og opplevelser som kommer fram. I denne sammenheng er både kritikk og ros like verdifullt. Dere vil være med å evaluere og forbedre kursopplegget slik at det kan komme andre lærere og elever til gode.

Dere kan når som helst stille spørsmål underveis, da samtalen vil foregå som en vanlig diskusjon mellom kolleger. Om dere ikke får sagt alt dere ønsker, så gjør ikke dette så mye, dere vil uansett få sjansen til å gi skriftlig tilbakemelding senere i prosjektet.

Hovedspørsmål og oppfølgingspørsmål

A. Generell oppsummering / hovedinntrykk
- Har kurset inspirert deg på noen måte?
  - ser du annerledes på noe etter kurset?
- Har dere inntrykk av at det har vært noen forandring hos elevene?
  - hvorfor? / hvorfor ikke?
- Hva synes du er beste måten for deg å lære et slikt kursinnhold på?
  - viktig at læreren selv er interkulturelt kompetent

B. Bevissthet rundt tematikken
- Hvor viktig synes dere denne tematikken er?
  - stikkord tematikk: åpenhet, akseptere hverandre, akseptere forskjellighet
  - bevissthet og håndtering av forskjeller
  - å lære av uenigheter/konflikter
  - å bli bevisst på og å risikere egen usikkerhet, ingen framgang uten usikkerhet
  - grunnverdi: alle har lov til å være seg selv.
- Var tematikken kjent på forhånd
- Føler du at tematikken blir en byrde, slik at det hindrer hovedmålet for faget?
- Føler du underveis at jeg har presset deg til å gjøre ting du ikke synes er viktig?
  - og føler du det samme presset fortsatt?
- Forestill deg at en kollega spør deg hva du har vært med på. Hva ville du svart?

C. Elevenes læring - Hva synes du elevene skal lære? - Hva synes du at kroppsøvingsfaget bør fokusere på?
D. Lærerutfordringer i KRØ - Tenk på jobbsituasjonen din. Hva opplever du er de største utfordringene i forhold til kroppsøvingsundervisningen?

APPENDIX 9:
Informed Consent, Teachers

Per Midthaugen
Doktorgradstipendiat
Norges Idrettshøgskole

Oslo, dag/dato 2009

Til aktuelle kroppsøvingslærere

Forespørsel om deltakelse i kroppsøvingsprosjekt

I forbindelse med mitt doktorgradsprosjekt ved NIH ønsker jeg å gjennomføre en undersøkelse ved skolen der du jobber, og vil svært gjerne at du som kroppsøvinglærer ønsker å delta. Hensikten med prosjektet; "Interkulturell læring i kroppsøving", er å tilpasse, gjennomføre og evaluere et etterutdanningskurs for lærere i kroppsøving, der hovedfokus er på hvordan man kan tilrettelegge for aktiviteter som utvikler elevenes kulturelle bevissthet, sosiale ferdigheter og selvforståelse i et inkluderende læringsmiljø. Målet er at lærerne gjennom kurset selv skal kunne bli mer bevisst på dette temaet, og oppleve kurset som en støttespiller i å planlegge, gjennomføre og reflektere rundt interkulturell læring i kroppsøving. Det er viktig å påpeke at dette er aktiviteter som kan inkluderes i "vanlige" kroppsøvingstimer, men med et bevisst fokus på tillit, samarbeid, forskjellighet, usikkerhet, bryte barrierer, inkludering, anerkjennelse og tilhørighet.

Det jeg ønsker å gjennomføre med dere er altså et kurs for kroppsøvingslærerne som går på teori og praktiske aktiviteter knyttet til dette temaet. All kursvirksomhet vil foregå innenfor normal arbeidstid, og vil bli tilpasset den enkelte lærers undervisningsplan så langt det lar seg gjøre. Det er planlagt å foregå over 3 ganger på rundt 3 timer hver. Det er utarbeidet et lærerkompendium i forbindelse med kurset som inneholder både teoretisk bakgrunn, og mange praktiske eksempler på aktiviteter og aktuelle undervisningsopplegg, som alle deltakende lærerne vil få.

Deltakelse i prosjektet innebærer at jeg ber deg å besvare et spørreskjema som vil bli gjennomført før og etter lærerkurset. Spørreskjemats hensikt er å kartlegge opplevd kompetanse og oppfatninger knyttet til temaet. Det er også ønskelig å se på praktiske erfaringer som lærerne har med egen undervisning i etterkant av det planlagte kurset, for å se hvordan aktivitetene fungerer i skolehverdagen. Som en oppfølging av de lærere som sier seg villig til dette, ønsker jeg derfor å

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE

komme for å observere noen av aktivitene i timene og i tillegg intervjue lærerne hvordan de ser på erfaringene underveis. Dette for å kunne vurdere om kursinnholdet oppleves som anvendbar og nyttig kunnskap, og hvilke barrierer og muligheter lærerne møter i å gjennomføre disse aktivitetene. Målet vil hele tiden være å skape størst mulig utbytte for de deltakende lærere, samtidig som resultatene fra studien kan danne grunnlaget for videreutvikling av kurset, og i videre perspektiv sikre at kursinnholdet kan komme flere lærere og elever til gode.

Det er helt frivillig å delta i prosjektet og du kan på hvilket som helst tidspunkt trekke deg uten å måtte begrunne dette nærmere. Prosjektet er innmeldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS. Forsker er i tillegg underlagt taushetsplikt og alle opplysninger vil bli behandlet strengt konfidensielt.

Resultatene av studien vil bli publisert som en avhandling, uten at den enkelte kan gjenkjennes. Doktorgradsprosjektet forventes å være avsluttet til desember 2010. Etter at prosjektet er avsluttet vil opplysningene bli anonymisert. Lydbånd og papirmateriale vil bli makulert.

Har du spørsmål i forbindelse med denne henvendelsen, eller ønsker å bli informert nærmere om undersøkelsen, kan du gjerne ta kontakt med meg. Håper dette kan være av interesse, og setter stor pris på om du er velvillig til å bruke noe av tiden i skoleåret 2009/2010 på dette prosjektet.

Med vennlig hilsen

Per Midthaugen

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

Samtykkeerklæring for deltakelse i forskningsprosjekt;
"Interkulturell læring i kroppsøving"

Jeg har lest informasjonsskrivet om prosjektet: *"Interkulturell læring i kroppsøving"*, og er inneforstått med formål, fremgangsmåter, konsekvenser for meg som deltaker, samt annen informasjon som blir gitt der. Med dette gir jeg også samtykke til at datamaterialet som blir registrert i prosjektet kan benyttes til forskningsformål.

Jeg er inneforstått med at deltakelse i prosjektet er frivillig og at jeg når som helst, og uten videre konsekvenser kan trekke meg fra deltakelsen i dette studiet.

Jeg bekrefter med dette at jeg har lest denne erklæringen og informasjonsskrivet, og samtykker i å delta i prosjektet:

Sted: _____ Dato: _____

Underskrift: _____

Prosjektleder bekrefter at jeg har informert skriftlig om deltakelsen i dette studiet med formål, fremgangsmåter og konsekvenser, og har svart på spørsmål som har blitt stilt, samt gitt forsøkspersonene kopi av dette skjema.

Med hilsen
Per Midthaugen
Prosjektleder, Norges Idrettshøgskole

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

APPENDIX 10:

Teacher Training, Input 1, 2 and 3

(Power-Point Presentations + Learning Activities)

NORGES IDRETTSHØGSKOLE

SOSIAL INKLUDERING I KROPPSØVINGSFAGET

Kurs for kroppsøvingslærere, NIH, økt 1
26.januar 2010

BAKGRUNN FOR LÆRERKURSET

- Fokuserer på bevissthet og kompetanse rundt det å håndtere mangfold og forskjeller på en konstruktiv måte gjennom kroppsøving og idrett
- Lærerkurset omhandler teori og praksis knyttet til læringsaktiviteter med bevisst fokus på samarbeid, annerledeshet, inkludering, anerkjennelse og tilhørighet.

EU-prosjekt 2004-2008: http://www.comenius-sport.eu/

ALBERT-LUDWIGS-UNIVERSITÄT FREIBURG
Institut für Sport und Sportwissenschaft

HENSIKT MED NIH-PROSJEKTET

- Gjennomføre og evaluere lærerkurset i norske videregående skoler.
- Kartlegge lærernes utbytte og erfaringer underveis.
- Undersøke og evaluere utbyttet til noen av elevene til de deltakende lærere. (1 klasse per lærer)

LÆRERKURSETS GRUNNTANKER

- Mye som påvirker elevenes samhandling, prøver å fokusere på noen viktige aspekter
- Kurset er ingen oppskrift, men en støttespiller for hva som kan fungere
- Bevissthet og forståelse vil ikke løse alt, men kan bidra til å håndtere forskjeller mer konstruktivt

TIDSPLAN 1.KURSDAG NIH

12.00-12.10	Velkommen/ introduksjon
12.10-12.45	Interkulturell læring. - Hva, hvordan og hvorfor?
12.50-13.35	Annerledeshet, usikkerhet og læringsmiljø
13.35-13.50	Pause m/klesskift
13.50-15.00	Praktiske eksempler (sal 2A)
15.00-15.15	Avslutning og oppsummering

NORGES IDRETTSHØGSKOLE

INTERKULTURELL LÆRING
– HVA, HVORDAN OG HVORFOR

Teoriøkt, del 1
NIH, 26.januar 2010

BEGREPSAVKLARING

- Sosial kompetanse
- Interpersonlig kompetanse
- Emosjonell intelligens
- Samarbeidslæring
- Interkulturell læring

FELLES: ***Hvordan forholde seg til "de andre"***

INTERKULTURELL LÆRING

- Planlagt gjennomføring av læringssituasjoner, som skal hjelpe elevene (og lærerne) til å bli bevisst på sin egen oppfatning og atferd overfor andre med forskjellige egenskaper, væremåte, kultur og bakgrunn
- Disse forskjellene kan være f.eks kjønn, sosial bakgrunn, etnisitet, fysiske forutsetninger, atferd, funksjonshemning, familiesituasjon osv.

INTERKULTURELL LÆRING

- Kulturell bevissthet: erkjenne og respektere individuelle og kulturelle forskjeller
- Sosiale ferdigheter: evne til samhandling og konfliktløsning
- Selvforståelse: håndtere egne opplevelser av usikkerhet og annerledeshet

INTERKULTURELL LÆRING

SKILLER SEG FRA DE ANDRE VED AT:

- Fokuserer på erfaringer med forskjellighet og annerledeshet som et utgangspunkt for læring
- Legger vekt på at konflikter og uenigheter er en naturlig del av livet, og bør brukes som læringssituasjoner
- Bevissthet rundt maktforhold, inkludering og ekskludering

HVORFOR KROPPSØVING ?

- Lettere å tilrettelegge og igangsette sosial samhandling og relasjoner gjennom fysisk aktivitet
- Elevene opptrer som seg selv, og de fleste handlinger er direkte og umiddelbart synlige for de andre
- Gode muligheter til å erfare forskjeller og å oppleve annerledeshet
- Gode muligheter for å oppleve anerkjennelse, tilhørighet, tillit og samarbeid – ofte nødvendig med kroppskontakt og å stole på andre.

(Giess-Stüber, 2006)

PRINSIPPER FOR OPPLÆRING
Kunnskapsløftet, 2006

- Alle elever skal stimuleres i deres personlige utvikling og identitet, i det å utvikle etisk, sosial og kulturell kompetanse
- Uavhengig av kjønn, alder, sosial, geografisk, kulturell eller språklig bakgrunn skal alle elever ha like gode muligheter til å utvikle seg gjennom arbeidet med fagene i et inkluderende læringsmiljø

LÆREPLANEN I KROPPSØVING
Kunnskapsløftet, 2006

- De sosiale aspektene i kroppsøving viktig for å styrke selvbildet, identiteten og den flerkulturelle forståelsen.
- Elevene skal oppleve glede, inspirasjon og selvforståelse ved å være i bevegelse og samarbeide med andre

KOMPETANSEMÅL I KROPPSØVING

ÅRSTRINN	KOMPETANSEMÅL
4.kl	- vise evne til samhandling i ulike aktivitetar
7.kl	- danse enkle danser frå ulike kulturar - følgje reglar og prinsipp for samhandling og fair play
10.kl	- danse dansar frå norsk kulturtradisjon og andre kulturar - utføre dansar frå ungdomsskultur - vurdere erfaringar frå aktivitetar i idrett og dans
vg1	**- praktisere danseformer frå ulike kulturar**
vg3	**- vise evne til forpliktende samarbeid, fair play, toleranse og omsorg**

DIDAKTISKE GRUNNTANKER

Læring gjennom samarbeid

1. Oppleve anerkjennelse
2. Oppleve tilhørighet
3. Bryte egne grenser
4. Erfaring med å forhandle og å håndtere konflikter

Læring gjennom erfaringer med annerledeshet

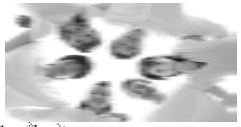
5. Å møte det fremmede
6. Bevisstgjøring av egen identitet
7. Nyansert oppfatning av det kjente og det ukjente
8. Se forbi forskjellene: Bevisstgjøring av fellestrekk

1. OPPLEVE ANERKJENNELSE

- Bevisstgjøring og anerkjennelse av ulikheter når det gjelder ferdighetsnivå, læremåter og tempo
- Formidling av tillit og anerkjennelse kan foregå på mange måter (verbalt/ikke-verbalt, lærer/elev, elev/elev)
- Ved selvopplevd fremgang og mestring – uansett viktig med positiv støtte fra læreren

2. OPPLEVE TILHØRIGHET

- Gode muligheter for å oppleve tilhørighet gjennom oppgaver som løses i team
- Bevisstgjøre elevene på viktigheten av tilhørighet og inkludering av alle



3. BRYTE EGNE GRENSER

- Gjennom anerkjennelse og tilhørighet oppnår man trygghet til å bryte egne grenser
- Både nye og ukjente aktiviteter, kroppskontakt, tester/konkurranser og risikofylte aktiviteter kan bryte slike grenser

4. HÅNDTERE KONFLIKTER

- Erfaring med konflikthåndtering og evne til å forhandle og diskutere med andre
- Gi spillerom for egne avgjørelser og handlinger
- Diskusjon rundt bevegelsessituasjoner – åpenhet rundt løsningsstrategier (eks. mattestafetter)
- Kan være nødvendig med noen rammer, for å hjelpe elevene i gang (eks. utvikle egne spill med tildelt utstyr)

GRUNNPRINSIPPER – INTERKULTURELL LÆRING

- Likeverdig deltakelse for alle
- Opplevelser kan ikke bli til gjennomtenkte erfaringer og forståelse uten bevisst refleksjon og diskusjon
- En målsetting at elevene skal anvende kompetansen sin også utenfor undervisningen

PRAKSISEKSEMPLER
(LÆRERKOMPENDIET S. 14-35)

- Generelle leiker og aktiviteter for alle idretter
- Eksempler på undervisningsopplegg
- Eksempler på leiker og aktiviteter fra andre kulturer

OPPSUMMERING

DU VET NÅ AT:

- Lærerkurset ønsker å fokusere på bevissthet og kompetanse rundt det å håndtere mangfold og forskjeller hos elevene gjennom kroppsøving og fysisk aktivitet
- Interkulturell læring kan forstås som en planlagt gjennomføring av læringssituasjoner, som skal hjelpe elevene til å utvikle kulturell bevissthet, sosiale ferdigheter og selvforståelse
- Læringsaktivitetene kan inkluderes i vanlige kroppsøvingsaktiviteter, men har et bevisst fokus på samarbeid, annerledeshet, inkludering, anerkjennelse og tilhørighet.

"DET ENESTE RIKTIGE"

Når klokken er 11 i Danmark,
er den 5 i U.S.A.,
10 i London, og 18 i Kina,
og 13 omkring Moskva.

Hvor er vi danske et udvalgt folk,
at vi netop er født i selve
det lille velsignede land, hvor klokken
er 11, når den er 11.

PIET HEIN

NORGES IDRETTSHØGSKOLE

ANNERLEDESHET, USIKKERHET OG LÆRINGSMILJØ

Teoriøkt, del 2,
NIH, 26.januar 2010

PRESENTASJON

Kort presentasjon (1 min)

- Kort om deg selv (navn, skole, jobberfaring)
- Nevn én ting du er god på (hva som helst)
- Skal fremføres som en rap eller annen musikalsk måte

VART DU SKRÆMT NO ?

- Hva tenkte du når du ble bedt om å synge om deg selv ?
- Forskjellige oppfatninger? (Noen ville kanskje synge, andre ville forlate kurset ?)
- Hva tror du elevene føler når vi ber dem om å gjøre ting de ikke behersker ?

MAKTFORHOLD LÆRER OG ELEV

- Læreren har definisjonsmakt (kan både belønne og gi sanksjoner)
- Lærere og elever deler kontrollen på læringsmiljøet(?)
- Elevers makt kan bestå av motvillighet, ikke delta og/eller forstyrrelser

Flertallet/majoriteten har gjerne makt til å godta eller akseptere nye medlemmer og aktiviteter

ANNERLEDESHET OG FREMMEDHET

- Fremmedhet er et diffust begrep, som vi er lite fortrolig med og ofte lar ligge uproblematisert
- Konstruert fenomen der mennesker, situasjoner eller aktiviteter oppleves som forskjellig fra vår egen oppfatning
- Mental reaksjon som oppstår ved noe ukjent, nytt, uforståelig eller uforutsigbart – kan gjøre elever usikre og utrygge.

HVORFOR KROPPSØVING ?

- Gode muligheter til å erfare og oppleve annerledeshet og fremmedhet
- Kan oppstå ved ulike personligheter, uvanlig oppførsel og væremåte, ukjente regler og bevegelsesformer, ulik kroppskultur og ukjente eller uvanlige idretter/aktiviteter.
- Emosjonell delaktighet naturlig del av faget, reaksjoner på det fremmede blir umiddelbart synlig og mulig å håndtere

(Giess-Stüber, 2006)

TRYGGHET VS. USIKKERHET

Erfaringer med fremmedhet i sosial samhandling utløser hovedsakelig to reaksjonsmønstre

- En følelse av trygghet og det å være akseptert
- En følelse av usikkerhet og det å føle seg truet

SELVFORSVARS-STRATEGIER

- Å trekke seg tilbake, unngå situasjonen
- Å nøle, rødme, usikker latter
- Å protestere
- Gjennom verbal og/eller fysisk aggresjon
- Å tulle eller gjøre ablegøyer
- ...

HVORDAN TAKLE USIKKERHET?

- Et positivt selvbilde er viktig for å takle følelser av usikkerhet
- Skape læringssituasjoner som kan hjelpe elevene å håndtere egne følelser av usikkerhet og utrygghet
- At elevene skal risikere usikkerhet krever et trygt læringsmiljø
- Et inkluderende læringsmiljø legger vekt på likeverdig deltakelse, respekt og omsorg for andre

DIDAKTISKE GRUNNTANKER

Læring gjennom samarbeid

1. Oppleve anerkjennelse
2. Oppleve tilhørighet
3. Bryte egne grenser
4. Erfaring med å forhandle og å håndtere konflikter

Læring gjennom erfaringer med fremmedhet

5. Å møte det fremmede
6. Bevisstgjøring av egen identitet
7. Nyansert oppfatning av det kjente og det ukjente
8. Se forbi forskjellene: Bevisstgjøring av fellestrekk

5. Å MØTE DET FREMMEDE

- Erfare situasjoner som skaper opplevelser av fremmedhet
- Tilpasse kjente aktiviteter til noe uvanlig og uforutsigbart
- Presentere nye og ukjente aktiviteter

6. BEVISSTGJØRING AV EGEN IDENTITET

- Bevisstgjøring av egen identitet og levemåte som en av mange muligheter - Selvrelativisering
- Skape bevissthet om og akseptere det uforståtte fremmede
- Med utgangspunkt i aktiviteter fra egen kultur, kan denne sammenlignes med varianter fra andre kulturer

7. NYANSERT OPPFATNING AV DET KJENTE OG DET UKJENTE

- For å orientere oss, danner vi ofte dikotome kategorier (vi/de andre, kjent/fremmed, trygt/usikkert)
- Forskjeller mellom gruppene blir fremhevet, mens forskjeller innad i gruppene blir oversett
- En nyansert oppfatning av det egne og det fremmede kan motvirke dette

8. SE FORBI FORSKJELLENE: BEVISSTGJØRING AV FELLESTREKK

- En nyansert oppfatning mellom det kjente og det ukjente, gir også muligheter til å se fellestrekk
- Motsetninger trer i bakgrunnen, kulturelle fellestrekk og universelle elementer kommer til syne (eks. hauk og due)
- Det nye og ukjente fremstår ikke lenger så fremmed som før

DIDAKTISKE GRUNNTANKER

(Se tabell s.37 i kompendiet)

Læring gjennom samarbeid

1. Oppleve anerkjennelse
2. Oppleve tilhørighet
3. Bryte egne grenser
4. Erfaring med å forhandle og å håndtere konflikter

Læring gjennom erfaringer med fremmedhet

5. Å møte det fremmede
6. Bevisstgjøring av egen identitet
7. Nyansert oppfatning av det kjente og det ukjente
8. Se forbi forskjellene: Bevisstgjøring av fellestrekk

PRAKSISØKT SAL 2A

(Kl. 13.50-15.00)

DU FÅR NOEN SMAKEBITER PÅ:

- Læringsaktiviteter for å skape tillit og tilhørighet
- Samarbeidsaktiviteter med åpne løsninger
- Ballspill og annerledeshet

TIDSPLAN

PROSJEKTET "SOSIAL INKLUDERING I KROPPSØVING"

Januar (uke 1-4)	Infoskriv lærere, elever og foresatte Spørreskjema til lærere og elever (velge 1 klasse per lærer).
Jan/Feb (uke 4-5)	Kurs på NIH, 2 økter á 3 timer (ca 20 lærere fra 5 vgs) - tirsdag 26.januar og mandag 1.februar (Kl. 12.00-15.15)
Februar (uke 6-7)	Besøk ute i skolene bestående av: - Kursøkt 3 av lærerkurset (1 time) - Gruppesamtale med lærerne (45min) - Jeg observerer 1 kroppsøvingsklasse. Standardisert opplegg
Mars (uke 10-12)	Besøk ute ved skolene bestående av: - Spørreskjema til lærere og elever (samme klasse per lærer) - Gruppesamtale med lærerne – 45 min - Observasjon av samme kroppsøvingsklasse som februar

NORGES IDRETTSHØGSKOLE

INTERKULTURELL LÆRING I KROPPSØVINGSFAGET

Lærerkurs økt 2
Februar 2010
Per Midthaugen, NIH

xxx vgs, 5.feb 2010

13.30-14.30	Teori, oppsummering og diskusjon
14.40-16.00	Praksisøkt innebandy
16.00-16.15	Avslutning/diskusjon

OPPSUMMERING ØKT 1

- Lærerkurset ønsker å fokusere på bevissthet og kompetanse rundt det å håndtere mangfold og forskjeller hos elevene gjennom kroppsøving og fysisk aktivitet
- Interkulturell læring kan forstås som en planlagt gjennomføring av læringssituasjoner, som skal hjelpe elevene til å utvikle kulturell bevissthet, sosiale ferdigheter og selvforståelse
- Læringsaktivitetene kan inkluderes i vanlige kroppsøvingsaktiviteter, men har et bevisst fokus på samarbeid, annerledeshet, inkludering, anerkjennelse og tilhørighet.

HVA ØNSKER VI Å OPPNÅ?

- Bevissthet rundt alle kroppsøvingsgrupper sitt mangfold
- Bevissthet rundt elevenes usikkerhet og forsvarsstrategier i møte med ulike aktiviteter
- Organisere aktiviteter slik at flere ønsker å være med og er trygge nok til å risikere usikkerhet og "å tape ansikt"
- Fremme samarbeid og respekt for hverandres styrker og svakheter i et trygt læringsmiljø

HENSIKT MED NIH-PROSJEKTET

- Kartlegge lærernes utbytte og erfaringer underveis og etter lærerkurset. (spørreskjema og gruppesamtale)
- Undersøke og evaluere utbyttet til noen av elevene til de deltakende lærere. (spørreskjema og observasjon)
- Mål: Lærerne skal forsøke å gjennomføre noen av aktivitetene med sin klasse i løpet av perioden.

HVORFOR KROPPSØVING ?

- Lettere å tilrettelegge og igangsette sosial samhandling og relasjoner gjennom fysisk aktivitet
- Elevene opptrer som seg selv, og de fleste handlinger er direkte og umiddelbart synlige for de andre
- Gode muligheter til å oppleve forskjellighet, og å oppleve og trene på egen usikkerhet i møte med aktivitetene
- Gode muligheter for samarbeid, respekt og bevissthet knyttet til styrker og svakheter ved seg selv og andre
- Kort diskusjon: Er idrett i seg selv inkluderende?

INTERKULTURELL LÆRING

- Kulturell bevissthet: erkjenne og respektere individuelle og kulturelle forskjeller
- Sosiale ferdigheter: evne til samhandling og konfliktløsning
- Selvforståelse: håndtere egne opplevelser av usikkerhet og fremmedhet

DIDAKTISKE GRUNNTANKER

Læring gjennom samarbeid

1. Oppleve anerkjennelse
2. Oppleve tilhørighet
3. Bryte egne grenser
4. Erfaring med å forhandle og å håndtere konflikter

Læring gjennom erfaringer med fremmedhet

5. Å møte det fremmede
6. Bevisstgjøring av egen identitet
7. Nyansert oppfatning av det kjente og det ukjente
8. Se forbi forskjellene: Bevisstgjøring av fellestrekk

Grunnprinsipper

- Opplevelser kan ikke bli til erfaringer og forståelse uten bevisst refleksjon og diskusjon knyttet til aktivitetene
- Lik deltakelse for alle, og gjerne kunne anvende det de lærer også utenfor kroppsøvingsfaget

FREMMEDHET

- Fremmedhet er et diffust begrep, som vi er lite fortrolig med og ofte lar ligge uproblematisert
- Følelsesmessig reaksjon som oppstår ved noe ukjent, nytt, uforståelig eller uforutsigbart – kan gjøre elever usikre og utrygge
- Kan oppstå ved ulike personligheter, uvanlig oppførsel og væremåte, ukjente regler og bevegelsesformer, ulik kroppskultur og ukjente eller uvanlige idretter/aktiviteter

TRYGGHET VS. USIKKERHET

Erfaringer med fremmedhet i kroppsøving utløser gjerne to motpoler når det gjelder reaksjonsmønster hos elevene:

- Eleven føler seg trygg og deltar på vanlig måte
- Eleven føler seg usikker kan oppleve aktiviteten som en trussel mot eget selvbilde

HVORDAN TAKLE USIKKERHET?

- Et positivt selvbilde er viktig for å takle følelser av usikkerhet
- Skape læringssituasjoner som kan hjelpe elevene å håndtere egne følelser av usikkerhet og utrygghet
- At elevene skal risikere usikkerhet krever et trygt læringsmiljø

LÆREPLANEN I KROPPSØVING
Kunnskapsløftet, 2006

- De sosiale aspektene i kroppsøving viktig for å styrke selvbildet, identiteten og den flerkulturelle forståelsen.
- Elevene skal oppleve glede, inspirasjon og selvforståelse ved å være i bevegelse og samarbeide med andre

KOMPETANSEMÅL I KROPPSØVING

ÅRSTRINN	KOMPETANSEMÅL
4.kl	- vise evne til samhandling i ulike aktivitetar
7.kl	- danse enkle danser frå ulike kulturar - følgje reglar og prinsipp for samhandling og fair play
10.kl	- danse dansar frå norsk kulturtradisjon og andre kulturar - utføre dansar frå ungdomsskultur - vurdere erfaringar frå aktivitetar i idrett og dans
vg1	**- praktisere danseformer frå ulike kulturar**
vg3	**- vise evne til forpliktende samarbeid, fair play, toleranse og omsorg**

KORT DISKUSJON

- Tenk gjennom begrepet toleranse?
- Hvilke andre ord har vi for toleranse?
- Diskuter maktforhold og læringsmiljø:
  - lærer vs. elev
  - vi vs. de andre
  - majoritet vs. minoritet

MAKTFORHOLD I KLASSEROMMET

- Læreren har definisjonsmakt (kan både belønne og gi sanksjoner)
- Lærere og elever deler kontrollen på læringsmiljøet
- Elevers makt kan bestå av motvillighet, ikke delta og/eller forstyrrelser

Majoriteten har gjerne makt til å godta eller akseptere nye medlemmer og aktiviteter

LÆRINGSMILJØ

- Maktforholdet mellom lærere og elever kan påvirke lærerens mulighet til å skape inkluderende miljøer
- Læreren og majoriteten i gruppen har gjerne ansvar for at interkulturell læring kan finne sted
- Læringsmiljøet omfatter både hvordan lærer relaterer til elevene, og hvordan læreren formidler innholdet og læringsverdien av det de underviser
- Ønsker et trygt, åpent og inkluderende læringsmiljø for alle – bevissthet rundt forskjellighet og usikkerhet som noe naturlig og positivt

PRAKSISØKT (90 min)

TEMA: INNEBANDY (se øktplan for detaljer)

- Utvikling av tekniske innebandyferdigheter og spillforståelse
- Utvikle selvbevissthet, samarbeidsevne, evne til fair-play, erfaringer med fremmedhet og usikkerhet

REVIDERT TIDSPLAN

Januar (uke 3-6)	Infoskriv lærere, elever og foresatte Spørreskjema til lærere og elever (velge 1 klasse per lærer).
Jan/Feb (uke 4-6)	Lærerkurs økt 1: NIH, 26.januar, 12:00-15:15 Lærerkurs økt 2: Ute i hver enkelt skole, 1-10.februar
Mars (uke 9)	Besøk ute i hver enkelt skole bestående av: - Økt 3: Oppfrisking av kursinnhold og flere aktiviteter (1 time) - Gruppesamtale med lærerne (45min) - Jeg observerer 1 kroppsøvingsklasse. Standardisert opplegg
Mars/April (uke 12, 14, 15)	Besøk ute i hver enkelt skole bestående av: - Spørreskjema til lærere og elever (samme klasse per lærer) - Gruppesamtale med lærerne – 45 min - Observasjon av samme kroppsøvingsklasse som uke 9

NORGES IDRETTSHØGSKOLE

Lærerkurs økt 1, NIH, 26.januar

Praksiseksempler sal 2A

- Læringsaktiviteter for å skape tillit og lagfølelse hos elevene
- Samarbeidsaktiviteter med forskjellige løsningsstrategier
- Ballspill og annerledeshet – Presentere nye varianter av kjente ballspill

AKTIVITETER / BESKRIVELSE	DISKUSJON / REFLEKSJON
Blind slange + bokstav-fight - 2-5 grønne matter (samme antall som antall lag) - Bokstaver på ark/små pappskiver (f.eks A, O, M, Ø, S, W, Æ) - evt blind-folds til elevene "Blind slange": Rekker på ca 6 elever, kun første elev (hodet på slangen) ser, resten lukkede øyne. Elevene holder hverandre i hendene. Den som ser må guide elevene trygt uten å kollidere med andre rekker, og ikke fortere enn at alle henger med. Legger etter hvert inn typiske oppvarmingsøvelser som høye kneløft, spark bak, sidelengs osv. Elevene holder seg på motsatt del av hallen fra der mattene ligger. Elevene bytter hode på slangen etter hver bokstav-fight. "Bokstav-fight": Ved signal kan alle åpne øynene. Lærer viser bokstav, og hvert lag skal så fort som mulig forme denne bokstaven ved sin grønne matte. Bokstaven skal være lesbar og nøyaktig, og leses i forhold til der lærer står. Poeng til første lag ferdig med "feilfri bokstav". Kan gjerne bruke elever som ikke deltar som dommere.	Målet er å skape opplevelser av tillit, tilhørighet og lagfølelse, få mulighet til ulike former for samarbeid, og bli enige om løsningsstrategi på bokstav-fighten. Mulige spørsmål til elevene i etterkant: - Hvordan følte det å ikke se? - Hvordan opplevdes det å lede slangen? - Oppstod det situasjoner der du følte deg usikker underveis? - Hvordan fungerte bokstav-samarbeidet? - Var det noen som hadde lederrolle? - Fant dere en taktikk som fungerte bra?
Mattestafetter - 2 grønne matter per lag "Mattestafett Originale": Ca 6 elever på hvert lag. Mattene legges inntil hverandre ut fra ene veggen. Poenget er å komme over på andre enden av salen, kun ved hjelp av mattene. Berører de gulvet med noen kroppsdel, blir det felles lagstraff (f.eks 3 spensthopp, løping rundt mattene osv). Starter sittende på bakerste matte. 30 sek til å planlegge taktikk før start. Elevene dømmer selv, og må si fra til laget sitt dersom de er i gulvet. Første laget som tar i veggen på andre siden er vinnere (evt at alle må ta i veggen). Kjøres f.eks to ganger, slik at laget har mulighet til å forbedre taktikken/samarbeidet. Kan også utvides slik at en på laget må føre en ball med kølle fra matte til matte underveis. Krever da at mattene ligger helt inntil hverandre. "Mattetransport" – Frakte 1 og 1: Ca 6 elever på hvert lag. Kun en matte hver lag, som legges inntil veggen. Oppgavene er å frakte en og en elev over til andre siden. Den som fraktes må ligge på matten. Bytte elev ved at den som blir fraktet tar i veggen på motsatt side. Alle de andre er med som fraktere, valgfritt hvordan laget vil bruke disse. Får 30 sek før start til å diskutere taktikk. Antall etapper som det er elever på laget. Ved ujevnt antall kan samme elev fraktes to ganger, dog ikke på to etterfølgende etapper.	Målet er å bygge lagfølelse, og trene på forpliktende samarbeid. Å dømme selv krever fair-play og ærlighet overfor de andre. Viktig: - Elevene selv diskuterer fram bev.løsning - At man gir honnør for godt samarbeid - At man tar hensyn til alle på laget - Å ta hensyn til den som blir fraktet. - Samarbeide godt gjør at man får effektive og gode vekslinger (gjerne ulike roller) - Ved store kroppslige forskjeller (f.eks overvektige) kan slike roller gis på forhånd. F.eks være minst 2 faste fraktere, minst 2 som blir fraktet, 1 koordinator osv
Evighets-stikkball - 4-10 myke baller. (Ved 30 elever ca 10 baller). Stikkballvariant der alle er med. Ballene kastes utover hallen etter hvert i spillet (Start med minst 3-4 baller, kast ut flere etter hvert, gjerne mot "passive" områder/elever) Elevene får ett poeng når de treffer andre og minus ett poeng når de blir truffet. Elevene teller selv poeng. Max 3 skritt, max 1 ball i hånda om gangen, og max holde ballen i 3 sekund. Bruk gjerne hele hallen dersom det er mange elever og mange baller, så skaper dette god aktivitet og mye forflytning. Kan f.eks kjøres som intervall med 2 min innsats og 1 min pause. Etter første gang kan de som fikk f.eks pluss 4, starte med minus 4, og motsatt.	Målet er å skape en form for stikkball der alle kan være med hele tiden, og forskjellene i egenskaper ikke kommer tydelig fram. Læreren kan observere fra sidelinjen og ha mulighet til å vurdere elevene underveis. - Alle med hele tiden, ikke oppmerksomhet på ett punkt, siden det er flere baller - Alle på sitt nivå, hver og en kan bryte egne grenser underveis.

Per Midthaugen,
PhD-stipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE

AKTIVITETER	DISKUSJON / REFLEKSJON
Stum leik m/ ti-trekk - en ball pr to lag - vester Velkjent oppvarmingsaktivitet til flere ballspill. Kan bruke flere ulike baller. Ikke lov til å si noe som helst, og elevene skal selv dømme (fortsatt uten å si noe). Eksempel på regler som sies på forhånd er; 3 skritt, holde ballen max 3 sekund, ikke lov å sentre tilbake til samme, ikke lov å stusse ballen. Bryter noen på laget reglene, legges ballen død på gulvet og andre laget overtar. Samme skjer dersom man scorer poeng. Lærer kan gjerne la være å gripe inn, og heller være opptatt med å organisere neste aktivitet (eks tallstafett). Dette gir elevene selv et hovedansvar for at aktiviteten skal fungere.	Gjør en velkjent aktivitet til noe som er nytt og litt annerledes. Krever andre kommunikasjonsformer. La elevene få mulighet til å øve seg på kommunikasjon uten verbalt språk, og sette fokus på fair play og viktigheten av å følge felles spilleregler. Spørsmål i etterkant: - Hvordan følte det å ikke kunne uttrykke seg gjennom ord? - Hvordan løste dere kommunikasjon nå?
Tallstafett - ca 30 kjegler - Nummerlapper 1-10 i ulike farger. 1 farge per lag (f.eks blå, rød og gul) Setter ut ca 30 kjegler på 1/3 av salen. Under kjeglene legges nummerlappene vilkårlig. Deler elevene i lag på ca 6-9 stk pr lag. Elevene løper fra motsatt side av salen tre og tre om gangen. Rødt lag skal finne rød nr 1, deretter tilbake å veksle, så skal neste tre finne rød nr 2. Alle tre skal tilbake til veggen og veksle før neste tre kan løpe ut. Kjeglene skal bare kikkes under å stå på sin plass hele tiden. Nummerlappene legges opp ved vekslingsfeltet slik at læreren kan følge med på stillingen underveis. En fordel seinere i stafetten dersom elevene husker hvilke kjegler de ulike lappene ligger. Hele leiken kan gjøres stum, eventuelt kan det være lov for laget å snakke når de er ute ved kjeglene, eller det kan være fritt fram for ordvekslinger uansett. Ulike former for kommunikasjon i aktiviteten gir forskjellige utfordringer når det gjelder samarbeid og løsningsstrategier.	Kommunikasjon, anerkjennelse, tilhørighet - Skape lagfølelse, og organisere stafetter slik at hver enkelt ikke blir så synlig. Mindre sjanse for at en elev ødelegger for resten av laget. - Hukommelse kan være like viktig som fart og utholdenhet, gjør at ulike personer kan vise sine styrker. - Stor grad av aktivitet, spesielt dersom kun 6 på hvert lag. Lagene opptatt av seg selv, og konsentrerer seg mye om å prøve å huske hvor neste nummer ligger. - Gjerne mange ulike som finner lapper, flere muligheter til å rose lagkamerater
Avslutning og kort diskusjon - Samle gruppa for en debriefing av aktivitetene, og samtidig knytte det opp mot teorien som ble gjennomgått. Spesielt koble det opp mot de didaktiske grunntankene for interkulturell læring - Kan gjerne legge inn korte pauser mellom aktivitetene slik at opplevelsene kan diskuteres relativt umiddelbart etter hver aktivitet. Spesielt viktig når aktivitetene er relativt ulike og bygger opp om ulike egenskaper og utfordringer. - Hver kroppsøvingsøkt bør avsluttes med en kort gjennomgang av hvilke læringsaktiviteter som er gjennomgått, hva formålet har vært og noen korte tilbakemeldinger om hvordan elevene er fornøyd med timen og egen innsats. Husk å rose elevene dersom det er fortjent, da f.eks relatert til det å vise evne til forpliktende samarbeid, fair-play, toleranse og omsorg (jf kompetansemål vg3).	- Viktig prinsipp for læringsaktvitetene at det ikke blir engangs-happeninger, men at elevene er med på hvilke egenskaper som utvikles og hvorfor. - Vektlegge at målet er et trygt læringsmiljø for alle der de kan oppleve anerkjennelse og tilhørighet, men samtidig ikke være redd for å møte det ukjente, risikere usikkerhet og det uforutsigbare/utrygge. - Poengtere at diskusjon og uenigheter er en naturlig del av livet, og kan også brukes som læringssituasjoner i kroppsøving.

Per Midthaugen,
PhD-stipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

Praksiseksempler økt 2,

Innebandy

Hovedtema:

- Utvikling av tekniske innebandyferdigheter og spillforståelse

- Utvikle selvbevissthet, samarbeidsevne, evne til fair-play, erfaringer med egen og andres usikkerhet

AKTIVITETER / BESKRIVELSE	HVORFOR
Teknikkoppvarming - innebandykøller og baller (1 stk kølle og ball per elev) - benker, kjegler, matter og rockeringer Elevene fører hver sin ball rundt i salen. Skal ikke kollidere med noen eller flytte på utstyret. Utstyret settes ut relativt vilkårlig rundt i salen og brukes til å øve tekniske ferdigheter. Elevene oppsøker sine utfordringer, og fører ball fra utfordring til neste. Bruker f.eks: Kjegler: Settes som slalåmløype kort og lang avstand, åttetall, smal passasje osv. Brukes til å føre ball gjennom. Benker: Settes på skrå, spredt vilkårlig rundt i salen. Brukes til å slå pasninger mot, og fremstår også som hindring når man fører ball. Ulike vinkler på benkene. Rockeringer: Settes inntil ribbevegg el. vegg i ulike høyder. Skal skytes mot med håndleddskudd. Matter/Tjukkas: Vippe ballen opp på matter/tjukkas og føre ballen over. Kan videre gå sammen to og to (eller tre og tre) om en ball å sentre til hverandre i samme området, uten å kollidere med hverandre eller med utstyret.	- Et av målene er å trene på tekniske grunnferdigheter i innebandy; føring av ball, pasninger og håndleddskudd. - Også et mål å utvikle selvforståelse ved å bli bevisst på egne ferdigheter og at disse forbedres gjennom teknisk trening på sitt nivå. Elevene velger derfor sitt nivå og sine utfordringer. Ikke fokus på noen få, alle konsentrerer seg om sitt, og sine ferdigheter. For noen kan det være nok å føre ballen uten å kollidere med andre. Mye utstyr, eleven velger selv hva han/hun vil prøve. Læreren har god oversikt på hver enkelt elev og gode muligheter til å gi tilbakemelding. Elevene må samarbeide som en gruppe hele tida og måtte forholde seg til andre. Må også trene på å ha blikket oppe mest mulig.
Føre/Takle +1/-1 - innebandykøller og baller (1stk kølle og ball per elev) Elevene fører hver sin ball rundt i salen. Målet er å ha full kontroll på egen ball, og samtidig kunne takle ballen vekk for de andre. +1 poeng hvis du får noen til å miste kontrollen over ballen sin, og -1 poeng hvis du mister kontroll over egen ball (både på egen hånd og når andre ødelegger for deg). Elevene holder rede på sine egne poeng, og må dømme ærlig i forhold til om de har kontroll eller ikke. Stopper spillet etter en stund. Eleven med pluss får minus i neste runde og de med minus får pluss. F.eks +4 poeng i første runde, så starter du med -4 poeng i neste.	- Øve på å føre ball i pressede situasjoner. Elevene kan selv vurdere hvor mye de vil oppsøke andre, eller om de vil konsentrere seg mest om egen ball. Å dømme poeng selv krever fair-play og ærlighet overfor de andre. - Utvikle selvbevissthet i møte med egne ferdigheter, og bli oppmerksom på at vi har forskjellige utgangspunkt for å beherske spillet.
Spill med flere mål - innebandykøller (1 stk per elev) + 2 baller - kjegler - vester Elevene deles i lag på rundt 6 elever. Bruker vester. Sentring gjennom to kjegler med kontrollert pasning og mottak gir poeng. Ca 1 meter mellom kjeglene. Ikke lov å score på samme mål to ganger. Lag gjerne minst 6 mål vilkårlig plassert i salen. Aktiviteten fungerer godt for 3 lag, 6 mål, og med 2 baller i spill.	Gjør en velkjent aktivitet til noe som er nytt og litt annerledes. God trening på spillsituasjon, men med noen nye varianter. Læreren kan observere fra sidelinjen og ha god mulighet til å vurdere elevene underveis. - Pasning som scoring krever godt samarbeid mellom elevene. - Ikke oppmerksomhet på ett punkt, siden det er flere baller - Elevene må telle poeng å dømme selv. Krever ærlighet og fair-play.

Per Midthaugen,
PhD-stipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE

AKTIVITETER / BESKRIVELSE	HVORFOR
Innebandyspill på vanlig bane med mål - innebandykøller - en ball pr to lag - vester Deler opp i to store lag med 10-12 elever per lag. Elevene skal selv lage to rekker. Rekkene spiller 2 minutt om gangen og bytter ved fløytesignal. Kan spille med keeper, eller lage krittstrek som forbudt område rundt målet. Kun lov med kommentarer til eget lag, og da kun positive tilbakemeldinger. (Ved brudd, da tydelig tiltale og ut fra aktivitet). Spill og fair-play er viktigst. Elevene dømmer selv.	- Elevene må selv vurdere hvordan de setter opp rekkene slik at de får utnyttet elevenes ferdigheter på en kompletterende måte. Må vurdere både styrker og svakheter. - Bygge teamfølelse og tilhørighet til et lag. Å fokusere på positive tilbakemeldinger kan utløse omsorg og respekt for medelever - Læreren har tid til å snakke med å gi tilbakemeldinger under pausen
Innebandyspill m/ regelendring - Aktiviteten fortsetter ut fra foregående spill på vanlig bane. 1 elev per spillerrekke forlater salen (sørg for at dette er elever som er svært trygge på seg selv/ positivt selvbilde). De resterende elever får beskjed om at fra nå av vil all kroppskontakt og køllekontakt nå bli forbudt, og vil bli dømt på som brudd på reglene. Eleven kommer så inn igjen, og spillet settes i gang med den nye regelen. Læreren dømmer. - Gjerne avslutte med vanlig spill til slutt før avslutning og kort diskusjon. Da med vanlige regler. Det for også å vise fokus på ferdig spillform og konkurranseidretten innebandy.	- Aktivitet der elevene får et møte med egen og andres usikkerhet, og kan bruke dette som diskusjonsgrunnlag i etterkant. - Hvordan oppleves det å ikke kjenne til reglene, føle seg utenfor. Kan relateres til hvordan det er å komme til en ny og ukjent skole/situasjon/kultur? - Hva kan gjøres for å inkludere de som ikke kjenner reglene i et fellesskap?
Avslutning og kort diskusjon - Samle gruppa for en debriefing av aktivitetene, og samtidig knytte det opp mot hva du ønsker at elevene skal lære gjennom aktivitetene - Gjerne også legge inn korte pauser mellom aktivitetene slik at opplevelsene kan diskuteres relativt umiddelbart etter hver aktivitet. Spesielt viktig når aktivitetene er relativt ulike og bygger opp om ulike egenskaper og utfordringer. - Hver kroppsøvingsøkt bør avsluttes med en kort gjennomgang av hvilke læringsaktiviteter som er gjennomgått, hva formålet har vært og noen korte tilbakemeldinger om hvordan elevene er fornøyd med timen og egen innsats. Husk å rose elevene dersom de har bidratt til en god læringsøkt. Gjerne ha fokus på godt samarbeid, ærlighet, at alle har deltatt på en god måte, og at gruppa har fungert som et godt fellesskap som jobber mot et felles mål.	- Viktig prinsipp for læringsaktvitetene at det ikke blir engangs-happeninger, men at elevene er med på hvilke egenskaper som utvikles og hvorfor. - Vektlegge at målet er et trygt læringsmiljø for alle der de kan oppleve anerkjennelse og tilhørighet, men samtidig ikke være redd for å risikere usikkerhet og det utrygge.

TIPS!

- Lignende type opplegg kan også egne seg godt for andre typer ballspill (basket, håndball, fotball)

- Aktivitetene kan gjerne kombineres med varianter av stum leik, ti-trekk, og partnerspill to og to.

Per Midthaugen,
PhD-stipendiat
Norges Idrettshøgskole

E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58

Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

LÆRERKURS ØKT 3, MARS 2010

INNHOLD

1. Oppfrisking av kursinnhold og veien videre (30 min)
2. Gjennomgang av flere aktiviteter – Utlevering av aktivitetshefte (30 min)
2. Gruppesamtale med lærerne – Intervju med lydopptak (45 min)

1. Oppfrisking av kursinnhold og veien videre

- Lærerkurset ønsker å fokusere på bevissthet og kompetanse rundt det å håndtere mangfold og forskjeller hos elevene gjennom kroppsøving og fysisk aktivitet.

- Kurset omhandler teori og praksis knyttet til undervisningsopplegg som kan organiseres i vanlige kroppsøvingsaktiviteter, men med et bevisst fokus på samarbeid, usikkerhet, annerledeshet, inkludering, anerkjennelse og tilhørighet.

- Kurset presenterer begrepet *interkulturell læring*. Dette kan forstås som en planlagt gjennomføring av læringssituasjoner, som skal hjelpe elevene til å utvikle *kulturell bevissthet, sosiale ferdigheter* og *selvforståelse*.
  - Kulturell bevissthet: Erkjenne og respektere individuelle og kulturelle forskjeller
  - Sosiale ferdigheter: Evne til samhandling, kommunikasjon og konfliktløsning
  - Selvforståelse: Håndtere egne opplevelser av usikkerhet og fremmedhet

- Sentralt i kurset er også begrep som *fremmedhet* og *usikkerhet*. Fremmedhet kan forstås som en følelsesmessig reaksjon som kan oppstå i møte med noe ukjent, nytt, uforståelig eller uforutsigbart, og som kan gjøre elevene usikre og utrygge.
  - Slik usikkerhet kan oppstå ved ukjente eller uvanlige idretter/aktivitieter, ulike personligheter, uvanlig oppførsel og væremåte eller ukjente regler og bevegelsesformer
  - To motpoler i møte med fremmedhet: (1) Eleven føler seg trygg og deltar på vanlig måte, eller (2) eleven føler seg usikker og opplever aktiviteten som en trussel mot eget selvbilde (det siste utløser gjerne ulike forsvarstrategier hos elevene).

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole
E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58
Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

NORGES IDRETTSHØGSKOLE

- Et positivt selvbilde og trygt læringsmiljø er viktig for at eleven tør å risikere egen usikkerhet og kan trene på dette i kroppsøvingsfaget.
- Trygge, stabile og forutsigbare rammer, der elevene blir inkludert i "hvorfor vi gjør hva vi gjør" i kroppsøving, kan bidra til at elevene tør å risikere mer i aktivitetene.
- Viktig at følelser av usikkerhet blir sett på som noe naturlig, og at vi kan formidle hvordan aktiviteter i kroppsøving kan være godt egnet for å trene på erfaringer med egen og andres usikkerhet.
- Læreren må også risikere usikkerhet i planlegging og gjennomføring av aktivitetene. Vær ærlig og åpen overfor elevene.

Per Midthaugen,
Doktorgradsstipendiat
Norges Idrettshøgskole
E-mail: per.midthaugen@nih.no
Tlf mobil: (+47) 97 68 76 07
Tlf arbeid: (+47) 23 26 23 58
Postadresse:
Postboks 4014, Ullevål Stadion
0806 OSLO

APPENDIX 11:
Detailed Time Schedule, School Visits

All Teacher Training Inputs,
Teacher and Student Measurements

TEACHERS I-SCHOOL 1	WHO	NO.	IMPLEMENTATION		
Info-meeting/Recruitment	12T + HD		Meeting week 50 at the I-school, dec 2009, for recruitment purposes		
Baseline measurement	All		Jan, Week (W) 3: Sent out survey by mail, completed to input1		
Teacher Input 1, NSSS	All	TT1	Jan, W 4: Input 1: 3.5hours, theory + activities		
Teacher Input 2, at school	All + colleagues	TT2	Feb, W 6: Input 2: 2 hours, floorball/basket + theory. Colleagues participated in practice		
Input3 + interview 1	All	TT3	Mar, W 9: Input 3: 2 hours, Interview + repetition + activity booklet		
Interview 2	All - 1	TT4	Apr, W 17: Evaluation: 90 mins. Interview 2+summary		
Posttest measurement	All		Apr, W 17: Handed out TT4, and collected at student measurement		
Intervention classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Weeks**
Teacher 1	17	I-1	Jan, W 4: Wednesday	Apr, W 16: Wednesday	12
Teacher 2	17	I-2	Feb, W 6: Friday	Apr, W 16: Friday	10
Teacher 3	26	I-3	Jan, W 4: Friday	Apr, W 16: Friday	12
Teacher 4	22	I-4	Feb, W 5: Thursday	Apr, W 15: Thursday	10
Teacher 5	26	I-5	Feb, W 5: Thursday	May, W 18: Thursday	13
Teacher 6	21	I-6	Feb, W 5: Wednesday	Apr, W 17: Wednesday	12
No. of visits: 15					
TEACHERS I-SCHOOL 2	**WHO**	**NO.**	**IMPLEMENTATION**		
Baseline measurement	All		Jan, W 3: Sent out survey by mail, completed to input1		
Teacher Input 1, NSSS	All - 1	TT1	Jan, W 4: Input 1, 3.5hours, theory + activities		
Review Input 1, at school	1		Jan, W 4: Input 1, 30 mins review to 1 teacher not attending NSSS		
Teacher Input 2, at school	All	TT2	Feb, W 6: Input 2: 2 hours, floorball/basket + theory		
Input3 + interview 1	All - 1	TT3	Mar, W 11: Input 3: 2 hours, Interview + repetition + activity booklet		
Interview 2	All -1	TT4	May, W 18: Evaluation: 90 mins. Interview 2+summary		
Posttest measurement	All		May, W 18: Handed out TT4, and collected at student measurement		
Intervention classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Weeks**
Teacher 7	19	I-7	Jan, W 4: Friday	Apr, W 16: Friday	12
Teacher 8	14	I-8	Jan, W 3: Thursday	Apr, W 17: Thursday	14
Teacher 9	18	I-9	Jan, W 4: Friday	Apr, W 16: Friday	12
Teacher 10	15	I-10	Jan, W 4: Thursday	May, W 18: Monday	13,5
No. of visits: 11					

TEACHERS I-SCHOOL 3	WHO	NO.	IMPLEMENTATION		
Info-meeting/Recruitment	3T		Meeting week 50 at the I-school, dec 2009, for recruitment purposes		
Baseline measurement	All-1		Jan, W 3: Sent out survey by mail, completed to input1 (1 withdrawal)		
Teacher Input 1, NSSS	All	TT1	Jan, W 4: Input 1, 3.5hours, theory + activities		
Teacher Input 2, at school	All	TT2	Feb, W 5: Input 2: 2 hours, floorball/basket + theory		
Input3 + interview 1	All	TT3	Mar, W 10: Input 3: 2 hours, Interview + repetition + activity booklet		
Interview 2	All	TT4	Apr, W 16: Evaluation: 90 mins. Interview 2+summary		
Posttest measurement	All		Apr, W 16: Handed out TT4, and collected at student measurement		
Intervention classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Weeks**
Teacher 11	16	I-11	Jan, W 4: Friday	Apr, W 16: Friday	12
Teacher 12	19	I-12	Feb, W 5: Tuesday	Apr, W 16: Tuesday	11
No. of visits: 7					
TEACHERS I-SCHOOL 4	**WHO**	**NO.**	**IMPLEMENTATION**		
Baseline measurement	All - 1		Jan, W 3: Sent out survey by mail, completed to input1 (1 missing)		
Teacher Input 1, NSSS	All - 1	TT1	Jan, W 4: Input 1, 3.5hours, theory + activities		
Review Input 1, at school	1		Feb, W 5: Input 1, 30 mins review to 1 teacher not attending NSSS		
Teacher Input 2, at school	All + colleagues	TT2	Feb, W 6: Input 2: 2 hours, floorball/basket + theory. Colleagues participated in practice		
Input3 + interview 1	All	TT3	Mar, W 9: Input 3: 2 hours, Interview + repetition + activity booklet		
Interview 2	All	TT4	Apr, W 16: Evaluation: 90 mins. Interview 2+summary		
Posttest measurement	All		Apr, W 16: Handed out TT4, and collected at student measurement		
Intervention classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Weeks**
Teacher 13	14	I-13	Jan, W 5: Tuesday	Apr, W 17: Tuesday	12
Teacher 14	15	I-14	Feb, W 6: Monday	Apr, W 16: Monday	10
Teacher 15	25	I-15	Jan, W 4: Wednesday	Apr, W 15: Wednesday	11
No. of visits: 9					
TEACHERS I-SCHOOL 5	**WHO**	**NO.**	**IMPLEMENTATION**		
Info-meeting/Recruitment	HD		Meeting week 48 at the I-school, nov 2009, for recruitment purposes		
Baseline measurement	2		Jan, W 3: Sent out survey by mail, completed to input1+2 at school		
Teacher Input 1, NSSS	None		Jan, W 4: Input 1, 3.5hours, theory + activities		
Teacher Input 1+2, at school	2	TT1+2	Feb, W 5: 2 hours. Special review/ repetition from input 1+2		

Input3 + interview 1	1	TT3	Mar, W 10: Input 3: 2 hours, Interview + repetition +activity booklet		
Interview 2	1	TT4	Apr, W 17: Evaluation: 90 mins. Interview 2+summary		
Posttest measurement	1		Apr, W 17: Handed out TT4, and collected at student measurement		
Intervention classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Weeks**
Teacher 16	22	I-16	Feb, W 5: Thursday	Apr, W 17: Thursday	12
No. of visits: 5					
Total visits I-schools: 47					

Note:
1) *Number of weeks corresponding to the calender year. E.g, Week 1 is from January 1st.. Intervention started in week 3/4 and final measurement were done in week 18.*
2) Number of students reported only those with complete measurements (T1+T2)

TEACHERS C- SCHOOL 1	**WHO**	**NO.**	**IMPLEMENTATION**		
Information/Recruitment	HD		Jan, W 2: Recruited by phone and e-mail correspondences		
Baseline measurement	All		Jan, W 3: Handed out and collected via student measurements		
Posttest measurement	All		Apr, W 16: Handed out W 15 and collected W 16		
Control classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Weeks**
Teacher 17	15	C-1	Jan, W 3: Thursday	Apr, W 15: Thursday Apr, W 16: Thursday (two times due to absence)	12 13
Teacher 18	15	C-2	Jan, W 3: Thursday	Apr, W 16: Thursday	13
Teacher 19	17	C-3	Jan, W 3: Thursday	Mar, W 12: Thursday	9*
Teacher 20	11	C-4	Jan, W 3: Friday	Mar, W 12: Friday	9*
Teacher 21	14	C-5	Jan, W 3: Friday	Mar, W 12: Friday	9*
Teacher 22	26	C-6	Jan, W 3: Friday	Apr, W 16: Friday	13
No. of visits: 7			*Collected before the Easter holiday in week 13 due to no PE in April		
TEACHERS C- SCHOOL 2	**WHO**	**NO.**	**IMPLEMENTATION**		
Information/Recruitment	1 T		Jan, W 3: Recruited by phone and e-mail correspondences		
Baseline measurement	All		Feb, W 5: Handed out and collected via student measurements		
Posttest measurement	All		May, W 18: Handed out W 17 and collected W 18		
Control classes	**Students**	**No.**	**Student baseline T1**	**Student posttest T2**	**Week**
Teacher 23	17	C-7	Feb, W 5: Friday	May, W 18: Tuesday	12,5
Teacher 24	19	C-8	Feb, W 6: Tuesday	May, W 18: Tuesday	12
Teacher 25	21	C-9	Feb, W 6: Tuesday	May, W 18: Tuesday	12
Teacher 26	18	C-10	Feb, W 6: Friday	May, W 18: Friday	12
No. of visits: 7					
Tot. visits C-schools: 14			**TOTAL VISITS TO SCHOOLS RELATED TO THE PROJECT: 47 + 14 = 61**		

APPENDIX 12:
Additional Tables and Bootstrapping Matrices

Table 35: Bivariate correlations among all main outcome variables at baseline (T1), and post-intervention (T2)

Measure (time)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Int vs. cont	--													
2. Self-concept (T1)	.02	--												
3. Uncertainty (T1)	.01	.03	--											
4. Openness (T1)	.05	.00	-.21**	--								.		
5. RA1 (T1)	-.05	-.12*	.04	.01	--									
6. RA2 (T1)	.02	.04	.12**	.23**	.15**	--								
7. STS-pattern (T1)	.03	.08†	-.02	.14**	-.00	.03	--		.					
8. Socio (T1)	-.07	-.02	.01	.14**	.01	.08†	15**	--						
9. Self-concept (T2)	.12*	.63**	-.05	.05	-.10*	.02	.07	-.04	--					
10. Uncertainty (T2)	.03	.08†	.77**	-.17**	.01	.10*	-.01	.01	-.05	--				
11. Openness (T2)	.09*	-.05	-.21**	.52**	-.11*	.10*	.12*	.08†	-.01	-.26**	--			
12. RA1 (T2)	-.07	-.08†	.01	-.02	.60**	.08†	-.01	-.03	-.08†	.06	-.05	--		
13. RA2 (T2)	.06	.03	.13**	.17**	-.04	.43**	.10*	.06	-.01	.16**	24**	.03	--	
14. STS-pattern (T2)	.05	.09*	-.04	.09†	-.06	.07	.46**	.11*	.03	-.02	.10*	.01	.09†	
15. Socio (T2)	-.05	.01	.01	.10*	.03	.07	.13**	.72**	-.00	.02	.05	.00	.00	.11*

Note. Pearson's correlations between all change variables (Spearman's point bi-serial coefficient between intervention and change variables). T1 = Baseline, T2 = Post-intervention, †p<.10, *p<.05, **p<.01 (two-tailed).

Table 36: Test of indirect paths, detailed bootstrapping procedure and output, overall group (cf. chapter 8.1.4, table 28, p. 108)

	Independent variable (IV)	Mediator (M)	Dependent variable (DV)	Point estimate	SE	Bootstrapping BC 95% CI	
						Lower	Upper
1	Int vs. control	Self-concept	Uncertainty	-.03	.02	-.083	-.004
2	Self-concept	Uncertainty	Openness	.02	.01	.001	.051
3	Uncertainty	Openness	Rational argumentation	-.04	.02	-.080	-.011
4	Self-concept	Uncertainty	Rational argumentation	-.01	.01	-.037	.001
5	Int vs. control	Openness	Rational argumentation	.04	.02	.001	.093
6	Int vs. control	Openness	Satisfaction with PE (T2)	.02	.02	.001	.076
7	Self-concept	Uncertainty	Total school satisfaction	.02	.01	.003	.055
8	Uncertainty	Total school satisfaction	Satisfaction with PE (T2)	-.15	.05	-.271	-.063
9	Int vs. control	Satisfaction with PE (T2)	Total school satisfaction	.11	.06	.012	.232

BC: bias corrected; 1000 bootstrap samples, *a-path* IV→ M, *b-path* M → DV.

All variables represent change from baseline to T2 (residual change scores), except Satisfaction with PE (T2)

1) Intervention vs. control (IvsC) → Change in Self-concept (SELFchange) → Change in Uncertainty (UNCERTchange).

In row 1, the paths between intervention vs. control (Independent Variable = IV), change in Self-concept from T1 to T2 (Mediator = M), and change in Uncertainty score (Dependent Variable = DV) were analyzed. The path between intervention vs. control and change in Self-concept was significant (Point Estimate, PE, for path a = .30, $p < .01$), and the same was the path between change in Self-concept and change in Uncertainty score (PE for path b = -.11, $p < .05$). The indirect link between intervention vs. control and change in uncertainty through change in self-concept was significant because the bias-corrected 95% confidence intervals (for the bands of products of coefficients after *n* re-samplings) did not include zero [PE, path a X path b = -.03, *SE* = .02, Bias Corrected Confidence Intervals (BCCI): Lower = -.083 and Upper -.004]. Revealing a confidence interval with only negative or positive value, indicate a significant indirect effect.

2) Change in self-concept (SELFchange) → Change in Uncertainty (UNCERTchange) → Change in Openness (OPENchange).
In row 2, the paths between change in self-concept (IV), change in uncertainty (M), and change in openness (DV) were analyzed. The path between change in self-concept and change in uncertainty was significant (PE for path a = -.10, p < .05), and the same was the path between change in uncertainty and change in openness (PE for path b = -.18, p < .001). The indirect link between change in self-concept and change in openness through change in uncertainty was significant [PE, path a X path b = .02, *SE* = .01, BCCI: Lower = .001 and Upper .051].
3) Change in Uncertainty (UNCERTchange) → Change in Openness (OPENchange) → Change in Rational Argumentation 2 (RA2change).
In row 3, the paths between change in Uncertainty (IV), change in Openness (M), and change in Rational Argumentation 2 (DV) were analyzed. The path between change in Uncertainty and change in Openness was significant (PE for path a = -.17, p < .001), and the same was the path between change in Openness and change in Rational Argumentation 2 (PE for path b = .23, p < .001). The indirect link between change in Uncertainty and change in Openness through change in RA2 was significant [PE, path a X path b = -.04, *SE* = .02, BCCI: Lower = -.080 and Upper -.011].
4) Change in Self-concept (SELFchange) → Change in Uncertainty (UNCERTchange) → Change in Rational Argumentation 2 (RA2change).
In row 4, the paths between change in Self-concept (IV), change in Uncertainty (M) and change in Rational Argumentation 2 (DV) were analyzed. The path between change in Self-concept and change in Uncertainty was significant (PE for path a = -.10, p < .05), and the same was the path between change in Uncertainty and change in RA2 (PE for path b = .10, p < .05). The indirect link between change in Self-concept and change in Rational Argumentation 2, through change in Uncertainty, was not significant [PE, path a X path b = -.01, *SE* = .01, BCCI: Lower = -.037 and Upper .001]. However, since the confidence interval has only marginal positive value, it indicates a support for this indirect link.
5) Intervention vs. control (IvsC) → Change in Openness (OPENchange) → Change in Rational Argumentation 2 (RA2change).
In row 5, the paths between intervention vs. control group (IV), change in Openness (M) and change in Rational Argumentation 2 (DV) were analyzed. The path between intervention vs. control and change in Openness was marginally significant (PE for path a = .17, p =.06), and the path between change in Openness and change in RA2 satisfaction was significant (PE for path b = .21, p < .001). The indirect link between intervention vs. control and change in RA2, through change in Openness was significant [PE, path a X path b = .04, *SE* = .02, BCCI: Lower = .001 and Upper .093].
6) Intervention vs. control (IvsC) → Change in Openness (OPENchange) → Satisfaction with physical education at posttest (SatPEpost).
In row 6, the paths between intervention vs. control group (IV), change in Openness (M) and satisfaction with physical education at posttest (DV) were analyzed. The path between intervention vs. control and change in openness was marginally significant (PE for path a = .18, p =.06), and the path between change in Openness and satisfaction with physical education was significant (PE for path b = .12, p < .05). The indirect link between intervention vs. control and satisfaction with physical education at posttest, through change in Openness was significant [PE, path a X path b =

.02, *SE* = .02, BCCI: Lower = .001 and Upper .076].
7) Change in Self-concept (SELFchange) → Change in Uncertainty (UNCERTchange) → change in Total satisfaction with school (TotSATchange).
In row 7, the paths between change in Self-concept (IV), change in Uncertainty (M) and total satisfaction with school (DV) were analyzed. The path between change in Self-concept and change in Uncertainty was significant (PE for path a = -.10, p = .03), and the same was the path between change in Uncertainty and change in Total satisfaction with school (point estimate for path b = -.19, p = .000). The indirect link between change in Self-concept and change in Total satisfaction with school, through change in Uncertainty, was significant [PE, path a X path b = .02, *SE* = .01, BCCI: Lower = .003 and Upper .055].
8) Change in Uncertainty (UNCERTchange) → Change in Total satisfaction with school (TotSATchange).→ Satisfaction with physical education at posttest (SatPEpost).
In row 8, the paths between change in Uncertainty (IV), change in Total satisfaction with school (M) and Satisfaction with PE at posttest (DV) were analyzed. The path between change in Uncertainty and change in Total satisfaction with school was significant (point estimate for path a = -.,19 p = .000), and the same was the path between change in Total satisfaction with school and Satisfaction with PE at posttest (point estimate for path b = .76, p = .000). The indirect link between change in Uncertainty and satisfaction with PE at posttest, through change in Total satisfaction with school, was significant [PE, path a X path b = -.15, *SE* = .05, BCCI: Lower = -.271 and Upper -.063].
9) Intervention vs. control (IvsC) → Satisfaction with physical education at posttest (SatPEpost) → Change in Total satisfaction with school (TotSATchange)
In row 9, the paths between intervention vs. control group (IV), Satisfaction with PE at posttest (M) and change in Total satisfaction with school (DV) were analyzed. The path between intervention vs. control and Satisfaction with PE at posttest was significant (point estimate for path a = .25, p = .04), and the same was the path between Satisfaction with PE at posttest and change in Total satisfaction with school (point estimate for path b = .45, p = .000). The indirect link between intervention vs. control and change in Total satisfaction with school, through Satisfaction with PE at posttest, was significant [PE, path a X path b = .11, *SE* = .06, BCCI: Lower = .012 and Upper .232]. All the path coefficients from the nine tests of indirect paths are illustrated in figure 7, p.109.

Output 1: Bootstrapping matrices, overall group (PASW 18.0 Output)

```
*************************************************************

Preacher And Hayes (2008) SPSS Macro For Multiple Mediation

Written by Andrew F. Hayes, The Ohio State University

http://www.comm.ohio-state.edu/ahayes/

For details, see Preacher, K. J., & Hayes, A. F. (2008). Asymptotic

and resampling strategies For assessing And comparing indirecct effects

in multiple mediator models. Behavior Research Methods, 40, 879-891

*************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   UNCE_cha
IV =   INTvsCON
MEDS = SELF_cha

Sample size
        473

IV to Mediators (a paths)
             Coeff        se         t         p
SELF_cha     ,3026     ,0946    3,1997     ,0015

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
SELF_cha    -,1087     ,0463   -2,3466     ,0194

Total Effect of IV on DV (c path)
             Coeff        se         t         p
INTvsCON     ,0878     ,0955     ,9193     ,3584

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
INTvsCON     ,1207     ,0961    1,2561     ,2097

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,0134     ,0092    3,1800    2,0000  470,0000     ,0425

*************************************************************

           BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        -,0329    -,0317     ,0011     ,0185
SELF_cha     -,0329    -,0317     ,0011     ,0185

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        -,0831    -,0039
SELF_cha     -,0831    -,0039

*************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
*************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   OPEN_cha
IV =   SELF_cha
MEDS = UNCERT_cha

Sample size
        473

IV to Mediators (a paths)
             Coeff        se         t         p
UNCE_cha     -,1002     ,0458   -2,1855     ,0293

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
UNCE_cha     -,1772     ,0455   -3,8943     ,0001

Total Effect of IV on DV (c path)
             Coeff        se         t         p
SELF_cha     -,0138     ,0460    -,2995     ,7647

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
SELF_cha     -,0315     ,0455    -,6926     ,4889

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,0314     ,0273    7,6289    2,0000  470,0000     ,0005

*************************************************************

           BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL         ,0178     ,0178     ,0000     ,0119
UNCE_cha      ,0178     ,0178     ,0000     ,0119

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL         ,0011     ,0506
UNCE_cha      ,0011     ,0506
```

```
************************************************************
Level of Confidence for Confidence Intervals:
  95
Number of Bootstrap Resamples:
  1000
------ END MATRIX -----
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   RA2_cha
IV =   UNCERT_cha
MEDS = OPEN_cha

Sample size
        469

IV to Mediators (a paths)
             Coeff        se         t         p
OPEN_cha    -,1656     ,0446   -3,7114     ,0002

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
OPEN_cha     ,2273     ,0465    4,8922     ,0000

Total Effect of IV on DV (c path)
             Coeff        se         t         p
UNCE_cha     ,0989     ,0459    2,1562     ,0316

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
UNCE_cha     ,1366     ,0455    3,0047     ,0028

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,0582     ,0542   14,4055    2,0000  466,0000     ,0000

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL       -,0376    -,0377     ,0000     ,0171
OPEN_cha    -,0376    -,0377     ,0000     ,0171

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,0803    -,0110
OPEN_cha    -,0803    -,0110

************************************************************
Level of Confidence for Confidence Intervals:
  95
Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   RA2_cha
IV =   SELF_cha
MEDS = UNCE_cha

Sample size
        469

IV to Mediators (a paths)
             Coeff        se         t         p
UNCE_cha    -,1011     ,0458   -2,2051     ,0279

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
UNCE_cha     ,0969     ,0462    2,0999     ,0363

Total Effect of IV on DV (c path)
             Coeff        se         t         p
SELF_cha    -,0294     ,0459    -,6404     ,5222

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
SELF_cha    -,0196     ,0460    -,4263     ,6701

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,0102     ,0060    2,4113    2,0000  466,0000     ,0908
************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL       -,0098    -,0101    -,0003     ,0086
UNCE_cha    -,0098    -,0101    -,0003     ,0086

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,0371     ,0009
UNCE_cha    -,0371     ,0009

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   RA2_cha
IV =   INTvsCON
MEDS = OPEN_cha

Sample size
        475

IV to Mediators (a paths)
             Coeff         se          t          p
OPEN_cha     ,1730     ,0934    1,8516     ,0647

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
OPEN_cha     ,2117     ,0459    4,6100     ,0000

Total Effect of IV on DV (c path)
             Coeff         se          t          p
INTvsCON     ,1649     ,0953    1,7310     ,0841

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
INTvsCON     ,1283     ,0936    1,3702     ,1713

Model Summary for DV Model
      R-sq  Adj R-sq          F        df1        df2          p
     ,0491     ,0451   12,1883     2,0000  472,0000     ,0000

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot       Bias        SE
TOTAL        ,0366     ,0361    -,0005     ,0235
OPEN_cha     ,0366     ,0361    -,0005     ,0235

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0009     ,0929
OPEN_cha     ,0009     ,0929

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   Sat_PE_p
IV =   INTvsCON
MEDS = OPEN_cha

Sample size
        478

IV to Mediators (a paths)
             Coeff         se          t          p
OPEN_cha     ,1822     ,0950    1,9177     ,0558

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
OPEN_cha     ,1227     ,0594    2,0649     ,0395

Total Effect of IV on DV (c path)
             Coeff         se          t          p
INTvsCON     ,2549     ,1236    2,0627     ,0397

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
INTvsCON     ,2325     ,1236    1,8810     ,0606

Model Summary for DV Model
      R-sq  Adj R-sq          F        df1        df2          p
     ,0177     ,0135    4,2738     2,0000  475,0000     ,0145

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot       Bias        SE
TOTAL        ,0223     ,0218    -,0006     ,0168
OPEN_cha     ,0223     ,0218    -,0006     ,0168

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0012     ,0756
OPEN_cha     ,0012     ,0756

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   SatT_cha
IV =   SELF_cha
MEDS = UNCE_cha

Sample size
        472

IV to Mediators (a paths)
             Coeff         se          t          p
UNCE_cha    -,0995     ,0460   -2,1645     ,0309

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
UNCE_cha    -,1897     ,0454   -4,1814     ,0000

Total Effect of IV on DV (c path)
             Coeff         se          t          p
SELF_cha     ,0656     ,0460    1,4260     ,1545

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
SELF_cha     ,0467     ,0454    1,0282     ,3044

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1        df2          p
     ,0401     ,0360    9,7946    2,0000  469,0000     ,0001

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        ,0189     ,0182    -,0006     ,0127
UNCE_cha     ,0189     ,0182    -,0006     ,0127

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0025     ,0546
UNCE_cha     ,0025     ,0546

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   Sat_PE_p
IV =   UNCE_cha
MEDS = SatT_cha

Sample size
        472

IV to Mediators (a paths)
             Coeff         se          t          p
SatT_cha    -,1943     ,0451   -4,3046     ,0000

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
SatT_cha     ,7628     ,0498   15,3177     ,0000

Total Effect of IV on DV (c path)
             Coeff         se          t          p
UNCE_cha    -,0922     ,0596   -1,5463     ,1227

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
UNCE_cha     ,0560     ,0497    1,1274     ,2601

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1        df2          p
     ,3368     ,3340  119,1062    2,0000  469,0000     ,0000

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL       -,1482    -,1448     ,0034     ,0537
SatT_cha    -,1482    -,1448     ,0034     ,0537

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,2705    -,0627
SatT_cha    -,2705    -,0627

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   SatT_cha
IV =   INTvsCON
MEDS = Sat_PE_p

Sample size
       478

IV to Mediators (a paths)
             Coeff        se         t         p
Sat_PE_p     ,2549     ,1236    2,0627     ,0397

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
Sat_PE_p     ,4458     ,0288   15,4558     ,0000

Total Effect of IV on DV (c path)
             Coeff        se         t         p
INTvsCON     ,0837     ,0952     ,8791     ,3798

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
INTvsCON    -,0299     ,0781    -,3829     ,7020

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,3357     ,3329  120,0208    2,0000  475,0000     ,0000

************************************************************


          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        ,1136     ,1119    -,0018     ,0564
Sat_PE_p     ,1136     ,1119    -,0018     ,0564

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0124     ,2315
Sat_PE_p     ,0124     ,2315

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

Table 37: Pearson's correlations between absolute change scores (T2-T1) and baseline measurements in outcome variables (T1)

		cha_SOCIO	cha_STS	cha_RA1	cha_RA2	cha_OPEN	cha_UNCERT	cha_SELF
SOCIO_pre	Pearson Correlation	-.370**	-.039	-.036	-.024	-.062	.001	-.026
	Sig. (2-tailed)	.000	.393	.436	.606	.175	.987	.568
	N	472	477	474	473	477	471	471
STS_pre	Pearson Correlation	-.024	-.520**	-.011	.071	-.017	.018	-.006
	Sig. (2-tailed)	.609	.000	.808	.124	.707	.690	.899
	N	472	479	476	475	479	473	473
RA1_pre	Pearson Correlation	.046	-.056	-.464**	-.174**	-.121**	-.043	.022
	Sig. (2-tailed)	.315	.221	.000	.000	.008	.355	.628
	N	470	477	476	475	477	471	471
RA2_pre	Pearson Correlation	-.012	.040	-.073	-.511**	-.131**	-.014	-.027
	Sig. (2-tailed)	.790	.385	.110	.000	.004	.765	.554
	N	469	476	475	475	476	470	470
OPEN_pre	Pearson Correlation	-.069	-.053	-.024	-.058	-.457**	.051	.055
	Sig. (2-tailed)	.137	.245	.607	.205	.000	.271	.231
	N	472	479	476	475	479	473	473
UNCERT_pre	Pearson Correlation	.006	-.021	-.045	.013	-.001	-.314**	-.082
	Sig. (2-tailed)	.891	.644	.326	.779	.982	.000	.075
	N	470	477	474	473	477	473	473
SELF_pre	Pearson Correlation	.046	.014	.049	-.012	-.056	.084	-.410**
	Sig. (2-tailed)	.325	.767	.290	.787	.226	.067	.000
	N	470	477	474	473	477	473	473

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 38: Test of indirect paths emerged in figure 6, controlled for gender

	Independent variable (IV)	Mediator (M)	Dependent variable (DV)	Point estimate (Coeff.)	SE	Bootstrapping BC 95% CI Lower	Upper
1	Int vs. control	Self-concept	Uncertainty	-.03	.02	-.083	-.002
	Gender (Control variable, CV)			(.05)	.09	Partial effect, p=.59	
2	Self-concept	Uncertainty	Openness	.02	.01	.001	.051
	Gender (Control variable, CV)			(.03)	.09	Partial effect, p=.75	
3	Uncertainty	Openness	Rational argumentation	-.04	.01	-.084	-.010
	Gender (Control variable, CV)			(-.18)	.09	Partial effect, p<.05	
4	Self-concept	Uncertainty	Rational argumentation	-.01	.01	-.041	.000
	Gender (Control variable, CV)			(-.16)	.09	Partial effect, p=.08	
5	Int vs. control	Openness	Rational argumentation	.04	.02	.005	.095
	Gender (Control variable, CV)			(-.19)	.09	Partial effect, p<.05	
6	Int vs. control	Openness	Satisfaction with PE (T2)	.02	.02	-.001	.069
	Gender (Control variable, CV)			(.57)	.11	Partial effect, p<.05	
7	Self-concept	Uncertainty	Total school satisfaction	.02	.01	.002	.063
	Gender (Control variable, CV)			(.11)	.09	Partial effect, p=.23	
8	Uncertainty	Total school satisfaction	Satisfaction with PE (T2)	-.15	.04	-.282	-.056
	Gender (Control variable, CV)			(.47)	.10	Partial effect, p<.05	
9	Int vs. control	Satisfaction with PE (T2)	Total school satisfaction	.11	.06	.010	.222
	Gender (Control variable, CV)			(-.15)	.08	Partial effect, p<.05	

BC: bias corrected; 1000 bootstrap samples, *a-path* IV→ M, *b-path* M → DV.

All variables represent change from baseline to T2 (residual change scores), except Satisfaction with PE (T2)

Table 39: Girls' changes in outcome variables from baseline to posttest. Repeated measures MANOVA+ follow-up analysis.

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Time * INTvsCON	Pillai's Trace	.071	2.707[a]	7.000	248.000	.010	.071	18.946	.903
	Wilks' Lambda	.929	2.707[a]	7.000	248.000	.010	.071	18.946	.903
	Hotelling's Trace	.076	2.707[a]	7.000	248.000	.010	.071	18.946	.903
	Roy's Largest Root	.076	2.707[a]	7.000	248.000	.010	.071	18.946	.903

a. Exact statistic
b. Computed using alpha = ,05

Tests of Within-Subjects Contrasts

Source	Measure	Time	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[a]
Time * INTvsCON	sts	Linea	.051	1	.051	1.185	.277	.005	1.185	.192
	ra1	Linea	.157	1	.157	3.400	.066	.013	3.400	.451
	ra2	Linea	.004	1	.004	.092	.762	.000	.092	.061
	open	Linea	.145	1	.145	2.363	.125	.009	2.363	.334
	uncert	Linea	.027	1	.027	.351	.554	.001	.351	.091
	self	Linea	.794	1	.794	7.357	.007	.028	7.357	.771
	socio	Linea	.004	1	.004	.004	.949	.000	.004	.050

a. Computed using alpha = ,05

Table 40: Boys' changes in outcome variables from baseline to posttest. Repeated measures MANOVA.

Within Subjects Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
factor1 * INTvsCON	Pillai's Trace	.050	1.501[a]	7.000	199.000	.169	.050	10.504	.622
	Wilks' Lambda	.950	1.501[a]	7.000	199.000	.169	.050	10.504	.622
	Hotelling's Trace	.053	1.501[a]	7.000	199.000	.169	.050	10.504	.622
	Roy's Largest Root	.053	1.501[a]	7.000	199.000	.169	.050	10.504	.622

a. Exact statistic
b. Computed using alpha = ,05

Table 41: Baseline scores and significant differences in outcome variables due to demographic variables (gender and study program)

Grouping variable	*Significant differences?*	*Which variables?*
Gender	*Yes (t-test)*	*STS, RA1, RA2, UNCERT, SELF, TotalSAT, SAT_PE*
Study program	*Yes (t-test)*	*SYMP, RA1, RA2, OPEN, SELF, SOCIO*
School level	*Yes (Anova)*	*UNCERT, SOCIO*
Immigrant background	*Yes (t-test)*	*SOCIO*
Experience abroad	*No (t-test)*	

Gender differences in outcome variables at baseline

Gender (N=479)	Girls (n=263) Mean ± *SD*	Boys (n=216) Mean ± *SD*	*p*
Outcome variables			
DIFF	4.22 ± 0.76	4.35 ± 0.70	.07
SYMP	2.32 ± 0.71	2.20 ± 0.75	.07
STS-pattern	0.29 ± 0.27	0.23 ± 0.25	.02
RA1 (N=477*)	2.42 ± 0.35	2.50 ± 0.35	.01
RA2 (N=476*)	2.92 ± 0.27	2.85 ± 0.33	.01
OPEN	3.29 ± 0.42	3.31 ± 0.36	.57
UNCERT (N=477*)	2.21 ± 0.62	2.02 ± 0.54	.00
SELF (N=477*)	2.50 ± 0.53	2.38 ± 0.59	.02
SOCIO (N=477*)	6.23 ± 2.02	5.95 ± 1.67	.10
SAT_PE	4.43 ± 1.26	5.05 ± 1.04	.00
TotalSAT	4.79 ± 0.91	5.10 ± 0.71	.00

Note. SD = Standard Deviation, *p* calculated with t-test.
*lower number of respondents due to missing data, calculated after missing analyses

Study program and differences between outcome variables at pretest

Study program (N=479)	Academic (n=389) Mean ± *SD*	Work related (n=90) Mean ± *SD*	*p*
Outcome variables			
DIFF	4.31 ± 0.68	4.16 ± 0.95	.16
SYMP	2.31 ± 0.71	2.09 ± 0.78	.02
STS-pattern	0.27 ± 0.26	0.23 ± 0.28	.20
RA1 (N=477*)	2.44 ± 0.36	2.52 ± 0.31	.04
RA2 (N=476*)	2.91 ± 0.30	2.83 ± 0.31	.03
OPEN	3.31 ± 0.39	3.22 ± 0.38	.03
UNCERT (N=477*)	2.12 ± 0.58	2.17 ± 0.64	.52
SELF (N=477*)	2.41 ± 0.56	2.57 ± 0.55	.02
SOCIO (N=477*)	6.18 ± 1.91	5.78 ± 1.69	.05
SAT_PE	4.69 ± 1.21	4.78 ± 1.18	.55
TotalSAT	4.94 ± 0.81	4.87 ± 0.94	.48

Note. SD = Standard Deviation, *p* calculated with t-test.
*lower number of respondents due to missing data, calculated after missing analyses

Table 42: Baseline teacher characteristics of intervention vs. control group

Characteristics	Total (N=26) N (%) or Mean ± *SD* (Range)	Intervention (n = 16) N (%) or Mean ± *SD* (Range)	Control (n = 10) N (%) or Mean ± *SD* (Range)	*p*
Gender				
Female	7 (26.9 %)	4 (25.0 %)	3 (30.0%)	
Male	19 (73.1 %)	12 (75.0 %)	7 (70.0%)	
Age (years)	38.0 ± 11.9 (25-64 years)	38.6 ± 13.8 (25-64 years)	36.9 ± 8.9 (27-56 years)	
Experience (years)	11.1 ± 9.8 (1-33 years)	10.7 ± 10.4 (1-30 years)	11.8 ± 9.3 (2-33 years)	
Education				
Master	9 (34.6 %)	6 (37.5%)	3 (30.0%)	
Bachelor	17 (65.4 %)	10 (62.5%)	7 (70.0%)	
Immigrant background				
Yes	4 (15.4%)	3 (18.7%)	1 (10.0%)	
No	22 (84.6%)	13 (81.3%)	9 (90.0%)	
Abroad experience (>6months)				
Yes	9 (34.6%)	6 (37.5%)	3 (30.0%)	
No	17 (65.4%)	10 (62.5%)	7 (70.0%)	
Athletic experience (at present)				
Yes	10 (38.5%)	6 (37.5%)	4 (40.0%)	
No	16 (61.5%)	10 (62.5%)	6 (60.0%)	
Athletic experience (earlier)				
Yes	23 (88.5%)	14 (87.5%)	9 (90.0%)	
No	3 (11.5%)	2 (12.5%)	1 (10.0%)	
Teacher Self-efficacy scale (TSE)				
TSE-Total	4.78 ± 0.75	4.77 ± 0.72*	4.79 ± 0.84	.95
TSE1-Inst	5.36 ± 0.77	5.38 ± 0.78*	5.33 ± 0.80	.86
TSE2-Moti	4.19 ± 1.12	4.35 ± 0.86*	3.95 ± 1.45	.45
TSE3-Adap	4.45 ± 1.12	4.27 ± 0.93*	4.73 ± 1.36	.37
TSE4-Dici	4.53 ± 1.08	4.65 ± 0.81*	4.35 ± 1.43	.56
TSE5-Coop	5.24 ± 0.93	5.12 ± 1.09*	5.43 ± 0.66	.39
TSE6-Cope	5.10 ± 0.85	4.88 ± 0.88*	5.43 ± 0.74	.11

Note. SD = Standard Deviation, *p* calculated with χ^2 or t-test. * One teacher missing TSE scores of the baseline measurement. TSE-dimensions: Inst=Instruction, Moti=Motivation, Adap=Adaptation, Dici=Discipline, Coop=Cooperation, Cope=Coping, (for further details on TSE-scale see p??).

Table 43: Baseline values (T1), posttest values (T2), and change scores (Δ), for teachers performance indicators in I-schools and C-schools.

Performance variables	Teacher	N*	Median	Mean Ranks	Z-value	*p*	ES, *r*
METH (T1):	Intervention	16	1.67	13.75			
	Control	10	1.33	13.10	− 0.21	.83	.04
METH (T2):	Intervention	16	2.67	16.97			
	Control	10	1.83	7.95	− 2.98	.00	.58
ΔMETH:	**Intervention**	**16**	**1.17**	**16.00**			
	Control	**10**	**0.33**	**9.50**	**− 2.13**	**.03**	**.42**
EB1 (T1):	Intervention	15	2.25	11.43			
	Control	10	2.38	15.35	− 1.34	.18	.27
EB1 (T2):	Intervention	15	2.38	14.38			
	Control	10	2.25	12.10	− 0.75	.45	.15
ΔEB1:	**Intervention**	**15**	**0.25**	**15.66**			
	Control	**10**	**−0.25**	**10.05**	**− 1.88**	**.06**	**.38**
EB2 (T1):	Intervention	15	1.67	11.57			
	Control	10	2.33	15.15	− 1.23	.22	.25
EB2 (T2):	Intervention	15	2.00	12.88			
	Control	10	2.33	14.50	− 0.54	.59	.11
ΔEB2:	**Intervention**	**15**	**0.17**	**14.63**			
	Control	**10**	**0.00**	**11.70**	**− 0.98**	**.33**	**.20**
EB3 (T1):	Intervention	15	2.00	14.53			
	Control	10	1.50	10.70	− 1.37	.17	.27
EB3 (T2):	Intervention	15	2.00	15.13			
	Control	10	1.75	10.90	− 1.45	.15	.29
ΔEB3:	**Intervention**	**15**	**0.00**	**14.44**			
	Control	**10**	**0.00**	**12.00**	**− 0.86**	**.39**	**.17**
AA1 (T1):	Intervention	15	0.50	12.23			
	Control	10	0.88	14.15	− 0.65	.52	.13
AA1 (T2):	Intervention	15	0.75	14.13			
	Control	10	0.63	12.50	− 0.54	.59	.11
ΔAA1:	**Intervention**	**15**	**0.00**	**14.78**			
	Control	**10**	**0.00**	**11.45**	**− 1.12**	**.26**	**.22**
AA2 (T1):	Intervention	15	2.00	13.63			
	Control	10	1.83	12.05	− 0.55	.58	.11
AA2 (T2):	Intervention	15	1.67	13.94			
	Control	10	1.83	12.80	− 0.38	.70	.08
ΔAA2:	**Intervention**	**15**	**0.00**	**13.69**			
	Control	**10**	**0.00**	**13.20**	**− 0.16**	**.87**	**.03**
AA3 (T1):	Intervention	15	1.67	12.43			
	Control	10	1.67	13.85	− 0.48	.63	.10
AA3 (T2):	Intervention	15	1.33	12.03			
	Control	10	1.83	15.85	− 1.26	.21	.25
ΔAA3:	**Intervention**	**15**	**0.33**	**12.78**			
	Control	**10**	**0.17**	**14.65**	**− 0.62**	**.54**	**.13**
KNOW (T1):	Intervention	15	2.25	11.23			
	Control	10	2.44	15.65	− 1.49	.14	.30
KNOW (T2):	Intervention	15	2.38	11.75			
	Control	10	2.44	16.30	− 1.50	.13	.30
ΔKNOW:	**Intervention**	**15**	**0.13**	**14.13**			
	Control	**10**	**0.00**	**12.50**	**− 0.55**	**.58**	**.11**

Note. * One Intervention-Teacher missing baseline measurements, except METH; *p* calculated with independent samples Mann-Whitney U test; *ES (Effect size, r)* calculated with Z/square root of N

Table 44: Independent samples Mann Whitney U test for differences in change scores between intervention group and control group teachers

Test Statistics[b]

	METH change	EB1 change	EB2 change	EB3 change	AA1 change	AA2 change	AA3 change	KNOW change
Mann-Whitney U	40.000	45.500	62.000	65.000	59.500	77.000	68.500	70.000
Wilcoxon W	95.000	100.500	117.000	120.000	114.500	132.000	204.500	125.000
Z	-2.127	-1.880	-.983	-.864	-1.118	-.164	-.619	-.554
Asymp. Sig. (2-tailed)	.033	.060	.326	.387	.263	.870	.536	.579
Exact Sig. [2*(1-tailed Sig.)]	.036[a]	.068[a]	.363[a]	.452[a]	.286[a]	.897[a]	.551[a]	.623[a]

a. Not corrected for ties.

b. Grouping Variable: Intervention vs. control

Table 45: MANOVA results, teacher variables and possible effects on student outcomes (cf. chapter 8.2.1).

Time x Teacher variable	*Wilks Lambda*	*F-value (df)*	*Sig. (p)*	*Eta squared*	*Obs. power*
1. Method competence (METH) (High vs. Low)	.98	0.799 (7, 290)	.59	.019	.34
2. Teacher Self Efficacy (TSE) (High vs. Low)	.99	0.799 (7, 276)	.87	.011	.20
3. Teacher Self Efficacy – TSE6 Cope (High vs. Low)	.98	0.751 (7, 290)	.63	.018	.32
4. Gender, Teachers (Male vs. Female)	.97	1.225 (7, 290)	.29	.029	.52
5. Age and experience (Experienced vs. Novice)	.99	0.598 (7, 290)	.76	.014	.26
6. Education (Master vs. Bachelor)	.98	0.656 (7, 290)	.71	.016	.28
7. Immigrant and experience abroad (Yes vs. No)	.96	1.690 (7, 290)	.11*	.039	.69
8. Athlete at present (Yes vs. No)	.99	0.414 (7, 290)	.89	.010	.18
9. Contentment with course (High vs. Low)	.99	0.424 (7, 290)	.89	.010	.19
10. Optimal teacher constellation (Optimal vs. Less optimal)	.99	0.458 (7, 290)	.86	.011	.20

Note: * An inspection of the mean scores shows that this small tendency (p=.11) is in opposite direction of the expectations. Teachers reporting "Yes" on Immigrant background and Experience abroad seem to have students changed in direction of being less sensitive towards differences and strangeness. Change mean scores STS-pattern, students; Yes (n=142, M= − 0.15±0.92) vs. No (n=164, M= 0.18±1.05).

Table 46: Descriptive statistics of the two implementing schools regarding immigrant background

School * Immigrant_back Crosstabulation

			Immigrant_back		Total
			1 Yes	2 No	
School	High impl. 1	Count	17	30	47
		% within School	36.2%	63.8%	100.0%
	High impl. 2	Count	41	13	54
		% within School	75.9%	24.1%	100.0%
Total		Count	58	43	101
		% of Total	57.4%	42.6%	100.0%

Table 47: Descriptive statistics of the two implementing schools regarding gender (girls vs. boys)

School * Gender Crosstabulation

			Gender		Total
			1 Girls	2 Boys	
School	High impl. 1	Count	21	27	48
		% within School	43.8%	56.3%	100.0%
	High impl. 2	Count	34	20	54
		% within School	63.0%	37.0%	100.0%
Total		Count	55	47	102
		% of Total	53.9%	46.1%	100.0%

Output 2: Bootstrapping matrix, students of high implementing teachers vs. control group (PASW 18.0 Output)

```
**************************************************************

Preacher And Hayes (2008) SPSS Macro For Multiple Mediation

Written by Andrew F. Hayes, The Ohio State University

http://www.comm.ohio-state.edu/ahayes/

For details, see Preacher, K. J., & Hayes, A. F. (2008). Asymptotic

and resampling strategies For assessing And comparing indirect effects

in multiple mediator models. Behavior Research Methods, 40, 879-891

**************************************************************
Dependent, Independent, and Proposed Mediator Variables:
DV =   UNCE_cha
IV =   INTvsCON
MEDS = SELF_cha

Sample size
        273

IV to Mediators (a paths)
             Coeff        se         t         p
SELF_cha     ,4001     ,1312    3,0503     ,0025

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
SELF_cha    -,1186     ,0579   -2,0468     ,0416

Total Effect of IV on DV (c path)
             Coeff        se         t         p
INTvsCON     ,0736     ,1258     ,5850     ,5590

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
INTvsCON     ,1210     ,1272     ,9515     ,3422

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,0165     ,0092    2,2679    2,0000  270,0000     ,1055

**************************************************************

           BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
               Data      boot      Bias        SE
TOTAL       -,0474    -,0447     ,0027     ,0301
SELF_cha    -,0474    -,0447     ,0027     ,0301

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,1240     -,0018
SELF_cha    -,1240     -,0018

**************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
**************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   OPEN_cha
IV =   SELF_cha
MEDS = UNCE_cha

Sample size
        273

IV to Mediators (a paths)
             Coeff        se         t         p
UNCE_cha    -,1085     ,0570   -1,9057     ,0578

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
UNCE_cha    -,2117     ,0625   -3,3858     ,0008

Total Effect of IV on DV (c path)
             Coeff        se         t         p
SELF_cha    -,0182     ,0597    -,3049     ,7606

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
SELF_cha    -,0412     ,0590    -,6981     ,4857

Model Summary for DV Model
      R-sq  Adj R-sq         F       df1       df2         p
     ,0411     ,0340    5,7802    2,0000  270,0000     ,0035
**************************************************************

           BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
               Data      boot      Bias        SE
TOTAL        ,0230     ,0234     ,0004     ,0170
UNCE_cha     ,0230     ,0234     ,0004     ,0170

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,0014     ,0698
UNCE_cha    -,0014     ,0698
```

```
************************************************************
Level of Confidence for Confidence Intervals:
  95
Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   RA2_cha
IV =   UNCE_cha
MEDS = OPEN_cha

Sample size
       269

IV to Mediators (a paths)
             Coeff        se         t         p
OPEN_cha    -,1924     ,0608   -3,1661     ,0017

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
OPEN_cha     ,2441     ,0591    4,1315     ,0000

Total Effect of IV on DV (c path)
             Coeff        se         t         p
UNCE_cha     ,1348     ,0604    2,2303     ,0266

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
UNCE_cha     ,1817     ,0598    3,0404     ,0026

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1       df2         p
     ,0775     ,0706   11,1714    2,0000  266,0000     ,0000
************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL       -,0470    -,0465     ,0004     ,0234
OPEN_cha    -,0470    -,0465     ,0004     ,0234

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,1090    -,0102
OPEN_cha    -,1090    -,0102
************************************************************

Level of Confidence for Confidence Intervals:
  95
Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   RA2_cha
IV =   SELF_cha
MEDS = UNCE_cha

Sample size
       269

IV to Mediators (a paths)
             Coeff        se         t         p
UNCE_cha    -,1104     ,0569   -1,9389     ,0536

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
UNCE_cha     ,1316     ,0609    2,1595     ,0317

Total Effect of IV on DV (c path)
             Coeff        se         t         p
SELF_cha    -,0397     ,0571    -,6950     ,4877

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
SELF_cha    -,0251     ,0571    -,4404     ,6600

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1       df2         p
     ,0190     ,0116    2,5765    2,0000  266,0000     ,0779
************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL       -,0155    -,0157    -,0011     ,0139
UNCE_cha    -,0155    -,0157    -,0011     ,0139

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,0583     ,0010
UNCE_cha    -,0583     ,0010

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   RA2_cha
IV =   INTvsCON
MEDS = OPEN_cha

Sample size
        271

IV to Mediators (a paths)
             Coeff         se          t          p
OPEN_cha     ,2618     ,1273    2,0565     ,0407

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
OPEN_cha     ,2185     ,0591    3,6993     ,0003

Total Effect of IV on DV (c path)
             Coeff         se          t          p
INTvsCON     ,0655     ,1262     ,5194     ,6039

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
INTvsCON     ,0083     ,1243     ,0671     ,9465

Model Summary for DV Model
      R-sq  Adj R-sq          F        df1        df2          p
     ,0495     ,0424    6,9837    2,0000  268,0000     ,0011

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        ,0572     ,0571    -,0001     ,0338
OPEN_cha     ,0572     ,0571    -,0001     ,0338

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0005     ,1403
OPEN_cha     ,0005     ,1403

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   Sat_PE_p
IV =   INTvsCON
MEDS = OPEN_cha

Sample size
        274

IV to Mediators (a paths)
             Coeff         se          t          p
OPEN_cha     ,2600     ,1305    1,9925     ,0473

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
OPEN_cha     ,1301     ,0753    1,7277     ,0852

Total Effect of IV on DV (c path)
             Coeff         se          t          p
INTvsCON     ,4477     ,1626    2,7530     ,0063

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
INTvsCON     ,4139     ,1632    2,5359     ,0118

Model Summary for DV Model
      R-sq  Adj R-sq          F        df1        df2          p
     ,0377     ,0306    5,3097    2,0000  271,0000     ,0055

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        ,0338     ,0327    -,0012     ,0297
OPEN_cha     ,0338     ,0327    -,0012     ,0297

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,0052     ,1183
OPEN_cha    -,0052     ,1183

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   SatT_cha
IV =   SELF_cha
MEDS = UNCE_cha

Sample size
        272

IV to Mediators (a paths)
             Coeff         se          t          p
UNCE_cha    -,1074     ,0572   -1,8781     ,0614

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
UNCE_cha    -,1093     ,0559   -1,9557     ,0515

Total Effect of IV on DV (c path)
             Coeff         se          t          p
SELF_cha     ,0925     ,0528    1,7517     ,0810

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
SELF_cha     ,0808     ,0529    1,5274     ,1278

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1        df2          p
     ,0251     ,0179    3,4628    2,0000  269,0000     ,0327

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL         ,0117     ,0113    -,0005     ,0092
UNCE_cha      ,0117     ,0113    -,0005     ,0092

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,0001     ,0426
UNCE_cha    -,0001     ,0426

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   Sat_PE_p
IV =   UNCE_cha
MEDS = SatT_cha

Sample size
        272

IV to Mediators (a paths)
             Coeff         se          t          p
SatT_cha    -,1190     ,0557   -2,1378     ,0334

Direct Effects of Mediators on DV (b paths)
             Coeff         se          t          p
SatT_cha     ,7948     ,0726   10,9482     ,0000

Total Effect of IV on DV (c path)
             Coeff         se          t          p
UNCE_cha    -,0235     ,0797    -,2949     ,7683

Direct Effect of IV on DV (c-prime path)
             Coeff         se          t          p
UNCE_cha     ,0711     ,0670    1,0615     ,2894

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1        df2          p
     ,3085     ,3033   59,9947    2,0000  269,0000     ,0000

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL       -,0946    -,0920     ,0026     ,0402
SatT_cha    -,0946    -,0920     ,0026     ,0402

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL       -,1830    -,0156
SatT_cha    -,1830    -,0156

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   SatT_cha
IV =   INTvsCON
MEDS = Sat_PE_p

Sample size
        274

IV to Mediators (a paths)
             Coeff        se         t         p
Sat_PE_p     ,4477     ,1626    2,7530     ,0063

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
Sat_PE_p     ,3870     ,0361   10,7320     ,0000

Total Effect of IV on DV (c path)
             Coeff        se         t         p
INTvsCON     ,3105     ,1152    2,6945     ,0075

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
INTvsCON     ,1372     ,0981    1,3997     ,1627

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1       df2         p
     ,3165     ,3114   62,7417    2,0000  271,0000     ,0000

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        ,1733     ,1730    -,0002     ,0622
Sat_PE_p     ,1733     ,1730    -,0002     ,0622

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0546     ,2989
Sat_PE_p     ,0546     ,2989

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```

```
************************************************************

Dependent, Independent, and Proposed Mediator Variables:
DV =   Sat_PE_p
IV =   INTvsCON
MEDS = SatT_cha

Sample size
        274

IV to Mediators (a paths)
             Coeff        se         t         p
SatT_cha     ,3105     ,1152    2,6945     ,0075

Direct Effects of Mediators on DV (b paths)
             Coeff        se         t         p
SatT_cha     ,7706     ,0718   10,7320     ,0000

Total Effect of IV on DV (c path)
             Coeff        se         t         p
INTvsCON     ,4477     ,1626    2,7530     ,0063

Direct Effect of IV on DV (c-prime path)
             Coeff        se         t         p
INTvsCON     ,2084     ,1383    1,5070     ,1330

Model Summary for DV Model
      R-sq  Adj R-sq         F        df1       df2         p
     ,3173     ,3122   62,9681    2,0000  271,0000     ,0000

************************************************************

          BOOTSTRAP RESULTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV through Proposed Mediators (ab paths)
              Data      boot      Bias        SE
TOTAL        ,2393     ,2357    -,0036     ,0905
SatT_cha     ,2393     ,2357    -,0036     ,0905

Bias Corrected Confidence Intervals
             Lower     Upper
TOTAL        ,0661     ,4275
SatT_cha     ,0661     ,4275

************************************************************

Level of Confidence for Confidence Intervals:
  95

Number of Bootstrap Resamples:
  1000

------ END MATRIX -----
```