# TEACHING RESPONSIBILITY TO ENABLE COOPERATIVE LEARNING IN PE

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**ABSTRACT**

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The purpose of the study was to plan, implement and describe the use of Teaching Social and Personal Responsibility model with Cooperative learning method in PE. In this study I used Hellison's TPSR model (2003) to teach responsibility and planned every task so that the tasks required teamwork and everybody's participation. By teaching personal and social responsibility the aim was to improve pupils' cooperating skills and also to create a safe learning environment which would contribute to succeed in cooperative tasks and that way increase enjoyment in class. In the beginning of every lesson the objectives of the day's lesson were presented and we discussed how to achieve them. Teaching responsibility and cooperative learning are in line with Self-Determination Theory (Deci & Ryan 2000) which is one the most used motivational theories of today.

The present study was implemented in the autumn 2013, when the pupils that participated in the study had met only two months earlier and started their 7th grade. The group was a sport oriented class, including 13 boys and 8 girls and the teaching period lasted six weeks. This study was a qualitative action study as well as an action research in which I conducted as a teacher-researcher. The main research material of the qualitative research consisted of my own research diary and oral and written feedback from the pupils that was gathered after each lesson. Partial videotaping and feedback from another observing teacher was used to support or correct my perceptions of the lessons. New information was collected by reflecting own experiences, and conceptualizing and analyzing the material.

Even though the teaching period was short and the results cannot be generalized, this research indicates that teaching responsibility with TPSR model and cooperative learning not only fit together but the learning results can be actually more effective. More, mastering these contents will help teachers in many ways like in planning PE lessons, giving short and long term aims and providing ideas and exercises to improve students' cooperating skills systematically and logically. Studies all around the world prove that increasing students' responsibility and cooperative tasks increase students' devotion and motivation in PE followed by better learning results and better enjoyment. TPSR model offers a systematic way how to teach and increase students' responsibility in PE lessons. However, implementing TPSR model and cooperative learning in teaching requires skill to internalize and bring the contents as a natural part of PE lessons.

Keywords: Physical education, self-directed learning, motivation, teaching responsibility, cooperative learning

## TIIVISTELMÄ

Koivisto, Kalle-Veikko. 2015. Vastuuntuntoisuutta opettamalla parempaa yhteistyökykyä. Liikuntakasvatuksen laitos, Jyväskylän yliopisto. Liikuntapedagogiikan pro gradu – tutkielma, 71 sivua, 10 liitetiedosta.

Tutkimuksen tarkoituksena oli suunnitella ja opettaa vastuuntuntoisuutta yhteisoppimisen periaatteiden mukaisesti sekä kuvata opetuksen onnistumista ja kokemuksia kuuden viikon ajalta. Vastuuntuntoisuutta opetettiin Hellisonin Teaching Personal and Social Responsibility -malli (2003) avulla ja tunnit olivat suunniteltu niin, että jokainen tehtävä suoritettiin yhteistoiminnallisesti. Opettamalla oppilaille yksilö- ja ryhmätason vastuuntuntoisuutta pyrittiin parantamaan oppilaiden yhteistyötaitoja. Samallapyrittiin luomaan turvallinen ja tehokas oppimisilmapiiri, joka edesauttaisi yhteistoiminnallisista tehtävistä selviytymistä ja lisäisi viihtyvyyttä. Jokainen liikuntatunti oli suunniteltu huolella niin, että tehtävät edellyttivät yhteistyötä muiden oppilaiden kanssa. Jokaisen tunnin alussa kerrottiin tunnin päätavoitteet ja keskusteltiin, kuinka ne oli mahdollista saavuttaa. Vastuuntuntoisuuden opetus ja yhteisoppimisen periaatteet ovat linjassa vallitsevan motivaatioteorian, Itsemääräämisteorian (Deci & Ryan 2000), kanssa.

Tutkimus toteutettiin syksyllä 2013, jolloin tutkimukseen osallistuneet seitsemäsluokkalaiset olivat hiljattain aloittaneet yläkoulun. Tutkimusryhmän muodosti liikuntaluokka, jossa oli 13 poikaa ja 8 tyttöä. Tutkimus oli luonteeltaan laadullinen toimintatutkimus, jossa itse toimin tutkija-opettajana. Tutkimusaineiston keräsin kirjoittamalla tutkimuspäiväkirjaa omista havainnoistani koko tutkimuksen ajan sekä keräämällä kirjallista -ja suullista palautetta oppilailta joka tunnilta erikseen. Vastuuopettajan havainnot ja osittainen videokuvaus toimivat tutkimusta tukevana aineistona omien havaintojeni lisäksi. Tutkimusmateriaalia analysoitiin jatkuvasti tutkimuksen ajan reflektoimalla ja käyttämällä hyväksi alan tutkimuksia ja kirjallisuutta. Materiaali auttoi suunnittelemaan liikuntatunteja ja seuraamaan oppilaiden oppimista.

Vaikka tutkimusjakso oli lyhyt, eikä tuloksia voida yleistää, tutkimus osoitti, että Hellisonin vastuuntuntoisuuden malli ja yhteisoppiminen sopivat samanaikaisesti opetettavaksi kokonaisuudeksi. Lisäksi nämä sisällöt auttoivat opettajaa monella tavalla, kuten liikuntatuntien suunnittelussa, antamalla opettajalle pitkän ja lyhyen tähtäimen tavoitteita, sekä työkaluja oppilaiden yhteistyötaitojen parantamiseen systemaattisesti sekä loogisesti. Tutkimukset maailmalla osoittavat, että oppilaiden vastuun lisääminen tunneilla ja yhteistoiminnalliset työskentelytavat lisäävät oppilaiden sitoutumista ja heidän motivaatiotaan, mikä johtaa parempiin oppimistuloksiin ja lisää viihtyvyyttä. Vastuuntuntoisuuden malli tarjoaa valmiin kokonaisuuden, jonka avulla voidaan opettaa ja lisätä oppilaiden vastuuta oppitunneilla. Niin vastuuntuntoisuuden mallin kuin yhteisoppimisen toteuttaminen vaatii kuitenkin opettajalta taitoa sisäistää ja tuoda sisällöt luonnolliseksi osaksi omaa liikunnanopetusta.
Avainsanat: Liikuntakasvatus, omatoimisuus, motivaatio, vastuuntuntoisuuden opettaminen, yhteisoppiminen

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# 1 INTRODUCTION

Instead of stick and carrots as a motivator for learning, research nowadays proves that intrinsic motivation holds the key for better learning results. Helping students to find a meaningful aim for doing tasks improves learning in various ways and shows better learning results. Self-Determination Theory from Deci and Ryan (1985, 2000) suggests that satisfying three basic psychological needs is the cornerstone for building intrinsic motivation. Those three psychological needs are autonomy, relatedness and self-competence.

Modern concept of learning is heading towards learner-centered way of working and further from teacher-led education. Including pupils to take part in decision-making and sharing responsible tasks with them are ways to increase the feeling of autonomy. To succeed sharing the responsibility pupils need to act in a responsible way. Studies show that responsibility can be taught and learned, but the teaching needs to be systematic and continuous (Dyson 2002).

Don Hellison created a model for teaching responsibility in schools that can be integrated inside any school subject. At first it was created to reduce disruptive behavior with "at-risk" students in USA. It has been a great success and many teachers have used at least some variations of Teaching Social and Personal Responsibility model successfully in their work. TSPR- model consists of five levels that help students to focus on what they should take responsibility for. The levels are: r*especting the rights and feelings of others*; p*articipation and effort*; *self-direction*; *helping others and leadership*, and lastly *outside the gym* (Hellison 2003).

In Finland Teppo Rantala used TPSR model in PE classes and found it suitable also for Finnish schools (2002, 2004). Both of his studies showed some learning at personal level, but at social level, learning would require prolonged teaching (Rantala 2002, 2004).

This study combined Hellison's responsibility model and cooperative learning method and sought to promote motivation by encouraging the pupils for more learner-centered way of working and increasing tasks that required teamwork. Directing the pupils to work without

constant supervision and solve problems together aimed to teach them autonomy. The classes included a lot of small-group working, as well as self-regulated tasks. Directing pupils to collaboration and teamwork is also advised by teacher trainers to bolster the feeling of community against individualism followed by deficiencies in pupils' cognitive and interaction skills (Kiviniemi 2000, 113).

## 2 MOTIVATION: INTRINSIC VERSUS EXTRINSIC

"There are three things to remember about education. The first is motivation. The second one is motivation. The third one is motivation." (Maehr & Meyer 1997, 372). Teachers can order tasks and make pupils do exercises but one cannot really force them to learn. Indeed, the key for learning is motivation; and to be precise: Intrinsic motivation. In the following chapters I will discuss about motivation, the unseen force that moves us.

### 2.1 Self-Determination Theory

Nowadays in the motivational studies, especially when discussing about sport motivation, the main framework adopts a social-cognitive view of motivation (Bandura 1986; Spray, Wang, Bindle, Chatzisarantis & Warburton 2006). The social-cognitive view includes cognitive-, affective- and value related variables, which affect how hard one is pursuing his goals. In this thesis the framework is based on Self-Determination Theory, later only SDT, (Deci & Ryan 1985; 2000) and Achievement Goal Theory, AGT, (Nicholls 1989) which both represent the social-cognitive motivational theories.

Self-Determination Theory is one of the most used frameworks in the motivational studies (Deci & Ryan 2000). As a social-cognitive theory, it includes both social (*e.g.* physical education classes' motivational climate) and cognitive (autonomy, perceived competence and relatedness) factors and from their combined effect forms the motivation towards the action. The result shows cognitive (*e.g.* willingness to participate), affective (*e.g.* enjoyment) and behavioral (*e.g.* perseverance) outcomes.

The motivational climate of physical education classes can satisfy or prevent the three basic psychological needs: perceived competence (or self-efficacy), sense of autonomy and relatedness (social contextual conditions). If these needs are satisfied, pupil's self-determination turns positive which means that one is participating in the task from his free will (Deci & Ryan 2000). This type of motivation is called *intrinsic.* On the other hand if the

social climate doesn't satisfy these three basic psychological needs then one doesn't have the feeling of self-determination and autonomy. Then the pupil has the feeling that his actions are controlled from outside and he is executing the tasks only to obey the teacher (Deci & Ryan 2000). This can build the motivation *extrinsic* and even lead to the complete lack of motivation *i.e.* amotivation. Outcome can be anxiety, disbeliefs of the usefulness and purpose of practicing or more difficulties in learning for the decreased perseverance and willingness to participate (Deci & Ryan 1985; Standage, Duda & Ntoumanis 2005). Research has shown that the quality of experience and performance can be very different when one is behaving for intrinsic versus extrinsic reasons (Deci & Ryan 2000).

Extrinsic motivation refers to doing something because it leads to a separable outcome, like getting rewarded or punished (positive feedback versus bad grade) (Deci & Ryan 1985, 2000). In that case the behavior is not self-determined but controlled by external factors (Deci & Ryan 2000; Vallerand 2001). Even if intrinsic motivation results high quality learning and is appraised in the direction of learning (Deci & Ryan 2000) in PE classes it is not possible for teachers to always find or give tasks that everyone likes. Therefore it is useful to know the varied types of extrinsic motivation that SDT proposes. Extrinsically motivated actions can be done with resistance or resentment or, alternatively, "with the attitude of willingness that reflects an inner acceptance of the value or utility of a task" (Deci & Ryan 2000). In the former case one feels truly forced into action while the latter one sees the possible benefit for oneself ("practice and repetition can be beneficial") and thus endorsed with a sense of volition.

Intrinsic motivation represents purely autonomic motivation: Doing something because the action is inherently interesting or enjoyable. In PE class, a situation that represents intrinsic motivation can be for example when pupils continue practicing or playing even when the class is finished. Intrinsic motivation enhances participation to physical activity (Weiss 2000) and intrinsic motivation is one of the main reasons for doing physical activity (Goudas, Biddle & Fox 1994). It contributes to the student's enjoyment and emerges positive feelings (Standage et al. 2005) *i.e.* positive experiences. Studies show that a student, whose motivation turns intrinsic, starts to consider his physical activity more important than earlier and puts more effort to it also in leisure time (Standage et al. 2005). His capacity to focus increases, as

well as his will to accept challenging tasks. As a consequence, his learning results are better (Deci & Ryan 2000).

As it is, intrinsic motivation can be seen having a very important role in doing physical activity in the first place, but also making physical activity part of everyday life. For this, one of the main objects for teachers in physical education classes should be trying to create an environment that contributes emerging intrinsic motivation towards physical activity.

In SDT Ryan and Deci (2000) detail intrinsic motivation: *"In one sense intrinsic motivation exists within individuals, in another sense it exists in the relation between individuals and activities. People are intrinsically motivated for some activities and not others, and not everyone is intrinsically motivated for any particular task."* (Deci & Ryan 2000, 56).

It is not so rare to meet pupils in PE classes who are not into any physical activity and wouldn't want to participate. But the relation between individuals and activities, the social environment, could be enough to motivate pupils to participate fully even if the task itself is not appealing.

### 2.1.1 Autonomy

Sense of autonomy refers to a person's possibility to influence on one's own activity and regulate it (Deci & Ryan 1985). Autonomy is the most studied factor in SDT. The sense of autonomy resolves whether motivation builds intrinsic or extrinsic (Deci & Ryan 2000). For example pupils can find playing handball enjoyable in the class when teacher is only observing and not taking any part in the game; but when teacher starts making rules to modify the game, the sense of autonomy may decrease and it leads to lower interest in playing. If the action is directed from outside or it is being controlled, pupils may not only lose initiative, but also learn less well, especially when learning is complex or requires conceptual and creative processing (Benware & Deci 1984; Grolnick & Ryan 1987). On the other hand, autonomy-supportive teachers generate in pupils greater intrinsic motivation, curiosity, and the desire for challenge (Deci, Nezlek, & Sheinman 1981; Ryan & Grolnick 1986). Many studies show that

autonomy is related to intrinsic motivation and showing more interest towards learning, as well as better results in learning (Deci, Schwartz, Sheinman & Ryan 1981; Grolnick & Ryan 1987; Ryan & Grolnick 1986), higher perceived competence (Ommundsen 2005) and higher physical activity not only in PE classes but also off-school. Including students in decision making and giving tasks that allow modifications are one of the many ways to support the feeling of autonomy.

### 2.1.2 Perceived competence

Perceived competence (or self-efficacy) refers to our perception of our own abilities while interacting in social environment (Deci & Ryan 1985; Harter 1978; Shavelson & Bolus 1982). In other words, it means how good one thinks he is considering the group he is part of. One can feel himself unskilled next to national team gymnastics but capable when practicing with beginners. As perceived competence is dependent on the others, therefore social factor is also involved. For the trickiness, that school groups consist of all-round skill level of students, Achievement Goal Theory (later AGT) from Nicholls (1989) was chosen to reinforce SDT. School groups are established rather randomly and the skill level of the students varies a lot within them. AGT (Nicholls 1989) reveals firmly the distinction between ego and task oriented motivational climate, which helps to plan classes where students could work together, preventing the feeling of incompetence compared to each other and using heterogeneous groups to its advantage (Dunn & Wilson 1991). Task oriented motivational climate is based on self-comparison rather than normative comparison which separates the other group members out of it. This helps to form an idea of their own abilities based on their personal perception rather than comparison. Soini (2006) used AGT successfully with SDT in his dissertation to extend perceived competence into two criteria, task and ego involvement.

Perceived competence is one of the main motivating factors in physical activity (Wallhead & Buckworth 2004). It is related to participation in physical activity during both PE classes and off-school (Carroll & Loumidis 2001; Ommundsen 2005). Perceived competence is also connected to intrinsic motivation (Deci & Ryan 2000; Ntoumanis 2001b; Ommundsen 2005). It is important to know that perceived competence is highly depending on the sense of

autonomy. In SDT the perceived competence is related to person's feelings of his own learning. If one feels the learning is controlled from outside, the results and commitment to the task lose their meaning and won't give satisfaction (Deci & Ryan 2000).

Several studies show that the climate in the class is also very meaningful for the feelings of perceived competence: feedback from the task itself, from the environment (other pupils) and from the teacher can either boost or weaker one's perceived competence (Deci, Koestner & Ryan 1999; Vallerand & Reid 1984). Task itself usually gives direct feedback: basketball either goes in or not. But if the atmosphere in the class is that errors are seen as failures, something that one should avoid, rather than being part of learning process, every non-successful performance will weaken one's perceived competence.

### 2.1.3 Relatedness

*"Human beings of all ages are happiest and able to deploy their talents to best advantage when they experience trusted others as "standing behind them". – Bowlby 1973* (Deci, Ryan & Lynch 1994).

The social side is a very significant factor when considering motivation in physical activity and it is often mentioned only in a positive way. We have a natural psychological need to be part of a group.

Number of studies show that one of the major things that make PE classes so enjoyable is the social side of the classes (Huisman 2004; Haapakorva & Välivuori 2003; Karvonen, Rahkola & Nupponen 2008; Laine 2004; Niemelä & Niemelä 2012; Nupponen & Telama 1998; 1999; Palomäki & Heikinaro-Johansson 2011; Smith & Parr 2007; Telama, Naul, Nupponen, Rychtecky & Vuolle 2002; Wold & Kannas 1993; Zacheus, Rinne, Koski & Heinonen 2003, 81). A study in Finland from Huisman (2004) showed that the most positive factors in PE classes, opinion of 9-graders themselves, were things that related to social interaction such as being together, friends, chatting, encouraging others, helping others and being understanding when others do errors. Being and doing things together can be even more important than the

physical activity itself when the satisfaction comes from participating altogether in the task (Ojanen 2000, 144). A group of motivational theorists has suggested that perceived autonomy, self-esteem, and motivation are fostered by the experience of relatedness to socializing others (Connell & Wellborn 1990; Deci & Ryan 1991; Goodenow 1993; Ryan & Lynch 1989).

Not all our actions are inherently interesting and thus must initially be externally prompted; the primary reason people would to be willing to do this kind of behavior is that they are valued by significant others to whom they feel, or would like to feel connected (Deci & Ryan 2000). In SDT relatedness is the sense of belongingness and connectedness: individual's pursuit for feeling devotion, fellowship and safety with others and the natural need to be part of a group, be recognized and get positive feelings from working in a group (Deci & Ryan 1991; 2000). Social contextual conditions can create a climate that either boost or impede intrinsic motivation by supporting or preventing person's basic psychological needs (Deci & Ryan 2000). Studies show clearly that relatedness is connected to intrinsic motivation in physical activity (Ntoumanis 2001b; Ryan & La Guardia 2000; Standage et al. 2005) and in participating in sports (Spink & Carron 1992).

The social contextual conditions in PE classes contain the teacher and group of pupils, peers. Teacher's interpersonal style has been shown to be influential in PE (Reeve, Jang, Carrell, Jeon & Barsh 2004). As being the adult and the authority in the class, teacher plays an important role in facilitating pupil's outcomes when they provide supportive relationships (Ryan, Stiller & Lynch 1994). In situations where pupils feel that the teacher is caring and showing interest (*i.e.* show involving) more intrinsic motivation has been observed than in situations where the teacher behaves indifferently (Grolnick & Ryan 1987; Ryan & Grolnick 1986; Ryan, et al. 1994).

The social environment and relatedness play a significant role when mooting about experiences in physical activity; which is why the effects of cooperative learning were seen interesting to be studied at and chosen to be part of this study. Using cooperative learning aims to increase collaboration and teamwork among the students. Hypothesis is that tasks that

require more cooperation and working in small-groups would enhance the feeling of enjoyment in the class.

## 2.2 Achievement Goal Theory

As presenting earlier, perceived competence is one of the main motivating factors in physical activity (Wallhead & Buckworth 2004). Achievement Goal Theory gives more insights about perceived competence by separating task and ego involvement, which helps us to understand how to create the most motivating environment considering the wide range of students. The main idea in AGT is to show how social environment influences in one's perceived competence (Nicholls 1989). In the theory, perceived competence is either based on self-comparison, in which I will be referring to *task involvement*, or normative-comparison, addressing to *ego involvement* (Nicholls 1989) motivational climate. Achievement Goal Theory is well used in the studies of physical education (Roberts 2001).

In AGT persons who are *task oriented* feel competent when their skills develop; they try hard and/or learn new things (Ames 1992; Nicholls 1989; Roberts 2001). In task-involvement motivational climate, perceived competence is not dependent on the others, but on the practice; process and progress in personal skills are enough to feel success and satisfaction. Therefore everyone, regardless of skill level, can experience success and joy when they find to make progress. In physical education the task-involving climate is widely observed to have connection to intrinsic motivation (Biddle & Soos 1997; Dorobantu & Biddle 1997; Goudas, Biddle & Fox 1994; Ommundsen 2005; Papaioannou 1995; Standage & Treasure 2002), enjoyment (Duda, Chi, Newton, Walling & Catley 1995; Duda & Nicholls 1992; Wallhead & Ntoumanis 2004), perceived competence (Cury, Biddle, Sarrazin & Famose 1997; Vlachopoulos & Biddle 1997; Wallhead & Ntoumanis 2004) and to self-assessed physical activity (Dempsey, Kimiecik & Horn 1993).

Persons, who are more *ego oriented* on the other hand feel competent when they win others or get good results compared to other pupils (Nicholls 1989). Showing their skills, such as finishing tasks with less work than others, are features characteristics to an ego oriented

person (Ames 1992). In ego-involving climate even trying or working hard won't guarantee the feeling of success because the criteria of perceived competence are competitive and therefore not self-regulated. Ego-involving climate is assumed to be connected to high participation motivation only if the person's task orientation is high (Roberts 2001). In physical education ego-involving climate is found to be related to pupils' low intrinsic motivation, low enjoyment (Duda, Chi, Newton, Walling & Catley 1995; Duda & Nicholls 1992; Fox, Goudas, Biddle, Duda & Armstrong 1994; Ntoumanis 2001b; Papaioannou 1995)and reduced trying on tasks (Walling & Duda 1995).

There is no consensus whether competitive climate belongs to PE classes or not. Some teachers and researchers support the idea and find it to be a good way to motivate pupils (Jääskeläinen, Korpilauri & Tikkanen 1985), but there are also studies that show competitive atmosphere to be harmful for certain types of students. Task and ego orientations don't exclude each other and everyone has features from both. What is important is to know the relation between these two. If mentality of task orientation is high enough it has no negative effect on motivation, no matter how high ego orientation is (Fox, Biddle, Duda & Armstrong 1994; Roberts 1992); but if ego orientation is higher than task orientation, particularly if the person's perceived competence is low, it might be problematic and harmful (Duda 2001; Roberts 2001). To sum it up, competitive tasks support normative comparison, which is the feature of ego-involving climate. According to AGT competitive tasks can be used without negative effects if pupils' task orientation is high enough (Nicholls 1989).

Teachers have an important role in building the motivational climate. Even if the pupils' impact (*e.g.* if they are naturally competitive) cannot be excluded, studies show that the teacher and his didactical actions are assumed to have significant effect on the motivation climate (Biddle, Cury, Goudas, Sarrazin, Famose & Durand 1995; Epstein 1989; Morgan, Kingston & Sproule 2005). That is why it is important to know what kind of actions support task orientation, and on the other hand which kinds of actions support ego orientation.

Tasks that support task-involvement climate are diverse and vary a lot, giving pupils personal challenges according to the level of their skills. Teacher is democratic and gives opportunities to pupils to be part of deciding about rules, tasks and solutions in class. Teacher shares the

responsibility and lets pupils feel autonomous, which also supports self-competence. Feedback is informative and given in the direction of the task. Groups are formed heterogeneous which helps avoiding normative comparison. Evaluating criteria are progression in the learning, trying, personal goals and cooperation with other students. The students are also included in the evaluating process. In task-involving climate, it is important that errors are seen as part of the learning: errors are not failures and no one should feel afraid of trying and ending up doing errors. Time on task is also a major thing. The action is not to be stopped if the learning process is still running. (Soini 2006.) Then pupils can practice on their own speed and won't feel that the teacher is controlling their learning (Epstein 1989).

Didactic actions that support ego-involving climate are quite the opposites. Tasks don't vary but are the same for everyone. Teacher decides what to do and forms groups according to their skills. Feedback is given by normative criteria that mean comparing students' performance to one another. Also, evaluating is based on results and comparison to other students. Using the time is inflexible and the plan of classes' activities is strict. (Soini 2006.)

Motivational climate is significant to one's perceived competence. For physically skilled pupils the ego-involving climate doesn't have reducing effect on motivation, but for less skilled pupils the normative comparison enhances the probability of negative outcomes in affective, cognitive and functional way (Duda 2001). Many studies in physical education and sports domains show better and more positive results in task-involving climate than ego-involving climate. Task-involving climate is connected to children's enjoyment (Liukkonen 1998; Theebom, De-Knop & Weiss 1995; Wallhead & Ntoumanis 2004), sportive activation (Biddle et al. 1995; Biddle, Soos & Chatzisarantis 1999), intrinsic motivation (Digelidis & Papaioannou 1999; Dorobantu & Biddle 1997; Liukkonen, Telama, Jaakkola & Sepponen 1997; Ntoumanis 2001a; Standage & Treasure 2002), in the willingness to participate in physical activity (Biddle et al. 1999), perceived competence (Cury et al. 1997; Wallhead & Ntoumanis 2004) and reduction of anxiety (Papaioannou & Kouli 1999).

Ego-involving climate in physical activity has shown to have connection between extrinsic motivation and increased anxiety as well as decreased interest in physical activity (Cury et al. 1997; Ntoumanis & Biddle 1989; Seifriz, Duda & Chi 1992; Treasure 1997), low enjoyment

(Liukkonen 1998) and low intrinsic motivation in PE classes (Cury, Biddle, Famose, Goudas, Sarrazin & Durant 1996; Liukkonen et al. 1997). Ego-involving climate has also been shown to be related to children's and youngsters' ego orientation (Biddle et al. 1995; Cury et al. 1996; Jaakkola 2002; Liukkonen et al. 1997).

Intervention studies (*e.g.* teachers knowingly change their behavior to highlight wanted effect) have shown that with supporting task-involvement climate, in the context of physical activity, it is possible to increase enjoyment, perceived competence and intrinsic motivation (Digelidis 2000; Theeboom, De-Knop & Weiss 1995), self-determination motivation (Jaakkola 2002) and higher task orientation (Digelidis, Papaioannou, Laparidis & Christodoulidis 2003; Goudas et al. 1994; Jaakkola 2002; Morgan & Carpenter 2002; Morgan et al. 2005; Papaioannou & Digelidis 1998). More, interventions have increased pupils' intrinsic interest towards PE classes, as well as towards practicing attitudes and helping other pupils (Papaioannou & Digelidis 1998). Developing task-involving motivational climate in PE classes has helped to increase pupils' perseverance, their will to choose challenging tasks (Solmon 1996) and more, to increase beliefs that trying does help succeeding (Treasure & Roberts 2001).

# 3 TEACHING RESPONSIBILITY TO ENABLE COOPERATIVE LEARNING

In this action research I combined two contents: Teaching Personal and Social Responsibility (Hellison 2003) and Cooperative Learning. The first one offers a systematic way to teach the students some responsibility which is the basis for successful cooperation and self-regulated performance. The teachings, more cognitive, represent the theoretical part. The second content of the intervention is cooperative learning that is explained in the next chapter more broadly. Cooperative learning can be, if simplified, seen as a working method, which is based on collaboration and teamwork. In other words, cooperative learning creates situations and opportunities for the pupils to practice and demonstrate the teachings of TPSR.

## 3.1 What is cooperative learning?

Cooperative learning is a dynamic instructional format that can teach diverse content to students at different grade levels. Students work together in structured, heterogeneous groups to master subject matter content. They are responsible not only for learning the material but also for helping their group-mates learn (Antil, Jenkins, Wayne & Vadasy 1998; Putnam 1998).

In general education, researchers have found that cooperative learning can have positive effects on academic achievement, self-esteem, active learning, social skill development, and equity achievement (Cohen 1994; Johnson & Johnson 1989; Kagan 1992; Slavin 1996). Though potentially beneficial, implementing cooperative learning require good planning adaptations in how teachers organize and manage their classroom or gymnasium.

Appealing in cooperative learning is that it offers a dual focus on social and academic outcomes (Antil et al. 1998; Cohen 1994; Putnam 1998). Teachers must plan specific social skills, such as listening, working together, and providing appropriate feedback to each other, to enhance student's interpersonal skills. Students make the greatest gains in learning when

teachers delegate responsibility so that more students can talk and work together at multiple learning centers (Cohen 1994).

Several physical educators have encouraged the use of cooperative learning as a recourse for change in physical education classes (Dyson 2001; Grineski 1996; Rovegno & Kirk 1995). In an elementary physical education program using cooperative learning, Dyson (2001) found that a teacher and students emphasized improving motor skills, developing social skills, working together as a team, helping others improve their skills, and taking responsibility for their own learning. In high school level, Dyson and Strachan (2002) reported that a physical education teacher believed cooperative learning helped her to meet the following goals: developing motor skills, developing game strategies, actively participating, respecting one's peers, accepting responsibility, and improving communication skills. Students in Grades 8 and 11 stated that cooperative learning encouraged participation, was fun, and allowed them to develop motor skills and interpersonal skills.

Research in physical education has reported that students were able to teach each other skills (Barret 2000; Carlson & Hastie 1997; Dyson 2001; Dyson & Strachan 2000; Ennis, Solmon, Satina et al. 1999). As students, they often are enthusiastic about taking on the role of coach and enjoy coaching and being coached by their peers (Carlson & Hastie 1997; Dyson 2002; 2001, Ennis et al. 1999; Hastie 1996; Pope & Grant 1996).

Cooperative learning involves allowing – encouraging – students to take responsibility for their own learning and that of their classmates (Sapon-Shevin 1994) which supports well the teachings of TPSR.

### 3.2 Teaching Personal and Social Responsibility

Don Hellison's, PhD, career-long effort to use sports and exercise as a mean to teach youngsters more responsibility has led him to publish many articles and to create Teaching Personal and Social Responsibility model (TPSR). Hellison's idea was to teach kids to take more responsibility not only for their own wellbeing but also to be more sensitive and

responsive to the wellbeing of others. The idea for TPSR model came from Hellison's own teaching experiences with unmotivated and hostile high-school students, and after many steps and reformations the model has taken its current form.
Hellison's TPSR model has been used in USA with “at-risk” students to prevent problems such as violence, vandalism and social exclusion (Hellison 2003). It has been the basis for many studies and it has inspired numerous PE teachers to use at least the idea of it in their everyday work with youngsters.

Hellison has summarized his idea of teaching responsibility into five different cumulative levels (or goals). Although students don't always progress in a linear way, it is easy to start teaching the basic individual level responsibilities (Hellison 2003, 16).

The first two levels, respect and effort, form the basis for responsibility development by establishing a positive learning environment. The next two, self-direction and helping, direct students to take responsibility not only for their own learning, but also for peer students by encouraging independent work and helping others. Reaching to work on levels three and four allows teacher more freedom to work with students who need more individual teaching as well as to contribute in making the learning environment a positive experience for each student by allowing more autonomy. The fifth and the last level aims to transfers all the previous levels of responsibilities in everyday life. (Hellison 2003, 16.)

Hellison specifies that TPSR involve more than behavioral directions. Even though teachers need to deal with behaviors all the time and it is easy to observe, TPSR includes also many non-observable behaviors as well, such as attitudes, beliefs, values and intentions. (Hellison 2003, 16.) Each five levels in TPSR contain 2-3 components such as ‘self-control’ and ‘the right to a peaceful conflict resolution’ that help learning by splitting the levels in few smaller objectives that are easier to achieve one by one (Hellison 2003, 17).

Rather than teaching sportsmanship or social and personal responsibility as an add-on in the beginning or in the end of the class, Hellison insists it doing it during the class by a complete integration of teaching physical activities and being personally and socially responsible. However, it is easier said than done; teacher who has to integrate these two sets of content

into teaching actually needs to master three sets of contents: physical activity knowledge, physical activity-related pedagogical skills, and TPSR, and then be able to use them in teaching successfully. (Hellison 2003, 18.)

### 3.3 Introducing the levels of responsibility 1-5

#### 3.3.1 Level 1 – Respecting the rights and feelings of others

Level 1 is the first step towards taking responsibility and its aim is to make the learning environment a safe place for everyone, free from psychological and physical abuse. Level 1 can be considered as making the least what one can do for others, showing minimal social responsibility but no personal responsibility. This means letting other students to concentrate and listen the teaching even though oneself would not be interested in learning. The major problems that level 1 tries to solve are

- Verbal and physical abuse, such as name calling and making fun of others;
- Intimidation, bullying, and hogging equipment or space;
- Inability to control one's temper or to resolve conflicts peacefully; and
- Disrupting the work and play of others

The first component of level 1, *self-control*, implies controlling one's attitude and behavior in a respective way for others' rights and feelings. Self-controlled person doesn't get provoked by others and reply to a disruptive behavior with fists. The second component, *the right to a peaceful conflict resolution,* offers a pacific way of resolving conflicts. Encouraging students to talk and find mutually satisfying way to continue the class together teaches students to make compromises and learn verbal interaction. The last component of level 1, *the right to be included*, highlights equality regardless of skills, gender, race, ethnicity, or sexual preference. All participants deserve turns and playing time and no one is less important than other. (Hellison 2003, 29-30.)

### 3.3.2 Level 2 – participation and effort

Participation and effort, as the title refers, intends to counter self-defeating attitudes and behaviors and help students to get more positive experiences through practice. Level 2 is all about helping students to understand the role of effort in improving oneself both in physical activity and in life. Without trying there is no way of succeeding.

*Self-motivation*, the first component, is to help students to take responsibility for their own motivation. Providing opportunities for students to regulate their own activity, for examplemoving to a new level after finishing a task, satisfies the feeling of autonomy and from that emerge possibly more positive experiences. The second component, *exploration of effort and new tasks*, encourages trying new challenges and leaving prejudices to the locker room. (Hellison 2003, 30-31.) Experimenting is the key to know oneself better; how does one know what is fun or good if has never tried!

### 3.3.3 Level 3 – Self-direction

Level 3 teaches students to accept everyone as a person with individual interests, needs and talents by stressing equality rather than favoring culturally popular activities, one gender over another, or the physically adept. The biggest difference from level 2 to level 3 is to move from the teacher-led directing to on-task independence. *On-task independence* is the name of the first component and it can be for example working individually or in groups without direct supervision. The next component, *goal-setting progression*, tries to help students to understand themselves better by creating realistic development goals. Teacher can give directions to students to make either a short-term or long-term plan for example improve one's weaknesses or strengths in sports. This means that students need to develop the courage to look inside themselves to be able to identify one's skills and create a realistic plan. Students should also record their progress or the hard work on the planning process can loose its meaning. (Hellison 2003, 31-33). Learning to choose and set short-term or long-term goals is an important skill and the corner stone to reach one's ambitions also in other fields in life.

The third component, *courage to resist peer pressure*, points straight to the hard struggle against external forces and encourage students to strive towards their own interests and needs. Creating a truly personal plan is no easy task for students who seek peer approval. Teacher's support will be needed to enhance the courage to stand up against peer pressure and choosing tasks. (Hellison 2003, 31-33.)

### 3.3.4 Level 4 – Helping others and leadership

While the responsibility process started from scratch and level 1 teaches students doing no harm, level 4 teaches them to make a positive contribution. This needs multi-level interpersonal skills and like all responsibility levels explained above, level 4 needs to be adjusted for age. The three components are named 1) *caring and compassion*, 2) *sensitivity and responsiveness* and 3) *inner strength*. Accomplishing these milestones requires emphasis, sensitivity, compassion and being altruistic. Level 4 teaches to recognize that others also have needs and feelings just as they do and that they must learn to see and feel things from the point of view of others. Actions such as helping others only if they want help, contributing without expectations of extrinsic rewards, or listening and responding without being judgmental are representative in level 4. (Hellison 2003, 33-34.)

The third component, *inner strength*, refers to the courage of resisting peer pressure and showing faire leadership. Leadership requires not only the skills and qualities of mentioned earlier, but also the ability to give a group directions considering everyone's needs and interests. "It requires confidence but not arrogance and as well as the ability to strive against external forces" (deCharms 1976) when necessary. (Hellison 2003, 29-34.) Showing leadership doesn't mean there can be only one leader in a group who takes the power of making all the decisions. Stepping up when needed is an act of true leadership. Calming down students who are having a struggle or maintaining order in the class when teacher is busy are examples of showing leadership.

### 3.3.5 Level 5 – Outside the gym

'Outside the gym' refers to extend the knowledge of the four other levels outside the program and act as a responsible person outside the class – at school, at home, or on the streets. The program includes not only many skills and behaviors, but also beliefs, attitudes, values and intentions that have a place in everyday life. Level 5 offers a good opportunity to discuss the reality of life outside the gym. Qualities such as effort, autonomy and community that are prompted in the program are not often valued on the street or even at home or at school. It is easier work on them inside a safe group where everyone acknowledges the same goals, but out there, one may need to stand alone with one's choices and actions. Discussions about what it would take to put them into practice and is it worth the effort, can help students to be prepared mentally to stand up and keep their heads when one confronts morally difficult situations. In the end level 5 means being a role model for others. (Hellison 2003, 34-35.)

*Why teach responsibility?*

Teaching responsibility through physical education is not a new concept and it enables better cooperation within students and encourages the students to be autonomous. Teaching Personal and Social Responsibility model was invented by Hellison the first time 1973 (TPSR1 Hellison 1973). With persistent guidance and teaching towards cooperative learning can encourage the students to take more responsibility in the learning process and the learning environment. Teacher provides each student with the power to make decisions, give feedback, take responsibility for others' success, foster social interaction, and improve communication and cooperation skills (Dunn & Wilson 1991). These are skills that are needed in everyday life and can be transferred in other life domains. For example in labour markets working as a team, working under pressure or problem solving are issues that people need to deal with. And in school teaching students to take more responsibility of their learning and act on their own makes it possible for the teacher to concentrate better on individuals and actual teaching rather than being just an instructor or “whistle-blower”.

### 3.4 Studies made about TPSR

The TPSR model has been implemented in different grades in primary and secondary education, and in different contexts, during physical education classes as part of academic curriculum and in out-of-school sport and extended day programs (Hellison & Martinek 2006). ”Some authors (Siedentop 1994; Wright & Burton 2008) consider the TPSR model to be an ideal framework for designing physical education classes and the rest of the school curriculum.” The most profound review of the efficacy of the TPSR model has been provided by Hellison and Walsh (2002). They reviewed 26 studies that investigated the impact of the TPSR model on positive youth development. The results showed that 19 of the 26 studies demonstrated that the implementation of the TPSR model improved respect, effort, autonomy and the capacity for leadership among participants.

Through TPSR model teachers learn to use teaching strategies that the literature indicates that favor the development of self-efficacy *i.e.* self-competence (to use modeling with peers, give power and voice to pupils, give them feedback on their performance, encouraging autonomy and strengthening the effort) (Margolis & McCabe 2006).

A study by Escartí, Gutíerrez, Pascual & Llopis (2010) made in an elementary school in Spain examined the TPSR model’s relevance as a method of teaching responsibility and its effects on the pupils’ self-efficacy. The participants were 42 students (11 and 12 years old) and were separated to two groups, control group and intervention group. The results showed that the TPSR model was an effective teaching instrument that helped teachers to structure classes and promoted the learning of responsibility behavior by the students. The teacher was trained, given 30h intensive course including theoretical foundation, objectives and instructional methods of TPSR model. Throughout the school year the teacher met with the research group twice a month. The results were based on the teacher’s interview and quantitative data comparison between the control group and intervention group. The study lasted a whole academic year, having two classes a week, 60 min PE lessons.

Hellison's TPSR model is not totally unfamiliar in either Finland and few studies has been made earlier in the field of PE. Two of those were carried out by Rantala (2002, 2004) and were related to a wider study of Heikinaro-Johansson about different adaptations of teaching physical education. The first study by Rantala (2002) was a pilot study for the latter. The purpose of the pilot study was to experiment integration of Hellison's TPSR-model (2003) in a mid-school PE class in Finland and modify a version to fit Finnish schools. The study lasted seven PE classes and the group consisted of twenty boys from 7th grade. The pilot study was successful and conclusions were that TPSR model (Hellison 2003) fits well in Finnish schools, but requires from the teacher a full internalizing of the TPSR model and skill to be reflective during teaching. However, Rantala writes that integrating TPSR model (2003) in teaching doesn't require unreasonable amount of effort from the teacher. (Rantala 2002.)

Rantala made the second study in 2004, in cooperation with Heikinaro-Johansson. The study lasted 20 weeks including 36 hours of PE during the time. Results showed progress and were similar to the pilot study; individual responsibility was improved, but the group level improvements stayed minor. These studies proved that integration of TPSR model (Hellison 2003) into PE classes is possible and by using the model, a student's sense of personal and social responsibility can be increased. However, this requires prolonged use and that the teacher has a wide understanding of the model, has good pedagogical content knowledge and is a reflective teacher. (Rantala & Heikinaro-Johansson 2007.)

TPSR model was also used in a study by Kuusela (2005) who planned and implemented a social emotional learning (SEL) course using ideas from TPSR. The course was organized during PE lessons in Finland. Participants were girls between 14 and 15 years, all 8th graders from three different class that formed a new PE group. The course included 36h of PE lessons and 14h of theory. During the course, the pupils learned both personal and social responsibility and also to take responsibility of the PE lessons (Kuusela 2005).

# 4 AIMS

The aim of the study was to plan, implement and describe the use of Teaching Social and Personal Responsibility –model (Hellison 2003) with Cooperative learning method in PE.

1. *Planning*: The aim was to plan an effective way to teach responsibility by TPSR-model (2003) for a 7th grade PE group and plan tasks which would allow the pupils to practice those skills in different situations. Previously TPSR model has been tested in PE in Finland by Teppo Rantala.

2. *Implementing*: During the intervention period the aim was to study and describe the implementation process of using TPSR- model among the pupils. The purpose of the intervention was to increase enjoyment and intrinsic motivation by teaching responsibility and increasing pupils' autonomy during the class.

3. *Describing and evaluating*: The study period was described and evaluated by the observation of the teacher-researcher, by the oral feedback of observant teachers and by the written feedback and self-evaluation of the pupils. The aim was to study the effect of teaching social and personal responsibility, and bring up different ways to increase pupils' motivation and cooperation in PE.

## 4.1 Methods

The purpose of the study was to plan, implement and describe the use of Teaching Social and Personal Responsibility model (Hellison 2003) with Cooperative Learning method in PE. The study period lasted six weeks, including one observation class, one theoretical introduction class and five PE lessons (90min).

In the observation class I was introduced for the first time to the group and the purpose was to get to know the pupils and evaluate their readiness for this intervention. In the introduction

class the study plan of the whole study period and the different levels of responsibility from TPSR model (Hellison 2003) were presented to the pupils. The introduction class lasted 45 min. During the following five PE lessons the pupils learned the theory of the different responsibility levels from TPSR model and as the lessons were planned so that it was possible for the pupils to put the teachings into practice.

The different responsibility levels were (Attachment 6):

**Level 1 – Respecting the rights and feelings of others**
**Level 2 – Participation and effort**
**Level 3 – Self-direction**
**Level 4 – Helping others and leadership**
**Level 5 – Outside the gym**

## 4.2 Participants

Participants of the study were a sport-oriented PE group, consisting 13 boys and 8 girls. All the pupils were between the age of 13 and 14. The mentor and PE teacher of the group, described the group being ”highly motivated and particularly united” even though most of the pupils were strangers to each other only three months earlier before starting the 7th grade. The teacher weighed most of the pupils showing already the attitude and behavior of level 3 in the TPSR model scale. Altogether there were 21 pupils, teacher-researcher and Porevirta, teacher in charge, who served as an observant during the lessons.

## 4.3 Design and the methodological choices of the research

This study is a qualitative case study as well as an action research. Action research is a cyclic process where understanding develops over time (Heikkinen, Rovio & Syrjälä 2008, 36). Action research is based on intervention and it is a practical, reflective and involving social process. It is used to examine social actions, especially which is based on the interaction (Heikkinen, Rovio & Syrjälä 2006, 16) and its purpose is to find out better ways of action

(Heikkinen et al. 2008, 29). More, action research and intervention study is usually a time-limited research and development project where new approaches are planned and tried out (Heikkinen et al. 2006, 17). With an action research one studies, tests and evaluates actions and their effects (Heikkinen et al. 2008, 136).

An important factor of action study is the spiral of action research with cycles of planning- action- observation and reflection (Heikkinen et al. 2008, 80). In this study this can be seen in the three main phases of the study:

1. Planning of the study autumn 2013
2. Implementing and teaching period in autumn 2013
3. Reflection and feedback of the teaching period from the pupils afterwards

During the teaching period there were also small spirals of action research after each lesson, where I planned the lesson, kept the PE lesson and observed the process during the lesson, as well as reflected the feedback and my actions after the lesson. These observations and reflections guided and helped me to plan the next lesson.

*Planning the study autumn 2013*

Planning of the study and teaching period started in the summer 2013 when I read and studied about TPSR model (Hellison 2003). Writing earlier my bachelor thesis about Self-Determination Theory, I had been thinking different ways how to satisfy pupils' feelings of autonomy, self-competence and relatedness to increase finally their motivation and enjoyment in class. My aim was to find a way to direct pupils to be more autonomous and that way increase their motivation for learning. My vision was that by teaching the pupils responsibility would help them to understand their role not only as an active learner but also boosting and directing each others to better performances. As it happens, TPSR model seemed to be compatible with SDT (Deci & Ryan). As SDT highlights also the importance of the feeling of relatedness, I started thinking ways to increase teamwork as well. Finally I ended up using Hellison's TPSR model to teach responsibility and the tasks in the classes were planned in line with the principles of cooperative learning.

I ordered Hellison's Teaching Personal and Social Responsibility –book (2003) and studied its contents as well as read more about cooperative learning on my own. During the teaching period the book was used actively to reflect and help me to understand the whole teaching and learning process and plan the following lessons. Before planning my strategy and classes, I contacted Teppo Rantala and read his thesis (2002) and dissertation (2004), the author of earlier studies made in Finland using TPSR model and asked for suggestions. From him I got the idea of adding question about evaluating the teacher's performance.

Teaching Personal and Social Responsibility (Hellison 2003) aims at autonomous work together with other pupils while offering a systematic way of increasing social education into school subject. The idea of adding cooperative learning into the content came from the thought that the cognitive theory (TPSR) would also require practicing, situations where the pupils could put the teachings into action. Every task during the PE lessons was planned to be worked in collaboration with peers and the sizes of the groups varied from two pupils to the whole class working together.

During this research I worked as a teacher-researcher, teaching five PE lessons while conducting the observing task as a researcher. Another approach for an action study is also possible The researcher staying as a non-participating observant as teacher in charge is executing the intervention (Heikkinen et al. 2006, 17). But as in this case, as the teacher in charge was not familiar with the contents this study involved, it was natural that I perform as the teacher as well. The purpose of participatory observation is to understand the subject of research and by that way to influence actions of the group in process (Heikkinen et al. 2008, 106). Action research is a hermeneutic process where understanding from the research object is developing over time (Heikkinen et al. 2008, 20). It is challenging but important to be able to balance between participation and observation, to teach and to the same time reflect and observe the ongoing process.

## 4.4 Data gathering and analysis

Most important methods for data gathering in action research are participatory observation, researcher's diary based on the observations and interview. In method triangulation different methods are used (Heikkinen et al. 2008, 104). This study was evaluated all the time during the teaching period using participatory observation. After the course evaluation was based on the partial video recordings from the lessons and written and oral feedback from the pupils. New information was collected by reflecting own experiences, and conceptualizing and analyzing the material. Quantitative data from two surveys and five questionnaires were analyzed by viewing the frequencies of the answers and grouping similar answers. After that the data was examined alongside with other studies and literature from the same subject. I used the quantitative data to analyze the progression of the pupils' learning. The results are presented later in this study. I analyzed the reliability of the data by comparing the pupils' self-evaluations to their written comments, to my observations and the video material.

*Observation.* Working as a teacher-researcher gave me first-hand information of the group, of the atmosphere in the lessons, of the feelings expressed in the group, of the situations occurred during the lessons and of the expressions of learning during the study period. The observations I wrote down to the researcher's diary. The researcher's diary lifts up researcher's observations, feelings, impressions, self-evaluations and it also builds interpretations (Heikkinen et al. 2008, 207).

*Partial video recording*. The material from videotaping was used as a supportive method for observation. Conducting first time the part of a teacher and an observant same time, it turned out to be a useful method to give wider perspective about what was going on in the lessons. The observant teacher, teacher in charge, recorded time to time short clips of video about situations which he thought being useful in the direction of the study. Having the possibility to go back and see the same situations from the video helped me to reflect and think critically my own observations afterwards.

## 4.5 Trustworthiness

In action research it is understood that the understanding of being a participant in a research is changing the behavior of the participants and affecting the result. This is seen as a natural part of the research and it is understood that objective information cannot be collected, but instead perceptions of the pupils and the teacher-researcher can be obtained. (Heikkinen et al. 2008, 72-73).

The result is only one possible truth of the research subject. The researcher's work is to tell the story as truthfully as possible (Heikkinen et al. 2008, 118-119). The results are shown as collected and the trustworthiness of the story is evaluated as a one possible truth as it is told by the researcher and the pupils.

According to Heikkinen et al. Action research can be evaluated by principle of historical continuity, principle of reflexivity, principle of dialects, principle of workability and principle of evocativeness (Heikkinen et al. 2008, 149-160).

*Principle of historical continuity*: researcher is evaluating the history of the research object and the actual research.

*Principle of reflectivity*: Understanding of the research object is developing over time. Researcher is reflecting his own understanding, his role in the research, development of his identity during the research and relationship with the study object.

*Principle of dialects*: researcher should bring up different voices and interpretations as authentic as possible.

*Principle of workability*: research should have an effect in practice and it should be useful. Workability can also mean that the pupils have become empowered.

*Principle of evocativeness*: research should evaluate the pros and cons of the project, also how it brings forward mechanics of power.

Researcher should also evaluate the ethics of the research; how the research is affecting the pupils and the society, and if the participants can be recognized from the study. All these points are followed in this study.

*Ethical choices of this study*

All the pupils in this study were volunteers. Anonymity of the pupils is kept the best way possible and no names are used while writing the story or presenting the results. Data of the present study is being held in security and destroyed when the study is completed. The pupils knew that they were being observed and time to time video recorded and that they could refuse to participate in the study at any time. Feedback from the pupils was collected after each lesson to plan and meet the needs of the pupils better in the next lesson. There was no obligation and no pupil was forced to work on the tasks during the PE lessons. From the feedback of the pupils that are presented in the results can be seen that the pupils perceived the teaching period in a positive way and they benefit from the study.

# 5 CARRYING OUT THE INTERVENTION

The study lasted six weeks including one observation class and one orientation class where I introduced the study and TPSR model to the group and five full PE classes. In the following chapters I will describe how the study was executed.

## 5.1 Prerequisites of the group and preparations

The group participating in the study was a sport-orientated class, including 13 boys and 8 girls. Total count was 21 pupils, all between the age of 13 and 14. The mentor and PE teacher of the group, described the group being “highly motivated and particularly united” even though most of the pupils were strangers to each other only three months earlier. He weighed most of the pupils being in level 3 in the TPSR model scale.

Since I wanted to test the suitability of the contents in an ordinary school environment, we didn't change or manipulate the order of the themes or subjects that were already in the curriculum of the course. I discussed and planned every class with the teacher in the direction of the contents of this project and their program. The classes I was to teach concentrated in practicing and improving pupils' physical attributes. Those five classes I taught, in a chronological order, were to improve 1) eye-hand coordination, 2) strength, 3) body control, 4) body care, and 5) rhythmic. Every class lasted 90 minutes.

I had designed a wall poster presenting 6 levels of responsibility including level 0, irresponsibility. In every class, I attached two identical posters (Attachment 6), size A4, next to a sign board that was used in teaching. The main idea of this study was to express out loud actions and attitudes that contribute personal and social well-being inside and outside the class. Studies show that teachers cannot merely put students in small groups and expect them

to know how to act responsibly (Dyson 2002; Kuusela 2005). By letting the pupils to know clearly what is expected of them and encouraging them to do so with positive feedback aimed to see improvements in their cooperation skills. I used the wall posters to visualize the different levels of TPSR model. It worked also as a reminder of the content during the class.

Every class started by introducing what was to come in the class and we discussed about how it was possible to show and demonstrate responsibility in personal and social levels. Teaching the students different solutions and giving them ideas of how to meet the aims of the day's lesson are important didactic actions and helps the students to achieve those (Dyson 2002). In the end of every class we sat down and discussed briefly together about the feelings and experiences of the class. More, before leaving everyone filled a short questionnaire (attachments 7 & 8) that included a self-evaluation of one's responsibility level in the class. Self-evaluation is also one of the ways to promote task-involvement learning climate (Soini 2006). The primary idea was to make the pupils to reflect their own behavior and become conscious of their own actions. Secondly, the questionnaire helped me to examine if the pupils had understood the contents of the levels.

### 5.2 Observation class and introducing the study

The teacher's view of the well behaving class was well observed when I went the first time to meet the group and observe their PE class in Laajavuori. They took me in easily and some pupils showed some initiative in talking to me. The day before the class, the teacher had requested and informed two boys, who practice disc golf, if they could teach the basics of disc golf to the rest of the class. The pupils were listening the "peer-teachers" carefully and acted as directed without problems. The teacher in charge didn't interrupt at any point even if they saw some errors. He counted on the pupils' ability to keep everything under control. Some of the pupils had their own discs with them and they got permission from the teacher in charge to continue the disc golf course without needing to come back to starting point in the end of the class. It was the first time with this class when the teacher used peer-teachers.

The next week I went to introduce my study and the TPRS model to the class. The pupils remembered me and were at ease. They listened quietly while I showed them my pyramid I had designed, showing the five levels of TPSR (Attachment 6). The design of the poster was inspired by Hellison (2003) and Rantala (2002). In the end I asked them to fill a questionnaire about the learning environment inside the group. The questioner was made individually, inquiring opinions of personal and group level interactions within the class. Introducing TPRS lasted 25 minutes and held a lot of information leaving me uncertain if the pupils were able to process all the information and grasp the main idea.

### 5.3 Reporting the classes

Every class was planned in way that left some ten minutes in the beginning and ending of the class to explain and discuss about the contents and objectives of that particular class. Every class included also a warm-up and an introduction to the day's subject before the main exercises. Time on task were planned loosely since the presumption was that adapting a new, more self-regulated, way of working would take some time. And as we remember, flexible time on task is important for promoting task-involvement learning climate (Soini 2006). Below is the program that shows the dates and the subjects of the events in the study.

*TEACHING PROGRAM – DATES AND THEMES*

| |
|---|
| To 3.10.2013, Observation: Disc Golf, Laajavuori |
| Ke 9.10.2013, Introduction of the study and TPSR-model, Viitaniemi |
| Ke 23.10.2013, Lesson 1 - Hand-eye coordination, Viitaniemi |
| Ke 30.10.2013, Lesson 2 - Strength, Viitaniemi |
| Ma 4.11.2013, Lesson 3 - Body control, Viitaniemi |
| Ke 6.11.2013, 4. Lesson 4 - Body care, Viitaniemi |
| Ma 11.11.2013, Lesson 5 - Rhythmic, Viitaniemi |

### 5.3.1 Lesson 1 - Eye-hand coordination

The subject of the first class was eye-hand coordination, improving and practicing the body movement related to one's vision. The class started with a little chitchat to break the ice; the sooner the pupils start feeling comfortable in the class, the sooner they start working liberated (Rovio, Lintunen & Salmi 2009). The girls were more courageous and started asking questions like if I was a football coach or an ice hockey coach. I took it that it indicated them showing interest and openness. I used around ten minutes, to remind them about the TPSR model, outlining a short overview and the day's main objectives.

In the warm-up game I instructed the pupils to referee the game by themselves. By this, I let them be autonomous and show responsibility; I was observing if anyone tried to cheat or deny a rule violation. More, I wanted to see if the two groups worked as a team, including everyone to their "play". The game and the rules were unfamiliar to the pupils, but after few minutes of playing, it started working really well. The ones who understood the rules were explaining them to the others while the game was on. The pupils had no problems refereeing the game by themselves or admitting their errors. I was able to stay in the background, without needing to interfere. Boys were more active and wanted more aggressively to possess the ball. However, the girls were getting more and more active when the game kept going.

The educational object of the main exercise was to focus on cooperation in small-groups and self-directed learning. After the pupils formed the small-groups, I gave them the instruction papers I had made in advance. Then I backed off, observing how the pupils would start carrying out those instructions. It took some minutes before anything started happening. Then slowly, all five groups went to pick the equipment they needed and started working in pairs or threesome. I observed that the pupils were doing more or less the minimum, what was instructed to. After a while I went to instruct and ask guiding questions about how they could modify those exercises in the direction of their preferences or how they could add challenge to

the exercise. Couple of times a guiding question was enough to the pupils to invent a good idea and modify the exercise on their own liking. Teachers giving the possibility to modify the tasks and that way take responsibility of the PE lesson, promotes the students' feeling of autonomy and increases devotion (Soini 2006). Being responsible for their own actions gives the students more meaning for being there and adds relatedness for others (Ahola & Hirvihuhta 2000, 11). Few times when the pupils lacked imagination I gave a direct example what the pupils could do to make the exercise more interesting. They seemed to have this habit to ask the teacher first, if their idea would be good enough. In those cases I only gestured them to try it and keep inventing more, without saying a word out loud. After the class, the observing teachers told me he had heard one pupil saying to the other group members: "let's modify this (exercise) a little bit." and had developed the exercise on his own. This had happened before I had started to encourage anyone to do so. The video material shows how pupils that are performing exercises, which differ from the original instructions, seem to be more motivated and more into the practice than those who have only continued performing the original exercise.

In the end of the class I gave the pupils ten minutes for inventing an exercise that would involve the whole five member small-group to participate in the same task. All the equipments were free to use from the storage. Three groups from five managed to find an idea and started working, but two groups lacked a good idea and their exercise consisted mostly throwing different balls to each other without any purpose or aim. I wanted to give space and time to every group and stayed deliberately mouth shut, not interfering the inventing process.

The last 15 minutes of the class was used to discuss about the class and fill a short questionnaire (Attachments 7 & 8). With the tips from Rantala, I had included questions about the teacher's performance in the class allowing the pupils to give feedback about the teacher's performance. However, the oral feedback and written feedback from the questionnaire shows that this 7$^{th}$ grader group was not able to evaluate critically the teacher's performance (see chapter 6.3.1). One pupil said out loud, that there is no point evaluating teacher's actions, because "teacher is always performing in level 5." Others seemed to share this opinion and I started to think how great status all the teachers have in Finland if the pupils see every teacher as "trusted adult who faces everyone as an individual and gets one motivated".

### 5.3.2 Lesson 2 - Strength

The class started by fetching mattresses and weights and having a joint warm-up. While we were testing different ways of workout, I was explaining the main objectives of the day's class: collaboration within the small-group, inventing exercises together and teaching them to the others. In the warm-up we did moves I had chosen and soon after I asked if the pupils would know some different moves. I let one of them to teach couple of moves, directing the pupils' explanations with guiding questions. Using peer modeling is a way to support self-competence (Margolis & McCabe 2006). By doing it I wanted to demonstrate about the core elements of teaching different moves other pupils. The class included teaching and demonstrating movements to other pupils..

After warm-up and forming the small-groups, the pupils had around fifteen minutes to come up with moves that would exercise certain muscles. Again, similar thing happened than last week: Some small-groups were fast and started inventing moves quickly, everyone collaborating. Others had troubles showing initiative and nobody in the small-group made the first move towards suggesting anything. When I went again to ask guiding questions, all those groups came up with several moves. It seemed to be the lack of courage to show initiative in an unfamiliar group and suggest ideas out loud.

Before starting a circuit training, every small-group had to demonstrate and explain two exercises they had chosen to the rest of the class. This worked out well, rest of the pupils listening carefully while one of the groups was teaching. No problems occurred in the circuit training, the pupils were performing moves independently and changing workstations simultaneously. The video confirms that the pupils were most devoted to do the exercise that their group had chosen.

### 5.3.3 Lesson 3 - Body control

The third class was about body control and I had planned the class in cooperation with Porevirta, the boys' PE teacher. The class was about pair and group acrobatics, including a lot of cooperation and showing social responsibility by being responsible for others' safety. I highlighted assisting and supporting others and the importance of the cooperation in that day's class.

In the warm-up I accepted the pupils ideas for warm-up (somersaults) and I was impressed, how several pupils were challenging themselves to perform better and better every time. I was happy to give positive feedback about the effort they were making.

I found it challenging to teach the correct and safe techniques to the whole group; rising on the back of another can be dangerous without the right technique. In fact, I was concerned if I could ensure everyone's safety. Gladly, the group's own teacher was also keeping an eye for dangerous performances and corrected them as well. For this class, I had not made any specific order for the moves, but the pupils were free to make different sizes of groups and come to ask what kind of movements or pyramids they could perform if they ran out of ideas. The pupils were very motivated about the day's topic and when they formed many small-groups, I found myself being insufficient to meet the demand and explain quickly enough different options they could perform. The own teacher came to aid me and together we were able to attend every group and ensure everyone's safety. I didn’t find this to interfere any way my research, keeping in mind that successful PE classes are the most important for the pupils.

The class was highly autonomous and after warm up I never demanded anyone to participate or perform any specific moves. Pupils were highly motivated and demonstrated excellent collaboration. Pupils assisting each other enabled everyone to succeed in different roles and experience the joy from a successful cooperation. In this class, everyone had an important role and the pupils could feel their contribution was essential. In the perspective of SDT (Deci & Ryan 2000), autonomy, relatedness and self-competence were being supported. From their

written feedback, several pupils from both sexes had mentioned this class being the best of the whole intervention study period.

### 5.3.4 Lesson 4 - Body care

I pondered long how to take cooperation to the next level and how it would be possible for the pupils to practice the level 4 of TPSR, *helping others and leadership.* I ended up planning four working stations and every pupil would have a chance to conduct as an assistant teacher.

The class started again with telling the pupils the plan of the class; we would be concentrating on the fourth level of TPSR without forgetting the three other levels that are included. There was no trouble in finding volunteers for the first task and while I was instructing the first four "assistant teachers" in another room, two other pupils were keeping the warm-up to the rest of the class. I had written instructions to the wallboard. Later, I heard from the teacher that everything had gone well, all pupils being motivated to follow peer-pupils' instructions.

In the beginning of the class, I had told the pupils wishing to see that my supervision wouldn't be needed and that the workstations would work without me being closely present. In cases when help is needed or the "assistant teachers" have questions about the moves, I would be happy to help. This meant highly self-regulated working. I never left the room, but stayed observing and walking in the middle of the gym. The pupils didn't have problems being an assistant teacher and no conflicts occurred. To my surprise, no irresponsible behavior was observed and everyone seemed to be listening when the assistant teacher was instructing and demonstrating what to do. Occasionally, I went to correct some moves so that no incorrect information would pass to the next group, which is the risk in this kind of teaching method. A few times a pupil made the initiative and asked me if he or she didn't remember the correct movement or wanted to be sure to teach it the right way.

Depending on the assistant teacher, the intensity of working in a workstation varied; sometimes everyone was active and practicing a move, and sometimes it was possible to observe that the main point of a move was lost by seeing confused faces and superficial performances. This meant low intensity and boredom. It was probably the first time for some

pupils to be given the difficult task of trying to teach new moves to other persons and do it alone. From the video it was possible to observe that most of the times the demonstration of a move was excellent, but then either the oral instructions were inadequate or no corrective feedback were given. I didn't find it at all to be a poor performance; even for an experienced teacher it is sometimes hard to give feedback or instruct in a way that everybody understands. Not everybody lacked the eye or courage to instruct others also verbally and corrective feedback was given as well: “Don't do like that, do like this” (with a demonstration) or “keep your back straight, yours is like this.” (followed by the demonstration)

Also one boy showed remarkable behavior for a 7$^{th}$ grader when he was attending the same workstation again and the station's “assistant teacher” started to instruct the moves, incorrectly. The boy was about to take the lead and said he can show and teach the moves. But then he changed his mind, backed off and told for the assistant teacher to continue and that he can correct if something goes wrong. I noted this and in the discussion in the end of the class, I told the whole class how this particular pupil had respected the other pupil by not stepping on his toes and helping him to carry out the correct teaching.

### 5.3.5 Lesson 5 - Rhythmic

Rhythmic and dancing is my weakest part of knowledge and I had hard time planning the class. I ended up for a plan, that after warm-up I would teach certain steps for a dance and later the pupils would invent their own choreography for the same dance in three groups. The warm-up consisted pair work with several pair changes; I gave instructions such as “choose a person you know the best/the least” or “choose a person with the same letter in his/hers name”. This left the pupils a free will to choose a pair, but a pair change had to be made every time. The boys clung mostly with boys and the girls were choosing only girls. Few girl-boy pairs were observed. For 13 years old teenagers, I didn’t find this to be anything extraordinary.

After the warm-up the pupils were divided in three groups with whom they would create choreography for the dance steps I had taught. Learning the dance steps took about fifteen

minutes and then every group had another fifteen minutes to modify and make their own choreography for the dance. In the first five minutes nothing seemed to happen; the groups were standing apart but nobody suggested anything. Everybody was standing still and seemed to be thinking. Then little by little, I started hearing more and more talking and movement. In fifteen minutes the groups were done and we were able to start perform those dances. Each group danced simultaneously so everyone could concentrate on their own dancing without needing to be the center of attention.

The next half an hour passed by training and making little improvements for the dances. Every time the groups were dancing at the same time. The "grande finale" was dancing the same dance three times, in the breaks changing places with the other groups. Everybody was participating in the dancing, some more enthusiastically than others. Every group consisted five or six members and in each group two or three pupils took the lead and participated in the making of choreography more actively, suggesting different ideas. In every group there were couple of pupils who were less active to suggest anything, but without disagreeing either. Those pupils were practicing and dancing with the group as well as others and they seemed to enjoy their role just as 'a follower'. I can easily relate to those pupils, since as a pupil I was one of those, who enjoyed more being a follower rather than creating any performance.

The class ended by discussing about the whole study period and filling a last questionnaire, including questions about their experiences and opinions whether their participation, initiative and enjoyment had changed during this study.

# 6 EVALUATION

This chapter tells about the pupils' and the teacher-researcher's experiences about the PE classes and answers the research questions. The information about the pupils' experiences is based on their oral and written feedback. After every class they filled a short questionnaire and in the end of the study, they filled a final survey concerning the whole study period. The teacher-researcher's experiences are based on the first-hand observations that were written in a researcher's diary that was kept during the whole study. Video material and feedback from the observing teacher helped me to get a better view of the situations that happened during the class and to either confirm or correct my perceptions.

## 6.1 Pupil's evaluation

Next five chapters view and analyze shortly the pupil's written evaluations and feedback. First chapter focuses on the initial survey. The second chapter gathers the information from all five self-evaluations which the pupils did after each lesson. The third and the fourth chapter analyze the data and the last chapter is about the final survey and the pupil's opinions concerning the study period.

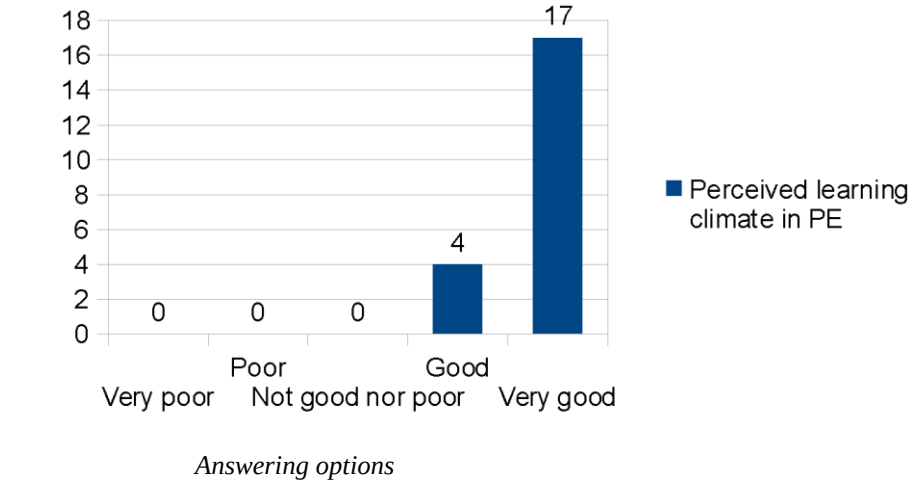
### 6.1.1 Initial survey

In the beginning of the study the pupils filled an initial survey (Attachment 9) concerning the group cohesion and the atmosphere in the class. The purpose of the survey was to give a general idea of how liberated and safe the pupils felt in their group for the sake of cooperation.

The initial survey showed highly positive atmosphere and high level of cohesion (PICTURE 1). More, the survey about personal questions was as well highly positive, showing no

negative responses. This supported the teacher's statement about this class being "exceptionally united and easy to teach". One of the pupil's even asked in front of the class what to answer for the question concerning bullying, because he hadn't experienced any incident like that. The questions in the survey were taken from a questioner that is used in KiVa Koulu –project that includes approximately 90% of Finnish schools (KiVa anti-bullying program, University of Turku 2012). As the project has been going on for many years already, we can assume that the questions are reliable and valid.

The survey clearly promised a good starting point for the study, since the classes included a lot of cooperation. After seeing only a week earlier how few pupils were already able to take role of an assistant teacher in the class, I had the feeling that with this group I wouldn't have to concentrate on preventing disruptive behavior but to find ways to increase cooperation and maximize the potential of this group.




PICTURE 1. Pupils perceived learning climate in PE before the study. Likert-5 step choice question.

### 6.1.2 Pupil's self-evaluation

In the first three classes, the short questionnaire the pupils filled in the end of the class were identical. The first question was a self-evaluation, asking opinion about which responsibility level one had been performing during the class according to the responsibility levels. The

levels were seen in the posters attached to the gym's wall. Including self-evaluation is a way to make the pupils to think about their own behavior and by that come conscious about one's actions. After the question there was space for a short comment. A short comment helped to see if a pupil has understood the question and it can give hint of what he or she values in the evaluation.

From the comments we can see that at least some of the pupils had understood the responsibility levels correctly. The comments are translated word to word from Finnish to English.

*"I enjoyed the cooperation and no one was left alone even though we didn't have pair for everyone."(Girl 1, level 4, Lesson 1)*

*"I did my best. I tried to take everyone's opinion in consideration and help others."(Boy 1, level 4, Lesson 1)*

*"I suggested movements and improved the cooperation of the group" (Girl 2, level 3, Lesson 2)*

*"We cared about each others' opinions."(Girl 1, level 4, Lesson 2)*

*"I helped everyone, I respected (others') suggestions and encouraged others." (Girl 4, level 4, Lesson 3)*

*"We performed things without the teacher's request" (Boy 5, level 3, Lesson 3)*

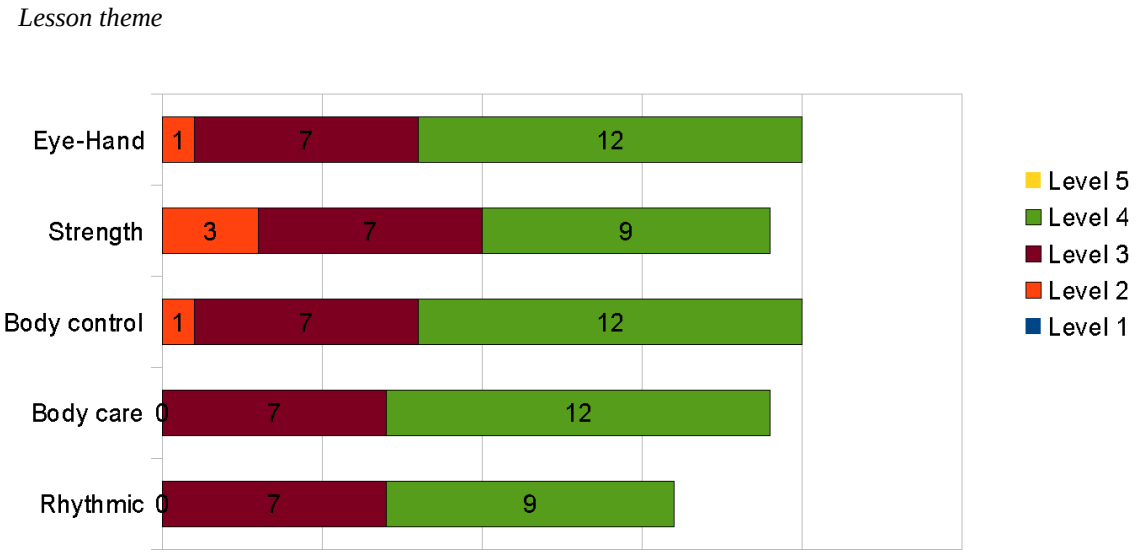
*"I participated in everything, helped others and took others into account." (Girl 1, level 4, Lesson 4)*

*"I collaborated. When I couldn't do something, I asked for help. And I helped others too."(Boy 6, level 4, Lesson)*

The chart below (PICTURE 2) shows how the pupils had mostly evaluated their performance being in level three or four for the whole teaching period and there results don't show significant changes in their responsible level. The result follows the evaluation that the

group's teacher in chargemade before the teaching period that the pupils were already performing in level 3. Some authors have highlighted that youth program participants that showed the most changes were those who were least competent before the program began (Anderson, Sabatelli & Trachtenberg 2007). Teaching period lasting only five full lessons and taking the pupil's good behavior and attitude, *i.e.* showing competence, into account the results are not out of ordinary. . The large amount of level 4 answers may also be explained for not being familiar enough what the levels keep inside and the pupils' self reflection is possibly over positive. Also Rantala (2002, 64) got similar results that indicated that the pupils' self-evaluation was over positive especially in the first class of his study.

During the teaching period we didn't have time to focus on the fifth level, *Outside the gym*, so we cannot expect any results of that sort either. Anyway, measuring the highest level of responsibility is problematic since no evidence can be verified as the actions are made beyond teacher's reach. Other authors admit the same problem and no evidence has been found to support the transfer of program goals outside the gym (Wright & Burton 2008). Hellison agrees (2003) that the aspect requires future development.




*Number of respondents in each responsibility level*

PICTURE 2. Pupil’s self-evaluation after each lesson. Numbers show the frequency of the answers. Respondents vary from twenty to sixteen.

### 6.1.3 Not ready for teacher's performance evaluation

Choosing the second question I was following Rantala's advice for letting the pupils to evaluate the teacher's performance as well. Including the teacher's performance evaluation would possibly give useful feedback for the teacher and arouse discussion about the cooperation between the pupils and the teacher. I had modified the responsibility levels concerning teacher's performance following the same spirit as TPSR. The question was about evaluating teacher's performance according to the levels. Those levels were included in the questionnaire (Attachments 7 & 8). After the question there was free space for a short comment.

From the first class on I had doubts if the young 7$^{th}$ graders were able to critically evaluate teacher's performance, since one of the pupils commented the question by: “What is the point of this question, because teacher is always in the level 5?” Level 5 meaning a trustful adult who is interested in every pupil's or student’s well-being and development and having time for pupils also outside the classes. Level 5 includes naturally all the four other levels, such as giving individual feedback and being a good motivator. In my opinion, these characteristics are a lot to ask from any teacher. However, the pupils seemed to share the common opinion of all teachers conducting in level 5.

From the short written comments of the evaluation, I came to a conclusion after three classes that the pupils were not able to critically evaluate teacher's performance for now. These are some comments from different pupils that show no logical evaluation. Comments are similar, but the levels differ between three and five.

*“Advised well” (Boy 7, level 3)*

*“Tried to advise well” (Girl 6, level 4)*

*"Helped and advised well" (Girl 3, level 5)*

To get a better idea of teacher's performance and to understand better the responsibility levels of the teacher, I planned the fourth class (Body care) in a way that every pupil would have role of a teacher at some point of the class. After the class I made the pupils to look again the responsibility levels of a teacher and make a self-evaluation of their own performance as teachers.

This seemed to open their eyes and the short comments were remarkably mature and showed that the pupils had understood the responsibility levels better than earlier. Let it be that the evaluation was over positive.

*"I was able to give advice, but I didn't have time to give feedback to everyone" (Boy 9, level 3)*

*"I taught others, modified some moves and corrected incorrect performances." (Boy 10, level 3)*

*"I helped everyone equally and listened everybody." (Boy 6, level 4)*

*"I tried to help all the time if someone didn't know how to do or didn't understand" (Girl 3, level 4)*

### 6.1.4 Can TPSR and cooperative learning increase perceived competence?

The third question in the questionnaire (Attachment 7) inquired about one's perceived success in the physical activities in the class. The question was chosen to show if the cooperative way of working would show somehow in the perceived competence. Many exercises required teamwork in which the whole group achieved their goals giving the feeling of success to every member of the group. However, the question wasn't specific enough to reliably show if the cooperation had anything to do with perceived competence. All the answers showed that the pupils felt competence and they had the feeling of success in the classes. The group being sport oriented, the result is not unexpected and cannot be shown to have relation with cooperation even if there would be.

However, even though this study cannot answer that question explicitly, Margolis and McCabe (2006) assures that through TPSR model teachers learn to use teaching strategies that the literature indicates that favor the development of self-efficacy *i.e.* self-competence. Those strategies are using modeling with peers, give power and voice to pupils, and give them feedback on their performance, encouraging autonomy and strengthening effort.(Margolis & McCabe 2006.)

### 6.1.5 Finalizing survey

In the end of this study, after the last class, the pupils filled a final survey (Attachment 10). The survey included an open question "What do you think of these classes?" then questions inquiring if cooperative learning had affected to the enjoyment in a) PE classes, b) in other classes with the group and c) outside the classes with the group. The last question inquired if this study had any influence to their self-regulated performance, participation or enjoyment.

All the classes during the study got highly positive oral and written feedback, which was nice to hear. The written feedback indicates that exercises that enable modification and problem solving tasks without any single correct or incorrect solution were the biggest "fun factor" and got several positive mentions.

*"They were good (classes) because in almost every class one got to modify exercises." (Girl 3)*

*"Very nice classes, it is good that oneself need to think how to do." (Girl 7)*

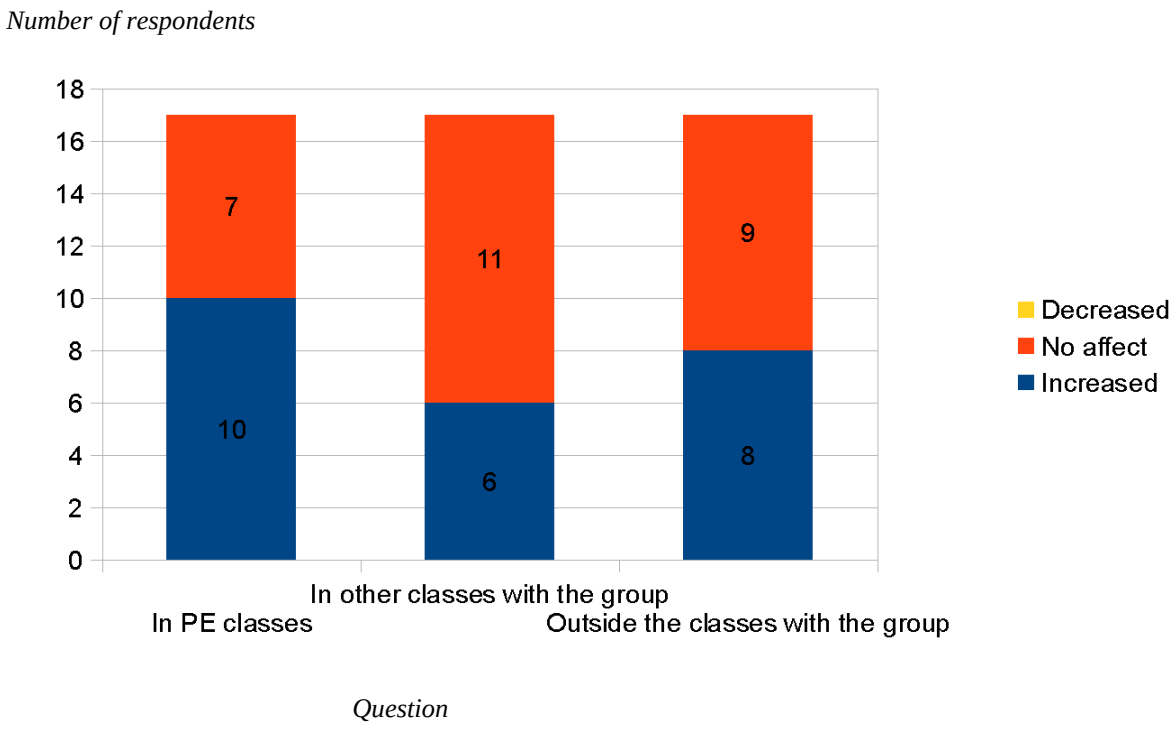
*"Was fun to modify tasks and do with different styles." (Boy 4)*

Two written feedback included more or less neutral comment. No negative comment was written or heard.

*"Nice and free. Some (classes) were nicer and some not as nice." (Boy 11)*

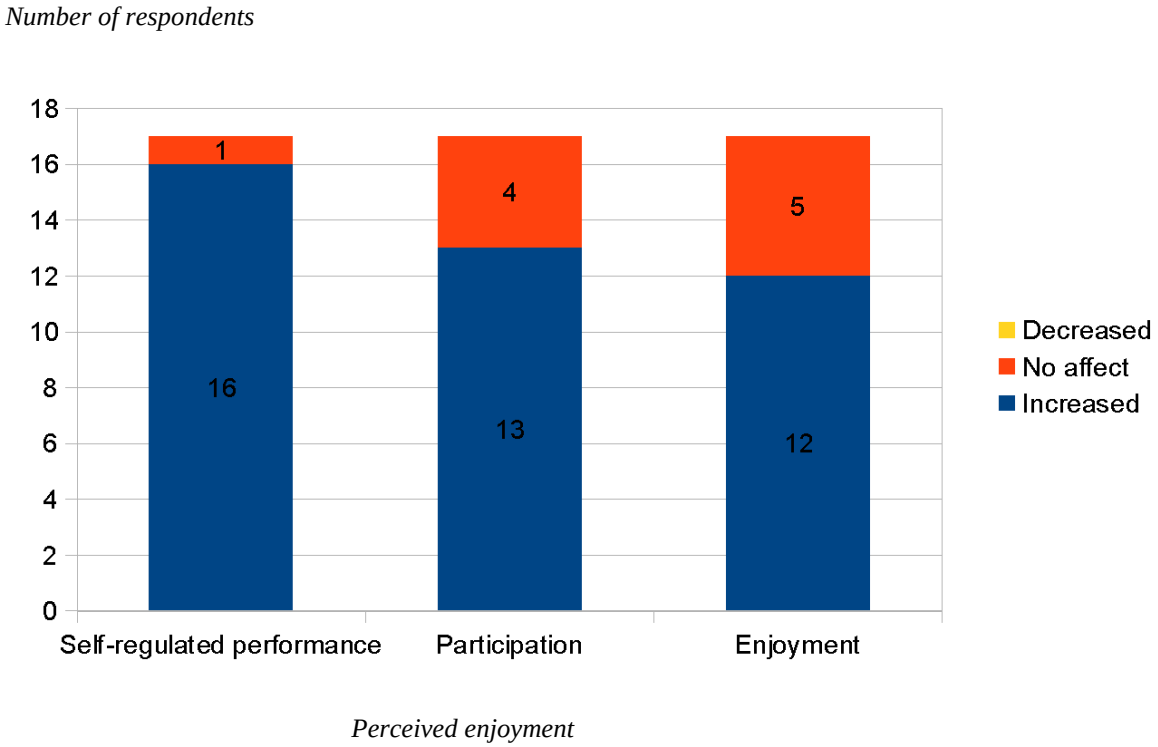
*"All the classes were nice. Some were boring, some fun." (Boy 5)*

In the last class 17 pupils participated and four were absent. The second question was about enjoyment and results were either neutral or positive (PICTURE 3). During the study ten pupils out of 17 responded that their enjoyment had increased in PE. More, 8 pupils responded that their enjoyment had increased also outside the classes with the group. Six pupils felt that their enjoyment had increased also in other teachers' classes with the same group. Rest of the pupils didn't feel that their enjoyment had increased nor decreased during the study.




PICTURE 3. N=17. The pupil's opinion whether the study period has affected to the enjoyment in different domains.

The third question concerned only PE classes and inquired if during the study their self-regulated performance, participation or enjoyment had increased, decreased or had no effect. This question showed that most of the pupils felt that their self-regulated performance and participation had increased during these five PE classes (PICTURE 4). Also twelve out of seventeen felt that their enjoyment had risen.




PICTURE 4. N=17. The pupil's opinion how the teaching period had affected their actions, effort and enjoyment in PE.

Classes that required a lot of cooperation, teamwork and offered tasks with multiple solutions and different variations to accomplish the task got the most positive feedback. This result follows Self-Determination Theory; activities that include teamwork bolster the feeling of relatedness. More, there was no external control over the small-groups and they were free to come up with any solution that helped them to achieve their goals. This supports the feeling of autonomy. And third, when there are no "right" or "wrong" answer or solution, one doesn't experience any direct failing which could affect negatively to one's feeling of competency.

Coming up with a solution or achieving a goal or aim as a group is often easier and every member of the group can rejoice it together.

### 6.2 Teacher-researcher's experiences about the teaching

In this study I performed as a teacher-researcher, keeping five full PE classes. The group's mentor and PE teachers were observing every class. Even though I had never been teacher-researcher before, I had no significant problems conducting these two roles. By being the teacher I got first-hand experience of how it was to teach these contents in addition to the observation process.

Teaching personal and social responsibility by integrating TPSR model (Hellison 2003) successfully to the teaching requires a full comprehension of the model and adapting it to one's educational ideology. Both TPSR and cooperative learning are educational ideas and when TPSR is more about cognitive teaching, cooperative learning provides the pupils opportunities to demonstrate and practice those teachings by collaborating and working in teams. In that sense these two contents not only fit together but also actually support each other. Neither of the ideas diminishes another and during the classes it didn't cause confusion to apply both contents into PE teaching. Mastering and being able to bring the contents fluently into teaching required studying and effort, but I found it to be doable.

Adapting the contents helps to observe situations when teacher can enhance positive behavior or attitude or, on the contrary, discuss about situations that are not acceptable. My experiences indicated that my understanding and teaching skills of TPSR improved in every class and that my knowledge of the content was good enough. Teaching responsibility systematically and logically is the key for learning which is why the theory needs to be fully understood and internalized.

Integrating cooperative learning with different objectives of TPSR model required time and effort beforehand for planning a successful PE class. During the class, the most important part was the beginning of the class; with clear and compact directives the pupils knew what was

expected from them and they were able to follow the instructions. However, my directives were time to time too wordy and more guidance was needed afterwards when the pupils had already started working on their tasks. Cooperative learning and small-group work decreased my workload during the class and my personal need for pupils. It gave me more liberty and I was able to walk around and give personal feedback while I could observe the whole class.
To improve my directives in the beginning of the class, on the third class I wrote on the wallboard the main topics I wanted talk about and it helped. I had problems to remember all I wanted to say and poor directives in the beginning of the class affected to the outcome of the class. If the directives were not clear enough, the pupils lacked determination in their actions; I saw confused faces and instructions were followed slowly. On the other hand the group was very motivated when the instructions were clear and the exercises were done with effort and devotion.

As a teacher I enjoyed the fact that my constant supervision was not really needed and the groups were performing the exercises on their own. If they had problems they couldn't solve by themselves or nobody had understood the objectives, a member from a group came to ask for help. The video confirms how I was mostly walking in the middle of the gym observing and time-to-time going to ask if help or guidance was needed. This was the case many times in the first four classes, but the rhythmic class was the least self-regulated class and kept me busy in directing them personally.

The PE classes didn't turn into discussion classes and the time on task was high. However, the intensity of the physical activity did suffer a bit from integrating the contents of the study. Time was used to the thinking process with other group members and it usually took some minutes before any physical activity started. Still, this is not a problem that worries me; after all it usually takes time to adapt new routines and ways of working. When the pupils learn to start executing the exercises straight away and challenge themselves by modifying the exercises, the classes will get physically more demanding.

## 6.3 Observations and evaluation

### 6.3.1 Self-regulation

Teaching and directing people to work self-regulated is a hard task when we are used to follow specific instructions and work under control or supervision. Many workplaces still work like that and I am sure we can all agree that in schools the control is even higher than at work. As Elias and Butler (1999) have proved, it is hard to change old customs that are learned earlier and adapting new ways takes time (Elias & Butler 1999). In this intervention I only started the process to change this mentality and was able to observe the first few steps of the outcome of working more self-regulated.

In every class I gave simple instructions how start working on their tasks, but encouraged them to modify and find various solutions to those tasks. More, I never went to stop what they were doing or order them to work on their tasks if someone was being idle. Being flexible, giving the space and time for the students to be creative and independent are ways to supports autonomy, encourages them to take responsibility for their own learning and promotes task involvement learning climate (Soini 2006). Usually, in the first five minutes after giving them these vague instructions, nothing really happened. The pupils were expecting more specific instructions so that they wouldn't need to think anything on their own, but just follow orders. When there were no more instructions, little by little, the pupils started putting their heads together and actually get on accomplishing the task what was given.

Teaching the pupils for five PE lessons in a row and influencing them to this idea of self-regulated working did show some improvement. In the end of the study it seemed to take less and less time for the pupils to get onto working the tasks after the instructions was given. The video also confirms my observations that the pupils seemed to be more devoted to the tasks that were modified and differ from the original instruction. Laine (2008) got similar results

from her study when she interviewed former students about experiences from PE lessons after seven years. The results revealed that the students felt more motivated and into the tasks when they had the opportunity to participate in the decision making (Laine 2008). For example the second class, *strength*, where the pupils had to come up with few moves to exercise certain muscle groups, the pupils worked hardest when they were working on the moves they had chosen. Another good example is from the last class, *rhythmic*, where the pupils showed more devotion when working on to create a choreography to the dance and less when I was teaching them the steps for the dance. Having the opportunity to influence to the outcome of the tasks is rewarding. Self-Determination Theory supports the same idea and in this study we can agree that the pupils did show more devotion when the tasks were self-regulated and required cooperation with other pupils.

### 6.3.2 Cooperation and teamwork

Directing the pupils to help each other and work as a team showed many positive situations in the classes. For example in the first class when the pupils were directed to referee their own game, several pupils were explaining the rules to those who hadn't understood everything and were giving advices for strategy to play better as a team. All this happened in a positive tone and teacher's interference was not needed.

During the body care class when the pupils were conducting as a teacher, they showed courage and took responsibility of other's learning by correcting and giving feedback while teaching different exercises in the small groups. Showing a demonstration was the most common, but oral feedback was also observed. Having pupils giving constructive feedback to each other is good achievement. Studies also prove that peer-teaching shows good learning results (Barret 2000; Carlson & Hastie 1997; Dyson 2001; Dyson & Strachan 2000; Ennis et al. 1999; Hastie 1996; Pope & Grant 1996). As students, they often are enthusiastic taking on the role of teacher and enjoy teaching and being taught by peers (Carlson & Hastie 1997; Dyson 2002; 2001; Ennis et al. 1999; Hastie 1996; Pope & Grant 1996).

In the body control class we did group acrobatics and the responsibility of others' safety was stressed. Some of the exercises could have been dangerous without proper assistance and the right techniques, from the performer itself and from the assistant. The pupils seemed to understand this and everyone demonstrated more care and concentration in aiding each other. This showed genuine concern and responsibility of the peers' safety. The pupils were giving corrective feedback to one another and asking for help from other pupils more than usual. Having more responsibility makes one feel more important and meaningful which fosters better motivation (Ahola & Hirvihuhta 2000, 10-11). The joy of succeeding as a team also showed from their faces and they were reluctant to finish the class, only wanting to do more and more difficult stuff.

### 6.4 Other notices

Competition was not observed within small-groups or between the groups. Everyone was all the time concentrated working with others and finding ways to succeed together that the learning climate was very task oriented. Often sport-oriented groups are more ego oriented and competitiveness is shown clearly. Changing the small groups in every class and cooperative working style, I believe, was the key for this. Also, all the tasks were planned so that there were no right or wrong solutions and the students couldn't compete in results. As we remember from Achievement Goal Theory (Nicholls 1989) that a task oriented learning climate is beneficial for supporting the feeling of self-competence, especially for less-skilled persons.

Studies indicate that seeing behavioral changes requires long-term teaching (Rantala 2002; Rantala 2004) and "even a year feels too short" (Kuusela 2005, 74). During the teaching period no significant changes in the pupils' behaviour was observed, but as the teaching period lasted only six weeks, it was expected. The pupils were already showing good behavior in the beginning of the study and their own teacher had evaluated them being level 3 in average in the responsibility level scale. I believe more learning happened in cognitive level. In the beginning of every class I explained how the responsibility levels could be seen in practical level. Then, after every class the pupils had to ponder and be reflective of their own

behavior. Luckner and Nadler (1997) point out that the importance of reflection is essential, because only experiencing something is not enough to guarantee that actual learning will occur. By reflection, new experience will be connected to earlier experiences. (Luckner &Nadler 1997, 6.) According to the questionnaires we can see some progress that a few individuals, in their own opinion, had improved their performance in the area of personal and social responsibility. The written comments showed better understanding of the contents of the responsibility levels, which suggests learning in cognitive level. None of the pupils had experienced any regression and no such behavior was observed.

### 6.5 Suggestions for the future

A group of pupils can benefit from giving them different roles and tasks when working in small-groups. During the intervention I observed that usually within a small-group there was at least one person who took the charge and showed initiative to start working on the task. When this happened, the others followed and the whole group worked actively. Time to time I observed groups that didn't really talk to each other and nothing happened in the beginning. It seemed that nobody wanted to be in charge and all of them were too shy to speak up how to begin. Those were the times when I went to ask directing questions about how they should start working on their task. Once the start-up was done, my advices weren't usually needed anymore. In the class when everybody had the turn to be a teacher, there was no situation like that. When it was clear who had the role of being the "leader", each and every one of them had the courage to step up and take the lead. This shows why sometimes it is good to point out the roles in advance and encourage the pupils to take different roles time to time. The natural leaders will learn to be also followers sometimes and the shy ones will have the opportunity to have a bigger role. It's all about experiences and thinking about future work life, those experiences can be very useful. And as Wright and Burton (2008) puts it, "when one is practicing leadership, the others are practicing respect" (Wright & Burton 2008).

To get better feedback I would do two things differently in the future. I would specify my question and direct the pupils to discuss about the questions in pairs or groups of three. For example I could ask "What were the two situations when you felt the strongest feeling of joy

during the class? What about the two situations when you felt failure or incompetence? What happened in those situations?"

Also nowadays technology allows self-evaluations to be made electronically but anonymously and monitoring can be made publically. This means I could ask the pupils to show for example opinion of their level of cooperation during the class from scale 1-5 and use technology to show anonymous statistics to the entire class. This way the pupils can be included to the inquiry and they can reflect their own behavior or attitude to the rest of the group. I believe including the pupils this way can be a good way to motivate them and show devotion.

TPSR model holds a lot of information and I noticed that it was difficult for the pupils to make self-evaluation as the steps of different responsibility levels are cumulative and are linked to one. In the future, I would separate the responsible levels and ask the students to evaluate their actions according to those responsible levels separately. I came up with this idea, since students show actions and attitudes a little from all of these levels during the same lesson. The idea would be to make the students to notice if they show for example more personal responsibility and less social responsibility.

For following studies the questions in the questionnaires should be better formed and thought more comprehensively. In this study the questionnaires were prone to errors. Also adding open space to all of the questions for comments could be used to understand the answers more widely. Adding specific instructions such as "Write two main factors.." which would urge the responded to comment the answer with few words.

# 7 DISCUSSION

*What was purpose again?*

The purpose of the study was to plan, implement and describe the use of Teaching Social and Personal Responsibility –model (Hellison 2003) with Cooperative learning method in PE. The study was executed with a 7th grade sport orientated class that consisted pupils from both sexes. This study used Teaching Personal and Social Responsibility (Hellison 2003) to teach responsibility and to build a safe environment for using cooperative learning successfully in PE. Cooperative learning is a way to satisfy the three basic needs that are the main factors in Self-Determination Theory (Deci & Ryan 2000). In order to find the learning environment motivational, the feelings of autonomy, relatedness and perceived competence are to be supported (Deci & Ryan 2000).

*The results were promising*

First of all, we need to remember that this was an interventional case study and the results cannot be generalized. Anyhow, the results are promising and the study shows that TPRS and cooperative learning can be combined. In fact they might even be supporting each other. Beforehand the planning of the lessons required more time than usual, but during the lesson the teacher's workload was less demanding. Implementing cooperative learning require good planning adaptations in how teachers organize and manage their classroom or gymnasium (Dyson 2002). Questionnaires in the study were quite inadequate and prone to errors, which is why more weight for analyzing the data should be put to the observations.

The results show correspondence with the motivation theory. Observations and the pupils' responses in the questionnaires indicate strongly that they had enjoyed the classes, which

were planned to be more autonomous, including lot of self-regulated tasks and cooperation. From written feedbacks two things arouse above others and were mentioned several times: The pupils enjoyed cooperation and the freedom of making own modifications and choices during the classes. The results are in line with the study by Dyson (2001) in which students from grades 8 and 11 in United States stated that cooperative learning encouraged participation, was fun, and allowed them to develop motor skills and interpersonal skills (Dyson 2001).

The final survey included also simple multiple-choice questions and they show positive results both inside and outside the PE classes. In the PE classes most of the pupils felt their activity in self-regulated tasks and participation in exercises had increased as well with enjoyment. More or less every second pupil had felt their enjoyment with the same group had increased as well outside the PE classes. In the study by Kuusela (2005), during her Social Emotional Learning course in PE, the PE group changed from disunited and poorly behaving group to a discerning and cooperative group (Kuusela 2005). Charney, Crawford & Wood (1999) states that the relationships between students won't form by themselves but needs actions from the teacher which creates more positive impact between them (Charney, Crawford & Wood 1999). These different didactic actions are creating opportunities that contribute prosocial behavior. During the teaching period first of all I had planned every lesson in line with the principles of cooperative learning and every task required cooperation with peers. Secondly, by teaching TPSR I gave the pupils solutions how to meet the challenges that would occur during the classes. Thirdly, I encouraged the pupils to take more responsibility of the lesson and their learning by letting them to participate the decision making. The study by Kuusela (2005) showed that the students enjoyed tasks where everyone was participating; everybody was taken into account and got help (Kuusela 2005). However, in this study some limitations need to be heeded. The results cannot tell how much their enjoyment, participation or self-regulated performance had increased in percentages and it is based on the pupils' own opinions. This study was too short to see any long-term effects or expect any permanent changes in the pupil' habits. Both, teaching responsibility and adapting the idea of cooperative learning is a long-term project and in order to see any permanent

effect the idea is to include the contents in the teaching for good (Rantala & Heikinaro-Johansson 2007).

The most significant factor that affected to the outcome of the classes was the quality and clarity of the instructions that were given in the beginning of the class. If the educational objectives and the instructions of what was expected from the pupils were given clearly and understandably, they were able to follow them executing the tasks actively and with devotion. On the other hand, time to time the instructions were too wordy and if the main points remained unclear, the performing of the tasks lacked determination and the intensity of physical activity stayed low. Writing the objectives to the signboard helped me to give the instructions clearly and visual instructions helped also the pupils to understand them better. In studies using TPSR such as the one from Escartí, Gutíerrez, Pascual & Llopis (2010), the teacher had a training period for the contents before starting the teaching. In my case, such as in Rantala's studies (2002; 2004), however no assistance from outside was received and the contents were studied by my own. After each lesson writing down notes to my researcher's diary and being reflective helped me to progress and towards the end teaching TPSR got easier and it got easier to be reflective also during the lessons.

The study was based on the motivation theory SDT that highlights the feelings of autonomy, relatedness and perceived competence (Deci & Ryan 2000). In the planning of the classes this information was taken into account. As the results base on the theory and the pupils written responses indicate that most of them felt their enjoyment had increased during the study, we can expect similar results in other school groups as well if teachers manage to find ways to satisfy those three key feelings. Noteworthy is also the result that reveals how almost every pupil felt that his or her activity in self-regulated tasks was increased. Combining these facts, that the pupils were enjoying the manner we worked and there was less need for the teacher's immediate assistance, is pedagogically really interesting.

*Gives a long-term aim for the teacher as well*

As Rantala studied more the suitability of TPSR-model in Finnish PE class, this study concentrated more in the behavioral teaching, using TPSR to create socially supportive environment where every pupil could work in cooperation with everyone without problems. TPSR provides a working and systematic way to educate students little by little towards more self-regulated working and most of all, to learn to respect others.

Teaching personal and social responsibility helped the teacher to give feedback by giving an aim to what observe. Also it gave a continuum in the teaching and linked every class to each other; even though contents in physical activity changed after every class, the educational theme proceeded and advanced class after class. As a teacher, this was very welcomed thing and teaching was enjoyable, allowing seeing some progress in the pupils. Without any systematic plan the educational part in teaching is often occasional and results stay shallow. Escartí, et al. (2010) got similar results as the teacher felt that TPSR model allowed the teacher to work in a more systematic way, with long and short term objectives. The teacher was more conscious of what she was doing and what she was attempting to achieve. She also felt that planning the lessons was easier with clear objectives. In addition, teaching TPSR helped to make her more conscious of her task as a teacher, be coherent and logical of what she says. (Escartí et al. 2010.)

Integrating TPSR and cooperative learning into PE didn't increase the teacher's workload during the lesson. Succeeding in giving clear instruction of exercises actually liberated the teacher and gave an opportunity to observe the whole class better. To achieve this, good planning before the class was important. Planning the lessons took more time and in that way increased the teacher’s workload, before the lesson. Planning the lesson got easier every time and it can be expected that when the contents and different cooperative working methods come more familiar and into routine, the planning will need less effort. However, Dyson (2002) has suggested that it may take two or more years for a teacher to feel comfortable implementing cooperative learning and even longer for institutionalized change.

*About the methods*

The group that participated in the study was a sport-orientated class including both girls and boys. More, the group was particularly well behaving and united compared to regular 7th grade groups that I have seen. This can partly explain why everything went so well and no major problems occurred during the study. But also, since they showed competence already, the results stayed minor. Some authors argue that youth program participants who show most changes are those who are least competent before the program (Anderson et al. 2007). As a teacher, I didn't have to use time to solve any disruptive behavior problems and all the pupils showed interest to the new ideas in the teaching.

Triangulation was a comprehensive way of collecting data and including pupils' feedback and self-evaluations gave important data about their experiences. The questions were not very specific and it is impossible to distinguish which was the biggest factor in the rise of enjoyment; whether it was more autonomous work, more cooperative way of working or perhaps something else. However, the given feedback, data from the final survey and teacher-researcher's observations, confirm that the pupils truly enjoyed and participated with good effort in the classes.

*Conclusion*

This study was inspired by the motivation theory, Self-Determination Theory (Deci & Ryan 1985, 1991, 2000), which highlights autonomy, relatedness and perceived competence being the three main factors that can turn motivation either extrinsic or intrinsic. Hellison's Teaching Personal and Social Responsibility offers a systematic way to achieve a frame in class, which enables ways to support the three factors of SDT. TPSR helps the teacher to build a supportive and safe learning environment where cooperative learning can be used effectively.

Giving responsible tasks and encouraging the students towards self-regulated learning are ways to support autonomy (Deci & Ryan 2000). Cooperative learning ways of working are usually liked among the pupils and satisfies the feeling of relatedness (Kuusela 2005). Working in small-groups and executing exercises as a team helps to create a task oriented learning climate, which reduces comparison and stresses personal learning. Task orientated learning climate is positively related to support perceived competence (Cury et al. 1997; Wallhead & Ntoumanis 2004).

According to schoolteachers and teacher trainers, deficiencies in pupils cognitive and interaction skills form already some degree problem in learning situations (Kiviniemi 2000, 113). Cooperative learning attacks straight to the issue by offering a motivating way to increase cooperation and improve cognitive skills in schools. In Physical Education program using cooperative learning, Dyson (2001) found that a teacher and students emphasized improving motor skills, developing social skills, working together as a team, helping others improve their skills, and taking responsibility for their own learning. More, in general education researchers have found that cooperative learning can have positive effects on academic achievement, self-esteem, active learning, social skill development, and equity achievement (Cohen 1994, Johnson & Johnson 1989; Kagan 1992; Slavin 1996).

This study shows promising results based on both teacher's and pupils' feedback that TPSR and cooperative learning can be used together to aid teachers to build a motivational learning environment that could help solving many educational issues that await in schools.

## REFERENCES


Ahola, T. & Hirvihuhta, H. 2000. Vääryydestä vastuuseen. Miten ohjata lapset ja nuoret ottamaan vastuu teoistaan? Opetushallitus. Helsinki: Painorauma.

Ames, C. 1992. Achievement goal, motivational climate, and motivational processes. G.C. Roberts (Ed.) Motivation in sport and exercise. Champaign, IL: Human Kinetics, 161-176.

Antil, L.R, Jenkins, J.R, Wayne, S.K, & Vadasy, P.F. 1998. Cooperative Learning: Prevalence, conceptualizations, and the relation between research and practice. American Educational Research Journal 35, 419-454.

Bandura, A. 1986. Social foundations of thought and action: A social-cognitive view. Englewood Cliffs, NJ: Prentice Hall.

Barret, T. 2002. Effects of two cooperative learning strategies on academic learning time, student performance, and social behavior of sixth grade physical education students. Unpublished doctoral dissertation, University of Nebraska, Lincoln.

Benware, C. & Deci, E. L. 1984. Quality of learning with an active versus passive motivational set. American Educational Research Journal21,755–765.

Biddle, S. J. H., Cury, F., Goudas, M., Sarrazin, P., Famose, J-P. & Durand, M. 1995. Development of scales to measure perceived physical education class climate: A cross-national project. British Journal of Educational Psychology 65, 341- 358.

Biddle, S. J. H. & Soos, I. 1997. Social-cognitive predictors of motivation and intention in Hungarian children. R. Lidor & M. Bar-Eli (Eds.) Innovations in sport psychology: Linking theory into practice. Proceedings of the 9th World Congress of Sport Psychology. International Society of Sport Psychology, 121-123.

Biddle, S. J. H., Soos, I. & Chatzisarantis, N. 1999. Predicting physical activity intentions using a goal perspectives and self-determination theory approach: A study of Hungarian youth. Scandinavian Journal of Medicine & Science in Sports 9, 353-357.

Bowlby, J. 1973. Self-reliance and some conditions that promote it. R. Gostling (Ed.), Support, innovation, and autonomy. London. Tavistock.

Carlson, T.B. & Hastie, P.A. 1997. The student social system within sport education. Journal of Teaching in Physical Education 16, 176-195.

Carroll, B. & Loumidis, J. 2001. Children's perceived competence and enjoyment in physical education and physical activity outside school. European Physical Education Review 7, 24-43.

Charney, R., Crawford, L. & Wood, C. 1999. The development of responsibility in early adolescence: approaches to social and emotional learning in the middle school. J. Cohen (Ed.) Educating minds and hearts. Social emotional learning and passage into adolescence. New York: Teachers College, 95–111.

Connell, J.P. & Wellborn, J.G. 1990. Competence, autonomy and relatedness: A motivational analysis of self-system processes. In M.Gunnar & Sroufe (Eds.), Minnesota Symposium on Child Psychology 23, 43-77. Hillsdale, NJ: Lawrence Eribaum.

Cohen, E.G. 1994. Restructing in the classroom: Conditions for productive small groups. Review of Educational Research 64, 1-35.

Cury, F., Biddle, S. J. H., Famose, J.P., Goudas, M., Sarrazin, P. & Durand, M. 1996. Personal and situational factors influencing intrinsic interest of adolescent girls in school physical education: A structural equation modeling analysis. Educational Psychology 16, 305-315.

Cury, F., Biddle, S. J. H., Sarrazin, P. & Famose, J. P. 1997. Achievement goals and perceived ability predict investment in learning a sport task. British Journal of Educational Psychology 67, 293-309.

Danish, S. J. 1997. Going for the goal: A life skills program for adolescents. In G. Albec, & T. Gullota (Eds.) Primary prevention works. Thousand Oaks, CA: Sage.

Danish, S. J., & Nellen, V. C. 1997. New roles of sport psychologists: Teaching life skills through sport to at risk youth.

Deci, E. L., Koestner, R. & Ryan, R. M. 1999. A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. Psychological Bulletin 125, 627-668.

Deci, E. L., Nezlek, J. & Sheinman, L. 1981. Characteristics of the rewarder and intrinsic motivation of the rewardee. Journal of Personality and Social Psychology40, 1–10.

Deci, E. L. & Ryan, R. M. 1985. Intrinsic motivation and self-determination in human behaviour. New York, NY: Plenum Press.

Deci, E.L. & Ryan, R.M. 1991. A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.). Nebraska Symposium on Motivation: Perspectives on motivation: 237-288. Lincoln: University of Nebraska.

Deci, E. L. & Ryan, R. M. 2000. The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry 11, 227-268.

Deci, E. L., Schwartz, A. J., Sheinman, L. & Ryan, R. M. 1981. An instrument to assess adults' orientations toward control versus autonomy with children: Reflections on intrinsic motivation and perceived competence. Journal of Educational Psychology 73, 642-650.

Dempsey, J. M., Kimiecik, J. C. & Horn, T. S. 1993. Parental influence on children's moderate to vigorous physical activity participation: An expectancy-value approach. Pediatric Exercise Science 5**,** 151-167.

Digelidis, N. 2000. Attitude change towards health and exercise issues in a health-related physical education curriculum during a school year. Unpublished doctoral thesis, University of Thrace, Greece.

Digelidis, N. & Papaioannou, A. 1999. Age-group differences in intrinsic motivation, goal orientations and perceptions of athletic competence, physical appearance and motivational climate in Greek physical education. Scandinavian Journal of Medicine and Science in Sports 9, 375-380.

Digelidis, N., Papaioannou, A., Laparidis, K. & Christodoulidis, T. 2003. A one -year intervention in 7th grade physical education classes aiming to change motivational climate and attitudes towards exercise. Psychology of Sport and Exercise 4, 195-211.

Dorobantu, M. & Biddle, S. J. H. 1997. The influence of situational and individual goals on intrinsic motivation of Romanian adolescents towards physical education. European Yearbook of Sport Psychology 1, 148-165.

Duda, J. L. 2001. Achievement goal research in sport: Pushing the boundaries and clarifying some misunderstandings. G.C. Roberts (Ed)Advances in motivation in sport and exercise. Champaign, IL: Human Kinetics, 129-182.

Duda, J. L., Chi, L., Newton, M. L., Walling, M. D. & Catley, D. 1995. Task and ego orientation and intrinsic motivation in sport. International Journal of sport Psychology 26, 40-63.

Duda, J. L. & Nicholls, J. G. 1992. Dimensions of achievement motivation in schoolwork and sport. Journal of Educational Psychology 84, 290-299.

Dunn, S.E. & Wilson, R. 1991. Cooperative Learning in the Physical Education Classroom. Journal of Physical Education, Recreation & Dance 62 (6), 22-28.

Dyson, B. 2002. The implementation of cooperative learning in an elementary physical education program. Journal of Teaching in Physical Education 22, 69-85. Dyson, B. & Grineski, S. 2001. The Journal of Physical Education, Recreation & Dance 72 (2).

Ennis, C.D, Solmon, M.A, Satina, B. Loftus, S.J, Mench, J. & McCauley, M.T. 1999. Creating a sense of family in urban schools using the ”Sport for Peace” curriculum. Research Quarterly for Exercice and Sport. 70, 273-285.

Epstein, J. L. 1989. Family structures and student motivation: A developmental perspective. C. Ames, & R. Ames (Ed.) Research on motivation in education. San Diego, CA: 259–295.

Eskola, J. & Suoranta, J. 1998. Laadullisten tutkimuksen arviointi. Teoksessa J. Eskola, J. Suoranta. Johdatus laadulliseen tutkimukseen. Tampere: Vastapaino, 209–235.

Fox, K. R., Goudas, M., Biddle, S. J. H., Duda, J. L. & Armstrong, N. 1994. Children’s task and ego profiles in sport. British Journal of Educational Psychology 64, 253-261.

Goodenow, C. 1993. Strengthening the links between educational psychology and the study of social contexts. Educational Psychologist 27, 177-196.

Goudas, M., Biddle, S. J. H. & Fox, K. 1994. Perceived locus of causality, goal orientations and perceived competence in school physical education classes. British Journal of Educational Psychology 64, 453-463.

Grineski, S. 1996. Cooperative Learning in physical education. Champaign, IL: Human Kinetics.

Grolnick, W. S. & Ryan, R. M. 1987. Autonomy in children's learning: An experimental and individual difference investigation. Journal of Personality and Social Psychology 52, 890-898.

Harter, S. 1978. Effectance motivation reconsidered: Toward a developmental model. Human Development 21, 34-64.

Hastie, P.A. 1996. Student role involvement during a unit of sport education. Journal of Teaching in Physical Education. 16, 88-103.

Heikkinen, H.L.T, Rovio, E., Syrjälä, L. 2006. Toiminnasta tietoon. Toimintatutkimuksen menetelmät ja lähestymistavat. Kansanvalistusseura.

Hellison, D. 1973. Humanistic Physical Education. Cliffs, NJ: Prentice-Hall.

Hellison, D. 2003. Teaching responsibility through physical activity, 2nd ed. Champaign, IL: Human Kinetics.

Huisman T-M. 2004. Liikunnan arviointi peruskoulussa 2003. Yhdeksäsluokkalaisten kunto, liikunta-aktiivisuus ja koululiikuntaan asennoituminen. Opetushallitus. Helsinki: Yliopistopaino.

Jaakkola, T. 2002. Changes in student exercise motivation, goal orientation and sport competence as a result of modifications in school physical education teaching practices. Research Reports on Sport and Health 131. Jyväskylä: LIKES.

Johnson, D.W., & Johnson, R.T. 1989. Cooperation and competition: Theory and research. Edina, MN: Interaction Book.

Jääskeläinen, L., Korpilauri, A. & Tikkanen, J. 1985. Liikunnan didaktiikka. Otavan ainedidaktiikat. 2. painos. Helsinki: Otava.

Kagan, S. 1992. Cooperative learning (2nd ed.) San Clemente, CA: Kagan Cooperative Learning.

Karvonen, T., Rahkola, A. & Nupponen, H. 2008. En ole liikunnallinen tyyppi – sanoo aiempaa useampi kouluikäinen. Liikunta &Tiede 45 (6), 8-12.

KiVa anti-bullying program. Ministry of Education and Culture of Finland. University of Turku 2012. Referred to 13.05.2015 (http://www.kivakoulu.fi/)

Kiviniemi, K. 2000. Opettajan työtodellisuus haasteena opettajankoulutukselle. Opettajien ja opettajakouluttajien käsityksiä opettajan työstä, opettajuuden muuttumisesta sekä opettajankoulutuksen kehittämishaasteista. Opetushallitus.

Laine, S-M. 2008. Kokemuksia liikuntatuntien ilmapiiristä, liikuntatunneilla viihtymisestä ja liikunnanopettajasta seitsemän vuoden takaa. Pro gradu -tutkielma. University of Jyväskylä.

Laine, M. 2004. Hienoja hetkiä arkipäivään. Selvitys 9-luokkalaisten nuorten harrastamista koskevista ajatuksista. Nuorten Akatemia / Nuori Suomi.

Liukkonen, J. 1998. Enjoyment in youth sports: A goal perspectives approach. Research Reports on Sport and Health Sciences. LIKES- Research Center for Sport and Health Sciences. University of Jyväskylä, Finland.

Liukkonen, J., Telama, R., Jaakkola, T. & Sepponen, K. 1997. Itsevertailu lisää liikuntamotivaatiota. Liikunta & Tiede 34, 13–15.

Maehr M.L. & Meyer H.A. 1997. Understanding motivation and schooling: Where we've been, where we are, and where we need to go. Educational PsychologY Review.9,371–409.

Margolis, H. & McCabe, P. 2006. Improving self-efficacy and motivation. What to do, what to say. Intervention in School and Clinic 41, 218-227.

Metsämuuronen, J. 2000. Laadullisen tutkimuksen perusteet. Jaabes OU: Methelp International Ky.

Morgan, K. & Carpenter, P. 2002. Effects of manipulating the motivational climate in physical education lessons. European Physical Education Review 8, 207-229.

Morgan, K., Kingston, K. & Sproule, J. 2005. Effects of different teaching styles on the teacher behaviors that influence motivational climate and pupils' motivation in physical education. European Physical Education Review 11, 257-286.

Nicholls, J. G. 1989. The competitive ethos and democratic education. Cambridge, MA: Harvard University Press.

Niemelä, J. & Niemelä, O. 2012. "Jos koululiikuntaa ei olisi, luulen, etten liikkuisi nyt vaapaa-ajallakaan juuri ollenkaan". Pro gradu –tutkielma. Jyväskylän yliopisto.

Nupponen, H. & Telama, R. 1998. Liikunta ja liikunnallisuus osana 11-16-vuotiaiden eurooppalaisten nuorten elämäntapaa. Jyväskylän yliopisto. Liikuntakasvatuksen julkaisuja 1.

Nupponen, H. & Telama, R. 1999. Liikunnalla monta roolia nuorten vapaa-ajassa. Liikunta &Tiede 3, 10 - 16.

Ntoumanis, N. 2001a. A self-determination approach to the understanding of motivation in physical education. British Journal of Educational Psychology 71, 225-242.

Ntoumanis, N. 2001b. Empirical links between achievement goal theory and self-determination theory in sport. Journal of Sport Sciences 19, 397-409.

Ntoumanis, N. & Biddle, S. J. H. 1999. A review of motivational climate in physical activity. Journal of Sport Sciences 17, 643–665.

Ojanen, M. 2000. Millainen osa liikunnalla on psyykkisessä hyvinvoinnissa? Teoksessa Miettinen, M. (toim.) 2000. Haasteena huomisen hyvinvointi − Miten liikunta lisää mahdollisuuksia? Liikunnan yhteiskunnallinen perustelu II. Tutkimuskatsaus. LIKES-tutkimuskeskus. Jyväskylä: Liikunnan ja kansanterveyden julkaisuja 124.

Ommundsen, Y. 2005. Motivation and affect in physical education classes- A self-determination perspective. Active lifestyles: The impact of education and sport. AIESEP World Congress. Abstracts Book, 192.

Palomäki, S. & Heikinaro-Johansson, P. 2011. Liikunnan oppimistulosten seuranta-arviointi liikunnanopetuksessa 2010. Koulutuksen seurantaraportit 4. Opetushallitus.

Perusopetuksen opetussuunnitelman perusteet 2004. Helsinki: Opetushallitus.

Papaioannou, A. 1995. Differential perceptual and motivational patterns when different goals are adopted. Journal of Sport and Exercise Psychology 17, 18–34.

Papaioannou, A. & Digelidis, N. 1998. Effects of a 7-month intervention study on students' motivation in physical education. Theodorakis, Y. Goudas (Ed Proceedings of the 2nd International Congress of Sport Psychology, 131-133.

Papaioannou, A. & Kouli, O. 1999. The effect of task structure, perceived motivational climate and goal orientations on students' task-involvement and anxiety. Journal of Applied Sport Psychology 11, 51-71.

Pope, C.C & Grant, B.C. 1996. Students' experiences in sport education. Waikato Journal of Education. 2, 103-118.

Putnam, J.W. 1998. Cooperative learning and strategies for inclusion: Celebrating diversity in the classroom (2nd ed.). Baltimore: Brookes.

Rantala, T. & Heikinaro-Johansson, P. 2007. The Personal and Social Responsibility Model as Part of Physical Education Lessons for Seventh-Grade Boys. Liikunta & Tiede 44(1) 36–44.

Rantala, T. 2002. Hellisonin vastuuntuntoisuuden mallin kokeilu seitsemännen luokan poikien liikuntatunneilla. Pro gradu –tutkielma. University of Jyväskylä. Faculty of Sports Sciencies.

Rantala, T.2005. Voiko vastuuntuntoisuuteen kasvattaa? – Toimintatutkimus Hellisonin vastuuntuntoisuuden mallin käyttömahdollisuuksista osana perusopetuksen liikuntatunteja. University of Jyväskylä. Faculty of Sports sciencies. Licenciate dissertation.

Rantala, T. & Heikinaro-Johansson, P. 2007. Hellisonin vastuuntuntoisuuden malli osana seitsemännen luokan poikien liikuntatunteja. Liikunta & Tiede 44(1), 36–44.

Rauste- von Wright, M. & von Wright, J. 1994. Oppiminen ja koulutus. WSOY. Porvoo.

Reeve, J., Jang, H., Carrell, D., Jeon, S. & Barsh, J. 2004. 'Enhancing students' engagement by increasing teachers' autonomy support', Motivation and Emotion 28, 147-169.

Roberts, G. C. 1992. Motivation in sport and exercise: conceptual constraints and convergence. G. Roberts (Ed.) Motivation in sport and exercise. Champaign, IL: Human Kinetics, 3-30.

Roberts, G. C. 2001. Understanding the dynamics of motivation in physical activity: The influence of achievement goals, personal agency beliefs, and the motivational climate. G.C. Roberts (Ed.) Advances in motivation in sport and exercise. Champaign, IL: Human Kinetics, 1-50.

Rovegno, I. & Kirk, D. 1995. Articulations and silences in social critical work on physical education: Towards a broader agenda. Quest 47, 447-474.

Ryan, R. M. & Grolnick, W. S. 1986. Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. Journal of Personality and Social Psychology 5, 550-558.

Ryan, R. M. & La Guardia, J. G. 2000. What is being optimized over development? A self-determination theory perspective on basic psychological needs across the life span. S. Qualls & N. Abeles (Ed Psychology and the aging revolution. Washington, DC: APA Books, 145-172.

Ryan, R.M. & Lynch, J. 1989. Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. Child Development 60, 340-356.

Ryan, R. M., Stiller, J., & Lynch, J. H. 1994. Representations of relationships to teachers, parents, and friends as predictors of academic motivation and self-esteem. Journal of EarlyAdolescence 14, 226–249.

Sapon-Shevin, M.K. 1994. Cooperative learning and middle schools: What would it take to really do it right? Theory Into Practice 33, 183-190.

Seifriz, J., Duda, J. L. & Chi, L. 1992. The relationship of perceived motivational climate to intrinsic motivation and beliefs about success in basketball. Journal of Sport and Exercise Psychology 14, 375-391.

Shavelson, R., J. & Bolus, R. 1982. Self-concept: The interplay of theory and methods. Journal of Educational Psychology 74, 3-17.

Slavin, R.E. 1996. Research on cooperative learning and achievement: What we know, what we need to know. Contempary Educational Psychology 21, 43-69.

Smith, A. & Parr, M. 2007. Young people´s views on the nature and purposes of physical education: a sociological analysis. Sport, Education and Society 1, 37–58.

Soini, M. 2006. Motivaatioilmaston yhteys yhdeksäsluokkalaisten fyysiseen aktiivisuuteen ja viihtymiseen koulun liikuntatunneilla. Studies in Sport, Physical Education and Health 120. Jyväskylä: Yliopistopaino.

Solmon, M. A. 1996. Impact of motivational climate on students' behaviours and perceptions in a physical education setting. Journal of Educational Psychology 88, 731-738.

Spink, K. S. & Carron, A. V. 1992. Group cohesion and adherence in exercise classes. Journal of Sport and Exercise Psychology 14, 78-96.

Spray, C. M., Wang, C. K. J., Biddle, S. J. H., Chatzisarantis, N. L. D. & Warburton, V.E. 2006. An experimental test of self-theories of ability in youth sport. Psychology of Sport and Exercise 7, 255-267.

Standage, M. Duda, J.L. & Ntoumanis, N. 2005. A test of self-determination theory in school physical education. British Journal of Educational Psychology 75, 411-433.

Standage, M. & Treasure, D.C. 2002. Relationship among achievement goal orientations and multidimensional situational motivation in physical education. British Journal of Educational Psychology 72, 87–103.

Theebom, M., De-Knop, P. & Weiss, M. R. 1995. Motivational climate, psychological responses, and motor skill development in children's sport: A field-based intervention study. Journal of Sport and Exercise Psychology 17, 294-311.

Telama, R., Naul, R., Nupponen, H., Rychtecky, A. & Vuolle, P. 2002. Physical fitness, sporting lifestyles and olympic ideals. Cross-cultural studies on youth sport in Europe. Sport science studies 29. Schorndorf: Hofmann.

Treasure, D.C. 1997. Perceptions of the motivational climate and elementary school children's cognitive and affective responses. Journal of Sport and Exercise Psychology 19, 278-290.

Treasure, D. C. & Roberts, G. C. 2001. Students' perceptions of the motivational climate, achievement beliefs, and satisfaction in physical education. Research Quarterly for Exercise and Sport 72, 165-75.

Vallerand, R. J. 2001. A hierarchical model of intrinsic and extrinsic motivation in sport and exercise. G.C. Roberts (Ed.) Advances in motivation in sport and exercise. Champaign, IL: Human Kinetics, 263-319.

Vallerand, R. J. & Reid, G. 1984. On the causal effects of perceived competence on intrinsic motivation: A test of cognitive evaluation theory. Journal of Sport Psychology 6, 94-102.

Vlachopoulos, S. & Biddle, S. J. H. 1997. Modelling the relation of goal orientations to achievement-related affect in physical education: Does perceived ability matter? Journal of Sport and Exercise Psychology 19, 169-187.

Wallhead, T. L. & Buckworth, J. 2004. The role of physical education in the promotion of youth physical activity. Quest 56, 285-301.

Wallhead, T.L. & Ntoumanis, N. 2004. Effects of a sport education intervention on students' motivational responses in physical education. Journal of Teaching in Physical Education 23, 4-18.

Walling, M. D. & Duda, J. L. 1995. Goals and their associations with beliefs about success and perceptions of the purposes of physical education. Journal of Teaching in Physical Education 14, 140-156.

Warburton, V. E. 2006. An experimental test of self-theories of ability in youth sport. Psychology of Sport and Exercise 7, 255-267.

Weiss, M. R. 2000. Motivating kids in Physical activity. The President´s Council on Physical Fitness and Sports. Research Digest 3, 1-8.

Wold, B. & Kannas, L. 1993. Sport motivation among young adolescents in Finland, Norway and Sweden. Scandinavian Journal of Medicine and Science in Sports 4 (3), 283-291.

Zacheus, T., Tähtinen, J., Rinne, R., Koski, P. & Heinonen, J. 2003. Kaupunkilaisten liikunta ikäpolvittain: Turkulaisten liikuntatottumukset 2000-luvun alussa. Turun yliopiston kasvatustieteiden tiedekunta.

## ATTACHMENTS

**ATTACHMENT 1** - Eye-hand coordination – Lesson plan

| Objectives | Exercise | Organization | Time |
|---|---|---|---|
| Refresh the memory of the responsibility levels | Reviewing the responsibility levels<br>-First independently<br>-Then together | Independent reviewing from the wall poster<br>"Questions?"<br>--> Level 1 more detailed, other levels explained quickly | 5-10' |
| Increase cooperation<br>Without advice: how the teamwork works?<br>No external referee: how does it work? | Modificated dodge ball<br>Moving as in ultimate, team vs team, "burning" by touching with the ball in hand | Paper-scissor-stone with a pair → fetching a colored vest<br>Instructions of the game and starting | 10' |
| Self-regulated work, cooperation in small-groups and challenging oneself | Small-group work<br>5 different working stations and instruction are written in a paper | Creating a row by alphabetical order, dividing in groups of five | 5x10 |
| Autonomy, cooperation and encouraging to find different solutions | Modifications<br>Each group can come up with any modification they fancy | All the equipment from the storage are available to use | 10' |
| Direct the students to reflect their performance and behavior during the class | Discussion about the class and filling a questionnaire | "How did this kind of working feel?"<br>"Anything about the teacher's performance?"<br>"Did you help or receive any help during the class?" | 10-15' |

**ATTACHMENT 2** – Strength – Lesson plan

| Objectives | Exercise | Organization | Time |
|---|---|---|---|
| Teaching cognitive and psychomotorical skills | Warm-up all together<br>-The use of different equipment in strength and condition training (kettle ball, weight bar, elastic band) | Teaching about muscular training and instructing about the different equipments during the warm-up<br>Movement suggestions from the students | 15' |
| **The students will understand the main objectives and know what is expected from them** | Telling out loud the main objectives and instructing the exercises<br>Cognitive: knowledge about muscle activity + thinking different movements<br>Psychomotorical skills: Trying and learning new movements<br>Educational: cooperation within the small-group and teach the movements to the other groups | Inventing movements together: Listen and appreciate others' suggestions. Add own suggestions.<br>Pondering and deciding about the movements together<br>Teaching others: One demonstrate, others explain | 5-10' |
| Improving cooperation skills<br><br>Encouraging to a self-regulated performance and together coming up with new ideas | In small-groups inventing movements to practice certain muscle groups<br>At least two different variations (static/dynamical, pulling/pushing) | Groups of three, persons from different sports backrounds<br>-Abs<br>-Back<br>-Calves<br>-Quadriceps/Hamstring<br>-Raising heart rate<br>-Pectorals/shoulder muscles<br>-Biceps/triceps | 10-15' |
| Ponder if the movement is safe and how one could add challenge if needed<br><br>Taking account others' ability to understand and learn the movement correctly | Teaching the movements to others<br>+ circuit training | Other groups gather around the group that teaches their movements<br>7 x 4 x45" sec circuit training, 15" sec break. | 10' + 30' |
| Ponder own experiences about inventing movements and own cooperative behavior | Discussion about the class and filling a questionnaire | ”How did it feel..?” | 15' |

**ATTACHMENT 3** - Body control – Lesson plan

| Objectives | Exercise | Organization | Time |
|---|---|---|---|
| To understand the difference between the levels | Defining the responsibility levels again and bring out the main objectives of the class | "Level 1: least one can do to other"<br>"Level 2: Start performing and try without prejudices"<br>"Level 3: Challenge and develop oneself"<br>"Level 4: The most one can do to others. Help, be understanding, accept, encourage" | 10' |
| Especially activation of abs and wrists<br>Learning "box" and "table" positions both cognitively and psychomotorically | Warm up together by the teacher. Teaching basic positions and movements | Instructions how to give positive and corrective feedback | 10' |
| Developing cooperative skills<br>Supporting and helping others: responsibility of others' safety<br>Succeeding together | Pair and group acrobatics in different sizes of groups<br><br>Different human pyramid variations | Doing movements on a soft mattress that require body control and acrobatics. Everybody participating on their own pace | 50-60' |
| Ponder own activity in helping others and the level of responsibility during the class | Discussion about the class and filling a questionnaire | "Did you collaborate with everyone?" | 10' |

**ATTACHMENT 4** - Body care – Lesson plan

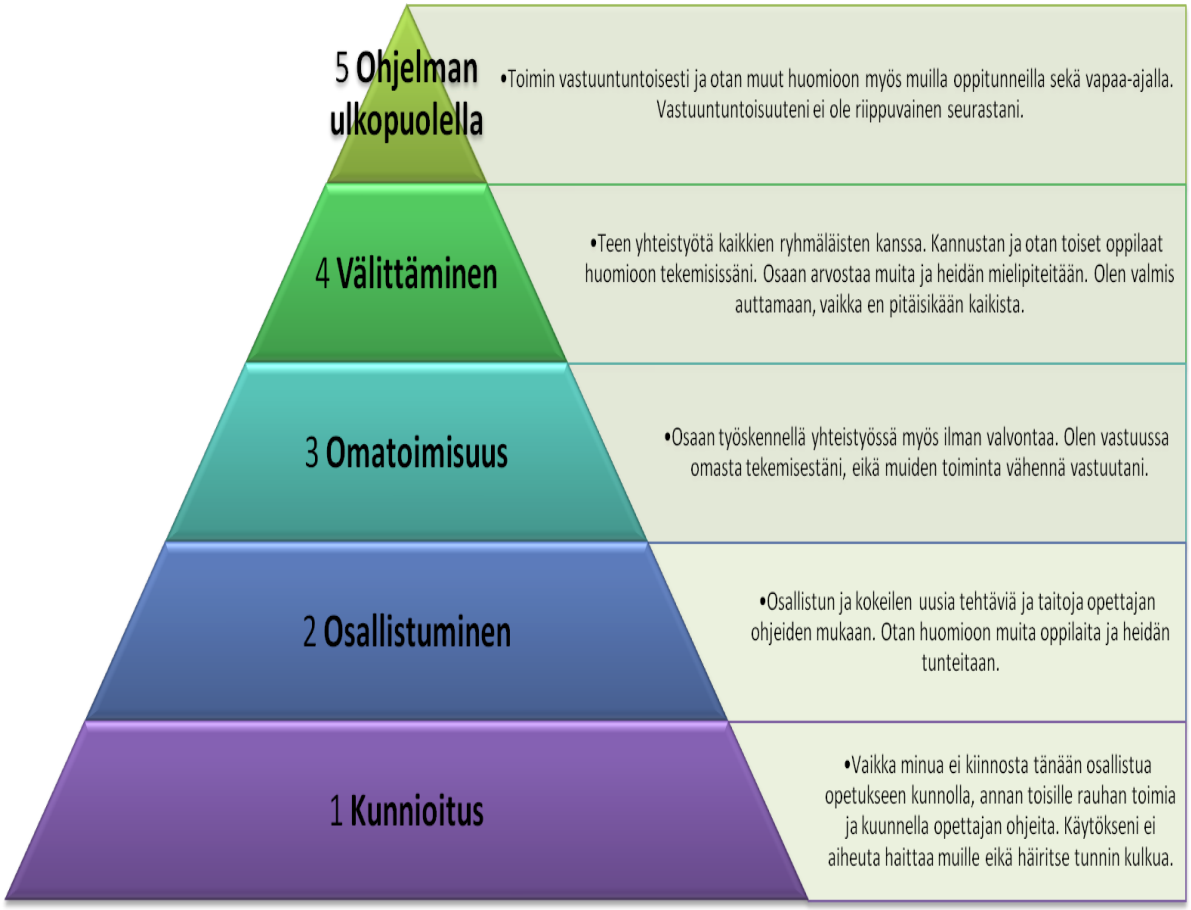
| Objectives | Exercise | Organization | Time |
|---|---|---|---|
| The students will understand what is expected of them | Explain the objectives and the plan of the class<br>-Intention that the work stations function without teachers' supervision | Jokainen saa toimia opettajana<br>“Level 1- Listen the teacher”<br>“Level 2 – Follow the instructions, ask if you didn't understand”<br>“Level 3 – Start performing after understanding the task”<br>“Level 4 – Adopt the role of the assistant teacher | 10'-15' |
| Delegate students to keep the warm up and liberate the teacher for other tasks | Two students keep the warm up<br>-Instruction on the sign board | Mean time instructing four assistant teachers in the storage room | 10-15' |
| | Small-group work, 4 students + assistant teacher | Dividing into four groups, working in stations<br>The assistant teacher moves on together with group and another student stays in the station to teach the next group | 4x12'-15' |
| Pondering about the experiences as an assistant teacher and self-evaluation about the performance<br>Self-evaluation in the direction of the responsibility levels | Discussion about the class and filling a questionnaire | ”Was it hard to be a teacher? Did you like it?” | 10-15' |

**ATTACHMENT 5** – Rhythmic – Lesson plan

| Objectives | Exercise | Organization | Time |
|---|---|---|---|
| Students understand what is expected from them | Explaining the objectives and plan of the class | Cooperation, participation and self-regulated performance | 5' |
| Cooperation and succeeding together<br>Combining movement to the rhythm | Warm up: ”hand shakes” and moving in the rhythm | With a pair, first without music<br>Moving in own pace and direction | 10' |
| Learn the dance steps | Practicing the dance steps all together | The class divided in three groups, a group in front of the teacher and two others on both sides | 15' |
| Increasing cooperation<br>Adding and modifying movements to the dance as a group | Modifying the choreography and adding movements.<br>Make the dance look theirs | Each group works independently with free will | 0-15' |
| Get feelings of succeeding together<br>Enjoy the feeling of working together<br>Improving in rhythmic, both cognitively and psychomotorically | Practicing the dance with own group and performing all groups together simultaneously | The groups practice own their own<br><br>Performing all the groups simultaneously | 30' |
| Reflecting about the whole study period and pondering one selves behavior and attitude | Discussion, feedback and filling the final survey | ”How did it feel to work more self-regulated?” | 15' |

**ATTACHMENT 6**

# VASTUUNTUNNON PYRAMIDI




**0 Vastuuntunnottomuus**

Keksin syitä, joilla oikeutan huonon käyttäytymiseni. Esim. syytän toisia omasta käyttäytymisestäni. En ota vastuuta tekemisestäni tai tekemättä jättämisestäni, eikä toisten häiritseminen ole minulle ongelmallista.

TASO 1:a)**Itsekontrolli**, b)**konfliktien rauhanomainen ratkaisu**, c)**oikeus kuulua joukkoon**
TASO 2:a)**Osallistuminen**, b)**uusien asioiden kokeileminen**, c)**omien vahvuuksien tiedostaminen**
TASO 3:a)**Omatoimisuus**, b)**henkilökohtainen suunnittelu**, c)**riippumattomuus ulkoisista vaikuttimista**
TASO 4: a)**Ihmissuhde- ja vuorovaikutustaitojen oppiminen**, b)**toisista välittäminen**, c)**toisten auttaminen**, d)**halu toimia osana ryhmää**
TASO 5: a)**Ymmärtää ja sisäistää mitä vastuuntuntoisuus kokonaisuudessaan on**, b)**osoittaa vastuuntuntoisuutta arkipäivän askareissa opetusryhmän ulkopuolella**

## ATTACHMENT 7

**Nimi**_____

Millä vastuuntuntoisuuden tasolla tekemiseni oli tällä liikuntatunnilla? Katso tasot seinätaulusta.

**TASO**____, kommentti: _____

_____

Mikä vastuuntuntoisuuden taso kuvaa parhaiten opettajan toimintaa tällä liikuntatunnilla? Pyramidi alla.

**TASO**____, kommentti: _____

_____

*Merkitse rastilla parhaiten kuvaava vaihtoehto*.

| | | | | |
|---|---|---|---|---|
| Tehtävät olivat haasteellisia,tykkäsin! | Tehtävät olivat helppoja, tykkäsin | | Tehtävät olivat liian helppoja, en tykännyt | Tehtävät olivat liian vaikeita, en tykännyt |

**TASO 5, OHJELMAN ULKOPUOLELLA**

Opettaja on luotettava aikuinen, jolle voi tulla puhumaan asiasta kuin asiasta ja hänellä riittää aikaa ja kiinnostusta kuunnella ja auttaa myös oppituntien ulkopuolella.

**TASO 4, LUOTTAMUS**

Opettaja kuuntelee minua ja arvostaa minua sekä mielipiteitäni. Opettaja on tunneilla minua varten ja tiedän, että hänen kanssaan voi keskustella. Opettaja saa minut motivoitua liikkumaan!

**TASO 3, KUNNIOITUS**

Opettaja on oikeudenmukainen ja rehellinen. Opettajaa kiinnostaa oppimiseni ja saan opettajalta yksilökohtaista palautetta. Opettaja kunnioittaa ja kuuntelee myös oppilaiden mielipiteitä.

**TASO 2, OSALLISTUMINEN**

Opettaja pyrkii kannustamaan minua. Opettajan kanssa ei kuitenkaan ole helppo keskustella asiasta. Välillä tuntuu ettei opettajaa aina kiinnosta, miltä minusta tuntuu.

**TASO 1, VASTUULLISUUS**

Minusta tuntuu, etten opi tunneilla mitään. Opettajaa ei tunnu kiinnosta oppilaiden kehittyminen tai osallistuminen. Opettaja antaa ohjeet kuinka toimia, mutten aina ymmärrä, mitä tulisi tehdä.

***NOLLATASO – VASTUUNTUNNOTTOMUUS***

Opettaja ei pidä huolta oppilaistaan eikä saa luokkaa kuriin, jos siellä joku häiriköi tai kiusaa.

## ATTACHMENT 8

**Nimi**_____

Millä vastuuntuntoisuuden tasolla tekemiseni oli tällä liikuntatunnilla? Katso tasot seinätaulusta.

**TASO**____, kommentti: _____

_____

Mikä vastuuntuntoisuuden taso kuvaa parhaiten omaa toimintaani opettajana (jos et toiminut opettajana, kirjoita se kommenttiin) tällä liikuntatunnilla? Pyramidi alla.

**TASO**____, kommentti: _____

_____

*Merkitse rastilla parhaiten kuvaava vaihtoehto*.

| | | | | |
|---|---|---|---|---|
| Tehtävät olivat haasteellisia,tykkäsin! | Tehtävät olivat helppoja, tykkäsin | | Tehtävät olivat liian helppoja, en tykännyt | Tehtävät olivat liian vaikeita, en tykännyt |

**TASO 5, OHJELMAN ULKOPUOLELLA**

Opettaja on luotettava aikuinen, jolle voi tulla puhumaan asiasta kuin asiasta ja hänellä riittää aikaa ja kiinnostusta kuunnella ja auttaa myös oppituntien ulkopuolella.

**TASO 4, LUOTTAMUS**

Opettaja kuuntelee minua ja arvostaa minua sekä mielipiteitäni. Opettaja on tunneilla minua varten ja tiedän, että hänen kanssaan voi keskustella. Opettaja saa minut motivoitua liikkumaan!

**TASO 3, KUNNIOITUS**

Opettaja on oikeudenmukainen ja rehellinen. Opettajaa kiinnostaa oppimiseni ja saan opettajalta yksilökohtaista palautetta. Opettaja kunnioittaa ja kuuntelee myös oppilaiden mielipiteitä.

**TASO 2, OSALLISTUMINEN**

Opettaja pyrkii kannustamaan minua. Opettajan kanssa ei kuitenkaan ole helppo keskustella asiasta. Välillä tuntuu ettei opettajaa aina kiinnosta, miltä minusta tuntuu.

**TASO 1, VASTUULLISUUS**

Minusta tuntuu, etten opi tunneilla mitään. Opettajaa ei tunnu kiinnosta oppilaiden kehittyminen tai osallistuminen. Opettaja antaa ohjeet kuinka toimia, mutten aina ymmärrä, mitä tulisi tehdä.

***NOLLATASO – VASTUUNTUNNOTTOMUUS***

Opettaja ei pidä huolta oppilaistaan eikä saa luokkaa kuriin, jos siellä joku häiriköi tai kiusaa.

**ATTACHMENT 9**

# Alkukysely

| **Mitä mieltä olet seuraavista väittämistä?** | Täysin samaa mieltä | Samaa mieltä | Ei samaa eikä eri mieltä | Eri mieltä | Täysin eri mieltä |
|---|---|---|---|---|---|
| Luokkani oppilaat viihtyvät hyvin yhdessä | | | | | |
| Ryhmissä työskentely sujuu hyvin luokassani | | | | | |
| Luokkakaverit tulevat väliin, jos jotain oppilasta kiusataan | | | | | |
| Luokkakaverit auttavat toisiaan koulutehtävissä | | | | | |
| Koulukavereiden kanssa on helppo tulla toimeen | | | | | |
| Minulla on ystäviä tässä koulussa | | | | | |
| Koulukaverit hyväksyvät minut sellaisena kuin olen | | | | | |

| **Tässä ryhmässä tunnen, että..** | Täysin samaa mieltä | Samaa mieltä | En samaa enkä eri mieltä | Eri mieltä | Täysin eri mieltä |
|---|---|---|---|---|---|
| Minua tuetaan | | | | | |
| Minua kuunnellaan | | | | | |
| Minua ymmärretään | | | | | |
| Minua arvostetaan | | | | | |
| Olen turvassa | | | | | |
| Voin vaikuttaa asioihin | | | | | |
| Voin vapaasti sanoa mielipiteeni | | | | | |

| **Kuinka usein seuraavia asioita tapahtuu liikuntatunneilla?** | Täysin samaa mieltä | Samaa mieltä | En samaa enkä eri mieltä | Eri mieltä | Täysin eri mieltä |
|---|---|---|---|---|---|
| Oppilaat eivät kuuntele, mitä opettaja sanoo | | | | | |
| Luokassa on hälinää ja | | | | | |

| | |
|---|---|
| epäjärjestystä | |
| Opettaja joutuu odottamaan kauan oppilaiden hiljentymistä | |
| Oppilaat eivät voi työskennellä kunnolla | |
| Tunnilla alussa kuluu kauan aikaa, ennen kuin oppilaat alkavat työskennellä | |

**Millaiseksi koet liikuntatuntiesi ilmapiirin?**

- o Erittäin hyväksi
- o Melko hyväksi
- o Ei hyväksi eikä huonoksi
- o Melko huonoksi
- o Erittäin huonoksi

**ATTACHMENT 10**

# Kysely heti tutkimusjakson loputtua

**Mitä mieltä olet pitämistäni liikuntatunneista?**

**Mieti, kuinka vastuuntuntoisuuden opettaminen ja yhteisoppiminen (pienryhmätyöskentely, yhteistyö, apuopettajana toimiminen jne.) on vaikuttanut viihtymiseesi.**
Mielestäni viihtymiseni on

| | Lisääntynyt | Ei vaikutusta | Vähentynyt |
|---|---|---|---|
| Liikuntatunneilla | | | |
| Muilla oppitunneilla ryhmäsi kanssa | | | |
| Ryhmäläistesi kanssa oppituntien ulkopuolella | | | |

**Mielestäni tutkimusjakson aikana liikuntatunneilla**

| | Lisääntyi | Ei vaikutusta | Vähentyi |
|---|---|---|---|
| Omatoimisuuteni | | | |
| Osallistumiseni | | | |
| Viihtymiseni | | | |