Title:

How to create a flourishing classroom? An intervention protocol for enhancing teachers' social and emotional learning

Authors:

Talvio, Markus*[1] & Lonka, Kirsti [1, 2]

Affiliation:

* [1] University of Helsinki, Finland

[2] Optentia Research Focus Area, Vaal Triangle Campus, NWU, South Africa

* corresponding author. Email: markus.talvio@helsinki.fi

Abstract:

The positive psychology movement values good atmosphere and flourishing in the classroom. In order to do this, it is important to develop teachers' social and emotional learning (SEL) as a part of expertise, because teachers are in key position to create supportive and engaging learning environment. Even though promoting SEL as a means to create a flourishing classroom is often recommended in the literature, there is not much multi-national evidence about the development of the teachers' competencies associated with SEL. Previous research indicates that it is difficult to aid students to flourish without teachers having the necessary skills to scaffold them. Focusing merely on cognitive outcomes is not helping, but instead, we need to train the teachers to support autonomy, agency and self-efficacy in classrooms to build sustainable success and happiness among youth. The whole classroom culture should be developed to support positive encounters. This chapter describes studies on SEL interventions on teachers. The participants of the first study were Finnish teachers who attended to Gordon's Teacher Effectiveness Training (TET) workshops, based on humanistic psychology. For assessing teachers' development of SEL, a new method, Dealing with Challenging Interaction (DCI) was developed. DCI helps to capture the real-life challenging situations at teacher's work in various settings. In all, after the TET intervention the teachers really started using the studied skills, and they were more likely to support their students' autonomy and agency than the teachers in the comparison groups. The

next step was to carry out global investigations about the Lions Quest teacher workshops. These studies revealed increased readiness to develop teachers' SEL competencies worldwide. Finally, various SEL interventions in nine European countries were looked at. So far, using mixed-method approach in several countries has produced consistent results with satisfactory effect sizes. The research methods appear ecologically valid, yet generalizable in various cultures and contexts. In all, these studies demonstrated that teachers benefit from SEL training. Diverse interventions appeared to increase teachers' readiness to implement SEL. Especially, teachers' sense of competence in teaching SEL increased. As such, the purpose of this chapter is to present an intervention protocol, based on the SEL interventions described above that aims at enhancing teachers' social and emotional learning. The final aim is to develop classroom cultures that promote flourishing in both teachers and students. The present research adds to both theoretical and practical understanding of teachers' continuing professional development worldwide.

Keywords:

Social and emotional learning (SEL), professional development, well-being, non-cognitive, intervention, continuing teacher training, mixed-method approach, classroom, Dealing with Challenging Interaction (DCI)

Author bio:

Dr. Markus Talvio is an international trainer on social and emotional learning and post-doc researcher in the Faculty of Educational Sciences at the University of Helsinki, Finland. He is interested in the processes involved in the teaching and learning of social interaction skills. He has a long experience in communication skills training.


Dr. Kirsti Lonka is Professor of Educational Psychology in the Faculty of Educational Sciences at the University of Helsinki, Finland and an extraordinary professor in Optentia Research Focus Area, NWU, South Africa. Her research interests include university student learning and motivation, especially in teacher education. She specializes in technology-mediated and instructional innovations in higher education.

# 1. Introduction

The positive psychology movement values good atmosphere and flourishing in the classroom. Both students' well-being and academic achievement are promoted in a classroom that supports positive atmosphere and constructive interaction (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). In order to promote the goals of positive psychology, it is important to develop teachers' social and emotional learning (SEL) as a part of expertise, because teachers are in key position to create supportive and engaging learning environment. The present chapter focuses on interventions that aim at developing teachers' SEL.

Why is SEL so important? First, it gives the teachers instructional tools for promoting engaging learning environment and creating good relationships with students. On the other hand, teachers are always students' role-models who are setting standards for interaction, the use of language and i.e., dealing with challenging situations in the classroom. Hence, it is very important that teachers' lecturing about good manners and respect are in line with their ways of interacting with students in the classroom (Lonka, 2018).

Since initial teacher training seldom includes much theory on SEL teachers seek their ways to the further education during their teacher career. There are several programmes available for implementing SEL at school worldwide (https://casel.org/). However, not much evidence is available on how teachers benefit from these trainings. The purpose of our investigations was to get both quantitative and qualitative information on the benefits of SEL for teachers. The intention of the quantitative studies was to validate, confirm and generalize the qualitative categories into structured items and to explore the quantitative change in teachers' thinking during their workshops on SEL. The first intervention studied was *Gordon's Teacher Effectiveness Training* (TET) ( Gordon, 2003). Then, the second investigation was targeted on investigating on the quantitative change in teachers' thinking on SEL during the *Lions Quest teachers' workshops* (https://www.lions-quest.org/). Since the data were collected in ten areas in nine OECD countries we were also able to look at the similarities in teachers' readiness to develop their SEL competence between countries. The intention of the qualitative studies was to reveal how teachers' thinking changed during a SEL training, Additionally, by using qualitative

approach we investigated the sustainability of the studied SEL skills. TET was used as an intervention of the qualitative studies.

Next, the use of social and emotional learning (SEL) in teaching will be defined. Then, we will look at the development of teachers' pedagogical benefits of SEL.  Finally, quantitative and qualitative studies of teachers' development of SEL will be separately presented.


## 1.1. The Role of Social and Emotional Learning in Teaching

SEL is defined as a comprehensive approach to promote protective mechanisms for positive life development. SEL includes the skills that are needed to regulate one's self and one's human relationships (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Without doubt, teachers' task is to promote students' SEL. To be able to do that appropriately, developing teachers' own social and emotional competence is essential. SEL fosters *intrapersonal competence* when improving our self-awareness, i.e., recognizing our i.e. feelings, needs and goals; the components of our inner reality. Another aspect of intrapersonal competence is self-management, that is, learning how to help oneself to fulfil the needs and manage to reach goals. When learners are aware of themselves they are able to regulate their emotions and actions in various situations. *Interpersonal competence* is another competence in that. It gives an insight to two other aspects of SEL: social awareness helps learners to show empathy and understanding to each other, whereas relationship skills helps them to make meaningful relationships and enhances effective interaction.  C*ognitive competence* is the third competence advancing capabilities to collaborate effectively in learning groups.  Making responsible decisions and ethical choices are other aspects of cognitive competence including respectful and democratic methods when acting and working together (https://casel.org/core-competencies/).

SEL is connected to academic success, too. Fostering positive interactions with those who participate in learning processes increases accomplishments in learning (Durlak et al., 2011; Elias et al., 1997; Zins, Payton, Weissberg, & O'Brien, 2007). Social interaction skills such as listening skills and expressing oneself respectfully promote interaction and collaboration. Socially competent people know how to deal with emotions, too. Recognizing and regulating

emotions influences learner's perception, motivation and attention leading more focused studying.

## 1.2. Teachers' Professional Development in SEL

Research on whether social interaction skills can be improved within the context of professional development is still relatively scarce (Talvio, 2014). The lack of research on teacher learning of social interaction skills has been explained in terms of the general assumption that teachers automatically adopt the necessary social interaction skills as part of their role (Jennings & Greenberg, 2009). Elliott, Stemler, Sternberg, Grigorenko, & Hoffman (2011) stated, in turn, that the development of teachers' skills is part of the tacit knowledge of the teaching profession. If it is suggested that pedagogical knowledge such as interaction skills is best learned as part of a teacher's job or when in the teaching practice, such knowledge may not be easily transmitted.

Despite above mentioned difficulties some European studies besides the Finnish ones have investigated teachers' professional development through SEL. Gol-Guven (2017) reported positive effects of the LQ teachers' workshops on school climate, student behaviours and conflict resolution strategies in Turkish primary schools. In another study it was found that the implementation guidance is important: teachers need training, but also specific help and ongoing support in how to integrate SEL into their daily school routine (Gol-Guven, 2016). An Austrian longitudinal study found positive effects on class climate as well as reduced bullying and fighting among the students whose teachers had participated in the training on SEL, namely LQ, compared to the control group. The magnitude of positive effects was affected by the implementation level of the LQ. Therefore, the delivered quality of implementation is an important issue when implementing SEL. Well-trained and experienced teachers are crucial for promoting SEL in schools (Matischek-Jauk, Krammer & Reicher, 2018).

In order to succeed in promoting SEL in classrooms, the way the instructor is trained is crucial, because the extent of how faithfully the principles and activities are replicated, how much of the content is delivered, and how effectively the students' other studies and background are considered, are dependent on instructor's competence (Talvio, Lonka, Komulainen, Kuusela, & Lintunen,2013, 2015). Thus, knowledge of the taught content and how to apply is important.

5

However, expectancy value theory (Eccles & Wigfield, 2002; Wigfield & Eccles, 2000) gives another theoretical approach about the effects on the outcomes of SEL training. According to it, individuals choose tasks based on their expectancies and beliefs of their own performance related to the task. Accordingly, if they feel they will succeed in teaching SEL, they are more likely to choose to start teaching it, and less likely to give up easily if problems arise.

## 1.3. Aims of the Studies

The overall aim of four studies presented here was to explore the benefits of social and emotional learning for teachers using mixed-method approach. In the present chapter we focus on an international commercialized SEL programs that are seldom investigated by using empirical methods. The findings presented here are based on our investigations of *Gordon's Teacher Effectiveness Training* (TET) and the *Lions Quest* (LQ).

The intention of the *quantitative study on TET* was to develop an instrument to measure teachers' SEL and find out how much teachers' knowledge and applied knowledge changed during the trainings. *A quantitative study of the LQ* investigated the change in teachers' knowledge, applied knowledge and their sense of competence.

*Two qualitative studies* analysed qualitative changes of teachers' thinking that might have occurred due to TET. The other study explored how teachers' knowledge and applied knowledge was developed during the training. The data were based on the teachers' descriptions found in their responses as measured by paper cases. Another qualitative study explored sustainability of the studied TET skills that were explored by analysing answers collected by email a couple of months after the training.

## 2. Methodology

Next, two SEL trainings used as interventions in these studies will be described. After that, the methodologies of two quantitative studies and two qualitative studies will be approached independently.

## 2.1. Interventions

### 2.1.1. Gordon's Teacher Effectiveness Training

An important part of our research has been to give a fresh look at Gordon's seminal work on interventions aiming at foster positive interactions in the classroom. In our own work, we aimed at reconceptualising Gordon from the perspective of modern theories in educational psychology. The general aim of the Gordon trainings for teachers appeared to be supporting participation, decision-making and autonomy among both pupils and teachers (Talvio, et al, 2013, 2015). When Gordon developed his models, they were strongly based on the prevailing psychological models and debates. The humanistic psychology movement during the 1960s emphasised the importance of using the resources of the human and adopting a respectful attitude towards others. By freely fulfilling their individual needs, people are able to attain the highest phase of being—that is, self-actualisation (Rogers, 1970). This movement had reflections on teaching. For example, Thomas Gordon (Gordon & Burch, 1974; Gordon, 2003) argued that only by declining to use their power and authority teachers could influence pupils. According to him, using power creates its own opposition and relationships between a teacher and pupils become unpleasant and hostile (Gordon & Burch, 1974; Gordon, 2003). This idea was very different from what prevailing understanding about learning, behaviourism, represented. Behaviourism stressed the importance of strengthening the desired behaviour by rewarding the student and ignoring the student's non-desired performance. It followed that the view of teachers' role as a controller in the classroom remained a main conception of teacher's task including assessing, judging and rewarding students' performance instead of facilitating knowledge creation or collaboration. Students' role in learning remained passive. Their job as learners was to please their teachers by receiving information and remembering it when it was assessed (Skinner, 2002).

As an opposite reaction to behaviourism, so called laissez-faire method, gained ground, too. Instead of teacher's authority, it leaves all the power in the hands of the pupils. (Neill, 1960). Gordon did not like that either. He stressed the notion that all the members of the learning community should be heard, treated respectfully and that everybody should take responsibility of creating good learning environment. For example, he suggested that decisions in the classroom should be taken by utilising both the needs of the teacher and the pupils. Hence, as early as the

7

1960s, a respectful teacher–pupil relationship was seen as an important factor in creating an effective and successful school. An appropriate balance between teacher power and a regulation of student's behaviour has been seen as an important factor in learning even these days (Brekelmans, Mainhard, den Brok, & Wubbels, 2011; Wubbels & Levy, 1997). A Finnish longitudinal study during the period of forty years indicated that success in life is enhanced by parents' active role as children's listeners and empathetic facilitators instead of playing a submissive adult (Pulkkinen & Kokko, 2017).

Teacher Effectiveness Training (TET),  is a training programme that offers teachers communication and conflict resolution skills ( Gordon & Burch, 1974; Gordon, 2003). According to the Gordon Training International website, T ET is available in 26 countries worldwide (http://www.gordontraining.com/school-programs/teacher-effectiveness-training-t-e-t/). Gordon developed a model for training teachers' social and emotional skills already in 1960's. As a representative of the humanistic psychology he based his work on trust of the human's agentic capabilities. The social and emotional skills used in the present TET intervention emphasize the core components of social and emotional learning (SEL): self-awareness, self-management, social awareness, relationship skills and responsible decision making (Elias et al., 1997). The skills taught include i.e. *Active listening*, *I –Messages,* avoiding *Road Blocks* and *Both win-method*. If a student has a problem (or "owns" the problem), *Active listening* is a skill to be used. It is a method in which the listener reflects to the speaker his or her understanding of what the speaker has said. This is meant to confirm that the listener has understood the message and to give the speaker a chance to correct the listener if necessary (Ivey, Bradford Ivey, & Zalaquett, 2009). *I-messages* help people to express i.e. their feelings or needs from their inner reality in a clear and a simple way. They are always true because people talk only on behalf of themselves without interpretations of others. I-messages can be i.e. declarative, preventive, positive or confrontive depending on what they are used for (Adams, 1989; Gordon, 2003).  Messages that include for example judging, warning, or labelling, are called *Road blocks.* One of the skills of TET is to avoid *Road blocks* and replace them with more constructive expressions such as with I-messages. (Adams et al., 2006; Gordon, 2003). *Both win* -method helps participants to make respectful and impartial decisions without power. This is possible with the careful investigation of the desired needs and only after that choosing the right

alternative takes place instead of "selling" own ideas to others (Adams et al., 2006; Gordon, 2003).

The purpose of the Gordon courses has reformed during their existence before becoming typical SEL programmes. For example, Gordon developed a Youth Effectiveness Training (YET) programme in 70's ([http://www.gordontraining.com/youth-programs-2/youth-effectiveness-training-y-e-t/](http://www.gordontraining.com/youth-programs-2/youth-effectiveness-training-y-e-t/)). Originally, YET was created to offer teenagers constructive ways of surviving under the power of controlling adults. Later, after the rapid change of the whole society the generation gap faded, and young people and adults started to understand better each other. Therefore, even though Gordon's YET still emphasizes how to deal with controlling authorities the programme changed its focus on the successful relationships and overall well-being.

### 2.1.2. Lions Quest

Lions Quest (LQ) is an international SEL programme that is available today in over 90 countries ([https://www.lions-quest.org/international/](https://www.lions-quest.org/international/)). The program has been in use for almost 30 years, and more than 13 million students have participated in LQ, with more than half a million teachers implementing LQ in their classrooms. To maintain the quality of LQ, teachers must participate in the LQ teacher workshop that provides the tools necessary to implement LQ in classrooms. The goals of the LQ for students have grown to aim at promoting well-being, by supporting positive youth development at school through *drug awareness*, *strengthening SEL*, and *giving emphasis to service*. In addition to studying SEL skills in the classroom, LQ promotes the *creation of a safe learning environment*. Learning to conduct an LQ lesson using specific LQ curricula is an additional goal of the LQ teachers' workshop. According to the age group of students three LQ curricula are available. Skills for Growing is for pre- and elementary school students, Skills for Adolescence is for middle school students and Skills for Action is targeted at teenagers. The goals of each curriculum are similar, in other words, all LQ materials are designed to help students develop their behaviour and skills to become healthy and capable adults (https://www.lions-quest.org/).

Lions Quest (LQ) was originally developed to prevent drug and alcohol abuse. Instead of offering information about drugs it was found that learning some life-skills such as social

interaction was essential in preventing substance abuse. For example, Cuijpers (2002) investigated studies on drug prevention programmes in his review article. Because of this study he formulated quality criteria for the prevention programmes. One suggestion in the criteria to strengthening the effects of the programme was to add life skills to the content of the programmes. Today, when promoting positive development of young people, life skills are seen as important per se, not only as tools to prevent drug use. Hence, even though one of the goals of the LQ is still drug, alcohol, & tobacco awareness the programme stresses the importance of anti-bullying, connection to school, positive behaviour, character education and service-learning, all important elements in the development of flourishing classroom. Our recent study on LQ also showed that the focus of the LQ teachers' workshops are more on student's character development and on promoting engaging learning environment than on the health promotion and the drug prevention (Talvio, Berg, Komulainen, & Lonka, 2016).

## 2.2. Quantitative Studies

Quantitative studies on the effectiveness of teachers' SEL interventions, namely, TET and LQ focused on investigating the quantitative changes of teachers' development of their social and emotional competence during their training. Teachers were asked to answer to the questionnaires before and after the intervention. The time between the two measuring points was in TET study about four months and in LQ study it was about one week. In addition, data from the comparison group were collected twice as well in order to check the possible effects of the mere measurement.

### 2.2.1. Sampling and participants

The participants of *TET study* included 70 teachers (56 female and 14 male) in Finland. Altogether 26 teachers of them received no TET instruction (Table 1). The data for the *Lions Quest evaluation* was collected from 2120 participants in nine OECD countries and in ten areas (in Japan the data were collected in two areas). Of all the participants, 1206 teachers attended to LQ teacher workshops (intervention group) and comparison data were collected from 914 teachers not participating in a LQ teacher workshop (Table 2). Overall, the participants were a heterogeneous group of comprehensive school teachers according to their training and experience in SEL skills and their teaching experience. In these quasi-experimental field studies

the samples were not randomized. The intention was to find teachers from ordinary schools in order to maintain ecological validity.

*Table 1. Characteristics of the participants of the intervention and comparison groups in the*

*TET evaluation*

| | Comparison group | | Intervention group | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Subject-matter teachers | | Subject-matter teachers | | Classroom teachers | | | |
| Gender | *n* | *%* | *n* | *%* | *n* | *%* | *n* | *%* |
| Female | 21 | 80.8 | 16 | 69.6 | 19 | 90.5 | 56 | 80.0 |
| Male | 5 | 19.2 | 7 | 30.4 | 2 | 9.5 | 14 | 20.0 |
| Work experience | | | | | | | | |
| > 10 years | 18 | 69.2 | 16 | 69.6 | 13 | 61.9 | 47 | 67.1 |
| 5–10 years | 6 | 23.1 | 3 | 13.0 | 3 | 14.3 | 12 | 17.1 |
| < 5 years | 2 | 7.7 | 4 | 17.4 | 5 | 23.8 | 11 | 15.7 |
| Years worked in the same school | | | | | | | | |
| > 5 years | 20 | 76.9 | 17 | 73.9 | 11 | 52.4 | 48 | 68.6 |
| 1–5 years | 3 | 11.5 | 4 | 17.4 | 6 | 28.6 | 13 | 18.6 |
| < 1 year | 3 | 11.5 | 2 | 8.7 | 4 | 19.0 | 9 | 12.9 |
| Type of job | | | | | | | | |
| Permanent job | 23 | 88.5 | 20 | 87.0 | 15 | 71.4 | 58 | 82.9 |
| Temporary job | 3 | 11.5 | 3 | 13.0 | 6 | 28.6 | 12 | 17.1 |
| Status | | | | | | | | |
| Full-time | 26 | 100 | 22 | 95.7 | 20 | 95.2 | 68 | 97.1 |
| Part-time | 0 | | 1 | 4.3 | 1 | 4.8 | 2 | 2.9 |

*Table 2. Characteristics of the participants of the intervention and comparison groups in the LQ evaluation*

| Country | | n | Gender* | | Position* | | | | | Experience in years | |
| | | | Male (std. res.) | Female (std. res.) | Class | Subject | Special | Dual | Other | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | 304 | | | | | | | | | |
| 1 | Intervention | 157 | 72 | 79 | 84 | 32 | 10 | 8 | 23 | 12.04 | 10.88 |
| | Control | 147 | 62 | 84 | 81 | 36 | 10 | 5 | 14 | 17.71 | 11.21 |
| | Total | 202 | | | | | | | | | |
| 2 | Intervention | 101 | 8 | 93 | 13 | 19 | 10 | 23 | 25 | 17.11 | 12.42 |
| | Control | 101 | 3 | 98 | 5 | 39 | 5 | 35 | 14 | 21.85 | 11.36 |
| | Total | 204 | | | | | | | | | |
| 3 | Intervention | 108 | 16 | 91 | 20 | 59 | 4 | 18 | 7 | 13.45 | 12.17 |
| | Control | 96 | 25 | 71 | 24 | 50 | 4 | 11 | 3 | 12.28 | 11.76 |
| | Total | 202 | | | | | | | | | |
| 4 | Intervention | 104 | 7 | 97 | 44 | 29 | 18 | 1 | 8 | 19.65 | 10.90 |
| | Control | 98 | 8 | 88 | 32 | 44 | 13 | 1 | 6 | 19.10 | 10.64 |
| | Total | 284 | | | | | | | | | |
| 5 | Intervention | 177 | 15 | 118 | 73 | 30 | 7 | 3 | **48 +** | 12.42 | 8.61 |
| | Control | 107 | 22 | 76 | 35 | 51 | 3 | 2 | **5 -** | 12.26 | 8.42 |
| | Total | 199 | | | | | | | | | |
| 6 | Intervention | 94 | 24 | 70 | **30 +** | 46 | 1 | 1 | 15 | 15.25 | 9.17 |
| | Control | 105 | 44 | 61 | **11 -** | 77 | 0 | 0 | 6 | 16.40 | 8.91 |
| | Total | 202 | | | | | | | | | |
| 7 | Intervention | 110 | 53 | 54 | 53 | 29 | 7 | 6 | 13 | 11.72 | 11.79 |
| | Control | 92 | 38 | 53 | 53 | 16 | 5 | 0 | 18 | 18.31 | 10.89 |
| | Total | 40 | | | | | | | | | |
| 8 | Intervention | 20 | 4 | 15 | 8 | 3 | 2 | 0 | 6 | 16.21 | 10.91 |
| | Control | 20 | 4 | 12 | 8 | 2 | 2 | 0 | 7 | 14.32 | 8.45 |
| | Total | 251 | | | | | | | | | |
| 9 | Intervention | 169 | 41 | 128 | 53 | 40 | 0 | 50 | 15 | 8.63 | 6.8 |
| | Control | 82 | 26 | 55 | 24 | 28 | 1 | 11 | 11 | 14.66 | 11.41 |

Talvio, K. M., & Lonka, K. M. (2019). How to create a flourishing classroom? An intervention protocol for enhancing teachers' social and emotional learning. In: L. E. van Zyl, & S. Rothmann (Eds.), *Positive psychological interventions: Theories, methodologies and applications within multicultural contexts.* Springer.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | 232 | | | | | | | | |
| 10 | Intervention | 166 | 17 | 149 | 74 | 27 | 33 | 0 | 32 | 9.80 | 7.93 |
| | Control | 66 | **15**+ | 51 | 20 | 27 | 8 | 0 | 11 | 15.55 | 10.66 |

*statistically significant over-/ under-representations with a cut-off of +-1.96 bolded.

## 2.2.2. Measuring instruments

As been mentioned before there is not much evidence on the research on teachers' development of SEL. It follows that it was difficult to find a suitable measuring instruments for our investigations. The following self-developed instruments were used to gather data for quantitative studies:

### 2.2.2.1. Materials for the study on TET

Three instruments, namely, a Reactions questionnaire, a Knowledge questionnaire and the Dealing with challenging interactions (DCI) paper case method were developed according to the hierarchical model of Kirkpatrick and Kirkpatrick (2006). They suggested that instead of mere perceptions of teachers' own learning it is important to look at various aspects of the outcomes of the intervention, including the participants' reactions, knowledge and the application of knowledge (skills).

*The Reactions questionnaire* collected feedback from the TET course and included 10 items that were assessed using a five-point Likert scale with response options ranging from completely disagree to fully agree.

In *the Knowledge questionnaire*, participants were asked to define in their own words the central concepts of interaction skills studied in TET.

A *Dealing with Challenging Interaction* (DCI) method was developed to capture teachers' way of interaction in typical situations at work. The original DCI paper case instrument consisted of seven typical interaction situations common in the classroom. Each case consists of a description of a common event at school and the respondent was asked to describe in a few sentences how they would react to that event. For example, in an event that involves confronting

the behaviour of a student, the teacher was asked to describe what s/he would do or say to a student. (Talvio, Lonka, et al., 2015). The descriptions given by participants in the DCI questionnaire were content analysed, quantified and categorized (Frey, Botan, Friedman, & Kreps, 1992; Weber, 1990). One idea, notion, view or opinion given by the participants was considered as one analysis unit. Thus, one answer could cover several units.

Both the statistical differences in the post-test scores between groups (two intervention groups and one comparison groups) and the statistical differences between the scores of the pre-TET and the post-TET tests were examined with a dependent sample one-way ANOVA. Pearson correlations were calculated to determine the relationships between the measurement scales.

### 2.2.2.2. LQ questionnaire

In the LQ questionnaire, teachers' perceptions of the LQ goals were approached from their sense competence in promoting the LQ goals. To measure it, participants rated eight statements we developed (e.g., 'I am very skilled at supporting my students' self-esteem and self-confidence.') using a seven-point Likert scale with response option from "totally disagree" (1) to "totally agree" (7). In analysing questions regarding knowledge participants rated 16 statements and regarding applied knowledge they rated 8 statements. These statements were based on the categories of open-ended answers from the LQ evaluation in Finland. A response on the midpoint of the scale (4) was scored 0, agreeing correctly were scored positively from 1 to 3 and in turn disagreeing were scored negatively from 1 to 3. Negative items, where disagreeing was correct, were scored in reverse. The development of the multiple-choice questions in LQ questionnaire on knowledge and applied knowledge is a part of Minna Berg's doctoral dissertation (in progress).

Back-translation was used in order to maintain high quality of the translation of the LQ questionnaire. A translator blind to the original questionnaire was asked to translate the questions back into the original language. The back-translation was then compared with the original questionnaire, and any differences were explored; when needed, questions were rewritten.

### 2.2.3. Statistical analysis

### *2.2.3.1. Analysis for the study on TET*

One of the goals for the quantitative study on TET was to develop an instrument to measure teachers' SEL skills in school situations and to study the reliability and validity of that, the so-called DCI instrument. In order to explore the discriminant validity of DCI, participants were grouped using latent class analysis (McCutcheon, 1987; Muthén & Muthén, 2009) into three clusters according to their responses to the DCI questionnaire. A principal components analysis with promax rotation and regression-estimated factor scores was used to condense and use the data from the DCI categories, the knowledge test and the course feedback. Finally, a Pearson's correlation, an analysis of variance (ANOVA) and cross-classification with a chi-square test were all used to estimate the relationship between the component variables. Three statistical programmes were used: SPSS for Windows version 18, Mplus version 6 and Survo MM version 3.

After the development of the DCI  possible changes in the participants' knowledge and skills (the application of knowledge) in SEL during the intervention were studied by using data from the knowledge test and investigating changes in six DCI categories, namely, listening, positive I-messages, confrontational I-messages, messages supporting autonomy and overall rating which represented those categories related to the desired ways of interacting and road blocks representing undesirable interaction messages. In addition, teachers' reactions to TET based on data from the course feedback surveys were explored. Furthermore, possible changes in the participants' experiences in terms of their social relationships and in their well-being during TET were investigated. Both the statistical differences in the post-test scores between groups (two intervention and one comparison groups) and the statistical differences between the scores of the pre-TET and the post-TET tests were examined with a dependent sample one-way ANOVA. Pearson correlations were calculated to determine the relationships between the measurement scales. SPSS version 20 was used in the analyses.

### *2.2.3.2. Analysis for study on LQ*

After screening the data from missing values and outliers the differences between the intervention and comparison groups in sample characteristics were examined. The differences were explored using cross-tabulations in which the adjusted standardized residuals were used to

draw inferences of over- and underrepresentation. The t-test was used in investigating the differences in average teaching experience between the groups.

The mean sum scores were computed from the multi-item measures and they were used as variables in further analyses. Mixed MANOVA, (Tabachnick, Fidell, & Osterlind, 2001) was used to examine the effect of the intervention regarding mean change over time across groups in the variables. The analyses were conducted separately for each sample.

Finally, sample-wise, within-group mean differences between the pre- to post-test scores, were examined and effect sizes of the intervention were evaluated (Gibbons, Hedeker & Davis, 1993).

## 2.3. Qualitative Studies

Purpose of the qualitative studies was on one hand to find out how teachers' answers changed during the intervention and, on the other hand, investigate the sustainability of the studied skills. TET was used as an intervention on both studies.

### 2.3.1. Participants

The participants of the qualitative TET study on the change in teachers' answers were teachers from one elementary school (n=21) and one secondary school (n=23) who participated in the TET in Finland. The four-day TET was organized in two parts within a six-month period. As regard to the study of the sustainability of the studied TET skills, altogether 19 class teachers and 12 subject-matter teachers of the intervention group participated in the study (Talvio, Lonka, et al., 2015)

### 2.3.2. Research procedure

The qualitative change in teachers' answers were investigated by using Dealing with Challenging Interaction (DCI) method described earlier in this chapter (page x). The pre-test was answered right before the training and the answers to the post-test were given at the end of the training. The comparison groups answered approximately at the same time as the participants who attended to the study. Since the TET was conducted in two parts during the school year the time between the pre-test and post-test was about four months.

Six months after completing the TET the teachers who participated in the study about the sustainability of the studied skills received an email. They were asked to describe a situation where they had utilized or tried to utilize the studied skills. In addition, they were asked how well they can use the studied skills now and how they would comment the training to their colleagues (Talvio, Ketonen, & Lonka, 2014).

### 2.3.3. Data analysis

. The answers to open-ended questions were analysed by using partly a strategy that was driven from the Gordon's theory studied in TET. In the analysis of the participants' answers one idea, notion, view or opinion was considered as one analysis unit The first author consulted the other authors regularly to discuss any difficulties that arose during the analysis or to obtain a second perspective on the appropriateness of the classification for specific units of the formulation of specific categories and subcategories. A content analysis of these answers produced a final categorization which included 10 categories with a good inter-rater reliability was established. Five categories—listening, positive I-messages, messages supporting autonomy, other I-messages and confrontational I-messages—represented the desired messages for interactions based on the course goals. Road blocks represented the only category of undesired messages for interactions. Three categories —'I do not compare', orders and conditions and encouraging or predicting—were data-driven and neutral from the perspective of the course goals. Finally, the tenth category—overall rating—was created as a holistic classification.

In regards with the study on the sustainability of TET three categories were established to condense the information of the skills used after TET: I-messages, Listening and Road blocks. In addition, four data-driven categories were created to condense the information about with whom the skill was used: with students, with parents, with colleagues and with someone else.

## 3. Results

### 3.1. Quantitative Findings

#### 3.1.1. Findings from the study on TET

The dealing with challenging interactions (DCI) method which was developed to measure the social interaction skills of teacher study groups appeared to be a reliable and valid tool for measuring teachers' social interaction skills.

A cluster analysis differentiating between competent and less competent teachers supported the discriminant validity (Talvio, Lonka, Komulainen, Kuusela, & Lintunen, 2012). The results using the supplementary instrument were equivalent to the cluster analysis supporting the criterion-oriented validity of the method developed (Talvio et al., 2012).

Multi-phase quantitative analyses showed that teachers benefitted from TET. Among those who participated in TET, both knowledge (See Figure 1) and the application of knowledge (skills) (see Figure 2) improved significantly. In the comparison group, no differences between the pre- and post-test measurements were found (Talvio et al., 2013).
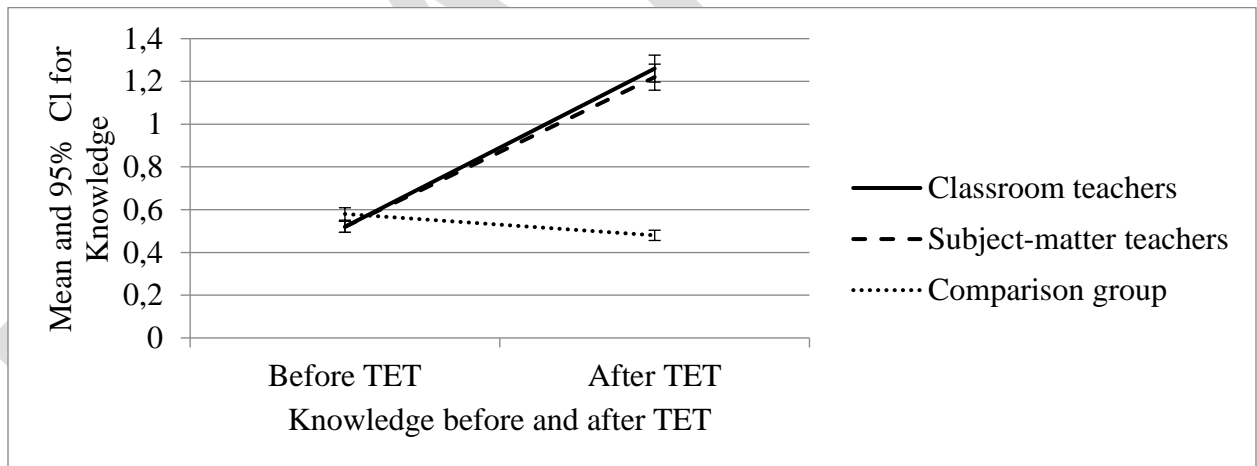


*Figure 1*. Changes in knowledge between groups during TET. (*Study II*: Talvio, M., Lonka, K., Komulainen, E., Kuusela, M., and Lintunen, T. (2013). Revisiting Gordon's Teacher Effectiveness Training: An Intervention Study on Teachers' Social and Emotional Learning. *Electronic Journal of Research in Educational Psychology, 11*(3), 693–716.)
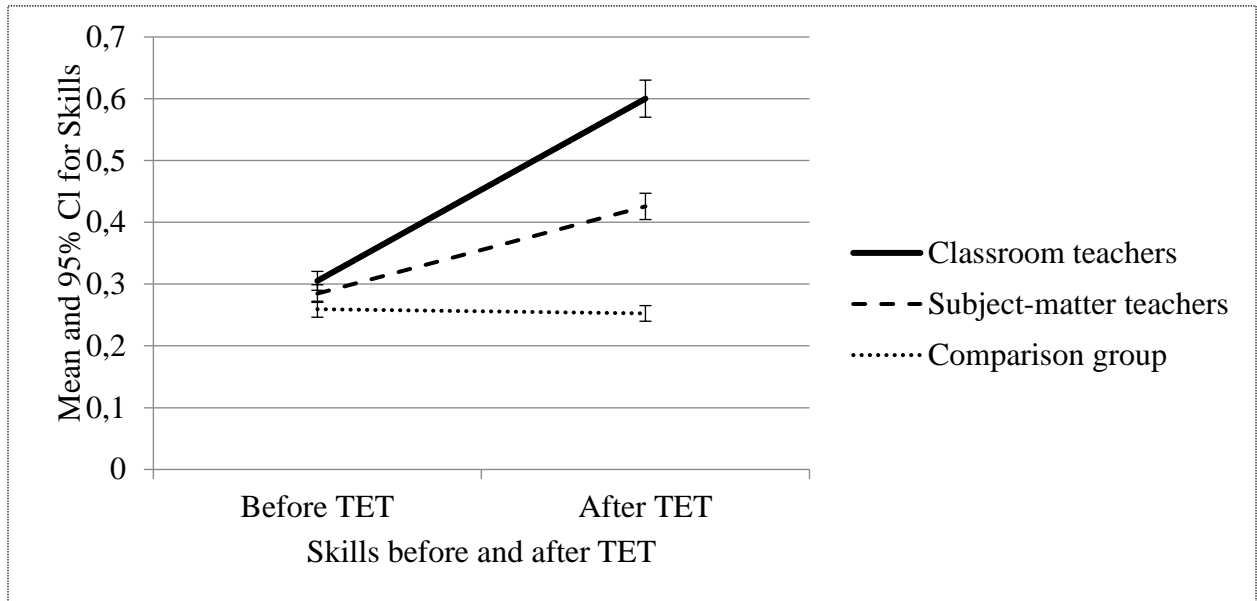
*Figure 2.* Changes in the application of knowledge (skills) between groups during TET. (*Study II*: Talvio, M., Lonka, K., Komulainen, E., Kuusela, M., and Lintunen, T. (2013). Revisiting Gordon's Teacher Effectiveness Training: An Intervention Study on Teachers' Social and Emotional Learning. *Electronic Journal of Research in Educational Psychology, 11*(3), 693–716)

### 3.1.2 Findings from study on LQ

In our LQ study from nine OECD countries the sense of competence, knowledge and applied knowledge during the LQ teachers' workshops were explored.   The preliminary results indicate, the LQ intervention had an identifiable effect on teachers' development of SEL in most of the participating countries. The biggest effects were on average for the development of the sense of competence and the smallest for the development of the knowledge. (Talvio, Hietajarvi, Matichek-Jauk, & Lonka, 2018).

### 3.2. Qualitative Findings

As regard to qualitative findings four of the ten DCI categories—namely listening, positive I-messages, supporting autonomy and confrontational I-messages—fell within the scope of the study of the TET. Before the training, the typical response instead of *listening* was providing a solution to the problem or lecturing about the importance of studying hard etc. After TET, the teachers used Active Listening and avoided responses that might indicate that the teacher was

taking control of the conversation. When the teachers were expected to give *positive feedback,* it was typical that before the TET course, teachers positively labelled their students when they had done something desirable (i.e. "You are bright!"). A few teachers said that since the students' diligence was normal and something which should be expected, no positive feedback was needed. After the training teachers provided a positive I-message (Gordon, 2003), that is, a detailed comment that included descriptions of the students' behaviour and the emotions and effects experienced by the teacher as a result of that behaviour. When teachers were supposed to give autonomy supportive answers the answers before TET were typically teacher-led including giving solutions. After TET the teachers were willing to withdraw from the leader's role and allow the students to be more involved in solving their own problems. In regards to confrontation, before TET teachers used a lot of roadblocks (Gordon, 2003) i.e. warned, gave solutions, and expressed sympathy . After TET they talked about themselves expressing their feelings, and consequences of a pupil's behaviour to them. In addition, they were more likely to describe the undesired behaviour in their answers as well (Talvio, Lonka, et al., 2015).

Overall, the qualitative results showed that after participating in the TET the teachers expressed themselves in more detail by using positive and confrontive I-messages. By giving room to students, for example, by emphasizing listening skills, or by asking students to participate actively in a problem-solving procedure, they were also more likely to support students' actions that reinforced autonomy and agency. In some descriptions, however, teachers used the skills only partially. In conclusion, from the perspective of the TET course's goals, teachers learned to use TET skills in their responses and improved their readiness to support their students' autonomy and flourishing classroom (Talvio, Lonka, et al., 2015).

The study on the sustainability of the results revealed that most teachers mentioned the studied skills and expressed in their descriptions the ways of benefitting the knowledge and skills studied on the TET. In addition, almost all the teachers would have recommended the training to their colleagues.

## 4. Discussion

To conclude, SEL training appeared to achieve its goals since teachers seemed to benefit from the training on social interaction skills and became socially and emotionally more competent,

which has positive effects on the classroom. Additionally, one of the studies indicated that the studied knowledge and skills were applicable and sustainable, too

Indeed, training outcomes—such as positive reactions, the increase in knowledge and the developed behaviour among participants—represent predictors of high-quality training (Colquitt, LePine, & Noe, 2000). However, SEL is not a compulsory subject studied regularly weekly according to the schedule like math or history. SEL is more an alternative pedagogical approach for teaching and studying any subject at school. For example, in the Finnish national core curriculum SEL is seen as a part of seven transversal competences that should be carried out in all studying (Lonka 2018). However, it is up to individual teachers which competences they emphasize. Hence, not only knowledge but also the sense of competence plays a central role when investigating the effectiveness of workshops because it predict teachers' pedagogical choices and readiness in implementing the new programme.

## 4.1. Practical Implications

Mixed method approach gave rich data revealing the large variety of teachers' thinking. Quantitative studies were helpful in understanding the quantitative development in teachers' answers. Yet, it was especially interesting to analyse the descriptions about how teachers solved challenges in their classroom without training on SEL. Their suggestions were seldom straight driven from the theory of SEL but they were sometimes likely to ease the challenge. If the researchers offered answering options based only on the theory of the training, much interesting information would have remained unknown.

However, there are challenges in making qualitative analyses in multicultural context. Researchers should know the language of the answers they are analysing. In addition, understanding the culture of the society and the school is important for researchers to understand more thoroughly teachers' answers about how they were influenced by the training. However, hiring and training an international team for analysing the answers might become laborious and expensive. Therefore, in addition to the qualitative studies the quantitative approach in conducting the research was chosen too, because the data was collected from multiple countries.

Furthermore, it gave relevant information about the quantity of the change in teachers' SEL during interventions.

There are a lot of studies on the development of SEL on students (Durlak, et al., 2011). However, studying only their outcomes does not necessarily explain the quality of teachers' workshops. For example, it is possible that teachers are unable to conduct SEL in their classrooms due to administrative decisions or lack of knowledge how it should be implemented in the curriculum (see Gol-Guven, 2016). Teachers' beliefs do not affect their individual agency only; collective development should be considered (Biesta, Priestley and Robinson, 2015). Thus, change in teachers' knowledge or sense of competence does not automatically produce better performance among students. This calls for administrative decisions and common commitment to develop the school culture (Humphrey, 2013). In Finland, SEL is now part of the new national curriculum (Lonka, 2018). Such changes may show in future studies.

It is also important to bear in mind, that the change of teachers' pedagogical practices might be quite slow, and the possible change cannot be explored right away. Since teachers are responsible for the quality of teaching they want instead of changing everything to test the new content they have learned piece by piece to make sure the new content really is beneficial (Guskey, 2002). Accordingly, teachers need time to adopt the studied skills as a part of their pedagogical thinking and practices they already have from their previous studies and experiences.

## 4.2. Future Directions

There is still lack of knowledge of the SEL implementation process in classrooms. Investigating some teachers who have just participated in training of SEL might give a chance to find out how teachers implement SEL at work. This information would be very important in developing the content of teachers' SEL workshops. Qualitative research based on video material for a few participants would provide interesting information. However, using video is not always feasible when the target group is large. In addition, it is difficult to capture the exact right moment when the behaviour of interest, such as how the teacher deal with challenging situations occurs. Furthermore, there is a substantial variety with regards to challenging interaction situations in

everyday teaching practice. The professional practice of teachers extends well beyond the classroom. Communications skills are required in encounters with parents, colleagues, school administration and the surrounding society. Video camera does not necessarily record those important moments outside the classroom.

Naturally, students' experiences would also offer important data of the teachers' possible pedagogical change. It would also be interesting to compare those students whose teachers have participated in the training on interaction skills with students whose teachers did not attend any SEL training. Potential research questions could include topics such as the atmosphere of and interpersonal respect within the classroom, bullying and the affiliation of a teacher. Indeed, our next goal is to explore the benefits of teachers' SEL workshops for students. EU funded project Learning to Be looks at both teachers and their students in five European countries (https://learning-2-be-evaluation.webnode.fi/).

Administrators' role in implementing SEL at school has lately been emphasized in literature (Humphrey, 2013; Lendrum & Humphrey, 2012). It would be important to compare administrators' attitudes and readiness with implementation processes in schools. This research would help curriculum designers to develop material for school staff who make decisions and give support to teachers.

Since teachers work a lot beyond the classroom students' parents and colleagues would be very good informants as well. Potential research questions could include topics such as the classroom climate and interpersonal respect within the classroom, preventing bullying and the affiliation of a teacher.

## 4.3. Conclusion

Today, the need for productive interactions and good relationships are explained through the sociocultural context. It is known that knowledge, skills and understanding are negotiated and developed in a social setting—through interacting with peers, teachers, parents and the broader community (Wenger, 1998). Learning is, thus, an interactive and co-regulative process mediated by thinking tools and social practices (Bandura, 2006; Hakkarainen, Palonen, Paavola, & Lehtinen, 2004; Vygotsky, 1978; Wenger, 1998) in which individuals constantly alter their actions according to the other members of the learning community (Fogel, 1993). In the

classroom, teachers and students tailor their actions according to the clues they receive from one another (Rogoff, 1990). Hence, good teachers know how they are perceived by students. By regulating the amount of affiliation and control they wield, teachers are able to align their instruction with their students' needs and expressed preferences (Wubbels & Levy, 1997). Since the requirement of learning is an awareness of cognitive and metacognitive experiences, feelings and motivation, it is important that these aspects are not overlooked. Instead, by using their interaction skills, teachers promote their students' autonomy, share a relative agency with their students and encourage students to take responsibility of their own learning (Edwards, 2005; Salonen, Vauras, & Efklides, 2005; Talvio et al., 2015).

Active role of the student is seen essential in socio-constructivist theories (Lonka, 2018). Accordingly, students should be able to experience autonomy and self-efficacy (Bruner, 1996; Sfard, 1998; Vygotsky, 1978) in interactions in the classroom (Pyhältö, Soini, & Pietarinen, 2010). The teachers' task include helping their students actively participate in shared learning processes and to foster adaptive models of engagement (Emmer, Sabornie, Evertson, & Weinstein, 2013; Freeman, Anderman, & Jensen, 2007; Hakkarainen et al., 2004; Patrick, Turner, Meyer, & Midgley, 2003) . Cultural tools for participating in learning situations offered by the teacher help students to adopt, master and use knowledge, skills and ways of thinking characteristic of the cultural setting (Bruner, 1996). Teachers' social interaction skills promote students also to become intrinsically motivated and competent in demonstrating high levels of autonomy and self-determination resulting in self-regulative students whose psychological well-being is on the high level (Deci, Koestner, & Ryan, 2001; Leroy, Bressoux, Sarrazin, & Trouilloud, 2007).

Hence, modern learning psychology emphasises creating effective teacher–student collaboration and an engaging learning atmosphere, where interaction is effective, active and respectful (Allodi, 2010; de Kock, Sleegers, & Voeten, 2005). These are related to students' psychological well-being and academic performance (Durlak et al., 2011; Elias et al., 1997). Therefore, schools should promote these aspects in order to maintain the learning and well-being of the students (Elias et al., 1997). Teachers' social and emotional competence facilitates learning through fostering their students' experiences of participation, autonomy and agency, which also lead to better academic performance (Brophy-Herb, Lee, Nievar, & Stollak, 2007).

In fact, many current theories of learning comprise ideas of the benefits related to collaboration and feedback (Ketonen, Talvio, & Lonka, 2014; Lonka & Ahola, 1995; Mezirow, 1990, 2000). For example, a skill to receive feedback in a constructive way and modify one's performance for the next time is an effective way to grow for anyone. Recently, this skill has been named as "feed forward" emphasizing the importance of promoting the ability to take action (Murtagh & Baker, 2009). Thus, social interaction skills are needed for fruitful negotiations in the classroom in order to move on to the next phase of students' SEL.

Accordingly, teachers' social and emotional competence is crucial in students' learning. However, teachers who have adopted knowledge and skills related to social and emotional learning benefit from them also themselves. Grayson and Alvarez (2008) found that teachers who were able to maintain positive relationships with their students were more likely to remain enthusiastic and to be engaged at work. Additionally, teachers' emotional stage was closely associated with the climate of relationships with parents and/or the community and student–peer relationships. In the flourishing classroom,  the teacher uses social and emotional skills for recognising their students' performance in light of the factors related to SEL (Jennings & Greenberg, 2009). As a result of this understanding, these teachers are likely to be skilled in classroom management and in facilitating enthusiasm and enjoyment in learning by being proactive, which make the teacher's work more enjoyable. They also understand the dynamics of conflicts in the classroom and are better able to respond to this behaviour effectively, yet respectfully. Furthermore, socially and emotionally competent teachers serve as role models of social interaction skills. Without consciously teaching such skills, students learn a lot from their teachers' example, for instance, how to recognise and manage emotions and needs, how to promote happy relationships and how to make responsible decisions in respectful ways (Durlak et al., 2011; Jennings & Greenberg, 2009).

The results of the present studies indicate that even a relatively short-term, low-cost intervention in teachers' SEL is worthwhile. Successful SEL enables teachers and their students to face challenges and promote well-being inside and outside school more easily. Due to the globalisation the growing networks of collaboration social and emotional skills will be increasingly important in future. Presumably, the need for research of SEL will grow, too.

## References

Adams, L. (1989). *Be your best*. New York: The Putnam Publishing Group.

Adams, L., Denslow, K. K., Emmons, S., Tyrrell, P., Miller, K., & Burch, N. (2006). *Dr. Thomas Gordon's teacher effectiveness training (T.E.T.). Instructor guide.* Solana Beach, California: Gordon Training International.

Allodi, M. W. (2010). The meaning of social climate of learning environments: Some reasons why we do not care enough about it. *Learning Environments Research*, *13*(2), 89–104. doi: 10.1007/s10984-010-9072-9

Bandura, A. (2006). Toward a Psychology of Human Agency. *Perspectives on Psychological Science, 1*(2), 164–180. doi: 10.1111/j.1745-6916.2006.00011.x

Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teachers' agency. *Teachers and Teaching: theory and practice, 21*(6), 624–640. doi: 10.1080/13540602.2015.1044325

Brekelmans, M., Mainhard, T., den Brok, P., & Wubbels, T. (2011). Teacher Control and Affiliation: Do Students and Teachers Agree? *Journal of Classroom Interaction, 46*(1), 17–26.

Brophy-Herb, H. E., Lee, R. E., Nievar, M. A., & Stollak, G. (2007). Preschoolers' social competence: Relations to family characteristics, teacher behaviors and classroom climate. *Journal of Applied Developmental Psychology, 28*(2), 134–148. doi: 10.1016/j.appdev.2006.12.004

Bruner, J. S. (1996). *The culture of education*. Cambridge: Harvard University Press.

Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology, 85*(5), 678–707. doi: 10.1037/0021-9010.85.5.678

Cuijpers, P. (2002). Effective ingredients of school-based drug prevention programs: A systematic review. *Integrating Substance Abuse Treatment and Prevention in the*

*Community, 2*7(6), 1009–1023. doi:10.1016/S0306-4603(02)00295-2

de Kock, A., Sleegers, P., & Voeten, M. J. M. (2005). New learning and choices of secondary school teachers when arranging learning environments. *Teaching & Teacher Education, 21*(7), 799–816. doi: 10.1016/j.tate.2005.05.012

Deci, E. L., Koestner, R., & Ryan, R. M. (2001). Extrinsic Rewards and Intrinsic Motivation in Education: Reconsidered Once Again. *Review of Educational Research, 71*(1), 1–27. doi:10.3102/00346543071001001

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Development, 82*(1), 405–432. doi: 101111/j.1467-8624.2010.01564.x

Eccles, J. S., & Wigfield, A. (2002). Motivational Beliefs, Values, and Goals. *Annual Review of Psychology, 53*(1), 109–132. doi: 10.1146/annurev.psych.53.100901.135153

Edwards, A. (2005). Relational agency: Learning to be a resourceful practitioner. International *Journal of Educational Research, 43*(3), 168–182. doi: 10.1016/j.ijer.2006.06.010

Elias, M. J., Zins, J. E., Weissberg, T. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., … Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators.* Alexandria, VA: Association for Supervision and Curriculum Development.

Elliott, J. G., Stemler, S. E., Sternberg, R. J., Grigorenko, E. L., & Hoffman, N. (2011). The socially skilled teacher and the development of tacit knowledge. *British Educational Research Journal, 37*(1), 1-21. doi:10.1080/01411920903420016

Emmer, E., Sabornie, E., Evertson, C. M., & Weinstein, C. S. (2013). *Handbook of classroom management: Research, practice, and contemporary issues.* New York: Routledge.

Fogel, A. (1993). *Developing through relationships : origins of communication, self, and culture.* New York: Harvester Wheatsheaf.

Freeman, T. M., Anderman, L. H., & Jensen, J. M. (2007). Sense of belonging in college freshmen at the classroom and campus levels. *The Journal of Experimental Education,*

Talvio, K. M., & Lonka, K. M. (2019). How to create a flourishing classroom? An intervention protocol for enhancing teachers' social and emotional learning. In: L. E. van Zyl, & S. Rothmann (Eds.), *Positive psychological interventions: Theories, methodologies and applications within multicultural contexts.* Springer.

*75*(3), 203–220.

Frey, L. R., Botan, C. H., Friedman, P. G., & Kreps, G. L. (1992). *Interpreting communication research : a case study approach.* Englewood Cliffs, NJ: Prentice Hall.

Gibbons, R. D., Hedeker, D. R., & Davis, J. M. (1993). Estimation of effect size from a seriesof experiments involving paired comparisons. *Journal of Educational Statistics, 18,* 271–279. doi: 10.3102/10769986018003271

Gol-Guven, M. (2016). The Lions Quest Program in Turkey: Teachers' views and classroom practices. *International Journal of Emotional Education, 8*(2), 60–69.

Gol-Guven, M. (2017). The effectiveness of the Lions Quest Program: Skills for Growing  on school climate, students' behaviors, perceptions of school, and conflict resolution skills. *European Early Childhood Education Research Journal, 25*(4), 575–594. doi:10.1080/1350293x.2016.1182311

Gordon, T. (2003). *Teacher effectiveness training.* New York: Three rivers press.

Gordon, T., & Burch, N. (1974). *TET, teacher effectiveness training.* New York: Random house.

Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education, 24*(5), 1349–1363. doi: 10.1016/j.tate.2007.06.005

Guskey, R. (2002). Professional Development and Teacher Change. *Teachers & Teaching, 8*(3), 381–391. doi: 10.1080/135406002100000512

Hakkarainen, K., Palonen, T., Paavola, S., & Lehtinen, E. (2004). *Communities of networked expertise : professional and educational perspectives.* Advances in learning and instruction series; Sitra's publication series; 257.; Sitra, ISSN 0785-8388; 257. Oxford: Elsevier.

Humphrey, N. (2013). *Social and emotional learning: A critical appraisal.* London: SAGE Publications Limited.

Ivey, A. E., Bradford-Ivey, M., & Zalaquett, C. P. (2009). *Intentional Interviewing and Counselling: Facilitating Client Development in a Multicultural Society* (7th ed.). Belmont CA: Cengage Learning.

28

Jennings, P. A., & Greenberg, M. T. (2009). The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes. *Review of Educational Research, 79*(1), 491–525. doi: 10.3102/0034654308325693

Ketonen, E., Talvio, M., & Lonka, K. (2014). Engaging Learning Environment (ELE) for Leadership Training: Fostering Interest and Epistemic Change. In *Proceedings of 2014 International Conference on Advanced Education and Management (ICAEM2014)* (pp. 104–111). Beijing, China.

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (Third ed.). San Francisco, CA: Berrett-Koehler Publishers, Inc.

Lendrum, A., & Humphrey, N. (2012). The importance of studying the implementation of interventions in school settings. *Oxford Review of Education, 38*(5), 635–652. doi: 10.1080/03054985.2012.734800

Leroy, N., Bressoux, P., Sarrazin, P., & Trouilloud, D. (2007). Impact of teachers' implicit theories and perceived pressures on the establishment of an autonomy supportive climate. *European Journal of Psychology of Education - EJPE (Instituto Superior de Psicologia Aplicada), 22*(4), 529–545. doi: 10.1007/BF03173470

Lonka, K. (2018). Phenomenal learning from Finland. Keuruu: Edita

Lonka, K., & Ahola, K. (1995). Activating instruction: How to foster study and thinking skills in higher education. *European Journal of Psychology of Education, 10*(4), 351–368. doi: 10.1007/BF03172926

Matischek-Jauk, M., Krammer, G., & Reicher, H. (2018). The life-skills program Lions Quest in Austrian schools: implementation and outcomes. Manuscript submitted for publication.

McCutcheon, A. L. (1987). *Latent class analysis.* Beverly Hills: SAGE.

Mezirow, J. (1990). How Critical Reflection triggers Transformative Learning . In J. M. & Associates (ed.), *Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory learning* (pp. 1–20). San Francisco: Jossey-Bass Inc.

Mezirow, J. (2000). *Learning as Transformation: Critical Perspectives on a Theory in Progress.* San Francisco: Jossey-Bass Inc.

Murtagh, L. and Baker, N. (2009) Feedback to Feed Forward: student response to tutors' written comments on assignments. *Practitioner Research in Higher Education*, *3*(1), 20-28

Muthén, L. K., & Muthén, B. (2009). *Categorical latent variable modeling using mplus: Cross-sectional data*. Los Angeles, CA: Statmodel.

Neill, A. S. (1960). *Summerhill: A radical approach to child rearing. Summerhill: A radical approach to child rearing.* Oxford,  England: Hart.

Patrick, H., Turner, J., Meyer, D., & Midgley, C. (2003). How teachers establish psychological environments during the first days of school: Associations with avoidance in mathematics. *The Teachers College Record, 105*(8), 1521–1558. doi: 10.1111/1467-9620.00299

Pulkkinen, L., & Kokko, K. (2017). *Human Development from Middle Childhood to Middle Adulthood : Growing Up to be Middle-Aged.* New York: Taylor and Francis.

Pyhältö, K., Soini, T., & Pietarinen, J. (2010). Pupils' pedagogical well-being in comprehensive school—significant positive and negative school experiences of Finnish ninth graders. *European Journal of Psychology of Education, 25*(2), 207–221. doi:10.1007/s10212-010-0013-x

Rogers, K. (1970). *On becoming a person: a therapeists' view of psychotherapy*. Boston, MA: Houghton Mifflin.

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context.* New York: Oxford University Press.

Salonen, P., Vauras, M., & Efklides, A. (2005). Social Interaction-What Can It Tell Us about Metacognition and Coregulation in Learning? *European Psychologist, 10*(3), 199–208. doi: 10.1027/1016-9040.10.3.199

Seligman, M. E., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford review of education*, *35*(3), 293-311.

Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher, 27*(2), 4–13. doi: 10.3102/0013189X027002004

Skinner, B. F. (2002). *Beyond Freedom and Dignity* (reprinted). Indianapolis/Cambridge: Hackett Publishing Company, Inc.

Tabachnick, B. G., Fidell, L. S., & Osterlind, S. J. (2001). *Using multivariate statistics.* Boston: Allyn and Bacon.

Talvio, M. (2014). *How do teachers benefit from training on social interaction skills? Developing and utilising an instrument for the evaluation of teachers' social and emotional learning* (Doctoral dissertation). Retrieved from http://urn.fi/URN:ISBN:978-951-51-0188-4.

Talvio, M., Berg, M., Komulainen, E., & Lonka, K. (2016). Exploring the coherence of the goals achieved through a youth development programme. *Procedia : Social and Behavioral Sciences, 217*, 469–476. doi: 10.1016/j.sbspro.2016.02.017

Talvio, M., Hietajärvi, L., Matichek-Jauk, M. & Lonka, K. (2018). Do Lions Quest (LQ) workshops have systematic impact on teachers' social and  emotional learning (SEL)? Samples from nine different countries. Manuscript submitted for publication.

Talvio, M., Ketonen, E., & Lonka, K. (2014). How long lasting are the effects of training on interaction skills? Teachers' sample. In *Proceedings of 2014 International Conference on Advanced Education and Management (ICAEM2014)*  (pp. 125–131). Beijing, China.

Talvio, M., Lonka, K., Komulainen, E., Kuusela, M., & Lintunen, T. (2012). The development of the Dealing with Challenging Interaction (DCI) method to evaluate teachers' social interaction skills. *Procedia: Social and Behavioral Sciences, 69*, 621–630. doi: 10.1016/j.sbspro.2012.11.454

Talvio, M., Lonka, K., Komulainen, E., Kuusela, M., & Lintunen, T. (2013). Revisiting Gordon's Teacher Effectiveness Training: An Intervention Study on Teachers' Social and Emotional Learning. *Electronic Journal of Research in Educational Psychology, 11*(3), 693–716. doi: 10.14204/ejrep.31.13073

Talvio, M., Lonka, K., Komulainen, E., Kuusela, M., & Lintunen, T. (2015). The development of teachers' responses to challenging situations during interaction training. *Teacher Development, 19*(1), 97–115. doi: 10.1080/13664530.2014.979298

Talvio, M., Matischek-Jauk, M., Hietajärvi, L., & Reicher, H. (2017). How Do Austrian Teachers Benefit from Lions-Quest Workshops? *Erziehung Und Unterricht, 9–10*, 802–809.

Vygotsky, L. (1978). *Mind in society.* Cambridge, MA: Harvard University Press.

Weber, R. P. (1990). *Basic content analysis. Quantitative applications in the social sciences; 49* (2nd. ed.). Beverly Hills, Calif: Sage.

Wenger, W. (1998). *Communities of practice: Learning, meaning and identity.* Cambridge: Cambridge University Press.

Wigfield, A., & Eccles, J. S. (2000). Expectancy–Value Theory of Achievement Motivation. *Contemporary Educational Psychology, 25*(1), 68–81. doi: 10.1006/ceps.1999.1015

Wubbels, T., & Levy, J. (1997). Paying attention to relationships. *Educational Leadership, 54*(7), 82.

Zins, J. E., Payton, J. W., Weissberg, R. P., & O'Brien, M. U. (2007). Social and emotional learning and successful school performance. In G. Matthews, M. Zeidner, & R. D. Roberts (Eds.), *The science of emotional intelligence: Knowns and unknowns* (pp. 376–395). New York: Oxford University Press.