

# Revisiting Gordon's Teacher Effectiveness Training: An Intervention Study on Teachers' Social and Emotional Learning

**Markus Talvio<sup>1</sup>, Kirsti Lonka<sup>1</sup>, Erkki Komulainen<sup>1</sup>,  
Marjo Kuusela<sup>2</sup>, and Taru Lintunen<sup>2</sup>**

---

<sup>1</sup> Department of Teacher Education, University of Helsinki, Helsinki

<sup>2</sup> Department of Sport Sciences, University of Jyväskylä, Jyväskylä

---

**Finland**

*Correspondence:* Markus Talvio, C/O Professor Kirsti Lonka, P.O. Box 9, 00014 University of Helsinki, Finland. E-mail: [markus@markustalvio.com](mailto:markus@markustalvio.com)

---

© Education & Psychology I+D+i and Editorial EOS (Spain)

## Abstract

**Introduction.** This study explored the development of teachers' social and emotional learning (SEL) skills by using *Teacher Effectiveness Training* (TET) (Gordon Training International) as an intervention with two groups of teachers. Further, Gordon's model was approached from the perspective of modern educational psychology. The effects of TET intervention on teachers were examined by utilizing Kirkpatrick and Kirkpatrick's model, since we considered it important to look at various aspects of the outcomes of the intervention, including the participants' reactions, knowledge, knowledge application (skills) and overall well-being.

**Method.** The teachers participating in TET were class teachers ( $n = 20$ ) from one elementary school and subject-matter teachers ( $n = 23$ ) from one secondary school in Finland. The comparison group comprised subject-matter teachers ( $n = 26$ ) from one secondary school who did not participate in TET. The statistical differences of the post-test scores were examined with dependent sample one-way ANOVA.

**Results.** In the comparison group, no differences between the pre- and post-test measurements were found. Among participants, *reactions* towards TET were positive. Further, there were significant results in two other aspects: both *knowledge* and *knowledge application (skills)* improved. The *overall well-being* of the teachers, measured at the end of the intervention, showed minor changes.

**Conclusion.** TET appeared to achieve its goals, since teachers learned to apply SEL skills during the intervention.

**Keywords:** social and emotional learning (SEL); teacher training; Teacher Effectiveness Training (TET); The Dealing with Challenging Interaction (DCI) method; social interaction skills; well-being

*Received: 06/23/13*

*Initial acceptance: 07/28/13*

*Final acceptance: 11/07/13*

# Una nueva mirada a la formación en eficacia docente de Gordon (TET): Un estudio-intervención en el aprendizaje social y emocional del profesorado

## Resumen

**Introducción.** En este estudio exploramos el desarrollo de las destrezas de aprendizaje social y emocional (SEL) de los docentes mediante el uso de *Capacitación de la Efectividad del Docente* (TET) (Gordon Training International) como intervención con dos grupos de docentes. También quisimos abordar el modelo de Gordon desde la perspectiva de la moderna psicología educacional. Los efectos de la intervención TET sobre los docentes fueron examinados utilizando el modelo de Kirkpatrick y Kirkpatrick, ya que consideramos importante observar diversos aspectos de los resultados de la intervención, incluyendo las reacciones, el conocimiento, la aplicación del conocimiento (destrezas) y el bienestar general de los participantes.

**Método.** Los docentes participantes en el TET eran maestros de grado (n=20) de una escuela primaria y profesores de asignatura (n=23) de una escuela secundaria de Finlandia. El grupo de comparación comprendió profesores de asignatura (n=26) de una escuela secundaria que no participaron en TET. Las diferencias estadísticas de los resultados posteriores a la prueba se examinaron con ANOVA unidireccional de muestra dependiente.

**Resultados.** En el grupo de comparación no se encontraron diferencias entre las mediciones previas y posteriores a la prueba. Entre los participantes las *reacciones* hacia el TET fueron positivas. Además hubo resultados significativos en otros dos aspectos: mejoraron tanto el *conocimiento* como la *aplicación del conocimiento*. El *bienestar general* de los docentes medido al final de la intervención mostró cambios menores.

**Conclusión.** TET pareció alcanzar sus objetivos, pues los docentes aprendieron a aplicar destrezas SEL durante la intervención.

**Palabras clave:** aprendizaje social y emocional (SEL); capacitación de docentes; Capacitación de la Efectividad del Docente (TET); método de negociar con interacción desafiante (DCI); destrezas de interacción social; bienestar.

*Recibido:* 23/06/13

*Aceptación inicial:* 28/07/13

*Aceptación final:* 07/11/13

## Introduction

Research on how teachers study, develop and improve their social interaction skills is scarce, although in modern learning psychology such skills are recognised as key tools in a learning environment. Socio-constructivist theories in educational psychology emphasize the active role of the learner (Lonka & Ahola, 1995), and it is therefore crucial that the teachers have the tools to support such an agentic position (Bandura, 2006; Edwards, 2005). Autonomy, participation and self-efficacy are central to this framework (Bruner, 1996; Sfard, 1998; Vygotsky, 1978). It is currently believed that pupils should experience agency and self-efficacy in interactions with members of the school community (Pietarinen, Soini, & Pyhältö, 2010). Educators should set challenges that are just beyond pupils' existing capabilities, and regulate their level of support as pupils pass through various phases of skill acquisition, but gradually withdraw aid as they become more skilled in mastering tasks on their own (e.g., Bandura, 2006; Vygotsky, 1978).

In self-determination theory (SDT) (Ryan & Deci, 2000; Deci & Ryan, 2002), fostering autonomy, creativity and intrinsic motivation are also important. From this perspective, one of the main tasks of the teacher is supporting autonomy in their pupils (Leroy, Bressoux, Sarrazin, & Trouilloud, 2007). SDT and related theories increasingly focus on constructive cognition and social intelligence that always provide alternative ways and opportunities for approaching interaction problems from new and more fruitful perspectives (Cantor, 2003). Leroy et al. (2007) suggested that by using social interaction skills the intrinsic motivation of pupils may also be improved. They showed that when teachers believed that pupils' academic achievement can be improved through the pupils' own efforts, this indirectly favoured an autonomy supportive climate. It was important that the teachers themselves experienced self-efficacy and believed that they could foster their pupils' learning.

The theories described above are very close to the positive psychology movement that is based on humanistic psychology, emphasising the strengths and potentials of human beings, instead of their weaknesses and problems (Aspinwall & Staudinger, 2003). Thomas Gordon developed a model for training teachers' social interaction skills and based his work on humanistic psychology already in the 1960s. Gordon (2003, pp. 107-108) stated that "there is a strong drive toward independence and self-responsibility within each of us", implicitly emphasizing agentic capabilities. In his model, the skill to listen was central, where

acceptance of and respect for a pupil is present. Gordon suggested that active listening by the teacher is a tool in promoting pupils' growth toward self-direction, self-responsibility, self-determination, self-control and self-evaluation (Gordon, 2003, p. 9). Such skills, according to him, must be nurtured and fostered by teachers because they are not developed automatically.

Overall, all the theories mentioned above have recently fuelled research on social interaction skills. We also see a close resemblance to the implicit values of Gordon's model. For instance, Bird and Sultmann (2010) see social interaction skills as tools for developing relationships, nurturing well-being and fostering quality learning. They see that educational settings "have the potential to engage young people in ways that help them define who they are, why they are important, how they should act and who they can become" (Bird & Sultmann, 2010, p. 143). In "A credo for my relationships with others", Gordon states that by respecting the needs of both the participants of interaction, a healthy relationship in which both can strive to become what they are capable of being, can be created and maintained (Adams, 2006). Thus, to be successful in interaction, it is important to be open and honest in one's communication.

By using social interaction skills teachers are able to utilize the impact of the reciprocal interaction to support the pupils' learning, self-efficacy and autonomy. It is agreed that a teacher's social and emotional competence supports the teacher-pupil relationship as well as relationships outside the classroom, maintains classroom management, helps teachers to implement the social and emotional curriculum and has a positive influence on their own well-being (Jennings & Greenberg, 2009). These factors lead to improved school performance and the psychological well-being of pupils (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

There is plenty of research about how children's emotional regulatory skills, social cognition skills and positive communicative behaviours can be facilitated (Durlak & Wells, 1997; Catalano, Berglund, Ryan, Lonczak, & Hawkins 2004; Greenberg et al., 2003; Wells, Barlow, & Stewart-Brown, 2003; Zins, Weissberg, Wang, & Walberg, 2004; Brock, Nishida, Chiong, Grimm, & Rimm-Kaufman, 2008; Rimm-Kaufman, Fan, Chiu, & You, 2007). Presumably, the social competence of a child is a product of multiple influences of the family and school environment (Brophy-Herb, Lee, Nievar, & Stollak, 2007). In addition, it is known that the pupils who have pro-social attitude and social and emotional skills score better academically than the peers (Durlak et al., 2011; Jiménez-Morales & López-Zafra, 2013).

Surprisingly little internationally reported research exists in education on how teachers can study, develop and improve social interaction although these skills are emphasized in modern learning psychology as key tools in a learning community. In addition, very few studies have described attempts to train teachers to support autonomy in their pupils, although there are some examples (Leroy et al., 2007; Tessier, Sarrazin, & Ntoumanis, 2008).

In this study we explored the development of teachers' social interaction skills by using Teacher Effectiveness Training (TET) (Gordon Training International, 2012) as an intervention with two groups of teachers. We also wanted to approach Gordon's model from the perspective of modern educational psychology.

### *Social and emotional learning (SEL)*

Social and emotional learning (SEL) consists of self-awareness, self-management, social awareness, relationship management and responsible decision making (Elias et al., 1997; Zins et al., 2004; Collaborative for Academic, Social, and Emotional Learning [CASEL], 2012). These components are also defined as central factors of teachers' social and emotional competence (Jennings & Greenberg, 2009). The social interaction skills used and taught in the TET intervention cover the core components of SEL concept (Lintunen & Gould, in press).

Some interventions on SEL for teachers are based on self-determination theory (SDT) (Deci & Ryan, 2002), such as the study by Leroy et al. (2007). Pérez-Escoda, Filella, Alegre, and Bisquerra (2012) reported positive outcomes of the training programme on improving teachers' and their pupils' social well-being through development of emotional competence. In an intervention by Tessier et al. (2008) the participants learned to employ more autonomy supportive and neutral behaviour than those in the comparison group. No difference, however, emerged in relation to the use of controlling behaviour. It appeared to be really difficult for teachers to give up their controlling behaviours. However, not all control is harmful if it focuses on classroom behaviour instead of taking over the control of learning. Brekelmans, Mainhard, den Brok and Wubbels (2011) found that pupils who perceived teacher control and simultaneously affiliation exhibited greater achievement, stronger engagement and more positive subject-related attitudes than pupils who perceived their teacher as exhibiting less of these. In general, teachers who are friendly and understand their pupils but also play an active role as the leader of the class are considered as interpersonally competent. Such control is

focused on teaching whereas controlling the pupil often involves a low level of affiliation merely focusing on controlling, correcting and punishing.

### *Teacher Effectiveness Training (TET)*

In TET, a teacher's social awareness, together with empathy and understanding become tangible and real in an interaction with a pupil when the teacher uses listening skills. *Active listening* is a special listening skill in which the teacher reflects back to the pupil his or her understanding of what the pupil has said. This allows the teacher to confirm that he or she has understood the message and to give the pupil a chance to correct the teacher if necessary (Ivey, Bradford Ivey, & Zalaquett, 2009). In addition, listening skills help teachers to promote respectful and friendly relationships with their pupils and enhances responsible decision making where everybody feels that they are included.

Further, a teacher's relationship with a pupil, his or her self-awareness and self-management become evident as he or she uses *positive I-messages* or *confrontation I-messages* which are other tools taught in TET. Positive and confrontation I -messages have three similar components: a description of the pupil's act, the feeling of the teacher caused by this act and the tangible effect of his or her act on the teacher (Gordon, 2003, pp. 142-146). For example, in order to be able to construct a message that includes all three components, the teacher needs to recognize his or her own feelings, needs, beliefs and thoughts.

Messages, such as being judgemental or using mockery, which socially and emotionally competent teachers avoid, are called *road blocks*. They damage fruitful interaction and can be either ineffective confrontational messages where the teacher has a problem or ineffective counselling messages where the pupil has a problem (Gordon, 2003, p. 136).

In addition, TET includes the idea of *supporting autonomy* and self-responsibility by reducing the ways in which teachers exert control over others and replacing them, for example, with the No-lose method of conflict resolution and active listening. These skills aim at helping pupils to find solutions to their own problems instead of teachers taking ownership of the pupils' problems and feelings. TET skills in supporting autonomy promote responsible decision making and relationship skills. According to Gordon, active listening promotes pupils' internal resolution of conflicts, which increases their independence and self-responsibility (Gordon, 2003, p. 111).

The course methodology of TET is described in the TET instructor guide as a balance between presentations by the instructor, group discussions, individual sharing and skill-building activities (Adams et al., 2006, p. 5). Hence, the learner-centred approach is stressed. The course design also includes group discussions, assignments and memory recall exercises. Since reflection may be seen as an activity where participants' perceptions and interpretations are utilised to give meaning and make greater sense of the world around them (Stroobants, Chambers, & Clarke, 2007), the idea of these exercises is obviously to lead the participants to reflect on their own life and raise their awareness and understanding about themselves.

It is often assumed that teachers already have the necessary social and emotional competence, and skills, to create a supportive environment, model emotion regulation, be emotionally responsive to pupils, form collaborative relationships with pupils, parents and colleagues, handle behaviour problems and solve conflicts (Jennings & Greenberg, 2009). Elliot, Stemler, Sternberg, Grigorenko, and Hoffman (2011) found that because of their accumulated and unconscious tacit knowledge, experienced teachers were indeed better than novice teachers at identifying poor solutions. Leroy et al. (2007) also showed that experienced teachers were more likely to support their pupils' autonomy and less likely to control or label their pupils. Although there are some studies (i.e. Pérez-Escoda et al., 2012; Talvio, Lonka, Komulainen, Kuusela, & Lintunen, 2013) suggesting that emotional competencies can be taught and learned, it seems that usually teachers' social competence is considered as a trait that either does or does not exist and could probably be developed in the course of one's working life, but not by studying the necessary skills systematically.

### *Measuring Social and Emotional Learning during TET*

Analysing videotapes or observation are typical ways of measuring communication skills and interaction in the classroom (Rubie-Davies, 2007). These methods are important but not, however, always possible when the target group is large. In addition, it is difficult to capture exactly the right moment, when behaviour of interest occurs. Further, there is a great variety of challenging interaction situations in everyday teaching practice. The professional practice of teachers goes way beyond the classroom. Communication skills are required in encounters with parents, colleagues, the school administration and society.

The goal of TET is not just to impart the technical and individual skills used in interaction but to inculcate a holistic attitude towards teaching. Therefore, a global rating for



holistic classification was needed to evaluate social interaction skills. In medicine, it has been found that objective checklists' measuring separate technical skills may reward thoroughness but may not allow for the recognition of alternative approaches. Moreover, checklists do not capture increasing levels of expertise, and by providing clear information about the exact type of global rating criteria, researchers will be able to draw more valid conclusions compared to checklists (Regehr, MacRae, Reznick, & Szalay, 1998; Hodges, Regehr, McNaughton, Tiberius, & Hanson, 1999; Hodges & McIlroy, 2003).

Typically, feedback from participants is the only source used in assessing the outcomes of training, because of the above-mentioned complexity of evaluating the training. In this study, the effects of TET intervention on teachers were examined by utilizing Kirkpatrick and Kirkpatrick's model (2006), who suggested that it is important to look at various aspects of the outcomes of the intervention, including the participants' reactions, knowledge, knowledge application (skills) and overall well-being.

The teaching of social and emotional skills in teacher training has rarely been systematic, nor has regular continuing education in this area been available for teachers. In addition, studies on the teaching and learning of social and emotional skills are scarce (Lintunen, 2006). Our goal was to explore social interaction in the type of challenging situations that teachers encounter, not only in the classroom but also with colleagues, school administrators and parents.

In this study we firstly explored teachers' reactions to TET. Secondly, possible changes in the participants' knowledge and knowledge application (skills) in SEL during the intervention were studied. Thirdly, possible changes in the participants' experience of their social relations and in their well-being during TET were investigated.

### *Context of the Present Study*

Our study took place in Finland, which is an especially interesting context for several reasons: Finnish students have lately reaped rewards in several international comparisons of school achievements (i.e. OECD, 2010; Mullis, Martin, Foy, & Arora, 2012). However, pupils' relationships and school enjoyment, have been reported to be considerably below other countries, also risk-taking behaviour has been shown to be higher in several international comparisons of school attainments (Samdal, Dur, & Freeman, 2004; Mullis, Martin, Foy, & Arora, 2012; Mullis, Martin, Foy, & Drucker, 2012). Even though all teachers

in Finland are required to hold a Master's degree, teacher training programmes do not include much SEL. Instead, such courses are often part of continuing training. This study aims at deepening our understanding about the development of teachers' SEL and hereby helps them to foster pupils' well-being.

## Method

### *Procedures and Participants*

The effects of TET intervention on teachers were examined in this study. TET was organised in the form of in-house training at both schools. The four-day training course was organised in two parts, each part lasting for two days. In both schools the first part of the training was conducted in the autumn term at the beginning of the school year, and the second part during the spring term. The data were collected before and after TET within a six-month period both from the intervention groups and the comparison group.

The teachers participating in TET were class teachers (TET 1,  $n = 20$ ) from an elementary school and subject-matter teachers (TET 2,  $n = 23$ ) from a secondary school in Finland. The third group comprised subject-matter teachers ( $n = 26$ ) from a secondary school who did not participate in TET. However, they were on the waiting list for TET and were willing to participate in the TET course.

By using the Chi-square test, no significant differences between the groups in terms of working experience, permanence of job and years worked in the same school were found. Thus, the intervention and comparison groups were quite similar. Further, according to statistics concerning school size in Finland (Kumpulainen, 2009), the schools participating in this study were representative of typical Finnish semi-rural comprehensive schools.

### *Measures*

With the use of a *Course feedback questionnaire*, reactions to the TET course were measured, for example, evaluations of the applicability of the course or how it was managed. It included ten items with a five-point Likert scale with response options ranging from completely disagree to fully agree. "The course fulfilled my expectations" and "I can apply the skills studied at work" were typical statements regarding the content and goals of the course. Opinions regarding the management of the course were collected using the following

statements "The procedure of the course was clear" and "The trainer was professionally skilled". In addition, the participants were asked to rate their own energy levels and the course as a whole. Finally the mean values and standard deviation values of the answers' sum variables were calculated.

In the *Knowledge test*, participants were asked to define in their own words the central concepts of interaction skills studied in the TET course. There were eight questions altogether: for example, participants were asked to define what active listening is and to list the components of a positive I-message and to explain what the so-called No-lose method of resolving conflicts entails, a special technique for making responsible decisions (Gordon, 2003). The Knowledge test measured if the participants had learned the SEL terminology taught in the TET course. The answers to the Knowledge test were quantified from each answer by giving from 0 to 2 or 3 points. By using the answers' sum variables the mean values and standard deviation values were calculated.

*The Dealing with Challenging Interaction (DCI)*, a case-based evaluation method was developed to evaluate the skills required, or ability, to apply the knowledge studied on the TET course. Seven typical interaction situations at the teachers' schools were developed which were used to generate the DCI questionnaire. Each task consisted of a description of a common event at school and a question where the respondent was asked to describe in a few lines their reactions to that event. For example, in an event that involves confronting the bad behaviour of a pupil, the teacher was asked to describe what he/she would do or say to a pupil who is sending text messages during a lesson, which is against the rules in the school involved. Other events were Thanking the class, Getting along with the pupil's parents, Solving a problem between two pupils, Listening to a worried pupil, Confronting the bad behaviour of a colleague and Setting limits. The descriptions given by participants in the DCI were content analysed, quantified and categorized (Weber, 1990; Frey, Botan, Friedman, & Kreps, 1992). Listening, Positive I-messages, Confrontation I-messages, Messages supporting autonomy and Global rating represented categories of the desired ways of interacting. Road blocks was the only category that represented undesirable messages of interaction. In the categories of Confrontation I-messages, Positive I-messages and Global rating the numerical value could be 0, 1 or 2 according to the quality of the unit or answer, in other categories the possible numerical value of a unit was 0 or 1 showing the existence of that category in the unit. Finally the mean values and standard deviation values of the

categories' sum variables were calculated. More about the development of the DCI method is described elsewhere (Talvio, Lonka, Komulainen, Kuusela, & Lintunen, 2012).

To investigate the inter-rater reliability of the measure, half of the material was analysed in parallel by another researcher after which the chance adjusted proportion of agreement between two raters, Cohen's kappa, in each category was calculated (Krippendorff, 2004). It varied between .57-.86 hereby demonstrating a moderate to good inter-rater reliability of the measure.

*Overall well-being* was measured by modifying the School Well-being Profile (Konu, 2005) that aims to produce information about well-being in school. The participants evaluated their well-being with a Likert-scale ranging from 1 to 5. In our questionnaire, there are four categories of questions: Social relations, Relations with parents, Self-fulfilment and Well-being. The social relations category consisted of questions concerning teachers' relationships with their pupils and colleagues. Questions about their relations with parents assessed the quality of these relationships. The self-fulfilment category consisted of questions that assessed the opportunities for teachers to work according to their own capabilities. With the questions that concerned Well-being the lack of psychosomatic symptoms were assessed to reflect mental health issues (see Konu, 2005; Konu & Rimpelä, 2002; Konu, Lintonen, & Autio, 2002). In all the well-being categories the mean values and standard deviation values were calculated from the answers' sum variables.

### *Data analyses*

Both the statistical differences in the post-test scores between the groups and the statistical differences between the scores of the pre-TET test and the post-TET test were examined with dependent samples one-way ANOVA. Pearson correlations were calculated to investigate the correlations of the measuring scales. SPSS 20 was used in the analyses. The internal consistency of the measuring scales varied between .66 and .89 (Cronbach's alpha) showing moderate to good internal consistency. The results reported are based on the sum scores of the post-TET test.

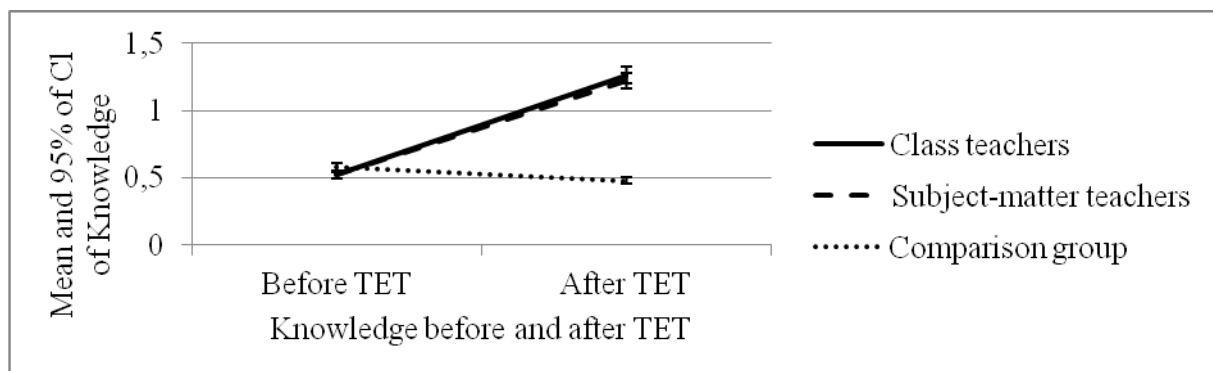
## Results

### *Teachers' Reactions to TET*

The average feedback from the TET course was on the Likert scale 1-5 among the subject matter teachers  $M (SD) = 4.06 (0.33)$  and among class teachers  $M (SD) = 4.20 (0.42)$  thus showing positive reactions of the course. Although the class teachers gave more positive feedback than the subject-matter teachers, no significant differences between the two groups participating in TET were found.

### *Changes (and Interrelations) of Knowledge and Skills of SEL during the Course*

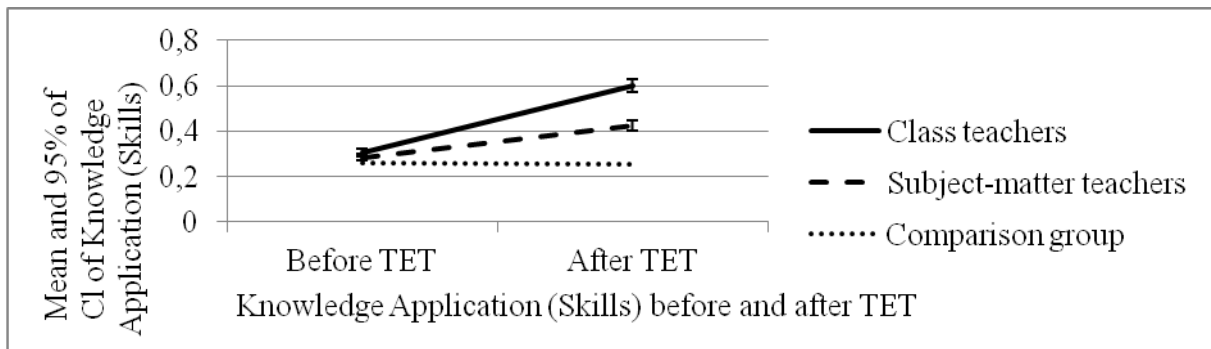
*Knowledge of SEL* level was similar in each group before TET and no significant differences between the groups were found (Figure 1). After TET the scores were significantly different ( $F (2, 69) = 33.98, p < .001$ ) between the groups with the two intervention groups scoring significantly better than the comparison group. Further, post-hoc test showed that there was a significant difference between the comparison group and the intervention groups but not between the intervention groups.



**Figure 1. Change between the groups in the Knowledge during TET**

*Knowledge application (skills)* was on a similar level in each group before TET and no significant differences in the pre-TET scores were found between groups (Figure 2). The post-TET test scores between the groups diverged significantly ( $F (2, 68) = 67.93, p < .001$ ) from each other with the lowest scores among the participants in the comparison group and the highest among class teachers. All pairwise post-hoc tests were also highly significant. Table 1

shows changes in the DCI variables in more detail. Overall, among teachers participating in TET the variety of desired ways of interacting increased.



**Figure 2. Change between the groups in the Knowledge application (skills) during TET**

A significant and moderately high correlation was found between the Knowledge test and the Knowledge application (skills) ( $r = .67, p < .01$ ). Thus, the teachers, who knew the theory well, were also successful in applying it in given situations. In addition, Relations with parents correlated moderately with Self-fulfilment ( $r = .46, p < .001$ ) and Course feedback ( $r = .47, p < .001$ ). Accordingly, teachers who felt that their relationships with parents were good experienced stronger self-fulfilment at work and gave more positive feedback about the TET course. After the intervention mild correlations were also found between Social relations Self-fulfilment ( $r = .32, p < .05$ ) and Well-being ( $r = .33, p < .01$ ). Other significant associations were not perceived after the TET.

#### *Changes in the Participants' Experience of Well-being*

Between the pre-TET and post-TET measurements in overall well-being a negative significant change was discovered among subject-matter teachers in the answers concerning Relationships with parents ( $t(21) = -3.49, p < .01$ ) and a positive significant change among class teachers in the answers concerning Self-fulfilment ( $t(15) = 2.22, p < .05$ ). No other significant changes were perceived.

Table 1.

Summary of Means, Standard Deviations, Significances, and Effect Sizes of the DCI Categories during TET

DCI cat.	Comparison group				Intervention group							
	M(SD)		t (25)	$d^1$	TET 1				TET 2			
	pre	post			M(SD)		t (19)	$d^1$	M(SD)		t (22)	$d^1$
LIS	0.02(0.05)	0.01(0.03)	-1.00	-0.24	0.03(0.07)	0.21(0.12)			5.66***	1.83		
PIM	0.07(0.08)	0.07(0.08)	-0.33	0.00	0.20(0.14)	0.23(0.13)	0.78	0.22	0.09(0.10)	0.18(0.12)	3.07**	0.81
CIM	0.24(0.14)	0.21(0.17)	-0.76	-0.19	0.20(0.13)	0.66(0.24)	10.35***	2.38	0.22(0.16)	0.43(0.27)	3.89**	0.95
MSA	0.06(0.07)	0.06(0.09)	0.44	0.00	0.09(0.11)	0.15(0.08)	2.34*	0.62	0.06(0.09)	0.13(0.09)	3.19**	0.78
RB	0.60(0.20)	0.57(0.19)	-0.57	-0.15	0.49(0.22)	0.22(0.16)	-4.75***	-1.40	0.53(0.13)	0.46(0.20)	1.53	0.42
GR	0.77(0.22)	0.74(0.20)	-0.55	-0.14	0.80(0.18)	1.56(0.24)	13.27***	3.58	0.84(0.23)	1.18(0.34)	3.73**	1.17

Note: LIS = Listening, PIM = Positive I-Messages, CIM = Confrontation I-Messages, MSA = Messages supporting autonomy, RB = Road blocks, GR = Global rating. TET 1 = Class teachers, TET 2 = Subject-matter teachers.  $d^1$  = Cohen's  $d$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

## Discussion and conclusion

To sum up the results, the teachers' *reactions* towards TET were positive. In addition, the *knowledge* of SEL of the teachers participating in TET increased significantly. Among the comparison group no difference between the pre- and post-test measurement was perceived.

Further, *knowledge application (skills)* improved among teachers after participating in TET. Both the class teachers and subject-matter teachers attending TET described Listening, Confrontation I-messages and Messages supporting autonomy significantly more often than the teachers not attending TET. In addition, of the teachers participating in TET Positive I-messages increased among subject-matter teachers, whereas a non-desired way of interacting, or messages in the Road blocks category, decreased significantly among class teachers in the post-test measurement. Consequently, in both intervention groups the global rating score of the teachers' messages increased after TET. In the com-

parison group no difference in any category between the pre-TET test and the post-TET test was found. This result is interesting, since during the intervention not only autonomy supportive behaviour increased, but signs of decreasing controlling behaviour (decrease in Road Blocks) were perceived. This result is different from Tessier et al. (2008). Overall, the results in terms of the applied knowledge level matched the goals of the course. The participants attending TET showed progress in the theory-driven categories that were the focus of the TET course. Furthermore, answers in the Messages supporting autonomy category increased, although it was not included explicitly in the course curriculum. One interesting detail was that even before the TET course the class teachers used more Positive I-messages than the subject-matter teachers. This might reflect a difference between the main subjects taught in teacher training. The main subject of student class teacher is pedagogy, which may cover a large amount of teaching skills whereas subject-matter teachers have much less training in pedagogy. In addition, it is possible that those applicants who have a pedagogical approach to teaching seek class teacher education instead of more academically oriented subject-specific teacher training. Furthermore, in elementary school the community of practice with teachers' colleagues and parents might support pedagogically oriented teaching. These differences might also explain why after the TET course Road blocks among the subject-matter teachers did not decrease as much as they did among the class teachers.

Finally, the fourth category, the *overall well-being*, showed a positive change in self-fulfilment among class-teachers but among subject-matter teachers their dissatisfaction with their relationships with parents increased. It is possible that the training made the subject-matter teachers more conscious of the complications they had with their pupils' parents. It is understandable that no other changes in this category during the TET course were perceived. The latter measurement was organised right after the second part of the TET course. Even though the first part of the TET course was about six months earlier, half of the course content and in particular the part that consisted of applying the skills was right before the second test. Accordingly, more time would have been needed for the teachers to utilize the TET skills in their working environment.

On the other hand, we wanted to check if the shift in terms of knowledge and skills could be explained by a change in overall well-being during the TET course. In this case, even though overall well-being among subject-matter teachers was lower than among class



teachers, they still learned the knowledge and skills that had been taught. However, better scores in overall well-being might explain why class teachers had greater success in learning these skills.

### *Methodological Reflections*

The correlations between the results of the Knowledge test and the results of the DCI method as well as the correlations between the scales of overall well-being showed good criterion oriented validity of the measures. We also found support from previous studies that interventions aiming at improving interaction skills can be successful (Barton-Arwood, Morrow, Lane, & Jolivet, 2005; Tessier et al., 2008, Pérez-Escoda et al., 2012; Talvio et al., 2013).

Although the positive course feedback correlated with a positive experience in terms of relationships with pupils' parents, the results of the course feedback data did not demonstrate success in learning the skills studied in TET. It is, however, understandable, since the data on Course feedback were collected only from the teachers with TET training, and there was not very much variation in the data, since most participants were quite pleased with the course. In addition, in interaction training, it may be that people have to acknowledge their limitations and this in turn may make them feel somewhat uncomfortable. It follows that even when reactions are less positive, learning goals may still be reached.

The reader should bear in mind that only a small group of teachers was studied. More research in several schools and countries is needed before we can make generalizations about these results. In addition, the composition of this study to some extent resembled the quasi-experimental design with the comparison group (Shadish, Cook, & Campbell, 2002) but since the comparison group consisted only of subject-matter teachers and the sample was not randomized it did not fully correspond with the intervention group which consisted of class teachers and subject-matter teachers. However, the adapted quasi-experimental design gave us some interesting information concerning how a teacher's basic training may affect the outcome of interaction training. Our goal was not only to explore the differences between the intervention groups and the comparison group, but also to investigate the differences between all three groups participating in the study. Therefore, it might be interesting to investigate

potential differences between elementary and secondary school teachers participating in TET by having comparison groups for both of the intervention groups.

Another limitation was that this research did not provide any information about the actions of teachers in classrooms, only their own descriptions of their actions in hypothetical situations. On the other hand, when assessing medical student performance during clinical education, it appeared that collecting material through sampling during regular encounters in the work day was more feasible, reliable and valid than the data of a single global rating scale completed at infrequent intervals by a supervisor (Turnbull, MacFadyen, van Barneveld, & Norman, 2000) In addition, it has been suggested that examples of actual practical situations should be used in teaching to illustrate the previously studied theory (Norman, 2009).

In order to observe the real actions of teachers in a classroom, gathering research material by observing or videotaping would be necessary. However, collecting that material would have been difficult for the following reasons: First, there is a base-rate problem. The skills that are the focus of TET are used mostly when a teacher or a pupil faces a problem. These kinds of situations may not occur very frequently. Second, these skills cannot be put into practice right after the course. Third, if every participant in this study had been videotaped many more resources would have been needed. Because the purpose of this study was to focus on the change of a group that participated in the course, the set of questions used was seen as a practical way of collecting material. Hence, these results might indicate a change in the thinking and understanding of teachers due to the intervention, the TET course. However, qualitative research based on video material for a few participants would provide very interesting information about how teachers participating in TET have applied the skills thus obtained to their interactions in real life with pupils, parents and other colleagues.

### *Theoretical Reflections*

According to the present study, the TET course seemed to be an effective way for teachers to improve their knowledge of SEL and their ability to apply it. The theory and skills provided by TET are sometimes considered as just a body of classroom management techniques. However, according to our findings, the effects might be broader. TET began to be used in the 1970s. As a representative of individualistic humanistic psychology and a student and colleague of Carl Rogers, Thomas Gordon focused on the potential resources of the individual. We suggest that supporting autonomy is a collaborative act. By enabling pupils' autonomy, showing respect and leaving the responsibility for learning to the pupils,

teachers give them a chance to develop their agency. Accordingly, the general aim of TET is to increase constructive ways of communication, participatory, decision making and to support autonomy of both pupils and teachers.

## Acknowledgements

This research was financially supported by a Finnish Cultural Foundation grant for the first author and partially funded by the project RYM Indoor Environment 462054 of the Finnish Funding Agency for Technology and Innovation, [www.indoorenvironment.org](http://www.indoorenvironment.org).

## References

- 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, CA: Gordon Training International.
- Adams, L. (2006). *Dr. Thomas Gordon's teacher effectiveness training (T.E.T.). Workbook*. Solana Beach, CA: Gordon Training International.
- Aspinwall, L.G. & Staudinger, U.M., (eds). (2003). *A Psychology of Human Strengths: Fundamental Questions and Future Directions for a Positive Psychology*. Washington DC: American Psychological Association.
- 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
- Barton-Arwood, S., Morrow, L., Lane, K., & Jolivet, K. (2005). Project IMPROVE: Improving teachers' ability to address students' social needs. *Education and Treatment of Children*, 28(4), 430-443.
- Bird, K. A., & Sultmann, W. F. (2010). Social and emotional learning: Reporting a system approach to developing relationships, nurturing well-being and invigorating learning. *Educational & Child Psychology*, 27(1), 143-155.
- 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.
- Brock, L. L., Nishida, T. K., Chiong, C., Grimm, K. J., & Rimm-Kaufman, S. E. (2008). Children's perceptions of the classroom environment and social and academic

- performance: A longitudinal analysis of the contribution of the responsive classroom approach. *Journal of School Psychology*, 46(2), 129-149. doi: 10.1016/j.jsp.2007.02.004
- 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. (1996). *The culture of education*. Cambridge, MA: Harvard University Press.
- Cantor, N. (2003). Constructive cognition, personal goals, and the social embedding of personality. In Aspinwall, L.G. & Staudinger, U.M., (Eds). *A Psychology of Human Strengths: Fundamental Questions and Future Directions for a Positive Psychology*, Washington DC: American Psychological Association.
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *The Annals of the American Academy of Political and Social Science*, 591, 98-124. doi: 10.1037/1522-3736.5.1.515a
- Collaborative for academic, social and emotional learning (2012). *Implementation » overview*. Retrieved from <http://www.casel.org/implement/index.php>
- Deci, E. L. & Ryan, R. M. (2002). Overview of self-determination theory: an organismic dialectical perspective. In E.L. Deci and R.M. Ryan (Eds.), *Handbook of self-determination research*. Rochester NY: University of Rochester Press.
- 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: 10.1111/j.1467-8624.2010.01564.x
- Durlak, J. A., & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology*, 25(2), 115-152. doi: 10.1023/A:1024654026646
- 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., Kessler, R., Schwab-Stone, M. E., & 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
- Frey, L. R., Botan, C. H., Friedman, P. G., & Kreps, G. L. (cop. 1992.). *Interpreting communication research: A case study approach*. Englewood Cliffs, NJ: Prentice Hall.
- Gordon Training International (2012). *T.E.T. teacher effectiveness program*. Retrieved from <http://www.gordontraining.com/teachertrainingprogram.html>
- Gordon, T. (2003). *Teacher effectiveness training*. New York: Three rivers press.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58(6), 466-474. doi: 10.1037/0003-066X.58.6-7.466
- Hodges, B., & McIlroy, J. H. (2003). Analytic global OSCE ratings are sensitive to level of training. *Medical Education*, 37(11), 1012-1016. doi: 10.1046/j.1365-2923.2003.01674.x.
- Hodges, B., Regehr, G., McNaughton, N., Tiberius, R., & Hanson, M. (1999). OSCE checklists do not capture increasing levels of expertise. *Academic Medicine*, 74(10), 1129-1134. doi: 10.1097/00001888-199910000-00017
- 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.
- 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
- Jiménez-Morales, M., & López-Zafra, E. (2013). Impact of Perceived Emotional Intelligence, Social Attitudes and Teacher Expectations on Academic Performance. *Electronic Journal of Research in Educational Psychology* 11 (1), 75-98.
- Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (Third ed.). San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Konu, A. (2005). *School well-being profile*. Retrieved from <http://www10.edu.fi/hyvinvointiprofiili/info-eng.html>.
- Konu, A. I., Lintonen, T. P., & Autio, V. J. (2002). Evaluation of well-being in schools – A

- multilevel analysis of General subjective well-being. *School Effectiveness & School Improvement*, 13(2), 187-200. doi: 10.1076/sesi.13.2.187.3432
- Konu, A., & Rimpelä, M. (2002). Well-being in schools: A conceptual model. *Health Promotion International*, 17(1), 79-87. doi:10.1093/heapro/17.1.79
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology* (2nd ed.). Thousand Oaks, CA: Sage.
- Kumpulainen, T. (2009). *Koulutuksen määrälliset indikaattorit 2009*. [The quantitative indicators of education in 2009]. Helsinki: Opetushallitus.
- 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* 22(4), 529-545. doi: 10.1007/BF03173470
- Lintunen, T. (2006). Social and emotional learning in the school physical education context. In F. Boen, B. De Cuyper & J. Opdenacker (Eds.). *Current research topics in exercise and sport psychology in Europe* (1.th ed., pp. 25-33). Leuven: Lannoo Campus.
- Lintunen T. & Gould, D. (in press). Developing social and emotional skills. In A. Papaioannou and D. Hackfort (eds.). *Fundamental Concepts in Sport and Exercise Psychology*. London: Routledge.
- 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
- Mullis, I.V.S., Martin, M.O., Foy, P., & Arora, A. (2012). *TIMSS 2011 International Results in Mathematics*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College.
- Mullis, I.V.S., Martin, M.O., Foy, P., & Drucker, K.T. (2012). *The PIRLS 2011 International Results in Reading*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College.
- Norman, G. (2009). Teaching basic science to optimize transfer. *Medical Teacher*, 31(9), 807-811. doi:10.1080/01421590903049814
- OECD. (2010). *PISA 2009 results: What students know and can do?* Organisation for Economic Co-operation and Development.
- Pérez-Escoda, N., Filella, G., Bisquerra, R., & Alegre, A. (2012). Developing the emotional competence of teachers and pupils in school contexts. *Electronic Journal of Research in Educational Psychology*, 10 (3), 1183-1208.

- Pietarinen, J., Soini, T., & Pyhältö, K. (2010). Learning and well-being in transitions: How to promote pupils' active learning agency? In D. Jindal-Snape (Ed.), *Educational Transitions. Moving Stories from Around the World* (pp. 143-158). (Routledge research in education). New York; Abingdon: Routledge.
- Regehr, G., MacRae, H., Reznick, R. K., & Szalay, D. (1998). Comparing the psychometric properties of checklists and global rating scales for assessing performance on an OSCE-format examination. *Academic Medicine*, 73(9), 993-997. doi: 10.1097/00001888-199809000-00020
- Rimm-Kaufman, S. E., Fan, X., Chiu, Y., & You, W. (2007). The contribution of the responsive classroom approach on children's academic achievement: Results from a three year longitudinal study. *Journal of School Psychology*, 45(4), 401-421. doi: 10.1016/j.jsp.2006.10.003
- Rubie-Davies, C. (2007). Classroom interactions: Exploring the practices of high- and low-expectation teachers. *British Journal of Educational Psychology*, 77(2), 289-306. Doi:10.1348/000709906X101601
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- Samdal, O., Dur, W. & Freeman, J. (2004). School. In Currie C., Roberts C., Morgan M., Smith R., Settertobulte W., Samdal O. & Rasmussen V. (Ed.), *Young people's health in context: Health behaviour in school-aged children (HBSC) study: International report from the 2001/2002 survey* (pp. 42-51). Copenhagen: WHO Regional Office for Europe.
- 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
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002.). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton Mifflin.
- Stroobants, H., Chambers, P., & Clarke, B. (2007). *Reflective journeys: A fieldbook for facilitating life-long learning in vocational education and training*. Leuven: Acco.
- 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. (in press). The

development of teachers' responses to challenging situations during interaction training. *Teacher development*.

- Tessier, D., Sarrazin, P., & Ntoumanis, N. (2008). The effects of an experimental programme to support students' autonomy on the overt behaviours of physical education teachers. *European Journal of Psychology of Education - EJPE* 23(3), 239-253. doi: 10.1007/BF03172998
- Turnbull, J., MacFadyen, J., van Barneveld, C., & Norman, G. (2000). Clinical work sampling. *JGIM: Journal of General Internal Medicine*, 15(8), 556-561. doi: 10.1046/j.1525-1497.2000.06099.x
- Vygotsky, L. (1978). *Mind in society. The development of higher psychological processes*. Cambridge: Harvard University Press.
- Weber, R. P. (1990). *Basic content analysis* (2nd. ed.). Beverly Hills CA: Sage.
- Wells, J., Barlow, J., & Stewart-Brown, S. (2003). A systematic review of universal approaches to mental health promotion in schools. *Health Education*, 103(4), 197-220. doi: 10.1108/09654280310485546
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.