

## Experimental evaluation of emotional development programmes for teachers in Secondary Education

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**Título:** Evaluación experimental de programas para el desarrollo emocional en docentes de Educación Secundaria

**Resumen:** La inteligencia emocional es un factor predictivo de bienestar entre los docentes. Por lo tanto, el debate se centra en la pertinencia y la necesidad de desarrollar competencias en profesores de educación secundaria. Esto implica el diseño, implementación y evaluación de dos programas de capacitación vinculados a la gestión de conflictos y la promoción de las competencias emocionales.

La eficacia de los programas de capacitación se estudia mediante la adopción de un diseño de investigación de tipo preexperimental con medidas previas y posteriores a la prueba. Los resultados obtenidos tras la aplicación de ambos programas muestran cambios estadísticamente significativos ( $p < .05$ ) en las diferentes dimensiones de competencia. Por lo tanto, se concluye que existe evidencia empírica que respalda la hipótesis de que la competencia emocional se ve reforzada por experiencias educativas apropiadas, lo que faculta a los docentes para enfrentar los desafíos de sus prácticas en el aula.

**Palabras clave:** Formación de docentes de secundaria; programa educativo, innovación educativa; investigación en educación.

**Abstract:** Emotional intelligence is a predictive factor of wellbeing among teachers. The discussion therefore focuses on the pertinence of, and need for, developing competences in Secondary Education teachers. This involves the design, implementation and evaluation of two training programmes linked to conflict management and the promotion of emotional competences.

The efficacy of the training programmes is studied through the adoption of a pre-experimental type research design with pre/post-test measures. The results obtained following the application of both these programmes show statistically significant changes ( $p < .05$ ) in the different dimensions of competence. It is therefore concluded that there is empirical evidence to support the hypothesis that emotional competence is enhanced by appropriate educational experiences, empowering teachers to face the challenges of their classroom practices.

**Keywords:** Secondary teacher training; education programme; education innovation; education research.

### Introduction

A positive climate and interpersonal relationships play a key role in schools. Each and every one of the actions undertaken in education involves constantly sharing emotions among both teachers and students, informing their relationships and, therefore, influencing the teaching-learning process. In today's 21<sup>st</sup> century classrooms, teachers' work cannot simply be reduced to that of a mere transmitter of knowledge, as they need to have the skills and competences required to tackle the challenges posed by their work and the demands made of them by students, their families, and society at large (Bisquerra, 2005; Day & Gu, 2015; Zaccagnini, 2008).

This study seeks to address the training of teachers with a view to improving the climate at secondary schools attended by pupils up to the age of 16 (compulsory) and post-16 (voluntary), being framed within the context of the initial studies leading to a Master's Degree for Teachers of Secondary Education, Occupational Training and Languages<sup>1</sup>. This degree in Spain is regulated by Ministerial Order ECI/3858/2007 of 27 December, laying down the requirements and competences expected of prospective teachers (amended by Order EDU/3498/2011, of 16 December).

Based on the reasoned need to train teachers in aspects over and above the acquisition and transmission of theoretical content, the quest for fostering a holistic and quality edu-

cation in schools renders it important to introduce training programmes designed to improve the climate at school, linking them to conflict management and emotional development (Torrecilla, 2014; Imbernón, 2014).

In view of this need, this article considers a training strategy for prospective secondary teachers, which is embodied in two training programmes designed to favour competences for their own personal and social wellbeing, and therefore for enhancing the quality of the education and climate at schools, giving teachers' emotional education the importance it deserves.

The pertinence and need for implementing the emotional development programmes that constitute the first element of analysis inform the research's design and, based on the hypotheses to be tested, lead to a conclusion in the form a series of findings that provide sufficient evidence on the efficacy of programmes linked to emotional education. These results suitably enlighten the scientific community on the impact training of this kind has on the teaching competence.

An ever greater role has been given in recent years to emotions in education. It no longer suffices at schools to reinforce students' cognitive development, as instead emotional development is becoming a vital complement for providing a truly holistic and quality education (Bisquerra, 2000; Delors, 1996).

Emotions have a vital role to play in people's lives, which means they have a bearing on the way we interact with the environment and with others, as well as on decision-making and the pursuit of our life goals (Bisquerra, Pérez, & García, 2015; Damasio, 1996; Evans, 2002; Greenberg, 2000).

Thus, the fundamentals of emotional education are to be found within the field of positive psychology (Seligman &

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<sup>1</sup> In Spanish: Máster de Profesor de Educación Secundaria Obligatoria y Bachillerato, Formación Profesional y Enseñanzas de Idiomas (hereinafter referred to as the Master's Degree for Teachers of Secondary Education).

Csikszentmihalyi, 2000), in research into subjective wellbeing (Bradburn, 1969; Veenhoven, 1984), in counselling and psychotherapy (Frankl, 1991; Rogers, 1972), as well as in the movement for pedagogical renewal (Bowlby, 1976; Delors, 1996) and in studies on emotional intelligence (Salovey & Mayer 1990).

Within this integrating theoretical framework, emotional education is also underpinned by the contributions made by neuroscience, psychoneuroimmunology, and the study of emotions, whose core purpose is to favour personal and social wellbeing (Bisquerra, 2000; Durlak, Domitrovich, Weissberg, & Gullotta, 2015; Fernández-Berrocal, 2008).

The main interest of emotional education lies in fostering a series of emotional competences, such as emotional awareness, emotional regulation, empathy and social skills. The justification for emotional education is to be found in a whole series of social needs that are not always considered in formal education (Acosta, 2008; Bisquerra, 2003; Fernández-Berrocal, 2008). These needs include the following highlights: socio-educational problems linked to school drop-outs or a drop in academic performance, a greater perception of distress and higher rates of anxiety and depression, and difficulties in interpersonal relationships across members of the school community. These difficulties are often due to a lack of emotional regulation strategies for dealing with conflict resolution, giving rise to inappropriate behaviour and hindering coexistence.

It may therefore be contended that the educational applications of the study and intervention of emotions and emotional intelligence are consistent with emotional education, which merges as an education innovation that tackles a whole series of needs that are not addressed by the standard curriculum, and which are designed to promote a series of emotional competences in people. In other words, working on emotional education entails a change in education that has an impact on the community (Bisquerra, Pérez González, & García Navarro, 2015).

In this same vein, scholars such as Bisquerra (2002), Carpena (2010), and Escamilla (2009) argue that emotional competence is one of the basic competences for life, according to the interest and need to develop it as an ideal complement to other ones closer to cognitive development, bearing in mind the influence that emotions have, as well as their identification or management in decision-making, in dealing with everyday conflicts, or when seeking and achieving personal and social wellbeing.

Among the myriad attributes, roles and functions expected of teachers today, emotional education becomes important as a non-specific factor of primary prevention, with the purpose of favouring personal and social wellbeing and development, as well as coping with the diversity of situations that occur at school, minimising the risks and dysfunctions stemming from feelings of helplessness, stress, distress or frustration, among others (Bisquerra, 2005; Day, 2011; Sutton & Wheatley, 2003; Vaello, 2009).

In sum, a teacher's emotional education, and therefore

the promotion of their emotional competences, constitutes a prior and vital step in their own personal and social wellbeing. Furthermore, it is considered a fundamental premise for guaranteeing the emotional development of those with whom they perform their teaching duties (Bisquerra, 2005; Cabello, Ruíz-Aranda, & Fernández-Berrocal, 2010; Bernal & Cárdenas, 2009).

Until now, studies have focused on certain effects of the implementation of programmes linked to the enhancement of coexistence and emotional education in terms of the following: greater adaptation to the school context (Brackett, Mayer, & Warner, 2004; Faggiano et al., 2011), better academic performance (Gil-Olarte et al., 2005), and improved psychological adjustment (Salovey et al., 2002). A review of the different research reveals that although we find evidence of the impact of emotional education programmes, these simply involve working on students' socioemotional aspects.

As posited by scholars such as Vázquez de Prada (2015), Palomera, Ruíz, & Fernández-Berrocal (2010) and Palomero (2009), even though there is a clear need to work on teachers' emotional competence as a prior step, it has so far been assumed that teachers already possess these kinds of competences and, as a general rule, training in aspects of this nature has been reduced to the presentation of specific programmes, strategies and materials for working with students.

In Spain, the Master's Degree for Teachers of Secondary Education, as a new qualification in higher education, has provided recognition and backing for the professional figure of secondary teacher, a change in the training model, and a significant effort by the authorities to improve the quality of education (González, 2010; Mañu & Goyarrola, 2011; Márquez, 2009).

A review of Order ECI/3858/2007, of 27 December, regulating the Study Plan for the aforementioned Master's, also states the need to develop the socioemotional aspects of prospective teachers by "promoting actions of emotional education, in values and citizenship" (Section 5. Planning the teaching)<sup>2</sup>.

Although it is clearly pertinent and necessary to include programmes for improving the competences linked to coexistence in the curriculum of initial teacher training (Isaza & Calle, 2014; Palomera, Fernández-Berrocal, & Brackett, 2008; Palomera, Ruíz & Fernández Berrocal, 2010; Palomero, 2009; Sureda & Colom, 2002), this training is generally addressed simply as a specific competence within some or other optional subject or in a Master's or specialised post-grad course that is taught in some universities.

This current model informs the need to introduce programmes of educating for coexistence, focused on socio-emotional aspects and on conflict resolution, on the search for ways of overcoming the instructional limitations of the initial training of secondary teachers, favouring the acquisi-

<sup>2</sup> The original Spanish is "promover acciones de educación emocional, en valores y formación ciudadana" (Apartado 5. Planificación de las enseñanzas).

tion of competences that will enable them to deal with the constant challenges of their teaching practice (López, 2007; Pertegal, Castrejón, & Martínez, 2011; Triliva & Poulou, 2006).

Furthermore, emphasis needs to be placed on the importance of fostering research into the efficacy of training programmes designed to promote a teacher's socioemotional competences, which has been reaffirmed by the scientific community in studies such as those by Cabello, Ruiz-Aranda, & Fernández-Berrocal (2010), Pérez-González (2008), and Repetto, Pena, & Lozano (2007).

## Method

As noted within the theoretical framework, the research work's overriding aim is to find empirical scientific evidence to support quality training programmes that reinforce the competences linked to coexistence for prospective teachers, adopting different approaches. The outcome will therefore be to design and implement training programmes that will ultimately achieve this end. Firstly, the focus is on working with conflict resolution (*e-TALCO Harmony Workshop*) by considering that coexistence improves when people manage conflicts more effectively. The study conducted on that competence reveals a need to further analyse emotional education, which secondly entails the design and implementation of a new training programme for the advancement of emotional competences (*Pro-Emociona* Programme).

According to the recommendations and standards of experts in evaluation research, such as Anguera, Chacón, & Sanduvete (2008) and Pérez Juste (2006), the application and assessment of both these programmes considers a series of ethical principles, safeguarding the voluntary nature and data transparency of the beneficiaries, as well as respecting the identity and privacy of those participating, who are informed at all times of the research's goals and results, briefing them on the rights and responsibilities they acquire when taking part in the study.

The methodological design of the research within which the assessment of programmes is framed is of an experimental nature. Both training processes are validated through studies involving prospective teachers studying for the Master's Degree for Teachers of Secondary Education. These are pre-experimental studies, specifically, pre/post-test with no control group (Campbell & Stanley, 1963). In both cases, the pre/post-test measurement permits a minimum control for checking the changes that the programme itself imposes on the competence level acquired by the participants. The hypothesis to be verified for each programme, therefore, is defined as follows: *the application of the type of training programme designed ad hoc has positive effects on the level of competence initially measured in the participants.*

## Participants

The training design based on a practical methodology leads to the premise of establishing small working groups of between 15 and 30 participants, as a key condition or approach for determining the sample in both studies.

As regards the first study, it was conducted over the 2011-12 course with students on the Master's Degree for Teachers of Secondary Education organised by Salamanca University. At the time, the sample population consisted of  $N = 244$  students. The second study was held over the 2015-16 course, again with students studying for the same master's, although on this occasion the population consisted of 233 students.

In both cases, access to the sample was made in December through the subject "*Orientación Educativa (Familiar y Tutorial)*"<sup>4</sup> in all the master's specialisms. The students attending the subject were informed about the course and the enrolment process, which involved a questionnaire in Google Drive<sup>5</sup>. Given the study's experimental nature, with restrictions on the possibility of a large sample size, instead of applying the criterion of sample size calculation the goodness-of-fit was checked between the distribution of the sample selected and that of the reference population. To do so, two criteria were followed in the sample selection: order of enrolment and branch of knowledge, whereby priority was given to those people enrolling first and the existence of a fit between the branches of knowledge that make up the master's specialism and the study sample.

The distribution of the sample by branch of knowledge studied in the master's, the frequency of the theoretical distribution, and the testing of the hypothesis for evaluating the distribution's goodness-of-fit are shown in Table 1.

**Table 1.** Distribution of the sample of students on the master's.

Branch of knowledge	Competences in Conflict Resolution			Competences in Emotional Education		
	$f_i$	$f_e$	$(f_i - f_e)^2$	$f_i$	$f_e$	$(f_i - f_e)^2$
Arts and humanities	8.02	10	1.25	11.62	12	0.01
Social sciences	5.29	7	0.89	7.39	5	0.78
Sciences	7.06	8	1.13	5.99	8	0.68
TOTAL	25	25	3.18	25	25	2.00

The value of the test statistic is  $\chi^2_{2,05} = 3.819$  with probability  $p = .148$ , in study I, and in study II  $\chi^2_{2,05} = 1.465$  with  $p = .148$ . It was therefore concluded for both programmes that the empirical value obtained is lower than the tabular value, so the sample distribution, by knowledge area, fits the population.

3 Educational Guidance (Family and Tutorial).

4 Questionnaire for the course "*e-TALCO Harmony Workshop*": [https://docs.google.com/spreadsheets/viewform?usp=drive\\_web&formkey=dEZWQW03MGlaS0M0dUFfTVZzWUZsNGc6MQ#gid=0](https://docs.google.com/spreadsheets/viewform?usp=drive_web&formkey=dEZWQW03MGlaS0M0dUFfTVZzWUZsNGc6MQ#gid=0)  
Questionnaire for enrolling on the "*Pro-Emociona*" course: [https://docs.google.com/forms/d/e/1FAIpQLSd\\_a0ul5WOBKa6UI2gpOqZcypCZzswyTWfSvoy9jb7cYn\\_gQ/closedform](https://docs.google.com/forms/d/e/1FAIpQLSd_a0ul5WOBKa6UI2gpOqZcypCZzswyTWfSvoy9jb7cYn_gQ/closedform)

The results therefore confirm that the selected samples are representative of the reference population and meet the criterion of independence of observations.

### Variables and instruments

Considering that these are pre-experimental studies, with no control group, with pre/post-test measurement, the dependent variable is measured before and after the programme's application. In both cases, the dependent variable is the level acquired by the competence's components, with the competences being *Conflict Resolution* in study I, and *Emotional Competence* in study II. Thus, the instruments designed and/or selected for assessing the level of competence acquired are applied both as a pre-test, before the training programmes were held, and as a post-test, once they had concluded. Hence the reason the independent variable is the treatment applied, informed by the programmes mentioned in each case.

In addition, the dependent variables are broken down into the competence's three subcomponents (Delors, 1996; Martínez, 2012; Martínez & Echeverría, 2009; Villa & Poblete, 2008), *know*, *know how to do*, and *know how to be*, for conflict resolution. In the case of emotional competence, two components are distinguished: the *level of emotional competence self-perceived* – studied according to the pentagonal GROU model (Bisquerra & Pérez-Escoda, 2007): emotional awareness, emotional regulation, social autonomy, social competence, and competences for life and wellbeing- and *level of emotional competence expressed*- studies according to the capability shown when identifying the thoughts and emotions prompted by everyday situations, as well as to the ability to adopt appropriate behaviours, launching elaborate emotional regulation strategies. Each one of the variables is measured through the instruments shown in Table 2.

**Table 2.** Instruments for evaluating the components of the competency assessed.

INSTRUMENTS			
Competences in Conflict Resolution		Competences in Emotional Education	
<i>e-TALCO Harmony Workshop</i>		<i>Pro-Emociona</i>	
Know	Multiple choice test (15 items)	Level of Emotional Competence	Multiple-choice test. Self-report measure of Emotional Competence: CDE-A <sup>6</sup> (Pérez Escoda, Bisquerra, Filella, & Soldevila, 2010).
Know how to do	Open-ended test (2 evaluation rubrics)	self-perceived	
Know how to be	Scale of attitudes EMES-C7 (44 items)	Level of Emotional Competence expressed	Open-ended test (2 evaluation rubrics)

The use of *homemade* instruments requires prior scientific validation, which is an ad hoc process. This refers to the multiple-choice test *e-TALCO Harmony Workshop* and the open-ended test –in both programmes-, validated following their design by a group of expert judges in the matter.

As regards the competences in *Conflict Resolution*, the multiple-choice test for the assessment of *know* is designed according to the standard criterion; in other words, only one answer is correct, while an error adjustment is also considered in order to remove any element of luck. The design involves a battery of 100 items (20 per subject), of which 15 (three per topic) are extracted because they are considered the most complete and illustrative ones. In the case of the variable *know how to be*, the scale applied is EMES-C (Caballo, 1987; in Caballo, 1993), a validated scale that distinguishes between subjects with high and low social skill through 44 items formulated in the negative, whereby the lower the score, the higher the social skill. This scale has been selected both because of its value in terms of measuring the level of social skill, and because of its high reliability, established according to the author's study, with a Cronbach's alpha of 0.83.

As regards the open-ended tests, they involve an approach with two practical cases, for *Conflict Resolution* they are classroom and school conflicts, for which the subject needs to draft a possible solution using the tools they hypothetically have at their disposal. *Emotional Competence* presents situations of conflict involving a student (case A) and a family (case B), in which the subject is asked to consider the thoughts and emotions that each case triggers, as well as the specific action they would undertake. In order to avoid any subjective correction of the activity, these open answers are evaluated separately by three different experts by means of two evaluation rubrics designed beforehand for this purpose. In other words, a rubric is created for each case, in which the ideal behaviour is used to establish the rubric's highest level in each item. This is followed by an analysis of the results (reliability), calculating the mean of the scores provided by the three judges.

Finally, the multiple-choice test CDE-A (Pérez-Escoda, Bisquerra, Filella, & Soldevila, 2010) is a self-report measure used to establish the *level of emotional competence self-perceived* in adults. It consists of 48 items on an eleven-point Likert-type scale, scoring from 0 to 10 depending on the level of agreement with each one of the statements. In this case, the higher the score, the better the level of competence. The test's internal consistency over a sample of 1537 adults, estimated using Cronbach's alpha, in studies such as the one by Pérez Escoda et al. (2010), has reported a value of 0.92 for the full scale and over 0.70 for each one of the dimensions.

### Procedure

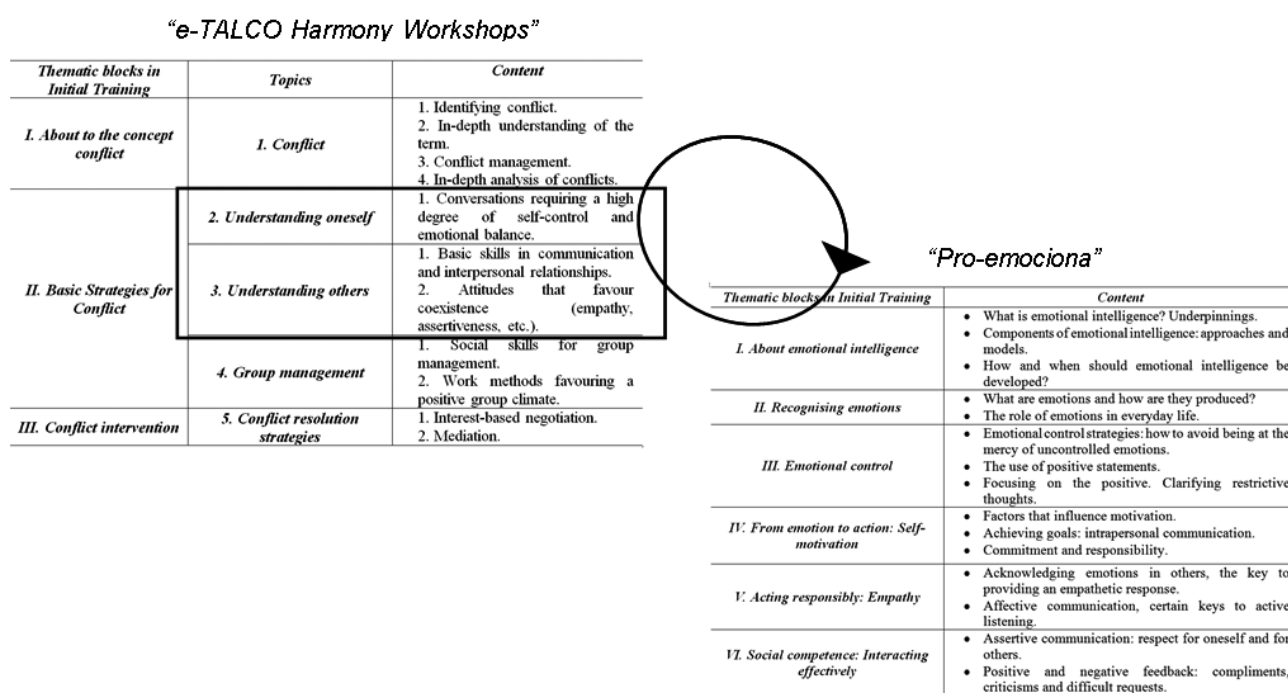
The preceding sections have referred to the training programmes designed and validated; yet what about the actual procedure used for their application? The *e-TALCO Harmony*

<sup>6</sup> Cuestionario de Desarrollo Emocional de Adultos – Adult Emotional Development Questionnaire

<sup>7</sup> Caballo's Escala Multidimensional de Expresión Social – Multidimensional Social Expression Scale

*Workshop* was implemented during the 2011-12 course, and has also been evaluated considering the three components of the competence in *Conflict Resolution*: *know* –concepts-, *know how to do* –group management skills-, and *know how to be* –attitudinal, social skills- (Delors, 1996; Martínez, 2012; Martínez & Echeverría, 2009; Villa & Poblete, 2008). Each variable is associated with an instrument for its measurement, as specified in the section on variables and instruments. Following the evaluation of the aforementioned sub-dimensions, the results are positive in favour of the programme. No changes are detected, however, as regards *know how to be*. Given that the instrument's dimensions are related to the

components of emotional education, there is a need to organise a programme on it, which will permit developing two similar programmes for improving coexistence in schools. The emotional education programme *Promotion of emotional competences for teachers, Pro-Emociona*, implemented over the 2014-2015 course, would provide the platform for the subsequent work on conflict resolution, as it involves the in-depth development of a specific block of the *e-TALCO Harmony Workshop* programme. Figure 1 shows the link between the two programmes through emotional education. The point where they meet involves both intra and interpersonal emotional competences.



**Figure 1.** Relationship between the content of the programmes e-TALCO Harmony Workshops and Pro-Emociona.

Not only does content link these respective programmes, but also the face-to-face methodology within a 30-hour timeframe constitutes another of the characteristics that underpin this link. What's more, a practical approach is used; that is, the training programmes are based on interactive activities in which the participants experiment with simulations and real cases.

### Data analysis

As this research is of a pre-experimental nature, the data are analysed using mainly inferential-type techniques (Tejedor, 2006). Counterfactual scenarios are used to verify whether there are any changes following the programmes' application. Accordingly, prior to this step a study is made of the goodness-of-fit for normality using the Kolmogorov-Smirnov test (Siegel, 1983) in the study variables. The goodness-of-fit test for normality is fulfilled in the variables *know*

*how to do* (.307) and *know how to be* (.837) for the competence in *Conflict Resolution*. In turn, the goodness-of-fit for normality in *Emotional Competence* occurs in the variable *level of emotional competence self-perceived* (.200). In these dimensions, given the goodness-of-fit for normality, the parametric *t* test will be applied for related samples. In all cases, and taking sample size into consideration, the calculation of the significance of differences is accompanied by the calculation of the effect size based on Cohen's *d* statistic (Cohen, 1969; Grissom & Kim, 2011), which enables us to confirm the amount of effect in the specific comparison.

As regards the variable *know* (.029) in *Conflict Resolution* and the *level of emotional competence expressed* (case A <.001, case B <.001) in *Emotional Competence*, the lack of goodness-of-fit for normality means we have to apply non-parametric tests, specifically the Wilcoxon test, together with the explained variance for measuring effect size.

## Results

Once the goodness-of-fit for normality has been studied and the most suitable comparison test has been selected for the set of data, the data are shown differentiating between the studies, as this provides a greater understanding of the relationship between the programmes.

### Study I

In study I, following the application of the instruments, the data from the tests conducted corroborate the existence of differences between the pre/post tests (see Table 3), caused by the treatment applied, corresponding to the programme.

**Table 3.** The programme's effectiveness hypothesis test for the control group.

	Student's <i>t</i>			Wilcoxon test			N
	<i>t</i>	<i>p</i>	<i>d</i>	$\chi$	<i>p</i>	<i>d</i>	
<i>Know</i>	---	---	---	-4.042	.000	0.808	25
<i>know how to do</i>	-13.130	.000	1.72	---	---	---	25
<i>know how to be</i>	2.05	.051	-0.24	---	---	---	25

At a .05 level of significance, the components *know* and *know how to do* record significant differences in favour of the programme's application. Regarding the component *know how to be* the statement is not so clear, although at statistical level we have  $p = .051$ , which indicates that there is no pre/post test difference. Group size, defined as small, may pose certain statistical limitations; this casuistry establishes a greater

interpretation of the data, calculating the effect size in each variable. The measurement of effect size, according to Cohen's classification (1969), is large for the variable *know how to do*, whereas it is small for *know how to be*, so it therefore seems that the variable *know how to be* is not influenced by the object of study for improvement. Regarding the variable *know*, the effect size measured by the explained variance is high (Becker, 2000; Grissom & Kim, 2011), which entails more firmly accepting the hypothesis of improvement following the application of the programme in this variable. In response to the data obtained, the variable *know how to be* is analysed further to clarify its behaviour in the instrument's different dimensions.

Following the study of the descriptive statistics for each one of the dimensions of the Caballo test (1987, in Caballo 1993), Table 4 does not reveal any significant pre/post test differences (regarding this instrument it should be remembered that the lower the score, the higher the skill level). Nevertheless, confirming this assumption requires studying the hypothesis test through the Student's *t*, together with Cohen's *d* for effect size, given that the sample recorded goodness-of-fit for normality in that variable. This test showed that the data confirmed significant differences in dimensions 6 and 11, supported by moderate effect sizes. None of the other dimensions records significant differences, and the effect sizes are small or null. Nevertheless, the fact that two variables improve reinforces the possibility of optimising the overall competence through training programmes.

**Table 4.** Descriptive statistics and hypothesis testing in the dimensions of social skills.

DIMENSIONS	Pre-test			Post-test			Student's <i>t</i>		
	$\bar{X}$	<i>S<sub>x</sub></i>	N	$\bar{X}$	<i>S<sub>x</sub></i>	N	<i>t</i>	<i>p</i>	<i>d</i>
D1. Fear of speaking in public and of confronting superiors	1.51	0.48	25	1.47	0.51	25	0.49	.629	0.01
D2. Fear of other people's disapproval when expressing negative feelings and refusing requests	1.19	0.57	25	1.05	0.61	25	1.37	.183	0.27
D3. Fear of making and receiving requests	1.64	0.58	25	1.64	0.58	25	--	--	--
D4. Fear of paying and receiving compliments	1.56	0.68	25	1.60	0.73	25	-0.35	.731	-0.07
D5. Concern over expressing positive feelings and initiating contacts with the opposite sex	1.02	0.49	25	0.94	0.46	25	0.76	.453	0.02
D6. Fear of being judged negatively by others when behaving negatively	1.48	0.60	25	1.16	0.66	25	2.85	.009	0.57
D7. Fear of a negative response by others when expressing positive behaviour	1.29	0.57	25	1.32	0.52	25	-0.26	.801	-0.05
D8. Concern about other people's reactions when expressing feelings	0.83	0.66	25	0.80	0.77	25	0.26	.799	0.05
D9. Concern over the impression caused on other people	1.26	0.51	25	1.31	0.67	25	-0.42	.676	-0.09
D10. Fear of expressing positive feelings	0.88	0.54	25	0.75	0.53	25	1.50	.147	0.30
D11. Fear of standing up for one's rights	1.72	0.76	25	1.40	0.60	25	2.78	.010	0.56
D12. Accepting one's own possible shortcomings	0.94	0.71	25	0.74	0.63	25	1.41	.170	0.28

In sum, following the programme's application the competence in *Conflict Resolution* improves in the dimensions *know* and *know how to do*, with no changes in those related to *know how to be*. The study by dimensions reveals changes in favour of two dimensions in *know how to be*. This indicates that more research is needed into this last variable.

Following the study of Caballo's instrument (1987; in Caballo 1993), there might be a relationship between its dimensions –the instrument focuses on feelings and emotions– and emotional education, which entails the need to create a new programme for improving the specified variable through *Emotional Competence*.

## Study II

The application of study II, referring to the *Pro-Emociona* programme linked to Emotional Competence, reveals an improvement in that competence for those taking part in the training scheme. This affirmation is confirmed following the application of the instruments explained beforehand, in pre/post-test measures.

In relation to the *level of emotional competence self-perceived*, the Student's *t* and Cohen's *d* tests shown in Table 5 reveal significant differences ( $p \leq .05$ ) both in the sub-dimensions of the instrument CDE-A, as in the overall measure, all confirmed by effect sizes ranging between moderate and high, with values of between 0.50 (emotional autonomy) and 1.21 (in the dimension that contains aspects related to emotional awareness).

**Table 5.** Effectiveness hypothesis testing of the programme in the level of emotional competence self-perceived.

		Student's <i>t</i>		
		<i>t</i>	<i>p</i>	<i>d</i> <i>N</i>
Level of emotional competence self-perceived	Emotional awareness	5.309	<.001	1.21 25
	Emotional regulation	4.504	<.001	0.81 25
	Social competence	3.725	.001	0.56 25
	Social autonomy	4.309	<.001	0.50 25
	Life and wellbeing competence	6.350	<.001	0.79 25
	Total	6.745	<.001	0.95 25

In order to imbue the results obtained with greater consistency, we included the two practical cases that measure the *emotional competence expressed*. The results obtained (see Table 6) corroborate that in its three dimensions (thoughts, emotions and actions), the treatment has positive effects on the competence. In this case, the Wilcoxon test was used to compare the hypothesis between pre-and post-test, with the variance explained for effect size, as there is no goodness-of-fit for normality in the sample. Table 6 shows, at a level of significance of .05, there are changes in favour of the programme, ratified with high effect sizes.

**Table 6.** Effectiveness hypothesis testing of the programme in the level of emotional competence expressed

		Wilcoxon test			
		$\zeta$	<i>p</i>	<i>r</i> <i>N</i>	
Level of Emotional Competence expressed	Case A	Thoughts	-4.010	<.001	0.80 25
		Emotions	-4.147	<.001	0.83 25
		Actions	-4.301	<.001	0.86 25
	Case B	Thoughts	-4.056	<.001	0.81 25
		Emotions	-3.220	.001	0.64 25
		Actions	-2.874	.004	0.57 25

In sum, *Emotional Competence* may well improve after the application of training programmes. This reflects the importance of these kinds of training schemes that help prospective teachers to continue improving the climate at schools. Above all, the combination of both these pro-

grammes will reinforce the overall competence for the management of the climate in classrooms, by understanding that without *Emotional Competence* there is no possibility of managing conflictive situations.

## Discussion and Conclusions

Ongoing social change, as well as the needs and expectations arising in schools, renders it necessary to embrace innovations that foster a veritable emotional revolution, in which teacher training cannot be ignored; in other words, innovation needs to be made by boosting the training of emotional communities. Only in this way will we achieve a true emotional culture in schools (Imbernón, 2007; Marcelo, 1994; Mañu & Goyarrola, 2011).

The significance of Emotional Competence is based on its meaning as a key component of coexistence. Its importance is not only supported by this aspect, as it is also corroborated by the growing impetus given to emotional education over cognitive development, which has led some scholars to refer to an emotional revolution, *Zeitgeist*, or spirit of the age (Bisquerra, 2003; Mayer, Salovey, & Caruso, 2000).

In turn, as regards emotional education there is scientific proof that enables us to affirm that Emotional Competence is not an innate and invariable construct, but instead can be improved through suitable educational experiences, even over short periods of time (Pérez-González, 2012; Schutte, Malouff, & Thorsteinsson, 2013).

This study considers the possibility of optimising *Emotional Competence* on the basis of the results recorded in the training programmes. This view has been backed up by other like-minded research involving programmes that focus their interest on improving coexistence in teachers from different dimensions (Benítez, Tomás, & Justicia, 2005; Boqué, 2005; Moliner & Martí, 2002; Pérez-Escoda, Filella, Fondevila, & Soldevila, 2013; Pérez de Guzmán, Amador, & Vargas, 2011; Pulido, Calderón-López, Martín-Seoane, & Lucas-Molina, 2014).

Moreover, it is important to stress such highlights at international level as the cases of Canada and Finland, where not only do they cater for and support the need for training teachers in emotional education, but now they are also developing programmes for improving emotional education among students of higher education (Tossavainen & Turunen, 2013; Vesely, Saklofske, & Nordstokke, 2014).

It is nonetheless true, insofar as the study contained in this paper is concerned, that certain limitations are singled out that call for precautions to be taken when generalising its findings. The first is related to sample size, an aspect that we have sought to redress by using appropriate statistical techniques. Secondly, self-report instruments may not show the real competence, which means it would be expedient to incorporate instruments on capabilities (Extremera & Fernández-Berrocal, 2007; Pérez-González, 2008).

Finally, it is deemed of prospective interest to replicate both programmes as a single training construct and with other population samples, whereby the results could be compared and possible differences studied, continuing with the mainstream study begun.

In short, this work provides an incentive for the scientific community to analyse the efficacy of emotional education

that has not been reflected in the literature, corroborating the need to instruct prospective teachers in emotional competences and in those linked to conflict resolution –as the initial levels this collective currently records are lower than they should be– in order to favour their personal and social well-being, guarantee their transfer, and improve coexistence in schools.

## References

- Acosta, A. (2008). Educación emocional y convivencia en el aula. En M. Soledad, *Educación emocional y convivencia en el aula* (pp.11-31). Madrid, España: Ministerio de Educación, Política social y Deporte.
- Anguera, M. T., Chacón, S., & Sanduverte, S. (2008). Cuestiones éticas en evaluación de programas. En M. T. Anguera, S. Chacón y A. Blanco (Eds.), *Evaluación de programas sociales y sanitarios* (pp. 291-318). Madrid: Síntesis.
- Becker, L. (2000). *Basic and Applied Research Methods*. Colorado, CO: Spring.
- Benítez, J., Tomás de Almedia, A. & Justicia, F. (2005). Educación para la convivencia en contextos escolares: una propuesta de intervención contra los malos tratos entre iguales. *Apuntes de Psicología*, 23(1), 27-40. Recuperado de <http://www.apuntesdepsicologia.es/index.php/revista>
- Bernal, A. & Cárdenas, D.R. (2009). Influencia emocional del profesorado en la construcción de la identidad del alumnado. *Bordón*, 61(3), 19-31. Recuperado de <http://recyt.fecyt.es/index.php/BORDON>
- Bisquerra, R. (2000). *Educación emocional y bienestar*. Barcelona, España: Praxis.
- Bisquerra, R. (2002). La competencia emocional. En M. Álvarez & R. Bisquerra, *Manual de orientación y tutoría* (pp.69-83). Barcelona, España: Praxis.
- Bisquerra, R. (2003). Educación emocional y competencias básicas para la vida. *Revista de Investigación Educativa*, 21(1),7-43.
- Bisquerra, R. (2005). La educación emocional en la formación del profesorado. *Revista interuniversitaria de formación del profesorado* 19(3), 95-114. Recuperado de <http://aufop.com/aufop/home>
- Bisquerra, R. & Pérez-Escoda, N. (2007). Las competencias emocionales. *Educación XXI*, 10, 61-82. <http://dx.doi.org/10.5944/educxx1.1.10.297>
- Bisquerra, R., Pérez-González, J.C. & García Navarro, E. (2015). *Inteligencia emocional en educación*. Madrid, España: Síntesis.
- Boqué, M. C. (2005). *Tiempo de mediación. Taller de formación de mediadores y mediadoras en el ámbito educativo*. Barcelona, España: Ediciones Ceas.
- Bowlby, J. (1976). *El vínculo afectivo*. Buenos Aires, Argentina: Paidós.
- Brackett, M., Mayer, J. & Warner, R. (2004). Emotional intelligence and its relation to everyday behavior. *Personality and Individual Differences*, 36, 1387-1402. doi:10.1016/S0191-8869(03)00236-8
- Bradburn, N. (1969). *The structure of psychological well-being*. Chicago, IL: Aldine.
- Caballo, V. (1993). *Manual de evaluación y entrenamiento de las habilidades sociales*. Madrid, España: Siglo XXI.
- Campbell, D. & Stanley, J. (1963). *Diseños experimentales y cuasi experimentales en la investigación social*. Buenos Aires, Argentina: Amorrortu.
- Carpena, A. (2010). Desarrollo de competencias emocionales en el marco escolar. *CEEParticipación Educativa*, 15, 40-57.
- Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. New York, NY: AcademicPress.
- Damasio, A. (1996). *El error de descartes. Emoción, razón y el cerebro humano*. Barcelona, España: Crítica.
- Day, C. (2011). *Pasión por enseñar. La identidad personal y profesional del docente y sus valores*. Madrid, España: Narcea.
- Day, C. & Gu, Q. (2015). *Educadores resilientes, escuelas resilientes. Construir y sostener la calidad educativa en tiempos difíciles*. Madrid, España: Narcea.
- Delors, J. 1996. *La educación encierra un tesoro. Informe de la Comisión Internacional sobre la Educación para el siglo XXI*. Madrid, España: UNESCO-Santillana.
- Durlak, J. A., Domitrovich, C. E., Weissberg, R. P., & Guilotta, T. P. (2015). *Handbook of Social and Emotional Learning*. New York, NY: Guilford Press.
- Escamilla, A. (2009). *Las competencias en la programación de aula de infantil y primaria*. Barcelona, España: Grao.
- Evans, D. (2002). *Emoción: La ciencia del sentimiento*. Madrid, España: Taurus.
- Extremera, N. & Fernández-Berrocal, P. (2007). Una guía práctica de los instrumentos actuales de evaluación de la inteligencia emocional. In J. M. Mestre y P. Fernández-Berrocal, *Manual de inteligencia emocional* (pp.99-123). Madrid, España: Pirámide.
- Faggiano, F., Vigna-Taglianti, F, Versino, E., Zambon, A, Borraccino, A. & Lemma, P. (2008). School-based prevention for illicit drugs use: A systematic review. *Preventive Medicine*, 46, 385-396. doi: 10.1016/j.ypmed.2007.11.012
- Fernández-Berrocal, P. (2008). La educación social y emocional en España. En C. Clouder (Ed.), *Informe de la Fundación Marcelino Botín (IFFM), Educación emocional y social. Análisis internacional* (pp.159-196). Santander, España: Fundación Marcelino Botín.
- Frankl, V. (1991). *El hombre en busca del sentido*. Barcelona, España: Herder.
- Gl-Olarte, P., Guil, R., Mestre, J. M. & Núñez, I. (2005). La inteligencia emocional como variable predictora del rendimiento académico. In J. Romay & R. García, *Psicología social y problemas sociales. Psicología ambiental, comunitaria y educación, editado* (pp.351-357). Madrid, España: Biblioteca Nueva.
- González, I. (2010). *El nuevo profesor de Secundaria. La formación inicial docente en el marco del Espacio Europeo de Educación Superior*. Barcelona, España: Graó.
- Greenberg, L. (2000). *Emociones: Una guía interna*. Bilbao, España: Desclée De Brouwer.
- Grissom, R. & Kim, J. (2011). *Effect sizes for research: univariate and multivariate applications*. Nueva York, NY: RoutledgeAcademic.
- Imbernon, F. (2014). *Calidad de la enseñanza y formación del profesorado*. Barcelona, España: Octaedro.
- Imbernon, F. (2007). *10 ideas clave. la formación permanente del profesorado. nuevas ideas para formar en la innovación y el cambio*. Barcelona, España: Grao.
- Isaza, G. M. & Calles, J. S. (2014). Inteligencia emocional del maestro. Posibilidad para favorecer procesos de enseñanza-aprendizaje. *Infancias Imágenes*, 13(1), 140-142. Recuperado de <http://revistas.udistrital.edu.co/ojs/index.php/infancias>
- López, A. (2007). Innovación y formación del profesorado. In Secretaría General Técnica (Ed) *El desarrollo de competencias docentes en la formación del profesorado* (pp.195-216). Madrid, España: Ministerio de Educación y Ciencia.
- Marcelo, C. (1994). *Formación del profesorado para el cambio educativo*. Barcelona, España: PPU.
- Márquez, A. C. (2009). La formación inicial para el nuevo perfil del docente de Secundaria. Relación entre la teoría y la práctica. Disertación doctoral. Málaga, España: Universidad de Málaga.
- Martínez, P. & Echeverría, B. (2009). Formación basada en competencias. *Revista de Investigación Educativa*, 27(1), 125-147. Recuperado de <https://revistas.um.es/rie>
- Mañu, J. M. & Goñarrola, I. (2011). *Docentes competentes. Por una educación de calidad*. Madrid, España: Narcea.
- Moliner, O. & Martí, M. (2002). Estrategias didácticas para la solución cooperativa de conflictos y toma de decisiones consensuadas: mejorar la convivencia en el aula. *Revista electrónica interuniversitaria de formación del profesorado*, 5(3), 1-5. Recuperado de <http://revistas.um.es/reifop>
- Palomera, R., Fernández-Berrocal, P. & Brackett, M. (2008). La inteligencia emocional como una competencia básica en la formación inicial de los docentes: algunas evidencias. *Revista Electrónica De Investigación Psicoeducativa*



- tiva, 6(2), 437-454. Recuperado de <http://www.investigacion-psicopedagogica.org/revista/new/formsubscripcion.php>
- Palomera, R., Ruíz-Aranda, D. & Fernández-Berrocal, P. (2010). El desarrollo de la inteligencia emocional docente en los contextos de secundaria. In A. I. Pérez, *Aprender a enseñar en la práctica: procesos de innovación y prácticas de formación en la Educación Secundaria* (pp.149-163). Barcelona, España: Grao.
- Palomero, P. (2009). Desarrollo de la competencia social y emocional del profesorado: Una aproximación desde la psicología humanista. *Revista Interuniversitaria De Formación Del Profesorado*, 12(2), 145-153. Recuperado de <http://aufop.com/aufop/home>
- Pérez De Guzmán, M. V., Amador, L. & Vargas, M. (2011). Resolución de conflictos en las aulas: un análisis desde la Investigación-Acción. *Pedagogía Social. Revista Interuniversitaria*, 18, 99-114. Recuperado de <http://www2.uned.es/pedagogiasocial.revistainteruniversitaria/>
- Pérez-Escoda, N., Bisquerra, R., Filella, G. & Soldevila, A. (2010). Construcción del Cuestionario de Desarrollo Emocional de Adultos (QDE-A). *Revista Española de Orientación Psicopedagógica*, 21(2) 367-379. doi: 10.5944/reop.vol.21.num.2.2010.11539
- Pérez-González, J. C. (2008). Propuesta para la evaluación de programas de educación socioemocional. *Electronic Journal of Research in Educational Psychology*, 15 (6/2), 523-546. Recuperado de <http://www.investigacion-psicopedagogica.org/revista/new/index.php>
- Pérez-González, J. C. (2012). Revisión del aprendizaje social y emocional en el mundo. In R. Bisquerra (Ed), *¿Cómo educar las emociones? La inteligencia emocional en la infancia y la adolescencia* (pp.56-69). Barcelona, España: Hospital Sant Joan de Déu.
- Pérez Juste, R. (2006). *Evaluación de programas educativos*. Madrid: La muralla.
- Pertegal, M.L., Castejón, J.L. & Martínez, M.A. (2011). Competencias socioemocionales en el desarrollo profesional del maestro. *Educación XXI*, 14(2), 237-260. doi: <http://dx.doi.org/10.5944/educxx1.14.2>
- Pulido, R., Calderón-López, S., Martín-Seoane, G. & Lucas-Molina, B. (2014). Implementación de un programa de mediación escolar: análisis de las dificultades percibidas y propuestas de mejora. *Revista Complutense de Educación*, 25(2), 375-392. doi: 10.5209/rev\_RCED.2014.v25.n2.41610
- Rogers, C. (1972). *El proceso de convertirse en persona*. Buenos Aires, Argentina: Paidós.
- Salovey, P. & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185-211. doi: 10.2190/dugg-p24e-52wk-6cdg
- Salovey, P., Stroud, L., Woolery, A. & Epel, E. (2002). Perceived emotional intelligence, stress reactivity, and symptom reports: further explorations using the Trait Meta-Mood Scale". *Psychology and Health*, 17, 611-627. doi: 10.1080/08870440290025812
- Schutte, N., Malouff, J. & Thorsteinsson, E. (2013). Increasing Emotional Intelligence through training: current status and future directions. *The International Journal of Emotional Education*, 5(1), 56-72. Recuperado de <https://www.um.edu.mt/ijee>
- Seligman, M. & Csikszentmihalyi, M. (2000). Positive psychology: an introduction. *American Psychologist*, 55, 5-14. doi: 10.1007/978-94-017-9088-8\_18
- Siegel, S. (1970). *Estadística no paramétrica: aplicada a las ciencias de la conducta*. México: Trillas.
- Sureda, I. & Colom, J. M. (2002). Una reflexión sobre la formación socioemocional del docente. *Revista Electrónica Universitaria de Formación Del Profesorado*, 5(3), 1-4. Recuperado de <http://revistas.um.es/reifop>
- Sutton, R. & Wheatley, K. (2003). Teacher emotions and teaching: a review of the literature and directions for future research. *Educational Psychology Review*, 15(4), 327-358. Recuperado de <http://www.springer.com/psychology/journal/10648>
- Tejedor, F. J. (2006). *Análisis inferencial de datos en educación*. Madrid, España: La Muralla.
- Torrecilla, E.M. (2014). *Diseño y evaluación de un programa en Resolución de Conflictos para la formación inicial y permanente del profesorado de Educación Secundaria*. Tesis doctoral inédita. Universidad de Salamanca. Salamanca.
- Tossavainen, K. & Turunen, H. (2013). Promoting social, emotional and physical wellbeing, child participation, educational attainment and parent engagement in later childhood the finnish perspective. In V. Barnekow, B. Bruun, C. Currie, A. Dyson, N. Eisenstadt & E. Melhuish (Eds). *Improving the lives of children and young people: Case studies from Europe*, editadopor (pp. 29-37). Copenhagen, Dinamarca: World Health Organization.
- Triliva, M. & Poulou, S. (2006). Greek teacher` understandings and constructions of what constitutes social and emotional learning. *School Psychology International*, 27, 315-338. doi: 10.1177/0143034306067303
- Vaello, J. (2009). *El profesor emocionalmente competente. Un puente sobre las aulas turbulentas*. Barcelona, España: Grao.
- Vázquez de Prada, C. (2015). Análisis del proceso y resultados de un programa de educación emocional en la escuela, *Tesis Doctoral*. Coruña: Universidad de Coruña.
- Veenhoven, R. (1984). *Conditions of happiness*. Boston, MA: Reidel.
- Vesely, A., Saklofske, D., & Nordstokke, D. (2014). EI training and pre-service teacher wellbeing. *Personality and Individual Differences*, 65, 81-85. doi: 10.1016/j.paid.2013.07.401
- Villa, A. & Poblete, M. (2008). *Aprendizaje basado en competencias: una propuesta para la evaluación de las competencias genéricas*. Bilbao, España: Mensajero.
- Zaccagnini, J. L. (2008). La comprensión de la emoción: Una perspectiva psicológica. In A. Acosta, *Educación emocional y convivencia en el aula* (pp.31-84). Madrid, España: Secretaria General Técnica. Ministerio de Educación, Política Social y Deporte. Secretaria de Estado de Educación y Formación.

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