

Developing Emotional and Social Intelligence in an education leadership postgraduate program

Desarrollo de la Inteligencia Emocional y Social en un posgrado de liderazgo educativo: Percepciones de los aspirantes a líderes

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Abstract

This exploratory study measures the impact of emotional intelligence training on educational leaders' skill development. Using a quasi-experimental methodological approach, the researchers evaluated the effectiveness of a postgraduate leadership program for aspiring leaders. The course was grounded in two models of emotional intelligence, a mixed model (Goleman, 2001) and the ability model from Mayer and Salovey (1997). The sample consisted of 45 aspiring leaders in urban New York City. The Leadership Practices Inventory (LPI) and The Emotional Social Competency Inventory (ESCI) were the measurements used for evaluating results. The preliminary results conducted by paired sample t-tests showed positive statistically significant differences in all the variables of the ESCI and the LPI. Further analysis, with a quasi-experimental pre-posttest design, evaluated the effect of the cohort and maturation. Results showed positive statistically significant differences in all five leadership practices of the LPI, except in the practice of Challenge. Prospective school leaders' perception of their emotional intelligence competencies, measured by the ESCI, also demonstrated significant positive results in all variables except Self-Awareness. Awareness. In conclusion, the training program for aspiring leaders, consisting of emotion skill and competency development in both mixed and ability EI models, has demonstrated effectiveness in most EI and leadership variables. We recognize that aspiring leaders development will require more experience and practice. The study also notes that emotionally intelligent leaders' behaviors are often aligned with transformational leadership.

Keywords: emotional intelligence, training, leadership, aspiring school leaders.

Resumen

Este estudio exploratorio evaluó el impacto del entrenamiento en inteligencia emocional en el desarrollo de habilidades de liderazgo educativo. Los investigadores evaluaron la efectividad de un programa de liderazgo de posgrado para aspirantes a líderes utilizando un enfoque metodológico cuasi-experimental. El programa incluía dos modelos de inteligencia emocional, el modelo mixto de Goleman, (2001) y el modelo de habilidad de Mayer y Salovey (1997). La muestra estaba compuesta por 45 aspirantes a líderes de la ciudad de Nueva York. El Inventario de Prácticas de Liderazgo (LPI) y el Inventario de Competencias Socio Emocional (ESCI) fueron las medidas utilizadas para evaluar los resultados. Los resultados preliminares realizados mediante pruebas t de muestras pareadas mostraron diferencias estadísticamente significativas en todas las variables del ESCI y del LPI. Un análisis posterior, con un diseño cuasi-experimental pre-postest, evaluó el efecto de la cohorte y la maduración. Los resultados mostraron diferencias estadísticamente significativas en las cinco prácticas de liderazgo de la LPI, excepto en la práctica de Desafío. La percepción de los futuros líderes escolares sobre su inteligencia emocional, medida por el ESCI, también demostró diferencias significativas en todas las variables, excepto en Autoconciencia. En conclusión, el programa de formación para aspirantes a líderes, integrando tanto modelos mixtos como de habilidad en IE ha resultado ser efectivo en el aumento de las puntuaciones en las variables de IE y liderazgo de un modo estadísticamente significativo. Señalar como conclusión que algunas habilidades emocionales requieren más experiencia para ser desarrolladas y que los comportamientos de los líderes emocionalmente inteligentes están alineados con el liderazgo transformacional.

Palabras clave: inteligencia emocional, formación, liderazgo, aspirantes a líderes escolares.

Cómo citar: Sánchez-Núñez, M. T., Patti, J., & Latorre-Postigo, J. M. (2023). Developing Emotional and Social Intelligence in an education leadership postgraduate program. *Escritos de Psicología – Psychological Writings*, 16(1), 53-64. <https://doi.org/10.24310/espsiescpsi.v16i1.14754>

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Introduction

Education is an adaptive field as educators continuously respond to children, families, and society's changing needs. To meet these needs, school principals' primary functions include creating a successful vision, nurturing a healthy and safe school climate, cultivating leadership in others, improving classroom instruction, and managing data, school operations, and people (Wallace Foundation, 2013). During the 20-21 pandemic, these responsibilities expanded. School leaders led their school communities from real-time to remote instruction, never done before on a large scale. They were extending their roles around (a) safe schooling and setting the context for future schooling while (b) simultaneously extending their role of instructional leader to digital instructional leader. These pressures are non-trivial and increase tension in already highly stressful work (Fotheringham et al., 2022; Netolicky, 2020; Pollock, 2020). This was a tall order for even the most effective leader.

Are we doing all that we can do to prepare school leaders to excel in their job? The human dimension of leadership needs attention. Universities are still primarily in charge of training aspiring educational leaders, despite the continued debate about their effectiveness in (Cibulka, 2009). What leadership skills are most required to be an effective educational leader is under continuous evaluation (Markham, 2014). One set of leadership practices that purports to lead to effective leadership stems from the research of Kouzes and Posner (2003). They define five practices of exemplary leadership: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act and Encourage the Heart. The LPI was developed by Kouzes and Posner (2002) to measure these five leadership practices supporting the characteristics of a transformational leader. These practices support individuals to reach their fullest potential (Kelley & Peterson, 2007).

On the other hand, emotional intelligence skills and competencies are being called upon to prepare future leaders to meet today's challenges. Adult development with emotional intelligence (EI) is an essential component of leading schools (CASEL, 2019). For school leaders to ensure the academic, social, and emotional performance of staff and students, they must lead with social and emotional skills and inspire, motivate, and influence others to be their best selves (Mahfouz et al., 2019).

Applications of Emotional Intelligence Models in Preparing Educational Leaders

The field of Education Leadership has taken interest in using various affective reflective strategies to develop and strengthen interpersonal and intrapersonal skills for effective leadership (Boyatzis, & Saatioglu, 2008; Patti et al., 2012). There is ample research that supports EI as a predictor of effective leadership (Ayiro, 2009; Boyatzis et al., 2002; Boyatzis & Ratti, 2009; Papoutsi et al., 2019).

In recent years, attention has been given to the skills that predict school leaders' top performance, including the ability to use emotions to facilitate thought and the ability to perceive emotions in self and others (Ayiro, 2009; Patti et al., 2015). Are there specific EI skills and competencies that are needed for effective school leadership? In the systematic review carried out by Gómez-Leal et al. (2021) the most frequently mentioned skills for effective leadership in school were subsets of self-awareness, self-management, empathy (social awareness) and several skills such as communication and managing conflict that are central to relationship management. These four domains of EI guide the research of the Consortium for Research in EI, inspired by the Goleman-Boyatzis model of EI (Boyatzis & Goleman, 2007; Boyatzis, 2009; Boyatzis et al., 2017; Goleman, 1995). They are also foundational to the K-12 school-based social and emotional learning movement of the Collaborative for Social and Emotional Learning (CASEL). Implicit in the twelve leadership behavioral competencies are the emotion skills of recognizing, naming, understanding, expressing, and regulating their behaviors (Gomez-Leal et al., 2021) typical of the EI Skill Model by Mayer and Salovey (1997). The emotion skills and behavioral leadership competencies manifested in the literature are becoming a priority to the preparation of school leaders who are tasked with positively impacting all aspects of school and the community.

EI training has been present in corporate leadership development since Goleman first popularized it. In the book, *Working with Emotional Intelligence*, Goleman (1998) introduced his leadership framework as a set of skills needed to be effective in the work environment and defined EI as "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships" (Goleman, 1998, p. 317). Early training programs were built around either the Goleman (2001), Mayer and Salovey (1997), or Bar-On (1997) models of emotional intelligence EI (Craig, 2019). Goleman's mixed model framework has been used over many years in leadership development programs primarily in the work environment and uses a competency-based model to help the leader reach success, rather than in explanatory model of EI (Boyatzis & Goleman, 2011). These are the domains the model included (Goleman, 2001; Boyatzis et al., 2000):

- Self-awareness, which includes emotional awareness, self-assessment, and self-confidence.
- Self-management, which includes self-control, fidelity, consistency, confidence, adaptability, achievement orientation, and initiative.
- Social awareness, including empathy, service orientation, and organizational understanding.
- Relationship management, which includes the development of others, leadership, influence, communication, conflict management, driving change, relationship development and team-work.

In contrast to the mixed models, the ability model is often referred to as the scientific model of EI because of the low level of correlation resulting with personality traits (Mayer et al., 2016). Furthermore, it does not focus on self-report or raters' perceptions of others. Its focus is on emotional information processing capacity and using that knowledge to improve situations and make good decisions (Salovey and Mayer, 1990). The Mayer and Salovey ability model, (1997) have made the effort to develop a scientific version of the EI concept, similar to the concept of classical intelligence (Matthews et al., 2002) and defining EI as "the ability to accurately perceive, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth" (Mayer & Salovey, 1997, p.10).

The four abilities included are:

- Emotional perception and expression: identification of one's own emotions and those of others and expression in the appropriate place and manner.
- Ability to use emotions to facilitate thought: emotions direct attention, determine the way we deal with problems and process information productively.
- Understanding of emotions and feelings: ability to label emotions and understand their meaning and the evolution from one emotional state to another.
- Ability to manage emotions: the ability to remain open to feelings and regulate and reflexively manage emotions to promote emotional and intellectual growth, in oneself and in others.

Since 1990 when Salovey and Mayer published their white paper on the theory of EI, differences of opinion emerged regarding whether the ability model or mixed models of EI best described a person's EI. However, both models can be considered complementary depending on the aspects of EI that we intend to evaluate.

Literature Background

Research on the relationship between EI and school leadership is increasing (Gomez-Leal et al., 2021; Mahfouz et al., 2019). However, less research is available that studies its effects on aspiring educational leaders. What follows is a sampling of the scarce studies that explore relationships between EI skills and competencies and leadership for candidates aspiring to become school leaders. The initial studies focused on studying the skills that an educational leader requires to be successful in their daily practice.

Stratton (2000), in an experimental study with aspiring school leaders, reported findings that suggest that there are specific knowledge, skills, and attitudes that professional educational administrators need to succeed in practice. These include a high degree of self-knowledge, the ability to lead by example and model behavior they wish others to demonstrate, the ability to see themselves as vision-builders, and the ability to strive to nurture a healthy EI.

On the other hand, in a dissertation of a study carried out at St. John's University (New York), the results indicate leadership responsibilities and EI competencies to be significant for the entire sample and for all four subgroups of principals (aspiring, beginning, mid-level, and experienced). Analysis of variance found no significant differences in years of experience between the four subgroups (Director, 2016). These results have important implications for the inclusion of emotional competencies in aspiring leaders' training, regardless of their years of leadership experience EI is contributes to leadership effectiveness. Furthermore, both studies highlighted the importance of competencies related to transformational leadership and EI.

In a qualitative study focused on the type of methodology to carry out better instruction in educational leadership; Church (2010) used interviews as data collection to examine four cohorts from Lake Union University's principal preparation program. He gauged the cohort member's preparation in EI concepts in their instructional program and the seminar through interviews of former students. The authors concluded that the students regarded the reflective practice as a valuable method of learning, following best practice for principal preparation, and that there are many ways to look at how we can support EI in school leaders' preparation.

In a similar line of research, Singh and Dali (2013) wanted to verify whether it was necessary for EI to be an integral part of the Work Integrated Learning Competencies (WILCs) for principals in order to develop their social skills. The WILCs concept provides progressive experiences in integrating theory and practice, giving a new meaning to the notion of cooperative learning. WILCs is a form of education that integrates periods of academic study with periods of work experience in jobs related to the students' studies. The qualitative research method used was comprised of five focus group (FG) interviews with sixty principals. This research has evoked the importance of professional development programs for principals incorporating the EI dimension. The responses from the school principals suggest that the program has been fairly successful in developing their EI WILCs. These competencies include their ability to be aware of others' feelings, needs and concerns in terms of empathy, developing others, service orientation, leveraging diversity and political awareness.

And finally, in the few existing experimental studies on the evaluation of the effectiveness of training programs for aspiring leaders where EI is included, the following results have been found. Kearney et al. (2014) used a mixed model approach that incorporated the "Emotional Skills Assessment Process® (ESAP®)" (Nelson & Low, 2011). This valid and reliable measure was used with 31 aspiring principals enrolled in a leadership preparation program at a public university in Texas. Kearney et al. (2014) used interventions aimed at increasing emotionally intelligent leadership skills in the following six areas: social awareness/active listening, anxiety management, decision-making, appropriate use of assertive behaviors, time management, and commitment ethics. These analyses indicated that the interventions employed for social awareness and time management resulted in a statistically significant gain for students who received the intervention compared with those in the control group. The authors commented that emotional competencies are best taught to leaders through both awareness and practice.

Another study corroborated the effectiveness of leadership training programs when EI is incorporated. Sánchez-Núñez et al. (2015) evaluated the effectiveness of a postgraduate development program for aspiring school leaders who taught social and EI based on the Goleman-Boyatzis model (Goleman et al., 2001). Participants reported significant improvements to self-reported social and emotional competencies related to leadership. Inspirational leadership was the competency that improved the most as a result of this program, followed by Organizational Awareness, Coach-Mentor, Teamwork, and Influence. However, no significant differences were found in social and EI and other related characteristics such as assertiveness, empathy, mental health, personality, and openness to experience. The authors considered that it was necessary to reconsider the intervention model and that more time was required for the development of certain skills.

For this reason, this study includes the two perspectives in the study of Emotional Intelligence, Mixed Models and Ability Models. The study incorporated knowledge, skills, and dispositions taken from the EI mixed Goleman model (Goleman, 2001) and the ability model of Mayer and Salovey (1997). Program designers-built curricula based on both EI models for being the most present skills in a successful leader, thus considering a model with the greatest impact on learning skills related to EI and effective leadership. Using both models in this university program study is a unique feature of both the teaching applications and the research study.

The purpose of this study was to investigate the effectiveness of the integrated training of EI in the development of behavioral leadership competencies in the four domains of EI: self-awareness, self-management, social awareness, and relationship management in a sample of aspiring leaders in the city of New York. This study reports the results of a two-year educational leadership program for aspiring leaders that integrates social and EI theory and practice into the first and last course in the program.

Students in the study enrolled in a 6th-year degree program designed to prepare them to receive their certification as a School Building Leader and School District Leader in New York State schools. The program consisted of eight courses, two per semester, to be completed within two years. The program followed Professional Standards for Education Leaders, the professional standards to prepare school leaders (National Policy Board, 2015).

Research questions emerged from the literature review and ongoing development of various cohorts of aspiring school leaders. These include:

1. Does the integrative training program in EI increase the aspiring school leader's emotional and social intelligence?
2. Does an integrated EI model with the intentional practice of emotion skills and competencies increase the perception of leadership performance?

The research questions evolved into the following hypotheses, which guided this study:

H1: The EI integrative training program increases the aspiring school leader's emotional and social intelligence behaviors.

H2: The integrative training program of EI increases the aspiring school leader's leadership behaviors.

Method

Participants

The sample comprises 45 aspiring school leaders, belonging to two cohorts, one from the 2009-2010 academic year and another belonging to the 2012-2013 academic year. All students accepted into the program had a master's degree, had been teaching for a minimum of three years, and had New York State teacher certification. The sample consisted of 15 males and 30 females between the ages of 25 and 50 ($M = 31.39$, $SD = 3.55$); 39.29% of the participants were Caucasian. The rest were distributed among Latinos, 28.57%, African Americans 21.43%, Asian, 7.14%, and mixed classifications, such as Irish / West Indian, 3.57%.

Procedure

Participants completed their assessment scales in September, at the beginning of the course, and again after completing the first semester of study. Candidates attended this EI leadership-based course weekly for two and a half hours for four months. In compliance with the University's Institutional Review Board processes, participation was voluntary. Subjects were informed of their right to refuse participation in the study or withdraw their consent to participate without reprisal. A consent letter was distributed at the beginning of the program and again after its last class. Students completed the assessments online via Survey Monkey. Students used an identification code to protect their anonymity. The questionnaires did not collect information that could harm the participants' mental or social integrity. Assessments were distributed in class, both pre and post-test formats.

Within the first course of this preparation program, students received training in the integrative model of EI that supported the development of leadership competencies and emotion skills. During the last class, students take the ESCI 360 and analyze their results considering their work in the first semester.

The training program in the development of leadership in EI focused on the four cluster areas measured by the Emotional Social Competency Inventory (ESCI) (Boyatzis & Goleman, 2007): Self-awareness, Social-awareness, Self-Management, and Relationship Management. Students practiced these emotional domains through reflective activities such as visioning, empathy building, perspective-taking, assertive language, conflict management, inspirational leadership, and transparency. The pedagogical approach included various modalities such as knowledge sharing through articles, text readings and videos, individual and paired reflections, team development, and role play. Students used their data from two assessments, the Emotional and Social Competency Inventory (Boyatzis & Goleman, 2007), and the Leadership Practices Inventory (Kouzes & Posner, 2012), to create goals based on strengths and areas for improvement. Activities were added to the intervention program selected from the RULER Program (Brackett et al., 2019) based on the Salovey/Mayer /Caruso ability model of EI. These activities were added to provide a more experiential interaction to recognize, understand, label, express, and regulate emotions at the heart of every leadership decision. Specific activities conducted during the first semester included:

- Taking the ESCI-University edition self-assessment and the LPI self-assessment and deconstructing the results,
- Building a personal growth plan for improvement in identified "challenged" competencies using their "strength" competencies as leverage for change,
- Plotting their feelings weekly on the Mood Meter (Nathanson et al., 2016),
- Writing weekly reflections,
- Identifying conflict style and conflict management skills,
- Practicing with the Meta Moment (Brackett et al., 2019),
- Personal and professional visioning and goal setting, empathy building, and perspective-taking,
- Enhancing understanding of divergent points of view, mental models,
- Identifying the five leadership practices in themselves and their principals, and
- Integrating EI into team projects.

The research that guided the program's development in effective EI-based programs was developed by the Consortium on Research in EI with Daniel Goleman. The marriage of both the behavioral competence approach of Boyatzis and Goleman and the EI ability model of Salovey and Mayer were considered to prepare future school leaders best. Students were able to work with their emotion skills in the context of their emotionally intelligent behavioral leadership competencies.

Measures

In addition to socio-demographic data, different self-report measures have been included in this work to assess EI and leadership skills. These self-report measures (ESCI and LPI) were collected at two different points in time: before the start of the course (pre) and at the end of the course (post).

Emotional Social Competency Inventory (ESCI). The ESCI is a multi-rater tool of 72 items designed by Richard Boyatzis, Daniel Goleman, and the Hay Group (Boyatzis & Goleman, 2007) to collect information regarding four dimensions of EI that are related to effective leadership in a variety of organizations: Self-Awareness, Self-Management, Social Awareness, and Relationship Management. These four dimensions of EI represent higher-order factors comprised of 12 six-item subscales. The Self-Awareness dimension of EI was assessed by a single Emotional Self-Awareness subscale, whereas Self-Management was comprised of Achievement orientation, Adaptability, Emotional Self-Control, Positive Outlook. Additionally, the Social Awareness dimension was assessed by two subscales measuring Empathy and Organizational Awareness. In comparison, the Relationship Management dimension includes five subscales assessing Conflict Management, Coach and Mentor, Influence, Inspirational Leadership, and Teamwork. The ESCI has both "Self" and "Other" versions. Others' evaluations employ a 360-degree format, and the data are collected from various sources, including managers, peers, direct reports, and clients. Only the ESCI-Self instrument was used in this study, as this tool is used developmentally during the first course of the aspiring leaders' program. Participants indicate level of agreement with each statement on a 5-point Likert scale (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Consistently). Higher scores indicate higher performance in EI leadership behavior. The ESCI has demonstrated acceptable internal reliability between .73 and .87 (mean $\alpha = .78$) (Boyatzis et al., 2017). In our sample the internal consistency value for the ESCI scale is $\alpha = .85$.

Leadership Practices Inventory (LPI). The LPI was developed by Kouzes and Posner (2002) to measure five leadership practices of exemplary leadership: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act and Encourage the Heart. The LPI questionnaire is available in six languages: English, Simplified Chinese, Arabic, Latin American Spanish, and Brazilian Portuguese. The LPI consists of two instruments: the LPI-Observer for the individual's subordinates to report on their supervisor and the LPI-Self for the individual or supervisor to self-report. Only the LPI-Self instrument was used, as this assessment is also used developmentally at this point of the program. The LPI-Self (Kouzes & Posner, 2002) consists of 30 statements, six statements for measuring each of the five practices of exemplary leaders. Each statement has a 10-point Likert scale (1 rarely, ten almost always). We ask respondents to use the Likert scale to indicate how often they practice the action described by the statement. A higher score would indicate stronger self-perceived leadership skills. Internal reliability coefficients for the LPI-Self ranged between .75 and .87 (mean $\alpha = .81$) (Posner & Kouzes, 1993; Kouzes & Posner, 2003). In our sample the internal consistency value for the LPI inventory is $\alpha = .88$.

Data analysis

The data were coded, tabulated, and entered a database by an independent researcher not affiliated with the University. The data were collected and analyzed once they were received from both cohorts. To ensure that the sample size provided an adequate statistical power level, we performed a sensitivity test using the G*Power program (version 3.1.9.6) to calculate the minimum required effect size. With an $\alpha=0.05$, 0.95 power ($1-\beta$ err prob), two groups of $n=45$, two measurements, Noncentrally parameter $\lambda=13.60$, a critical value of $F=4.06$, and 1,43 degrees of freedom, the minimal critical value of effect size is 0.27. The data have been analyzed with Stata v. 17.0.

The study utilizes a quasi-experimental design without a control group. To identify significant change from pretest to post-test, we conducted paired sample t-tests for each outcome variable. A quasi-experimental pre-post-test design was used to learn whether cohort effects existed. Two non-consecutive cohorts were used to evaluate the cohort and maturation effect: the first a 2009-2010 (cohort A) and the second a 2012-2013 (cohort B). For each of the variables studied, a 2x2 ANOVA was performed with the variable of time intra-subjects (time 1, time 2) and the other variable, the two cohorts (A

and B). The cohort's control effect has been analyzed through the interaction between both variables, understanding that the absence of interaction effect has to do with similar behavior in both times, independent of the cohort. Considering that we could not have a control group because all students received the same course of studies, we opted to use a quasi-experimental design (Campbell & Stanley, 1963). Since the program is conducted every academic semester, we opted for a cohort design. As we had pre and post-test measures, we were able to compare the cohorts with one another. We chose to compare the pretest of one cohort with the post-test of the other cohort and vice-versa. This design solves many problems associated with pure pretest-post-test designs since an equivalent cohort function as a control group. From a data analysis point of view, the cohort's value is introduced as an independent variable to control for the effects that it might have on the results. Therefore, if we find time effects (pretest to post-test) on one of the variables, we can affirm that the program has been effective in modifying that variable since we compare different groups.

Results

Change pre-post-test

There were statistically significant differences found in all the variables. In table 1, the scores of all the variables, both ESCI and the LPI, increase significantly from pretest (Time 1) to post-test (Time 2). Particularly noteworthy is the increase in the "Social Awareness" factor of the ESCI ($d = 0.60$) and, above all, the "Inspire a Shared Vision" factor of the LPI ($d = 0.73$). On the other hand, to describe the data of the full sample and the interrelationships between the different variables, in Table 2 can be found interrelations, means, and standard deviations for ESCI and LPI factor scores.

Table 1
Mean comparison from pretest (time 1) to post-test (time 2) the ESCI and LPI factors.

MEASURE	TIME 1 M(SD)	TIME 2 M(SD)	<i>t</i>	<i>p</i>	<i>Cohen d</i>
ESCI					
-Self-Awareness	3.91 (0.51)	4.06 (0.52)	1.37	.037	0.29
-Self-Management	3.93 (0.49)	4.11 (0.43)	1.87	.031	0.39
-Social Awareness	3.92 (0.45)	4.16 (0.34)	2.87	.002	0.60
-Relationship management	3.88 (0.48)	4.05 (0.38)	1.79	.038	0.39
LPI					
-Model the Way	44.40 (6.40)	47.08 (5.82)	2.08	.020	0.43
-Inspire a Shared Vision	40.57 (7.30)	45.76 (6.90)	3.46	<.000	0.73
-Challenge the Process	43.77 (6.75)	46.00 (5.12)	1.76	.040	0.37
-Enable others to Act	47.80 (5.28)	50.05 (4.49)	2.18	.015	0.46
-Encourage the Heart	45.65 (7.74)	48.58 (5.79)	2.03	.022	0.43

Note: One-tailed t-test (H_a : time 2 > time 1).

Table 2
Interrelations, means, and standard deviations for ESCI and LPI factor scores.

	ESCI AW	ESCI MG	ESCI SA	ESCI RM	LPI MD	LPI IN	LPI CH	LPI EN	LPI CO
<i>M</i>	3.98	4.02	4.04	3.97	45.74	43.16	44.88	48.92	47.12
<i>SD</i>	0.52	0.47	0.41	0.44	6.23	7.53	6.06	5.01	6.95
<i>ESCI MG</i>	.46***								
<i>ESCI SA</i>	.50***	.77***							
<i>ESCI RM</i>	.43***	.78***	.74***						
<i>LPI MD</i>	.28**	.28**	.21*	.29**					
<i>LPI IN</i>	.29**	.31**	.22*	.25*	.74***				
<i>LPI CH</i>	.29**	.30**	.20	.32**	.67***	.69***			
<i>LPI EN</i>	.34**	.34**	.34**	.36**	.48***	.52***	.52***		
<i>LPI CO</i>	.24*	.31**	.18	.33**	.73***	.54***	.54***	.58***	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. ESCI: AW = awareness; MG = management; SA = social awareness; RM = relationships management. LPI: MD = model; IN = inspire; CH = challenge; EN = enable; CO = encourage.

Cohort effects

The summary of the ANOVA data for each of the variables can be seen in Table 3. The table has three blocks of columns with the F values of the ANOVA: the effect of the cohort (if there are differences between cohorts A and B), the effect of Time (Time 1, Time 2) that shows the change that occurs between the pre and post-test, and the interaction effect that shows if the pre-post-test differences are different in one group from another.

The time variable's effect is significant in almost all the factors studied, except in "Self-Awareness" of the ESCI and "Challenge the Process" of the LPI. The largest effect sizes are found in the factors "Inspire a Shared Vision" of the LPI ($\eta^2 = .122$) and in the "Social-Awareness" factor of the ESCI ($\eta^2 = .086$). The effect of the cohort is significant in the "Self-awareness" factor of the ESCI and in the "Model the Way", "Inspire a Shared Vision," and "Encourage the Heart" factors of the LPI. In all cases, the average of cohort A is greater than that of B. Specifically, in ESCI "Self-Awareness," the value of cohort A ($M = 4.09$, $SD = 0.39$) is greater than that of B ($M = 3.86$, $SD = 0.63$). In LPI "Model the way" the value of cohort A ($M = 47.25$, $SD = 6.22$) is greater than that of B ($M = 43.86$, $SD = 5.77$). In LPI "Inspire a Shared Vision" the value of cohort A ($M = 44.86$, $SD = 7.54$) is greater than the cohort B ($M = 41.04$, $SD = 7.03$). Finally, in LPI "Encourage the Heart" the value of cohort A ($M = 48.39$, $SD = 7.14$) is greater than the cohort B ($M = 45.53$, $SD = 6.45$). The interaction effect is not significant in any of the factors studied, which means that there are no differences from one group to another when there is a time effect.

Table 3
ANOVA Cohort x Time for each of the factors of the ESCI and the LPI.

	Cohort		Time		Cohort x Time	
	<i>F</i> (1, 87 df)	η^2	<i>F</i> (1, 87 df)	η^2	<i>F</i> (1, 87 df)	η^2
ESCI						
-Self-Awareness	4.30 *	.048	2.18	.025	0.69	.008
-Self-Management	2.16	.024	4.07 *	.045	1.43	.016
-Social Awareness	0.26	.003	8.05 **	.086	0.01	.000
-Relationship management	0.24	.003	3.10 *	.035	0.00	.000
LPI						
-Model the Way	7.23 **	.078	4.46 *	.049	0.04	.000
-Inspire a Shared Vision	6.86 *	.074	11.92 ***	.122	0.85	.010
-Challenge the Process	2.06	.023	2.97	.033	0.07	.001
-Enable others to Act	1.34	.015	4.70 *	.052	0.00	.000
-Encourage the Heart	4.04 *	.045	4.74 **	.052	1.15	.013

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion and Conclusions

The purpose of this study was to investigate the effectiveness of the leadership course in EI using an integrative model (Goleman, 2001; Mayer & Salovey, 1997) in the development of leadership competencies in a sample of aspiring leaders in New York City.

Concerning the first hypothesis: The EI integrative training program increases the aspiring school leader's emotional and social intelligence behaviors. The positive results have been corroborated in all factors, increasing the values from pre to post-test at a significant level in Self-Awareness, Self-Management, Social Awareness, and Relationship Management. Particularly the Social Awareness was the factor that increased the most. These results are unique as in the review of the few educational leadership programs in previous studies, researchers only found differences in Social Awareness (Kearney et al., 2014) or the training did not produce the desired significant effects on EI (Sánchez-Núñez et al., 2015). We have not found previous studies that have explored an integrative model of EI. Using both models has a greater impact on EI development.

When we carried out a more detailed analysis of the effect of training as a control group for the studied cohorts, we verified how our hypothesis is corroborated in all factors except in the Self-Awareness factor. One reason for this may be that the aspiring school leaders' initial scores were already high in this factor, especially in cohort A, being significantly higher in their scores than cohort B. The characteristics of the sample could also explain these results since a pre-selection of candidates aspiring to be school leaders already possessed a high level of Self-Awareness and regulation and an ability to develop effective, productive relationships with others (Patti, Sánchez-Núñez & Fernández-Berrocal, 2011). Finally, Self-Awareness is a complex factor that develops throughout life if the individual is a continual learner. These results support previous studies that EI training for leadership development is practical (Hodzic et al., 2018; Houghton et al., 2012; Kareem & Kin, 2018; Kearney et al., 2014).

Concerning the second hypothesis: The integrative training program of EI increases the aspiring school leader's leadership behaviors. We can conclude from a preliminary analysis that the hypothesis is accepted and corroborated in all the leading factors: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act and Encourage the Heart, with "Inspire a Shared Vision" being the factor that increased the most. Concerning the factor "Inspire a Shared Vision," leaders passionately believe that they can make a difference. They envision the future, creating an ideal and unique image

of what the organization can become. For aspiring student leaders, this could be one of their strengths in which to promote the rest of the factors, given the vocation and motivation in carrying out a new task for them.

These results corroborate previous studies where EI training has increased leadership skills in aspiring leaders (Sánchez-Núñez et al., 2015). It also highlights the importance of developing the social-emotional skills of veteran and aspiring school leaders (Anderson, 2019; Gomez-Leal, et al., 2021; Mahfouz & Gordon, 2020; Mahfouz, et al., 2019).

When we carried out a more detailed analysis considering the different cohorts, thus allowing for a control group, we also found significant differences in all the LPI factors except for, Challenge the Process. We consider that a possible explanation is that aspiring leaders need more workplace training concerning these leadership practices as they are not in a leadership position during their studies. The lack of experience and ability to learn on the job would contribute to a lower score in these competencies. "Challenge the Process" is a practice that is defined according to Kouzes & Posner (2002) by the leaders' ability to change the status quo, look for innovative ways to improve the organization, and take risks. The ability to move change forward and take risks comes with position power and experience. All the other leadership practices assessed in the LPI can be carried out, to some extent, by the students in their current positions. Regarding the factor "Model the Way," leaders establish principles concerning the way people treat one another, and the way goals should be pursued. In the factor "Enable Others to Act," leaders foster collaboration and build spirited teams. They actively involve others. Finally, the factor "Encourage the Heart" is demonstrated by caring and recognizing the contributions individuals make.

There are few studies-based efforts to develop EI skills and competencies for aspiring school leaders. Among the few existing studies, we found an inconsistency between the intervention programs used, their duration, or the evaluation measures used (Gómez-Leal et al., 2021). Therefore, it is difficult to compare them with previous studies and their results. Among other study's limitations is the reduced sample size limiting the predictive power that EI has on leadership, as well as the period in which the data were collected, since the circumstances after the pandemic are very different, including the educational field (UNESCO, 2023). Having a control group would better facilitate evaluating the effectiveness of the leadership training program in EI. We also must consider how the sample characteristics influence the results since the subjects who enter the aspiring school leader's program often already come with a high level of social-emotional competence, which can mitigate the effect of training. In future studies, the use of measures from both mixed models (Goleman, 2001) and the ability model (Mayer & Salovey, 1997) would help counteract the effects of both models' integration. However, we realize that the use of variables related to intelligence to process emotional information, such as the MSCEIT v2 (Mayer et al., 2002), would require a more extended period of training to verify a change. Therefore, in this study the change in perceived EI was measured. Finally, we did not aggregate our data by race, gender, or ethnicity. Indeed, given the great need for urban school leaders of color, it would behoove us to stratify our sample population to learn all we can to attract and retain a diverse leadership.

In conclusion, the integrative model of training in EI for aspiring leaders from two different cohorts has shown that it develops all the competencies and practices related to leadership and EI. Concerning these results, we must recognize that Self-Awareness is one of the most complex constructs to develop in an individual and may not show much change, other than the change that that increases as we age or encounter life circumstances. In the case of Challenge the Process, which refers to a leader's ability to take risks and promote change, we must remember that aspiring school leaders may demonstrate these behaviors with more experience when they in a leadership role.

It should be noted that this exploratory study sheds light on the effectiveness of EI integrative model on the transformational leadership development for aspiring school leaders. It is worth further, add more rigorous study on the practical methodology in the development of certain skills that require more experience. This study contributes to the field of EI and school leadership. It is one of few studies that examine the impact of the teaching of EI content and strategies in preparation programs (Kearney et al., 2014; Sánchez-Núñez et al., 2015; Singh & Dali, 2013).

Schools are reflections of society. As the pandemic departs, daily events and crises create new and complex challenges (UNESCO, 2023). School leaders must master their own emotions, an ongoing process, and encourage EI development of everyone who interacts with young people. The demand for conflict management in educational centers is increasing and therefore the importance of having a leader who can perform the functions of effective leadership with EI is highlighted. These leaders develop their own emotion competencies and skills and encourage others to do the same, thus creating the possibility of transforming others as well. More than ever, research is required on the effectiveness of training programs for aspiring leaders to ensure that they are provided with the necessary tools for leading today's schools, for their well-being and that of the educational community.

Authors' notes:

Funding: This work has been funded by the University of Castilla La Mancha under Program 010100021 of the UCLM's Own Research Plan, co-financed by the European Regional Development Fund (FEDER).

Conflicts of interest: The authors declare that they have no conflicts of interest.

Acknowledgements: The students who participated in this study and Department of Curriculum and Teaching of Hunter College.

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Received: 2 de junio de 2022
 Modified: 13 de marzo de 2023
 Accepted: 24 de marzo de 2023