An Investigation into Emotional Intelligence, Foreign Language Anxiety and Empathy through a Cognitive-Affective Course in an EFL Context

Ali Rouhani (Allameh Tabatabaii/Shahrekord)

Abstract

Emotional intelligence, as concerned with how an individual recognizes and regulates his or her emotions, has been in limelight quite recently. The present study seeks to fill a small gap in the literature on emotional intelligence, together with foreign language anxiety and empathy. To this end, short literary readings are used in a cognitive-affective reading-based course to see how emotional intelligence, foreign language anxiety and empathy are affected. Mayer, Salovey and Caruso (2002) Emotional Intelligence Test (MSCEIT), Cooper's (1996/1997) EQ-Map, Horwitz, Horwitz and Cope's (1986) Foreign Language Classroom Anxiety Test (FLCAS) and Caruso and Mayer's (1998) Multi-Dimensional Emotional Empathy Scale (MDEES) were administered to 70 Iranian EFL undergraduate students in a pretest posttest quasi-experimental design. MANOVA and ANCOVA were conducted. The results revealed that the cognitive-affective reading-based course in which literary readings were used significantly improved the subjects' emotional intelligence scores from the MSCEIT measure as well as empathy (MDEES) scores, but significantly decreased their foreign language anxiety (FLCAS) scores. The pedagogical implications for learners, teachers, educators and materials developers are presented.

1 Introduction

The debate for many philosophers concerns whether cognition is more important to our life or whether emotion is. We do not know exactly when the debate first started, but philosophical considerations of the relations between thought and emotion in western culture go back to early Greek thoughts. Aristotle argued that intellect was reliable while emotion was too undependable to be of much use to rational thought (Bar-on/Parker 2000). The same debate was also evident in early psychology. Intelligence was considered as a concept devoid of emotion and symposiums on intelligence over the years repeatedly concluded that the first hallmark of intelligence is high-level mental ability such as abstract reasoning (Sternberg 1997). For instance, Terman (1921; cited in Sternberg 1997: 339), as a pioneer of IQ tests, states that "an individual is intelligent in proportion as he is able to carry on abstract thinking". Therefore, intelligence conceptualized as abstract thinking was demonstrated to predict academic success.

In relating intelligence to second language learning, Brown (1994: 93) states that in the past it was conceived that "the greatest barrier to second language learning seemed to boil down to a matter of memory", in the sense that if a student could remember something he or she was exposed to, he or she would be a successful language learner because intelligence was traditionally defined and measured in terms of linguistic and logical-mathematical abilities. However, Gardner (1983), in a rather different approach, advanced a controversial theory of

intelligence, Multiple Intelligence, which questioned the horizontal approach to intelligence and blew apart the traditional thoughts about monolithic general intelligence. In his MI theory, he initially described seven *intelligences* including intrapersonal and interpersonal intelligences which, in part, paved the way for uncovering other intelligences such as *emotional intelligence,* which is interchangeably known as *EI* or *EQ.*

The concept of emotional intelligence formally developed out of growing emphasis on research on the interaction of emotion and thought in the field of psychology in 1990s (Grewal/Salovey 2006). EQ/EI is about the intelligent use of emotions and utilizing the power or information contained in emotion to make effective decisions (Ciarrochi/Mayer 2007). Although different competing and sometimes conflicting components have been integrated into motional intelligence, this construct has offered the potential to integrate the reasoning of a person's cognition and emotion. Recently more attention has been paid to the effect of emotional intelligence on academic success in education (Elias et al. 2003). However, as Brackett/Katulak (2007) state, quite a few studies have been conducted to explore this concept in contexts where English is spoken as a second or foreign Language (ESL/EFL), given the idea that the emotional intelligence serves both internal mechanisms and external environment in the process of language learning (Goleman 2001). That is why, this study seeks to shed some light on emotional intelligence, together with empathy and foreign language anxiety, which are two important affective factors involved in the process of second/foreign language learning. Foreign language anxiety is a situation-specific type of anxiety arising form the uniqueness of foreign language learning in the classroom or academic settings. It is associated with a fear of negative evaluation, test anxiety and communication apprehension which are experienced by some foreign language learners (Horwitz et al. 1986). Also, empathy is considered as the ability or capacity to understand or feel what others understand of feel (Brown 1994). It is a significant skill for people who experience a new setting such as second or foreign language context (Brown 2000). Given the emotional and social nature of language learning, the broad objective of this study is to investigate the impact of a cognitive-affective reading-based course on emotional intelligence, foreign language anxiety and empathy. This reading-based course with its focus on literary readings provides the subjects of the study with the bases for the legitimate negotiation of affective and cognitive processes.

2   Review of Literature

2.1   Emotional Intelligence: Ability and Mixed Models

Since its emergence in 1990s, the concept of emotional intelligence has generated interest in both the popular media and scientific circle, leading to several definitions and two general competing models of EQ. In an initial theoretical paper, Salovey/Mayer (1990) introduced an ability model of emotional intelligence and used two-part approach, speaking first of the general processing of emotional information and second specifying the skills involved in such processing. By 1997 and 1999, Mayer and Salovey, together with Caruso, expanded on this ability-based definition while keeping its two-part form and defined emotional intelligence as (Mayer et al. 1999: 267):

> An ability to recognize the meaning of emotions and their relationships and to reason and problem-solve on the basis of them [...] the capacity to perceive emotions, assimilate emotion-related feelings, and understand the information of those emotions and manage them.

This revised ability-model definition is based on the capacity to reason in four areas or branches: perceiving emotions, facilitating thought, analyzing emotions and managing emotions. As Bar-on/Parker (2000) explain, the first branch itself involves registering, attending to and deciphering emotion-loaded messages as they are expressed through voice

tone, objects of art, stories, facial expressions or cultural artifacts. Therefore, a student who sees the fleeting expression of amusement in the face of a teacher understands more about others' emotions and thoughts than another student who misses such a signal. The second branch concerns the ability to use or generate emotions to focus attention, communicate feelings, or engage in other cognitive processes such as reasoning, problem solving and decision-making. The third branch involves reasoning about or with emotions, that is, the ability to understand emotional information and the causes of emotions and how emotions combine, progress and change from one to another. The fourth branch, which is the highest level, concerns the management and regulation of emotion in oneself and others. It entails awareness, acceptance and use of emotion in problem-solving.

After the modern field of emotional intelligence saw its first scientific publication in early 1990s, some other researchers including Goleman (1995) and Cooper (1996/1997) expanded the meaning of emotional intelligence by explicitly mixing the ability to understand and process emotion with other diverse parts of personality or skills; hence creating mixed approaches to emotional intelligence. Thus, emotional intelligence is said to be more like 'character'.

Goleman (1995), who commercially popularized the concept, identified five domains of EQ: a) knowing one's emotion, b) managing emotion, c) motivating oneself, d) recognizing emotions in others, and e) handling relationships. To him, a person with higher emotional intelligence should become happier, more optimistic, motivated and outgoing. In a rather similar manner, Cooper and Oriolio, who defined emotional intelligence as a mix of mental and non-mental abilities, divided emotional intelligence into five general attributes in a measure called EQ-Map, which has provided an approach to identify one's strength and vulnerability and targeted specific actions to be taken (Cooper 1996/1997).

Taken together, there are some differences between the ability and mixed approaches towards emotional intelligence. According to Mayer (2001), mixed approaches claim a stronger predictive power for success, but the ability model only offers potentiality. That is, being emotionally intelligent in the ability model does not mean that a learner will necessarily succeed in school. Also, having high EQ in the ability model appears relatively independent of most personality characteristics such as extroversion or optimism; EQ scores, as Ciarrochi et al. (2001) state, might correlate more with some traits and less with others. In spite of the differences, both the ability and mixed approaches of EQ share a similar intention: to understand how an individual perceives and regulates his or her emotions.

All said, emotional intelligence, which reveals synthesis between cognitive and affective processes, has stimulated some research, mostly in the fields other than second language acquisition/learning. For instance, in the field of education, Stottlemayer (2002) in a study of EQ and its relation to student achievement among 200 eleventh and twelfth grade American students in Texas found that EI skills were significantly predictory of academic achievement. Also, in the field of psychology, Besharat et al. (2005) examined the impact of emotional intelligence on mental health and academic success in a sample of 220 Iranian university students in Isfahan. They reported that EQ was negatively correlated with psychological stress and positively with academic success.

In a second/foreign language (SL/FL) context, Pishghadam (2007) examined the relationship between EQ and second language success among 528 Iranian university students in Tehran. Emotional intelligence scores were correlated with the students' Grade Point Average (GPA) and the scores that they obtained at the end of second year at the university in listening, reading, speaking, and writing. The results indicated that second language skills and GPA strongly correlated with stress management and intrapersonal skills in the EQ test. Also, using Bar-On's Emotional Quotient Inventory (EQ-i) and a revised version of the Oxford's Strategy

Inventory for Language Learning (SILL), Aghasafari (2006) in a correlational design investigated the relationship between EQ and second language learning strategies among 100 sophomore participants at Islamic Azad University in Iran. The results indicated that there was a positive relationship between overall EQ and language learning strategies. The results of the above studies, which tend to underscore the importance and predictive power of EQ in second/foreign language achievement, are quite important to us. However, they do not provide empirical evidence on how to improve EQ/EI skills in a second/foreign language context. This present empirical research is an attempt to fill this gap in the literature on EQ.

2.3   Foreign Language Anxiety, Empathy and Literature

Gardner (1993) emphasizes that language is not grammar specific, but it is influenced by other factors that are intelligence-based. In the same line, he has expanded the framework of traditional intelligence and emphasized that the development of language is not limited to syntax, semantics and phonology. As Ellis (1994) states, there are many other variables that will influence language development, particularly second language learning. These include affective factors such as anxiety and empathy among other variables.

Anxiety as an affective factor is defined as "an abnormal or overwhelming sense of apprehension and fear marked by physiological signs" (Merriam-Webster's Collegiate Dictionary 1998). Cognitivists view anxiety as worry and emotionality (MacIntyre 1995). To them, anxiety is related to cognitive interference due to extreme instances of worry which might relate to appraisal of situations as threatening (Deffenbache 1980). Yet, Brown (2000) states that a distinction should be made among trait, state and situation-specific anxiety. Trait anxiety is a characteristic of a learner's personality whereas state anxiety is experienced in response to a specific event. To move further, Horwitz et al. (1986) identify another type of situation-specific anxiety, *Foreign Language Anxiety*, which is associated with L2 formal context in learning language skills. They describe it as a "distinct complex phenomenon of self-perception, beliefs, feelings and behaviors related to classroom language learning arising from the uniqueness of language learning process" (Horwitz et al. 1986: 126). That is why, they developed their own measure Foreign Language Anxiety Classroom Scale, FLCAS, to draw attention to three aspects or sources of language anxiety: communication apprehension, test anxiety and fear of negative evaluation. The first source happens most when listening to and speaking the foreign language. The second source, which causes performance anxiety, is triggered from the fear of being perfect in the test or failure in the foreign language classroom and involves worry over the frequent testing and examinations in language classroom. The last source is "an apprehension about the expectation that others would evaluate oneself [sic] negatively" (Horwitz et al. 1986: 128).

Although Dewaele (2002) and Sparks/Ganschow (1993) had difficulty in confirming the role of foreign language anxiety as a stable factor for foreign language learning, many researchers (e.g. Cheng et al. 1999; MacIntyre/Gardner 1991; MacIntyre et al. 1997) found a relationship between foreign language anxiety and language achievement or performance and, as such, supported Horwitz et al's (1986) conceptualization. Therefore, if teachers are concerned with helping students develop their L2 abilities, they might want not only to improve their emotional intelligence skills but also reduce foreign language anxiety, if possible. Unfortunately, little research, if any, has been conducted on this issue, which is the focus of this study.

Moreover, empathy as another important affective factor in ESL/EFL context is a multifactorial concept that has its origin in the Greek word *empathius*, meaning understanding others by entering their world (Broidy 2005). Brown (1994: 143) defines it as "the process of reaching beyond the self and understanding and feeling what another person is understanding

or feeling". Also, Buck/Ginburg (1997) consider empathy as a biologically-based and communicative process. However, Duan/Hill (1996) summarize the history of empathy as 1) primarily an affective phenomenon, referring to the immediate experiences of emotions of another person; 2) primarily a cognitive construct, referring to the intellectual understanding of another's experience or perspective-taking; 3) a combination of cognitive and emotional components; or 4) either cognitive or affective depending on the situation. Therefore, empathy can be seen as a complex multifactorial concept, for which language can play a significant role because, as Brown (1994: 143) states, "language is primary means of empathizing". However, like emotional intelligence and foreign language anxiety, the review of literature on empathy fail empirical studies on how to improve this affective factor in an EFL context.

Despite the lack of empirical evidence, the review of literature theoretically supports the connection between emotional knowledge and empathy by relating them to literary fictions. For instance, Ghosn (2001) states that literature, including short stories, plays, novels and poems, has the potential to foster emotional well-being by providing vicarious emotional experience that shape brain circuits for empathy. Also, Miall (2005) states that the feeling obtained in literary excepts appears to enable a reader to frame a particular meaning, to register it for the time being as a possible component of the story and draw, if necessary, on the prior knowledge when a feeling matches an occurrence from the reader's memory. This emphasis on emotional knowledge is the reference to the role of *situational* and *reflective empathy* which could be a skill or component of EQ. Bringing the role of literary excerpts to the foreground, Krakovsky (2006: 52) states, works of fictions, do not simply mimic real word life, but "they intensify it" and "let us play with fire of emotions form a safe remove". In the same line, Miall (2005) claims that the pleasure of literary reading may implicate the re-experiencing of negative feelings from ordinary settings, but within contexts in which they can be contextualized, managed and brought into relation with other feelings. Therefore, in De Sousa's (2005: 355) terms, "if we could understand how the movement of literature through paths of accessibility from one possible world to the way our own real world emotions can actually be transformed, we can create conditions under which our subjects are changed by the powers of literature". This is the point that the present study seeks to touch, given the poor empirical support.

3 Research Questions

By relying on a course in which literary excerpts were used as reading materials, attempts were made to investigate the impact of a cognitive-affective course on emotional intelligence, foreign language anxiety and empathy. In this cognitive-affective reading-based course, literary excerpts were used not only as learning materials but also the basis for classroom activities such as group work, peer-lead discussion and journal writings where the subjects had opportunities to empathize characters, events or settings in the literary excerpts, express their emotions and make use of emotional knowledge to solve problems. Meanwhile, this research relied on both the ability-based and mixed approaches to EQ/EI to provide a better-balanced picture of the subjects. Accordingly, the following broad research questions were developed:

1. Does cognitive-affective reading-based course with its focus on literary readings affect the undergraduate EFL subjects' emotional intelligence scores from two EQ measures?

2. Does a cognitive-affective reading-based course with its focus on literary readings affect the undergraduate EFL subjects' foreign language anxiety scores?

3. Does a cognitive-affective reading-based course with its focus on literary readings affect the undergraduate EFL subjects' empathy scores?

To this end, the following null hypotheses were addressed:

HO1: *The cognitive-affective reading-based course with its focus on literary readings does not have a significant effect on the undergraduate EFL subjects' emotional intelligence scores from two EQ measures.*

HO2: *The cognitive-affective reading-based course with its focus on literary readings does not have a significant effect on the undergraduate EFL subjects' foreign language anxiety scores.*

HO3: *The cognitive-affective reading-based course with its focus on literary readings does not have a significant effect on the undergraduate EFL subjects' empathy scores.*

4   Method

4.1   Subjects

Seventy undergraduate Iranian EFL sophomore and junior (forty-six female and twenty-four male) students participated in this study. These subjects included two intact classes from Shahrekord University which were assigned as control and experimental groups. They enrolled in the corresponding four-credit Reading Course in the fall semester of 2006-2007 and attended the class on Saturday and Monday. Meanwhile, they were all majoring in Translation of English and their ages ranged from 18 to 27.

4.2. Instrumentation

This study made use of the following instruments for data collection.

4.2.1. Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT Version 2.0)

The MSCETT is a performance-based measure of emotional intelligence which includes 141 items, developed in accordance with ability-based model of EQ. In this test, emotional intelligence is divided into two major areas, experiential and strategic EI, which can further be divided into four subscales that measure: perceiving, using, understanding and managing emotions, respectively. These four branches themselves are made up of two tasks. Therefore, all eight tasks give the total EI scores (Mayer et al. 2002). For instance, the following item, taken from Emotion Management Task, asks the respondents to rate the effectiveness of alternative actions in achieving a certain result in situations where a person must regulate his or her own actions. This item measures the respondent's ability to incorporate his or her emotions into decision making.

> Example 1: Mara woke up feeling pretty well. She had slept well, felt well rested and had no particular cares or concerns. How well would each action help her preserve her mood?
>
> Action 1: Mara enjoyed the feeling, and decided to think about and appreciate all the things that were going well for her.
>
> a. very ineffective   b. somewhat ineffective   c. neutral   d. somewhat effective   e. very effective
>
> Action 2: She decided it was best to ignore the feeling since it wouldn't last anyway.
>
> a. very ineffective   b. somewhat ineffective   c. neutral   d. somewhat effective   e. very effective

There are two methods of scoring. One is to identify the correct answer as the one that is considered correct by the majority of the respondents in the research or standardized sample. This is the *general consensus* method. The second method is to invite emotion experts to judge which answers are correct and use the average response to a given alternative as a criteria. This is the *expert consensus* approach, which was used for scoring in this study.

According to *MSCEIT User's Manual* (Mayer et al. 2002), the MSCEIT, which was standardized based on the data collected over 50 research sites from diverse geographic locations, has a full scale reliability of .91, with area reliability of .90 (Experiential) and .85 (Strategic). Brackett/Mayer (2001; cited in Mayer et al. 2002) also found a test-retest reliability of .86, with a sample of 62. The MSCEIT V. 2.0 has good coverage of 1997 model. Thus, it possesses content validity. At its most basic level, confirmatory factor analyses are supportive of the methods of scoring used (Ciarrochi et al. 2000).

4.2.2   EQ-Map Questionnaire

This study also used an EQ test which was part of the full-scale EQ-Map developed jointly by Cooper and Oriolio (c.f. Cooper 1996/1997). This test, which is theoretically based on the mixed approach to EQ, was validated by Bahrami (2002) through concurrent correlation procedures. Also, she reported that the test-retest reliability of the test was .84 with a sample of 30 Iranian university students. In this questionnaire, emotional intelligence is divided into eight parts: a) self awareness, b) emotional awareness of others, c) emotional expression d) resilience, e) compassion, f) creativity, g) interpersonal connection and h) personal power. This self-report questionnaire is a likert-type scale coded on a 4-point scale ranging from "very well" (3), which indicates the highest degree of its presence to "none/didn't occur" (0), which indicates the lack of construct. For instance, a student who selects "very well" alternative upon reading "I can express my emotions even if they are negative" is considered more emotionally intelligent than a student who selects "very little" or "none" alternatives.

4.2.3   Foreign Language Classroom Anxiety Scale (FLCAS)

To collect data on foreign language anxiety, this study also used a likert-type questionnaire developed by Horwitz et al. (1986). This scale includes thirty-three items, measuring test anxiety, speech anxiety and fear of negative evaluation. As the following item depicts, each item ranges from *strongly disagree*, at one end, to *strongly agree*, at the other end. Thus, the scale for each item ranges from 1 to 5.

> Example 2: I start to panic when I have to speak without preparation in English class.
>
> a. strongly disagree   b. disagree   c. neither agree nor disagree   d. agree   e. strongly agree

Internal consistency of the FLACS by Cronbach alpha coefficient, as measured by Horwitz (1986) was found to be .93, with the test-retest reliability of .83. With regard to its validity, criterion-related studies that bear on construct validity of the scale were conducted. The results suggest that foreign language anxiety can be reliably and validly measured (Horwitz et al. 1986; Horwitz/Young 1991).

4.2.4   Multi-Dimensional Emotional Empathy Scale (MDEES)

To collect data on emotional aspects of empathy, this study made use of the Multi-Dimensional Emotional Empathy Scale developed by Caruso/Mayer (1998) for adolescents and adults. This scale which ranges from *strongly disagree*, at one end, to *strongly agree*, at the other end, includes thirty self-report likert-type items, each of which is rated from 1 to 5. For instance, if a student chooses "strongly disagree" alternative in response to the item "I feel happy when I see people laughing and enjoying themselves", the student will receive 1 for the item, which indicates the lowest degree of empathy. Caruso/Mayer (1998) state that this test was found to significantly overlap with Mehrabian/Epstein's (1972) Emotional Empathic Tendency Scale. The scale demonstrated adequate internal consistency reliability as measured by coefficient of alpha (.86), with a sample of 793 adult and adolescent subjects. Further, the results of their factor analysis on the subjects' empathy scores yielded six meaningful factors.

4.3   Procedures

This study was based on quasi-experimental design. Two intact classes of undergraduate EFL students from Shahrekord University were randomly assigned as the control and experimental groups of the study. The pretest scores were obtained by administering the EQ, MDEES and FLCAS tests to both groups. Then, the subjects in the control group were assigned non-literary readings which were the basis for learning vocabulary, forms or sentence comprehension, as they are conventional in reading courses in Iran. In contrast, the subjects in the experimental group were assigned literary readings where they were asked to empathize characters, events and settings, keep a journal to reflect on the choice and themes of literary excerpts or connect the themes of excerpts to their own experiences. The literary readings provided the basis not only for learning materials, but also for classroom activities such as peer-lead discussion, group work and journal writing in which they could express their feelings.

Meanwhile, some of the non-literary readings, assigned to the control group, include: *Work and Play* (Read 1975); *When E. T. Calls* (Shostak 2004); *Laser: Supertool of Our Time* and *Thou Shalt Not Smoke*, which were selected from the book *Reading through Interaction* (Farhady/Mirhasani 2005); *Weather and Chaotic Systems* and *Building with Arches*, which were selected from the book *How to Prepare for the Barron's TOEFL iBT* (Sharpe 2006) and *What is a Port City*, which was selected from the book *Cambridge IELTS 2* (2000). Some of the literary readings, assigned to the experimental group, include: *Tell Tale Heart* by Edgar Allen Poe (1809–1848; see also Farhady/Mirhasani 2005); *The Story of an Hour* by Kate Chopin (1851–1904); *Limbo* by Rhonda Lucas (n. d.); *A Wrong Man in Workers' Paradise* by Rabindranoth Tagore (n. d.) and *Grisha Has Arrived*, which was selected from the book *Reading through Interaction* (Fardady/Mirhasani 2005). All the readings assigned to both groups were not more than a few pages long and their readability index, assessed by Lix formula (see Shulz 198: 50), ranged from 55 to 65, which is considered by Lix as challenging texts for non-native speakers of language. Besides, attempts were made to select most of literary and non-literary readings from the same textbooks such as *Reading through Interaction*, (Fardady/Mirhasani 2005), *English through Reading* (Bhasker/Prabhu 1975) and *Patterns: A Short Prose Reader* (Conlin 2005).

After an eight-week interval, posttest scores were obtained by administering the same tests to both control and experimental groups. Finally, MANOVA, ANCOVA and Pearson Product correlational procedures were run to address the research questions of the study.

5   Results

In this section, a descriptive analysis of quantitative data is presented based on the research questions of the study. The descriptive statistics of emotional intelligence (from the two measures), foreign language anxiety and empathy scores by groups before and after the treatment is reported in Table 1.

Group	Variable	N	Pretest		Posttest	
			Mean	St. dev.	Mean	St. dev.
Control	MSETT	35	41.81	4.04	41.92	3.91
	EQ Map	35	145	16.05	146.09	15.82
	FLCAS	35	90.23	13.86	90.03	13.30
	MDEES	35	102.40	15.67	101.94	15.17
Experimental	MSETT	35	41.65	4.05	43.76	3.29
	EQ-Map	35	146.08	15.61	146.14	15.72
	FLCAS	35	92.80	13.57	90.06	12.86
	MDEES	35	100.26	14.95	102.89	14.47

Table 1: Descriptive Statistics of EQ, FLCAS and MDEES Measures

As displayed in Table 1, the emotional intelligence (MSCEIT and EQ-Map), foreign language anxiety (FLCAS) and empathy (MDEES) mean scores of the subjects in the experimental group changed more from pretest to posttest, compared with emotional intelligence, foreign language anxiety and empathy mean scores of the subjects in the control group. Also, as observed in this table, whereas the emotional intelligence and empathy scores of the experimental group had an increase from the pretest to posttest, the foreign language anxiety score had a decrease from the pretest to posttest.

Before the multivariate and covariate analyses were run to address the research questions, it was important to make sure that control and experimental groups had the normal distribution. The results of test of normality are presented in Table 2. As reported in this table, the significance values of Kolmogorov-Smirnov test of normality for the two groups were found to be .200. Therefore, EQ, FLCAS and MDEES scores in two groups enjoyed 80% of normal distribution, which was acceptable.

Variable	Group	Skewness	Kurtosis	Kolmogorov-Smirnov		
				Statistic	df	Sig.
MSCEIT	Control	.041	.823	.103	35	*.200
	Experimental	-.64	.544	.096	35	*.200
EQ-Map	Control	-.009	-.543	.073	35	*.200
	Experimental	.087	.282	.060	35	*.200
FLCAS	Control	.141	-.495	.051	35	*.200
	Experimental	.145	-.544	.049	35	*.200
MDEES	Control	-.163	.135	.070	35	*.200
	Experimental	-.127	.299	.093	35	*.200

Table 2: Tests of Normality for EQ, FLCAS and MDEES Measures

To address the first research question, a multivariate analysis of variance (MANOVA) was conducted. The posttest scores from two measures were considered as dependent variables and the treatment on pretests as independent variables. The error was originally set at .05 when comparing groups on EQ variables. The results are reported in Table 4. Also, the results of Box and Levene's tests of equality of covariance and variance, which are prerequisites to MANOVA, are presented in Table 3.

Test	Variable	F	df1	df2	Sig.
Box		**.721**	3	32326	.539
Levene	MSCEIT	**.508**	1	68	.479
	EQ-Map	**.000**	1	68	.998

Table 3: Tests of Equality of Covariance and Variance

As displayed in the Box Test, the covariance matrix did not differ significantly across groups, $F = .721$, $p = 539$. In the same line, in the Levene's test, the variance matrices did not differ significantly for both MSCEIT and EQ-Map scores across groups, $F = .508$, $p = .479$ and $F = .000$, $p = .998$, respectively. Therefore, it was quite appropriate to use and interpret multivariate test of significance to determine the treatment effect.

	Effect	F	df	Sig.
Intercept	Pillai's Trace	4845	2	.000
	Wilks' Lambada	4845	2	.000
	Hotelling's Trace	4845	2	.000
	Roy's Largest Root	4845	2	.000
Treatment	Pillai's Trace	**6.17**	2	.003
	Wilks' Lambada	**6.17**	2	.000
	Hotelling's Trace	**6.17**	2	.000
	Roy's Largest Root	**6.17**	2	.000

Table 4: Multivariate Tests of Significance for the Treatment Effect

As observed in Table 4, the treatment of the study for emotional intelligence, in general, was found to be significant, $F(2, 68) = 6.17$, $*p < .05$. In order to see the treatment effect on EQ scores from each measure, the results of univariate analysis are reported in Table 5. As displayed in this table, whereas the F value for MSCEIT scores was found to be significant, $F(1, 68) = 4.53$, $*p < .05$, the F value of EQ-Map was not, $F(1, 68) = .000$, $p = .988$. Thus, a significant difference in the treatment effect was indicated. This difference could account for the MSCEIT mean score increase from pretest to posttest in the experimental group.

Source	Variable	Mean Square	df	F	Sig.
Intercept	MSCEIT	128492	1	9824	.000
	EQ-Map	1494457	1	6006	.000
Treatment	MSCEIT	59.30	1	**4.53**	.037
	EQ-Map	5.71	1	**.000**	.988
Error	MSCEIT	13.08	68		
	EQ-Map	249	68		

Table 5: Univariate Tests of Significance for the MSCEIT and EQ-Map

To address the second and third research questions, separate covariate analyses were conducted on FLCAS and MDEES scores. First, covariate analysis were conducted to see whether there was a significant interaction between the treatment of the study, on the one hand, and FLCAS and MDEES pretest scores, on the other. Then, covariate analyses were carried out to see whether the treatment had a significant effect on FLCAS and MDEES posttest scores when the pretreatment effects were covaried out. The results of analyses are coalesced and reported in Table 6 and 7.

Source	Variable	Mean Square	df	F	Sig.
Intercept	FLCAS	15.17	1	9.40	.003
	MDEES	235	1	9.77	.003
pretest	FLCAS	11526	1	7141	.000
	MDEES	12668	1	526	.000
Treatment	FLCAS	.25	1	**.152**	.698
	MDEES	68	68	**2.84**	.097
Treatment by Pretest	FLCAS	.98	1	**.606**	.439
	MDEES	36	1	**1.49**	.226
Error	FLCAS	1.61	66		
	MDEES	24	66		

Table 6: Analysis of Covariance on FLCAS and MDEES Scores for the Interaction Effect

Source	Variable	Mean Square	df	F	Sig.
Intercept	FLCAS	14.93	1	9.30	.003
	MDEES	229	1	9.44	.003
pretest	FLCAS	11535	1	7188	.000
	MDEES	12758	1	525	.000
Treatment	FLCAS	101	1	**62.92**	.000
	MDEES	252	1	**10.37**	.002
Error	FLCAS	1.61	67		
	MDEES	24	67		

Table 7: Analysis of Covariance for the Treatment Effect on Posttest FLCAS and MDEES Scores

As demonstrated in Table 6, the treatment was not found to be significant for both FLCAS and MDEES pretest scores, $F(1, 66) = .152$, $p = .698$ and $F(1, 66) = .284$, $p = .097$, respectively. More important, no significant interaction between the treatment and the pretest scores was found for both anxiety and empathy measures, $F(1, 66) = .606$, $p = .439$ and $F(1, 66) = 1.49$, $p = .226$, respectively. Therefore, there were not any significant pretreatment differences between the two groups.

As revealed in Table 7, there was a strong linear relationship between pretest and posttest scores from FLCAS and MDEES measures because the p values of pretest variables in the test of treatment effect on posttest scores were found to be significant for both FLCAS and MDEES measures, $F(1, 67) = 7188$, $*p < .05$ and $F(1, 67) = 525$, $*p < .05$, respectively. This finding could indicate the high power of the analysis of variance test for the treatment effect on the subjects' FLCAS and MDEES posttest scores. As observed in this table, the treatment of the study was also found to have a significant effect on both FLCAS and MDEES posttest scores of the subjects in the experimental group, $F(1, 67) = 62.92$, $*p < .05$ and $F(1, 67) = 10.37$, $*p < .05$, respectively.

6   Discussion and Implications

The results reported above raise a number of issues. First is the improvement of emotional intelligence in the cognitive-affective reading-based course, particularly significant improvement of MSCEIT scores, which are, in Mayer's (2001) terms, more scientifically

based than scores obtained from mixed-approach measures. The studies in the literature empirically support the positive relationship between EQ, on the one hand, and academic success (Stottlemayer 2002; Besharat et al. 2005), second language performance (Pishghadam 2007) and language learning strategy use (Aghasafari 2006), on the other. However, these studies fail empirical evidence on how to improve EQ in an EFL context. This is the point this study can significantly touch through the results obtained in Table 4 and 5. It is assumed that EQ scores of the subjects in the experimental group improved through stimulating humor, metaphor, wit, fancy and other imaginative devices found in the literary readings assigned in the cognitive-affective reading-based course. Humor was not a just literary device per se, but possibly, as Vaid (2006) has argued, a technique that the subjects could use as the interpersonal management of emotion, both their own emotions as well as those of others. Metaphor and metonymy found in literary readings, as Jakobson (1988) has stated, were not just figures of speech, but possibly fundamental modes by which the subjects in the experimental group felt and their mind worked. Besides, in one way or another, the literary readings, which were the basis of the classroom activates in the cognitive-affective course, offered the subjects opportunities to relate the real world of fictional literary characters to their own past experiences as well as the potential to address four basic questions in line with the concept of emotional intelligence: "how may/was he or she feel/feeling?", "what may/was she or he think/thinking as a result of these feelings?", "what may cause/caused each person to feel that way he or she does/did?" and "what may/did he or she do to manage these feelings?".

The discussion of the above issue raised by the empirical findings of the study on EQ enables us to argue for the following pedagogical implications. Given that students can learn by observing, symbolic and representational modeling, EQ-based syllabuses can come into being with many liberal arts such as poetry, drama and stories. Young learners can learn much about their feelings when they read literary excerpts that depict characters with tendency to experience specific emotions. Using different techniques in literature-based reading courses such as brainstorming, journal writing, peer-discussion, cooperative learning, self-assessment, and creative writing, language learners learn to perceive emotions, differentiate between emotions and subsequent need to take appropriate action in response to negative affect which could be a deterrent to language learning. Besides, English classes in some countries such as Iran are generally a threatening milieu for students since their feelings are not taken into account. Students suffer from error phobia, meaning that they do not speak or interact until they feel that they are perfect to do so. The classes are generally teacher-entered and EFL learners are allowed less to express their voices. By implication, emotional intelligence skills touched in cognitive-affective courses can be a great help in this context. When EQ skills develop through these courses, second language skills, as Pishghadam (2007) reported, can improve and more academic success is expected.

Second is the difference in the treatment effect on MSCIT and EQ-Map scores, as observed in Table 5. The significant improvement of MSCIT scores, compared with non-significant improvement of EQ-Map scores can challenge the wild claim made by the advocates of mixed approaches such as Goleman (1995) about improving EQ through intervention courses. The result obtained in Table 5 can also suggest that emotional intelligence is partly biologically based and partly learned. The cognitive-affective reading-based course with its focus on literary readings might have taught the subjects emotional knowledge, that is, what a person learns about emotions. This emotional knowledge is different from the concept of character which is mixed with the mental abilities in mixed-approach definitions of emotional intelligence. From a theoretical point of view, this issue is a further support for an ability model of EQ. The implication is that only emotion knowledge can be inculcated through a reading curriculum in which emotionally colored text are used to train subjects to perceive emotional information better to facilitate their thinking.

Third is the significant decrease in the foreign language anxiety scores observed in the experimental group. One reason for this result is that the cognitive-affective reading-based course in which literary readings were used might have changed the subjects' negative expectations which could lead to their higher anxiety and negative affect. Besides, this cognitive-affective reading-based course with its emotionally colored literary readings must have offered the subjects the opportunity to voice their emotions, avoid discomfort and promote helpful function of emotion and thought. Compared with the subjects in reading-based course in which non-literary readings were used, the subjects in the cognitive-affective course where literary readings were used also interacted more with their peers. Therefore, they might have learnt to be less anxious. The study by Besharat et al. (2005) on the impact of emotional intelligence on mental health or stress can support the therapeutic role of this cognitive-affective course, which is in line with the concept of emotional intelligence.

Students with higher language anxiety, as Broidy (2005) argues, are prone to have irrational ideas, to be less able to control their impulses, and to cope more poorly than other learners. Learners with high degree of anxiety are more likely to be self-focused and perhaps less socially desirable because, as Horwitz et al. (1986) argue, foreign language anxiety serves as a deterrent to social facility. By implication, language learning can gain momentum through the kind of cognitive-affective course employed in the present study since, in Elder's (1997) words, once the danger signal is off through these courses, the speed of language learning can be accelerated. The implication is that EFL learners can enjoy communicative facility and experience less levels of language anxiety if teachers rely on emotion-generating and emotion-managing techniques in courses which use emotionally colored literary excerpts in an attempt to improve EQ. Besides, English is spoken in limited contexts in EFL contexts and EFL classes are rather threatening to both teachers and students because much pressure is put on the correct pronunciation, grammar and perfect accent. Through cognitive-affective courses, both teachers and learners can appropriately tackle some of the affective and communication problems besetting in the classrooms and evaluate language performance in an optimistic light, leading to better L2 learning performance.

The Final issue is the significant improvement of empathy scores in the experimental group. One reason for this might be that the cognitive-affective course in which literary readings were used boosted the subjects' social perception as well as their focus from the self to others. Through social interaction and experiencing characters' emotions, the subjects practiced understanding of others in their inwardness and individuality. That is, this course in which literary readings were used in an attempt to integrate cognition and affect created emotional attachment to others.

The discussion of the above result obtained by this study has pedagogical implications. If we develop empathy through cognitive-affective courses in which literary readings are used as the basis of second language learning, learners can also gain cultural understanding, which is the fifth skill besides speaking, listening, reading and writing (National Standards 1996). Since it is very difficult for many language learners to travel or live in a target community, literature-based courses can accelerate the pace at which learners reach the desired level of intellectual empathy and intercultural understanding, shifting their cultural frames of reference, setting aside their own world view assumptions and intentionally taking on a better perspective. If EFL/ESL students have training to imaginatively put themselves in place of characters from the target culture in reading short literary fictions, it becomes easier to reconstruct their viewpoints. Hence, cultural learning as a component of language learning enhances. Through literature-based reading courses, instructors and teachers of English, therefore, should help learners with personalization and depersonalization to express emotions and internalize the other in the self. Also, materials developers, curriculum designers, educators, and intervention specialists should pay utmost attention to EI/EQ skills, which

relate to social and emotional functions of language, and incorporate them into their syllabuses.

7   Limitations

Investigations into emotional intelligence and empathy are just beginning to be part of the second language acquisition/learning. As in any new area of the study, several limitations in the research design make it difficult to make sweeping generalizations about the potential implications of this research. First, the quasi-experimental method of this research was limited by its selective undergraduate EFL subjects majoring in Translation of English. This methodological dearth limits the extent the findings are generalized to the population of EFL Iranian and non-Iranian students who do not resemble the subjects of this study. Second, because of the demanding type of the treatment carried out in this study, a larger sample in the present study would make the conduct of the treatment in the experimental group impossible for the researcher. However, the small pool of subjects that data collection instruments of the study sample can pose a threat to the validity of the study. Third, this study used three self-report questionnaires, along with a performance-based ability measure of EQ, to measure emotional intelligence, foreign language anxiety and empathy. A potential limitation relates to the nature of these self-report instruments. The problem with the self-report scales, as Ciarrochi et al. (2001) state, is that they measure perception and some learners do not have an accurate understanding of their own competence or construct. Reliability of data obtained through these self-report instruments depends on the truthfulness of the respondents in filling out the questionnaires. Therefore, it might have been better to complement the results by other more performance-based measures to increase the construct validity of the study. Finally, this study investigated the role of emotional intelligence, foreign language anxiety and empathy among EFL learners whose first language was Farsi. No attempts were made to investigate them in a heterogeneous context. Therefore, this study was not intended to be a comprehensive study of second language learning; rather, it focused on several factors that could have an effect on second/foreign language learning in a rather homogenous context.

8   Conclusion

As Gardner (1993) states, to fully understand the complexity of language learning process, we should pay attention to internal mechanisms and social interpersonal interaction involved in this process. To this end, emotional intelligence can be a great help since, as Goleman (2001) states, it not only serves as an internal mechanism, but also interlocks with the external environment. In line with the concept of emotional intelligence, this study presents a preliminary step towards approaching a cognitive-affective course or, in Forgas' (2001) terms, an *affect into thought* infusion course. Attempts were also made to draw on literary readings which could provide the diverse examples of emotional life. The results of the study indicated that the literary readings used in the cognitive-affective reading-based course helped the subjects improve their emotional intelligence skills. This finding encourages us to use tools and strategies to invest on EQ/EI skills in a reading-based curriculum to promote emotions as positive in L2 learning. However, we should avoid wild generalizations about the predictive power of the cognitive-affective course which makes use of literary excerpts as reading materials because, compared with the MSCIT mean score increase, the improvement of EQ scores from the mixed approach measure of this study was not significant.

Also, this study provided the empirical evidence for the therapeutic role of the cognitive-affective reading-based course in which the literary readings were used. This course significantly lowered the subjects' foreign language anxiety scores and improved their empathy scores. Given the role of emotional intelligence, foreign language anxiety and empathy in second language learning, teachers should make use of *affect into thought* infusion

courses through studying fictions to help learners think rationally within an emotionally colored context. To enhance the integration of cognition with affect, they should also orient a curriculum towards helping students identify their own feelings and feelings of others involved.

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