Emotional Intelligence and Critical Thinking Ability as Correlates of EFL Learners' Vocabulary Knowledge

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Abstract

The current study examined the correlation among Iranian EFL learners' emotional intelligence (EI), critical thinking (CT) ability, and L2 vocabulary knowledge (VK). To this end, surveys were administered to 75 Iranian advanced EFL participants. Analyses of the data revealed a mutual relationship between the Iranian EFL learners' EI and their L2 VK. Similarly, a positive correlation was found between their CT ability and L2 VK. Additionally, it was revealed that some components of EI enjoy a robust role in predicting the participants' L2 VK. Finally, gender was found not to impact the correlation between the participants' CT ability and their L2 VK. Findings suggest that EFL instructors might reserve a good space in their programs to further nourish and build features of EI and CT ability in the future generations of their L2 learners.

Keywords: Emotional Intelligence (EI); Critical Thinking (CT) Ability; L2 Vocabulary Knowledge (VK); EFL Learners

1. Introduction

It is, to a large degree, true that "learners bring many individual characteristics to the learning process which will affect both the way in which they learn and the outcomes of their learning process" (Williams & Burden, 1997, p. 88). For good reasons, then, individual characteristics and dispositions such as their level of motivation, prior knowledge of language, level of autonomy, and so on are consistent predictors of their language achievement (Dörnyei & Skehan, 2003). It ought to be noted, however, that in this respect, students' emotional intelligence (EI) can act as a springboard to help them in numerous tough circumstances. Parallel to that, one of the key intellectual abilities recognized by ELT scholars as a determiner of L2 learning success is the learners' critical thinking (CT) ability. Freeley and Steinberg (2000) arguably took the position that CT is "the ability to analyze, criticize, and advocate ideas; to reason inductively and deductively; and to reach factual or judgmental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief" (p. 2). Along the same line, L2

learner's vocabulary knowledge (VK), on the other hand, has been cited as a vital component of L2 proficiency (Schmitt, 2010). VK, obviously, is central to language learning, and it is particularly significant for L2 learners/teachers to become fully aware of the factors pertinent to its growth and enrichment. Laufer and Nation (1999) highlight the significance of the broadening of L2 students' knowledge of the lexical items of the L2. They posit that the command of VK is an essential issue for communication purposes.

Given the presumed fact that vocabulary is an important ingredient of any language and L2 VK is an essential part of an L2 (Richards & Renandya, 2002), it seems necessary to explore the relationship between this obviously crucial variable and the variables likely to affect its acquisition and development, including learners' CT ability and their EI levels. As a consequence, the present study sought answers to the following questions:

1. Is there any significant relationship between Iranian advanced EFL learners' EI and their L2 VK?

2. Is there any significant relationship between Iranian advanced EFL learners' CT ability and their L2 VK?

3. Does gender as a moderator variable affect the relationship between Iranian EFL learners' CT ability and their L2 VK?

4. Which one of EI components is the best predictor of Iranian advanced EFL learners' L2 VK?

2. Literature Review

2.1 Emotional Intelligence

Despite the fact that intelligence was first supposed as a one-dimensional and unilateral concept by its key advocates (e.g., Binet, 1905), "it is now being regarded as a multifaceted construct which is prone to enhancement" (Alavinia & Ebrahimpour, 2012, p. 2). The establishment and creation of EI owes to, a great deal, to the works of authors and scholars such as Gardner (1983), Salovey and Mayer (1990), Goleman (1988), and Bar-On (1997a, 1997b). In their definition of EI, Salovey and Mayer (1990) identified it as the "ability to monitor one's own and other's feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action" (p. 189).

It should be borne in mind that the term *emotional quotient* (*EQ*) was first coined by Bar-On (1997b) as a counterpart to intelligence quotient. Bar-On conceptualized EQ as "an array of noncognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands

and pressures" (p. 14). Elsewhere, Bar-On (2006) defines EI as "being concerned with effectively understanding oneself and others, relating well to people, and adapting to and coping with the immediate surroundings so as to be more successful in dealing with environmental demands" (p. 4). Additionally, he acknowledges the fact that EI traits are capable of being developed during the course of time through training and hard work (Bar-On, 2006). Moreover, among models of EI, Bar-On's (1997a, 1997b) emotional-social intelligence model stands out. In brief, his model comprises of five broad areas of competencies, including (a) intrapersonal component which is concerned with self-regard, emotional self-awareness, assertiveness, independence, and self-actualization, (b) interpersonal component which is concerned with empathy, social responsibility, and interpersonal relationship, (c) adaptability component which is conceptualized as reality testing, flexibility, and problem-solving, (d) stress management component which is the capability of stress tolerance, and impulse control, and (e) general mood component which deals with traits such as optimism and happiness.

2.1.1 Latest probes into EI

In their study, Nelson and Low (2003) argue that emotionally talented students are skilled in interpersonal communication, goal achievement, personal responsibilities, working abilities, and self-management. They further contend that EI is conceptualized as a confluence of learned abilities resulting in wise behavior, high achievement, and mental health. Concerning the realm of EFL, Fahim and Pishghadam (2007) attempted to find the relationship between EQ, IQ, verbal intelligence, and the academic achievement of Iranian EFL students. Based on the findings of their survey, they highlighted that learners' academic achievement was strongly associated with several dimensions of EI (e.g., intrapersonal, stress management, and general mood competencies). In another important research, Skourdi and Rahimi (2010) investigated the relationship among EI, linguistic intelligence, and vocabulary learning. Their findings revealed that there was a positive relationship between learners' EI levels and their linguistic intelligence. They also reported that there was a high correlation between learners' EI levels and their vocabulary acquisition. In a similar vein, Abdolrezapour and Tavakoli (2012) found a high positive correlation between the EFL learners' achievement in reading comprehension and their corresponding EI levels. In a more recent survey, Alavinia and Ebrahimpour (2012) conducted a survey to identify the possible correlation between EI and learning styles among EFL sophomore learners. Their findings suggested that there was a positive linkage between those two constructs under investigation. They posited that the more the former is practiced by learners, the more efficient they would be in applying affective types of the latter in their learning. In like manner, Abdolrezapour (2012) strived to explore the impacts of EI

traits on EFL learners' performance in writing. The results revealed the enormous impacts of the learners' EI traits on their writing performance.

2.2 Critical Thinking Ability

From an etymological perspective, the word *critical*, according to Paul and Elder (2008), derives from two Greek roots *kriticos* (meaning, well-thought judgment) and *kriterion* (meaning, criteria). Etymologically, then, the word implies the development of "meticulous judgment based on criteria" (Pual & Elder, 2008). According to Paul (1985, as cited in Fahim, Bagherkazemi, & Alami, 2010), CT is "learning how to ask and answer questions of analysis, synthesis and evaluation" (p. 37). It should be noted that problem-solving and decision-making skills appear to reside in the core principles of CT. For instance, Halpern (2003), considers CT as "purposeful, reasoned, and goal-directed and the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions" (p. 6). Hughes and Lavey (2008), based on their grasp of the CT construct, highlight the significance of using CT skills/principles to persuade others to relinquish their weird beliefs. They put forth the argument that by applying CT skills in our arguments, we can be in a better position to dislodge the perspectives that have no place in correct reasoning.

Facione (2011) set out to enumerate the fundamental characteristics of an ideal critical thinker. He states that:

> A good critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results. It combines developing CR skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society. (p. 11)

2.2.1 Empirical research findings on CT

In his study, Facione (2011), stated that there was a positive relationship between the learners' CT ability and their reading comprehension. In a similar vein, Paul (1990) highlighted the correlation between CT ability and reading comprehension. It is important to note that the field of EFL in this regard has had its own share of the overall impacts of CT research. Likewise, in their study, with its logistics in the Iranian context, Fahim, Bagherkazemi, and Alami (2010) attempted to discover the possible relationship between the Iranian EFL test-takers' CT ability

and their performance on the reading section of TOEFL. For their purpose, they included 83 EFL advanced male and female students in their investigation. Their participants were required to take both a CT appraisal test and a reading selected from the TOFEL test. Based on the results, they concluded that the participants' scores on the CT test had a statistically significant relationship with their performance on the reading sample test of the TOFEL.

In an unprecedented research project, Ghanizadeh and Moafian (2011) strived to find out the relationship between the participants' CT ability and their EI levels. To achieve this goal, they used Watson-Glazer's CT test and Bar-On's Emotional Quotient Inventory (EQ-i) questionnaire. The findings showed that there was a positive correlation between the learners' CT ability and their EI levels. They also made clear that age cannot have any impact on the relationship between CT and EI. Kamali and Fahim (2011) investigated the relationship between the Iranian EFL learners' CT ability, resilience levels, and their reading comprehension. Their main objective was to find out to what extent CT skills can influence and enable their participants to cope with the ambiguous and unknown vocabularies in the reading comprehension test. The results demonstrated that the Iranian EFL learners' CT ability had a statistically significant impact on their performance on the reading comprehension test. Furthermore, the participants' CT skills had significantly impacted their resilience ability in dealing with unfamiliar lexical items within the reading test. As far as the recent research on CT is concerned, Gholami and Purfallah (2014) conducted a robust study to explore the impacts of CT skills on L2 vocabulary learning. According to their findings, teaching CT skills can immensely influence EFL learners' stock of vocabulary and, hence, give them the sufficient ability to acquire the L2 lexical items without so much trouble. As it stands, it appears very probable that further investigation of the CT construct can be very promising in the near future and can definitely result in more excavations of the domain of CT which, in turn, will produce very fruitful outcomes for the field of ELT in particular.

2.3 Theoretical Concepts of L2 Vocabulary Knowledge

Nunan (1991) considers "vocabularies to be the basic building blocks of a language, units of meaning from which larger structures such as sentences, paragraphs, and whole texts are formed" (p. 32). Similarly, Richards and Renandya (2002) see "vocabulary knowledge as the core component of language proficiency" and they persist that "it provides much of the basis for how well learners speak, listen, read, and write" (p. 255). According to these authors, lack of an extensive vocabulary repertoire can put a lot of obstacles in the way of L2 learners to use a multitude of the L2 sources of information such as reading English newspapers, watching television, and the like. In the past, vocabulary teaching/learning were

often given little priority in L2 teaching programs. Specifically, in L2 research, there have been few empirical studies to date on the relationship between EFL learners' VK and their other personal linguistic characteristics such as their EI levels and their speaking/writing abilities. Over the past decade, "there has been a renewed interest in the nature of vocabulary knowledge and its perceived role in learning and teaching" (Richards & Renandya, 2002, p. 255). More recently, there has been a growing interest among EFL/ESL scholars to meticulously explore the impacts of VK and its relationship with other key variables.

2.4 Link Between EI, CT Ability, and VK

Although, to the best of the present researchers' knowledge, there are few, if any, studies documenting the relationship between EI, CT ability, and L2 VK together, there are some studies establishing the relationship between EI and vocabulary learning/knowledge and CT and vocabulary learning/knowledge.

For example, Alavi and Rahimi (2011) examined the link between EI and vocabulary achievement among a group of Iranian preuniversity students. The participants included both male and female students who filled out the Bar-On's EQ-i and took a vocabulary achievement test. The findings demonstrated a low and negative relationship between the participants' EI and VK. The authors, then, concluded that this finding is not in line with the findings reported in previous research which provided some hints as to the controversial nature of the relationship between EI and vocabulary learning.

Jamali Nesari, Karimi, and Filinezhad (2011) investigated the relationship between EI and vocabulary achievement among a total of 148 randomly selected Iranian L2 learners. Homogenized through taking Nelson English Test, the participants completed Bar-On's EQ-i and took a vocabulary achievement test. The results of the Pearson product-moment correlation coefficient indicated no significant relationship between EI and VK among the participants.

Still in another study, Skourdi, Rahimi, and Bagheri (2014) probed the relationship between EI and VK. The participants included a total of 103 junior university students majoring in English-related fields including ELT, translation, and English literature. Schutte's Self-Report Emotional Intelligence (SSREI; 1998) was employed to assess the participants' level of EI, and Nation's Level Tests (2001) was used to assess the participants' VK. The results showed that there was a positive relationship between EI and VK.

As to the relationship between CT and VK, Fahim and Komijani (2010) investigated the relationship between CT, VK, and vocabulary learning strategies. The participants included a total of 70 intermediate EFL students majoring in English-related fields including English literature, English translation, and ELT. The

Critical Thinking Questionnaire (CTQ), the Productive Vocabulary Levels Test (PVLT), and the Vocabulary Learning Strategies Questionnaire (VLSQ) were the major instruments used for the data collection purposes. The results showed that the participants' L2 VK was highly correlated with their CT ability. There was also a positive relationship between their CT ability and their self-reported degree of determination, memorization, cognitive, and metacognitive strategies employed for L2 vocabulary learning.

3. Method

3.1 Participants

To use Dörnyei's (2007) terminology, a total number of 86 captive (i.e., the participants' in one's own institution) advanced (based on the students' placement policies of the institutes) EFL (fe)male participants were involved in the current research. The participants were selected nonrandomly from Resa, Asatid, the ILI, and Maghreb Zamin Language Institutes located both in Urmia and Boukan, West Azerbaijan, Iran. More importantly, it is informative to note that for reasons of the homogeneity of the participants in terms of VK, the ultimate number of the participants involved in the study was reduced to 75 candidates (51 males and 24 females) based on their scores on the PVLT (see below). The participants' age ranged from 17 to 28. As far as the research sampling procedure was concerned, we strived to use a nonprobability sampling procedure so as to take into account the geographical proximity, easy accessibility, and the willingness of the participants (Dörnyei, 2007).

3.2 Instruments

Three main instruments were used for data collection purposes in the present study. The descriptions of these instruments are as follows:

3.2.1 Productive Vocabulary Levels Test (PVLT)

PVLT is developed by Laufer and Nation (1999) as a data-collection instrument for measuring the VK of ESL/EFL learners across the world. With respect to the overall content of the test, it consists of 90 completion-type items with samples of 18 items for each 2,000, 3,000, 5,000, university word lists, and 10,000 frequently used words. According to Laufer and Nation (1999), the test enjoys a very robust reliability (0.91 on KR21) and validity which has rendered it to be a dependable and reliable tool for the assessment of the VK construct. Apart from all that mentioned, PVLT enjoys robust test-practicality criteria in that it is very easy to be administered, scored, and quite adaptable to be interpreted based on the results of the test (Fahim & Komijani, 2010). As regards the time allocation for completion of the test, a total time of 40 min was deemed to be sufficient.

3.2.2 Bar-On's Emotional Quotient Inventory (EQ-i)

The main data-collection tool utilized for the measurement of the EI levels of the participants was Bar-On's (1997) EQ-i. The original version of the test included 133 questions, but as a result of later revisions applied to the test by Bar-On himself (1997a, 1997b), its size was reduced to only 117 questions. Furthermore, through later modifications, Samouei (2003) tried to adapt and amend the test so that it could be domestically applied to the Iranian context. To this end, he safely ruled out those items in the test, which were obviously irrelevant or inappropriate for use in the domestic environment of our country and, thereby, shrank the total number of the items comprising the test to only 90 questions. Thus, what was utilized as the main source of data collection for the current study was this reduced form which includes 90 questions. The answers to the test questions were to be provided on a 5-point Likert scale ranging from 1 (*Strongly Agree)* to 5 (*Strongly Disagree*). Whereas a greater number of the questions (48 out of 90) were scored in the direct mathematical order from 1 to 5 (with the full score being given to *Strongly Agree* and the minimum score being assigned to *Strongly Disagree*), the remaining 42 were reversely scored. It needs to be pointed out that the cronbach's alpha reliability index for the EQ-i questionnaire taken by the 75 participants in the present study was calculated to be 0.94.

3.2.3 Peter Honey's Critical Thinking Questionnaire (CTQ)

The test was developed by Honey (2000) as an instrument to measure L2 learners' levels of CT ability. It is pivotal to note that he made some further adaptations later on the test to make it more suitable for its desired purposes. As regards the format of CTQ, it comprises of 30 items in the form of short statements seeking to measure L2 learners' ability in different CT abilities. Regarding the CTQ response format, it employs a 5-point Likert scale ranging from 1 (*Never*) to 5 (*Always*) with *Always* carrying the maximum score and *Never* the minimum score. The time estimation for the completion of CTQ is approximately 15 min. Because CTQ enjoys a very good readability index (e.g., Honey, 2000; Kamali & Fahim, 2011), we preferred to utilize the English version in the current study. Parallel to that, throughout the literature, CTQ has been reported to enjoy very satisfactory reliability and validity values (e.g., Fahim & Komijani, 2010; Kamali & Fahim, 2011). In this study, the cronbach's alpha index for CTQ proved to be 0.91 which is, indeed, indicative of its adequate reliability for the desired purposes of the present study.

3.3 Procedure and Data Analysis

Prior to getting into the nuts and bolts of the procedure of the research project, it should be borne in mind that attempts were made to assure that the

participants had a full consent and a great amount of willingness to participate in the study. At the beginning step of the study, the PVLT was administered to 86 participants in total. As a matter of fact, the main use and aim of the PVLT was two-fold. Firstly, it enabled us to clearly balance out and homogenize the ultimate number of the participants. More importantly, it served as the key instrument for measuring their VK. So far as the homogeneity of the participants was concerned, we tried to include only those participants who had scored within -/+1 standard deviation from the mean and, thereby, excluded those who had scored below or above 1 standard deviation from the mean. The reason lies in the fact that vocabulary size can affect guessing unknown vocabulary. In the second step, for reasons of logistics and time constraints, the participants were given the luxury of filling out the EQ-i questionnaires at their leisure. They were, however, informed to try to complete the questionnaires within the time limitation allowed for their completion. Another key point around this step was the fact that the participants were more than happy to take the hands-out home and fill them out there, while they were free from any kind of hardened and stressful conditions. After the elapse of a couple of days, to give the participants a sufficient amount of time and space to recover from the two previous test lags, the CT questionnaires were distributed among the same participants. It took almost a week before we could have full access to the handed questionnaires. Afterwards, through the use of SPPS (version 19), the data were subjected to a series of statistical analyses, such as Pearson product-moment correlation coefficient, partial correlation, and standard multiple regression.

4. Results

4.1 Preliminary Analyses

The main reason behind the administration of the PVLT at the outset of the study was to establish a warranted homogeneous distribution of the participants' scores so as to ensure the ultimate results of the study. Those who were clearly different from the majority in terms of their vocabulary scores were omitted to make the sample more homogenous. This led to the exclusion of those within approximately 1.5 standard deviation from the mean. Overall, 13% of the participants were excluded from the study. Figure 1 can easily depict the logic behind this exclusion:
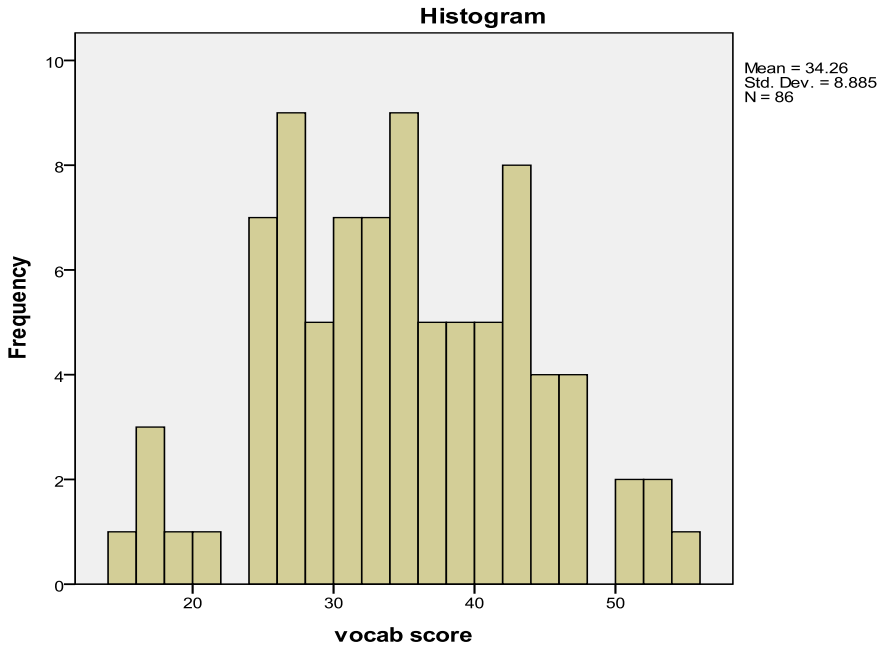
Histogram

Mean = 34.26
Std. Dev. = 8.885
N = 86

Figure 1. Histogram for Participants' Vocabulary Scores on the PVLT

Therefore, the ultimate number of the participants was reduced to 75. Table 1 presents the descriptive statistics related to the 75 advanced EFL participants of the study and their mean scores on the PVLT:

Table 1. *Descriptive Statistics of Participants' Performance on PVLT*

Model	*N*	Mean	Std. Deviation	Skewness	Std.	Kurtosis	Std.
Vocabulary Score	75	34.44	6.735	.153	.277	-1.14	.548

In Table 2, the result of the Kolmogorov-Simirov test is shown. As a matter of fact, the test mainly functions to assess the normality of the distribution of scores. Basically, a nonsignificant result (a *Sig*. value of more than .05) in the test indicates normality of the distribution of the scores. In this case, the *Sig*. value is .092, suggesting the realization of the assumption of normality of the scores:

Table 2. *Kolmogorov-Simirov's Test of Normality*

		df	*Sig.*
Kolmogorov-Simirov	.095	75	.092

Once the initial homogeneity of the scores and their reasonable distributions were warranted, we proceeded to provide cogent answers to the research questions. With reference to the first research question, which was about the possible relationship between advanced EFL learners' EI levels and L2 VK, a scatterplot was generated to ensure and check for any violation of the assumptions of linearity and the VK scores (see Figure 2):
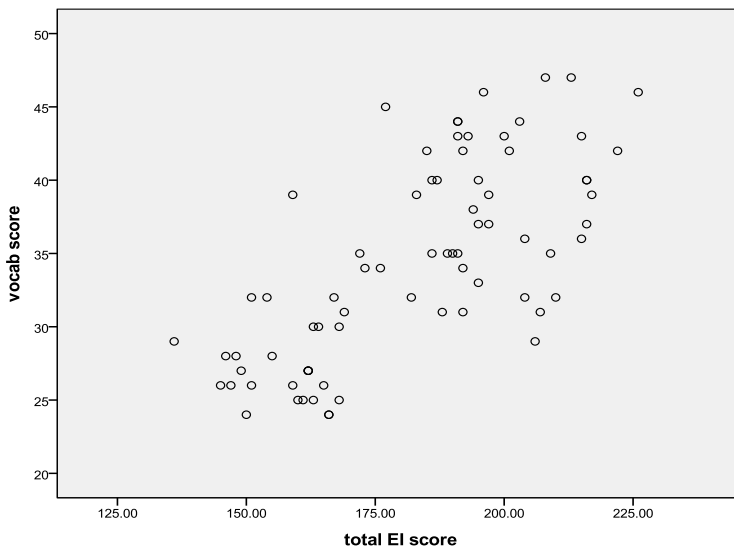

Figure 2. Scatterplot for Participants' Total EI and VK Scores

A careful inspection of the scatterplot in Figure 2 points to the fact that the relationship between the participants' EI and the VK scores is roughly linear and, more importantly, the scores are evenly distributed. Additionally, a further analysis of Figure 2 helps reveal that the concentration of the scores is based on a cigar shape, which further confirms the fact that there exists a positive dynamic interplay between the two variables under investigation. The results in Figure 2 indicate that no violation of the assumptions of linearity and normality of the distribution of scores was detected, thereby guiding us to safely run the correlation coefficient index.

4.2 Results of the Study

Once the assumptions of the linearity and normality of the scores between the participants' total EI and VK were ensured, we safely proceeded with the calculation of Pearson product-moment correlation coefficient between these variables. As a result, the relationship between the participants' EI (as measured by the total EI score) and the VK score (as measured by the total vocabulary score) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to check for any violation of the assumptions of normality, linearity, and homoscedasticity. As shown in Table 3, the results of the Pearson product-moment correlation coefficient indicated that there was a strong, positive correlation between the two variables, $r = .71$, $n = 75$, $p < .0005$, with high levels of the EI scores linked with high levels of the vocabulary scores.

Table 3. *Coefficient of Correlation for Participants' Total EI, VK Scores*

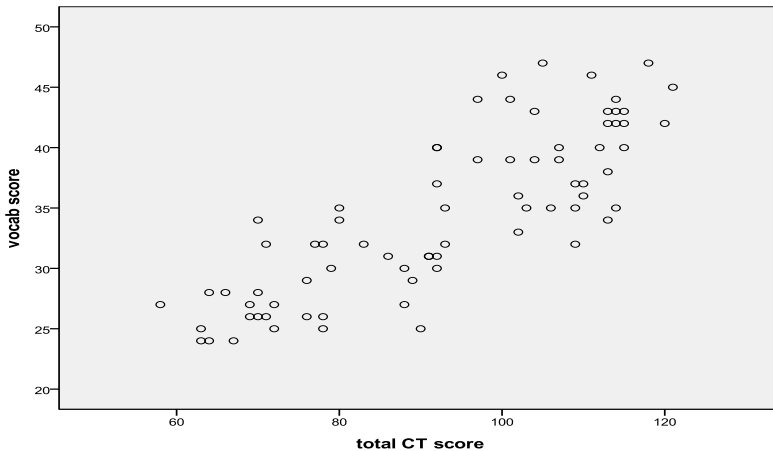| Correlations		
Models	EI Score	Vocab Score
EI Score	1	.710
Vocabulary Score	.710	1

Figure 3. Scatterplot for Participants' Total CT and VK Scores

As to the possible relationship among the participants' CT ability and L2 VK, similar procedures and steps were taken so as to make sure the assumptions of the normality and distribution of scores. This crucial issue was checked through generating a scatterplot in order to graphically demonstrate the degree of mutual

association between the participants' total CT and VK. Figure 3 displays the scatterplot for the relationship between the participants' total CT and VK scores. As seen in Figure 3, the assumptions of linearity and normality of the distribution of the participants' scores were not violated. In order to further unfold the relationship between their total CT and VK scores, Pearson correlation coefficient was run. The findings revealed that there was a highly strong, positive correlation between the two variables, $r = 0.82$, $n = 75$, $p < .0005$. As shown in Table 4, the correlation between the participants' total CT and VK scores was statistically significant, that is, *Sig*. (2-tailed = .000). All in all, the covariance between the participants' CT and VK scores was proved to be both strong and positive, with the participants' good performance on the former test connected with their positive performance on the latter:

Table 4. *Coefficients of Correlation for Participants' Total CT and VK*

Correlations		
Models	CT Score	Vocabulary Score
CT Score	1	.818
Vocabulary Score	.818	1

For research question three which was concerned with the possible impact of gender, as a moderator variable, on the relationship between the Iranian advanced EFL learners' CT ability and their L2 VK, partial correlation was used to explore the relationship between the two variables under investigation while controlling for the impact of gender. As seen in Table 5, the normal coefficient between the participants' total CT and VK scores was $r = 0.82$, while no control variable (gender) was in operation. The bottom half of Table 5 reveals the same correlation analyses, but this time controlling for and taking out the possible effects of the moderator variable (e.g., the participants' gender). In this case, the new partial correlation was $r = 0.77$, suggesting that gender, as a moderator variable, did not artificially impact the positive correlation between the participants' CT and VK scores considerably:

Table 5. *Correlation for Participants' Total CT and VK Scores While Controlling Gender's Impact*

Correlations

Models		CT Score	Vocabulary Score	Gender
None	CT Score	1	.818	-.109
	Vocabulary Score	.818	1	-.131
	Sex	-.109	-.131	1
Sex	CT Score	1	.774	
	Vocabulary Score	.774	1	

In order to gauge the predictability power of the EI components with respect to the participants' VK and provide an appropriate answer to research question four, standard multiple regression analysis was run. Prior to reporting the statistical results of the test, attempts were made to check for the assumptions of multicollinearity and independence of residuals. A quick analysis of the results showed that the *R* square for the EI components was 0.67, which was indicative of the fact that approximately 67% of the variance in the dependent variable (i.e., VK scores) was explained and predicted by the EI components (see Table 6). Moreover, in Table 6, the statistical significance of the *R* square is indicated, assisting us to realize that the EI components, in their prediction of the participants' total VK score reached the required statistical significance (*Sig.* = .000):

Table 6. *Predictability Power of EI Components With Respect to Participants' Total VK Scores*

Model	*R*	*R* Square	Std. Error of the Estimate	ANOVA *Sig*.
EI Scales	.819	.671	3.999	.000

As a consequence, these findings pushed us to draw the conclusion that the participants' L2 VK was fairly explained and predicted by their EI components. In order to understand which of the EI components better contributed to the prediction of the dependent variable (i.e., the participants' VK scores), close inspection of the standardized coefficients among the different components of the EI scores in Table 7 helped reveal that the intrapersonal component made the strongest contribution to predicting the VK scores of the participants (*Beta* = 0.49). On the contrary, the interpersonal component made the least amount of contribution to explaining the variance of the participants' VK scores (Beta = 0.10):

Table 7. *Beta Value for the Participants' EI Scales*

Coefficients

Models	Unstandardized Coefficients		Standardized Coefficients	*t*	*Sig.*
	B	Std. Error	Beta		
Intrapersonal Scale	.243	.127	.487	1.915	.040
Interpersonal Scale	.079	.088	.100	.900	.371
Adaptability Scale	.153	.122	.254	1.255	.214
Stress Management	.455	.128	.402	3.561	.001
General Mood	-.345	.121	-.437	-2.858	.006

To sum up, as to the last research question, it can be inferred from the analysis of the results that the participants' EI, in general, fairly explained the perceived variance in their VK scores. Similarly, it was discovered that among the EI components, intrapersonal and stress management had significant contributions.

5. Discussion

As the results of the statistical analyses showed, the EI of the advanced EFL learners' was discovered to be positively correlated with their knowledge of L2 vocabulary. Concerning the dynamic interplay between these two variables, it is deduced that improvements and developments in L2 learners' EI levels can probably culminate in beneficial repercussions in their progress in learning a multitude of lexical items. Additionally, the results of the standard multiple regression analysis helped clarify that the EI scales were, on the whole, good predictors of the participant L2 VK. This positive relationship could be elucidated by the nature of EI. As Goleman (1995) posits, EI is the ability to preserve one's motivation and continue to struggle to be hopeful, even when satisfaction might be delayed. Vocabulary learning is often accompanied by frustration as by nature vocabulary is fugitive and hard to retain. It, therefore, stands to good reason to find correlations between EI and VK.

Along the same line, through the data analysis results, it was inferred that there was a statistically significant correlation between the participants' CT ability and their degree of mastery over the L2 lexical items. This finding can also be explained in the light of the definition put forward by Siegel (1988) for CT as "skills plus tendencies" (p. 6) which involves both evaluation of appropriacy and the ability to actually utilize the learned materials in everyday life contexts. Evaluation and utilization are two integral components of vocabulary development. Moreover, it was discovered that gender did not have any considerable impact on the correlation between the participants' CT ability and their L2 VK.

It is pivotal to indicate that the findings are in line with that of Aghasafari (2006), in which he discovered a positive linkage between the participants' EI levels and their use of language learning strategies. In this study, a high positive relationship between the participants' EI levels and their use of VK was discovered. Additionally, the findings of this survey corroborated the results of the research by Rahimi and Skourdi (2010), in which they unfolded that there was a highly positive correspondence between the learners' EI levels, linguistic intelligence, and vocabulary learning. Moreover, the findings of the present study are in correspondence with that of Mollahossein and Alavinia (2012) who discovered that there was a dynamic interplay between the participants' EI scales and their use of listening metacognitive strategies. In the current study, a mutual linkage among the EI components and the participants' VK was also uncovered. There is a common shared linkage between the results of their study and the findings of the current research in that both studies highlight the instrumental role of the EFL learners' EI components in inspiring and guiding them to use a plethora of general language strategies which can, in turn, enable them to be more successful in L2 learning environments.

Concerning the relationship between the participants' CT skills and VK, the results highlighted the fact that there was a considerable and workable mutual interplay among these variables. What can, then, be deduced from the results of the current research is the realization that fostering CT skills in L2 learners will invariably enable them to learn L2 vocabulary in a more profound and efficient manner (Pual & Elder, 2008). Based on what was argued, the results consolidated, to a reasonable degree, the findings of previous studies carried out in the same domain (e.g., Fahim & Komijani, 2010; Gholami & Pourfallah, 2014; Kamali & Fahim, 2011). It is important to point to the fact that the findings are in accordance with the results that Fahim and Komijani (2010) arrived at in that there was a statistically significant mutual association between the EFL learners' CT skills and their L2 knowledge of the lexical items.

6. Conclusion

The findings provide very illuminating and promising theoretical and pedagogical implications for the entire community of curriculum developers, syllabus designers, materials developers, and EFL educators/instructors. In the first place, curriculum planners are advised to make a huge effort to prone their deep-rooted scholastic perspectives and consider the emotions and thoughts of learners as one of the prime determiners of their academic progress (Facione, 2011; Hughes & Lavey, 2008). Additionally, materials developers are recommended to take into account the link between emotions and thoughts in developing courses and programs for EFL students by focusing on skills associated with EI, so that they not only attain

more emotional achievement but also become more skillful critical thinker (Ghanizadeh & Moafian, 2011). As it sounds, EFL learners' EI levels and CT abilities can ideally arm them with the required facilities necessary to cope with the ineluctable challenges of academic environments. It is, therefore, very critical for curriculum planners to take special note of these two constructs and appropriate a deserved space in their programs for the incorporation of techniques and methods for the cultivation of CT skills and EI traits among EFL learners. Much in the same trend, EFL instructors are strongly recommended to not only raise in themselves the invaluable seeds of CT skills and EI traits, but also to educate their learners to sufficiently acquire these indispensable tools of the trade so as to promote their future learning outcomes (Alavinia & Ebrahimpour, 2012).

As the results showed a positive correlation between CT, EI, and VK, it seems necessary to include in the educational materials the potential to invoke and promote CT and EI skills in EFL students. Therefore, materials developers and syllabus designers need to make an effort to design lessons that promote CT and encourage students to reflect on their progress and take charge of their own thinking and learning process. They should also incorporate activities and practices which stimulate and build the features of EI, preparing them to function well in the society as competent and healthy citizens (Kamali & Fahim 2011). Put is briefly, it appears to be highly pivotal to take into consideration the viable roles of CT and EI in EFL students' present educational path. However, it should be pointed out that promoting EFL learners' EI and CT skills may not *per se* provide the ultimate panacea for all the existing obstacles in learning English.

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