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The relationship among emotional intelligence, critical thinking, and speaking ability of Iranian EFL learners

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Abstract

The present study aimed at investigating the relationship among critical thinking, emotional intelligence and speaking ability of Iranian EFL learners. To this end, 100 learners majoring in English at private language institutes in Sanandaj were selected as the participants of the study. The participants filled out the Bar-On (1997) emotional intelligence questionnaire, took the California Critical Thinking Skills Test (CCTST) Form B, and sat an interview, the results of which were checked by Language Oral Ability Assessment checklist adapted from IELTS Speaking Skill Test. The results of the multiple correlation analyses revealed emotional intelligence, followed by critical thinking, correlated significantly highly with learners' speaking ability. The results also revealed all components of emotional intelligence significantly correlated with learners' speaking ability. The results further showed there was a significant positive relationship between critical thinking and emotional intelligence. Further analyses revealed that almost half of the components of emotional intelligence correlated significantly

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highly with critical thinking. The results of multiple regression analyses indicated that emotional intelligence was the strongest predictor of speaking ability followed by critical thinking. The results further indicated that among the components of emotional intelligence, assertiveness, social responsibility, and reality testing significantly predicted learners' speaking ability.The results also showed among the components of emotional intelligence, only assertiveness significantly predicted learners' critical thinking. The findings imply that learners who are emotionally intelligent and are critical thinkers are more capable in speaking skill. The results as well as the implications of the study are discussed in more detail in the paper.

Keywords: critical thinking, emotional intelligence, speaking ability, Iranian EFL learners

1. Introduction

In order to communicate effectively, EFL and ESL learners should promote their speaking ability in the foreign/second language. EFL/ESL learners are usually judged on the knowledge and ability of their speaking skill at first glance, which might be regarded as one of the most demanding skills to acquire in EFL contexts. Teaching speaking has also been one of the most demanding, and significant tasks, but despite this, it has been sometimes ignored (Bora, 2012).

A substantial body of research has been conducted on the relationship between various areas of education and speaking ability. Critical thinking and emotional intelligence are assumed to be two major variables in promoting EFL and ESL learners' speaking ability (Bora, 2012; Pishghadam, 2009; Wang, 2009). These two factors have been the subject of numerous studies, and each has had its own contribution to the field.

2. Literature Review

2.1 Critical Thinking

Paul and Elder (2006), regard critical thinking as a mode of thinking which is disciplined, self-directed, self-corrective, and self-monitored. Nugent and Vitale (2008) regard critical thinking as the cognitive strategy upon and against which one's thinking, decision and behaviour are reflected and weighed. Wang (2009) also defines critical thinking ability as thinking reasonably and reflectively. He claims that critical thinking is an ability that allows students to freely express their own ideas, show and describe the interrelationships among the ideas, and generate higher levels of thinking. As Ennis (1989), Facione (2011), McPeck (1990), Paul (1995), and Yang and Chou (2008) maintain, critical thinking includes such higher-level thinking skills as 'analysis', 'inference', 'inductive reasoning', and 'deductive reasoning' (i.e. the "cognitive skill" dimension of critical thinking), which are assumed to be teachable and transferrable. The 'propensity' dimension however, which comprises such domains as 'truth-seeking', 'open-mindedness', 'self-confidence', 'analysis', etc., could be specified as the tendency to employ critical thinking ability in various situations (Facione, 2011; McPeck, 1990; Paul, 1995).

There seems to be a positive association between critical thinking and learning, in general and foreign language learning, in particular. The findings of a number of studies (e.g., McCutcheon & Apperson, 1992) suggest that students who think critically are more curious, ask many questions, and when they get the answers, they do not accept them easily. They analyse these pieces of information logically and come to trustworthy conclusions about the world that enable them to live and act successfully in it and thus become higher academic achievers.

Critical thinking is also positively associated with foreign/second language development. Chamot (1995), Tarvin and Al-Arish (1991), for instance, emphasise the paramount role critical thinking skills can have in learning a foreign language. In the same vein, some scholars in the field like Chopple and Curtis (2000) and Davidson (1994) have empirically found that such higher-order

thinking skills as critical thinking can positively affect foreign language learning. The majority of the studies conducted on the relationship between critical thinking and foreign language learning have focused on the reading skill (e.g., Farley & Elmore, 1992; Borzabadi & Movassagh, 2011; Fahim, Bagherkazemi & Alemi, 2010), all of which have found a positive correlation between critical thinking and reading skills. Wang (2009) investigated whether the incorporation of critical thinking into English conversation class could bring positive effects on the students' learning outcome. He found that students who took part in critical thinking English conversation classes attained significantly better achievement. He further found after applying the critical thinking skills to learning system in the class, students in the experimental group attained a greater level of satisfaction with their class.

In an experimental study, Hashemi and Ghanizadeh (2012) indicated that critical discourse analysis, as a branch of language studies, significantly affected EFL learners' critical thinking ability.

Dam and Volman (2004) found such instructional strategies as 'paying attention to the development of the epistemological beliefs of students', 'promoting active learning, a problem-based curriculum', 'stimulating interaction between students', and 'learning on the basis of real-life situations' to be effective on enhancing critical thinking. They suggested, in order for the students to participate critically in the communities and social practices, they should learn to think critically. They suggested that education should provide a context in which students can make sense of, and also develop a feeling of responsibility for the quality of the practice in question.

The relationship between Iranian EFL teachers' self-regulation and their critical thinking ability was investigated by Ghanizadeh (2011). She found a positive relationship between EFL teachers' critical thinking and their self-regulation.

While a number of scholars argue that critical thinking is incompatible with Asian cultural attitudes and that Asian learners are unable to think critically (Vandermensbrugghe, 2004),

Kumaravadivelu (2003) claims that the comparative lack of critical quality in the academic work of Asian international students in universities where English is the medium of instruction, is due to the difficulties of study in the context and also the discourse of the second language, and not to their low level of critical thinking abilities.

2.2 Emotional Intelligence

Emotional intelligence could be regarded as the capability to understand, appraise, regulate, and control emotions in oneself and in others (Barchard & Hakstian, 2004). It is thus possible to postulate that emotional intelligence includes both interpersonal and intrapersonal skills. The former might be referred to as the ability to feel the emotions of others, and respond to them appropriately. The latter could be described as the ability to discern one's own emotions and regulate them (Katyal & Awasthi, 2005). Furthermore, Salovey and Mayer (1989) consider emotional intelligence as "the use of feelings to motivate, plan, and achieve in one's life" (p.185).

There are other definitions and models of emotional intelligence which conceptualise it as a mixed set of perceived abilities, skills, and personality traits. Goleman (1998), for instance, considers emotional intelligence as the ability to discern and manage the emotions in oneself and in others. Perhaps, the most famous model of Emotional Intelligence (EI) was proposed by Bar-On (2000). He, in general, regards EI as the ability to succeed in emotionally demanding situations.

There are a number of studies in the literature which link emotional intelligence with foreign language learning. For one, Bora (2012), investigating the relationship between emotional intelligence and students' perceptions of their speaking skill, found students who had high levels of emotional intelligence were more engaged in speaking and brain-based activities simply because they had high levels of self-esteem and social skills, and were more able to cooperate with others. The findings also revealed that students with low level of emotional intelligence did not have appropriate

relations with the society; as a result, they were isolated from the classroom atmosphere, and denied taking part in speaking and brain-based activities and, consequently, achieved less.

Ghanizadeh and Moafian (2011) investigated the relationship between emotional intelligence and critical thinking and also the relationship between age and gender and emotional intelligence of 86 Iranian EFL learners. Bar-On questionnaire and Watson-Glaser Critical thinking Appraisal were given to the participants. The findings revealed there was a significant relationship between students' emotional intelligence and their critical thinking. Furthermore, among the components of emotional intelligence, flexibility and social responsibility had the highest correlations with critical thinking. The findings further revealed that age and gender neither affected the relationship between emotional intelligence and critical thinking nor had any impact on learners' emotional intelligence.

Joibari and Mohammadtaheri (2011) investigated the relationship among various components of emotional intelligence and academic achievement of Iranian EFL learners. They found that self-motivation, self-awareness, self-regulation, social consciousness, and social skills significantly correlated with students' academic achievement. The results also showed that there was a significant difference between males and females with respect to emotional intelligence.

Meshkat (2011) conducted a study to investigate the relationship among EI, academic success and field of study of the learners. The participants of the study were 187 Iranian students whose majors were Physics, Chemistry, Mathematics, English, and Medicine. To collect the required data, Bar-On's Emotional Intelligence Inventory was applied, and the participants' GPA (Grade Point Average) was also recorded. The findings indicated that there was no significant correlation between EI and academic success. The findings further revealed that field of study had no significant correlation with the EI of students.

Khalili (2013), investigating the relationship between emotional intelligence and L_2 achievement of 65 Iranian EFL learners, found no significant relationship between reading and speaking, and emotional intelligence. However, the findings further revealed emotional intelligence significantly correlated with listening and writing. In addition, the findings also indicated there was a positive significant relationship between the participants' total mark in all four skills and emotional intelligence.

Pishghadam (2009) explored the role of emotional intelligence in second language learning. The participants of his study included 508 Iranian university students. Bar-On's Emotional Intelligence Inventory (EQ-i) was used as the instrument of the study. The results indicated significant correlations between total EQ and listening and speaking. However, the results showed that total EQ had no significant correlation with reading and writing.

Moafian and Ghanizadeh (2009), exploring the relationship between 89 Iranian EFL teachers' emotional intelligence and their self-efficacy, found a significant relationship between the participants' emotional intelligence and their self-efficacy. The results further revealed the three components of emotional intelligence, namely, emotional self-awareness, interpersonal relationship, and problem-solving strongly predicted the participants' self-efficacy.

To sum up, it could be argued that as the review of the literature revealed, there seems to be a positive relationship between critical thinking and foreign language learning on the one hand, and emotional intelligence and EFL learning on the other. Furthermore, as Brookfield (1987) argues, the ability to think critically (i.e. critical thinking) is preceded by the ability to control and manage one's own emotions and those of others (i.e. emotional intelligence).

3. Purpose of the Study

As the review of the literature existing in the field revealed critical thinking and emotional intelligence are two crucial factors in EFL development. Speaking ability in foreign language is also said to be

enhanced by developing critical thinking and emotional intelligence in learners (Bora, 2012; Pishghadam, 2009; Wang, 2009). As a result, lack of development of critical thinking and emotional intelligence might have a serious negative impact on learners' speaking ability in the long journey of foreign language acquisition. Although the literature of the field abounds with studies conducted in Iran with respect to the relationship between emotional intelligence or critical thinking and EFL learning, no study has been done in Iranian context to examine the combined relationship of these two variables and/or their sub-components with EFL learners' speaking ability. Moreover, no study could be found to have examined which one of these two variables (i.e. emotional intelligence or critical thinking) and what combination of their components significantly predict Iranian EFL learners' speaking ability. Thus, to fill the research gap felt and to address the goals of the study, the following research questions were formulated:

1. Is there any significant relationship among Iranian EFL learners' critical thinking, emotional intelligence, and their speaking ability?
2. Between critical thinking and emotional intelligence, which one strongly predicts Iranian EFL learners' speaking ability?
3. Is there any significant relationship among different components of emotional intelligence and speaking ability of Iranian EFL learners on the one hand and between their emotional intelligence and their critical thinking on the other?
4. Among the components of emotional intelligence, which one(s) strongly predict(s) Iranian EFL learners' speaking ability and critical thinking?

4. Method

4.1 Participants

One hundred male learners studying English as a Foreign Language (EFL) in several private language institutes in Sanandaj, between June and August 2013, were selected as the participants of the

study. The participants had all been placed at advanced level by the standards of the institutes. They were all adult EFL learners above 18.

4.2 Materials and Instruments

The instruments adopted in the present study included "The California Critical Thinking Skills Test form B" developed by Facione and Facione (1993), Bar-On Emotional Intelligence Test adapted for the context of Iran by Dehshiri (2003), and an interview, the outcome of which was checked by the Language Oral Ability Assessment Checklist adapted from IELTS Speaking Skill Test.The details of these three instruments are presented below.

(1) The critical thinking test was labelled "The California Critical Thinking Skills Test Form B", developed by Facione and Facione (1993). CCTST Form B is a 34-item multiple choice test which investigates five areas of 'evaluation', 'inference', 'analysis', 'inductive reasoning' and 'deductive reasoning'. The test was translated into Persian by Khalili and Hossein Zadeh (2003) for participants to easily comprehend the questions and back translated to ensure the validity of the translation. They revealed that the Persian version of CCTST Form B enjoyed acceptable reliability, validity and normality indices in Iranian context. Khalili and Hossein Zadeh's translation of the questionnaire was viewed in the present study by two experts in the field based on whose ideas some minor modifications were made.

(2) The emotional intelligence questionnaire was a Likert scale questionnaire containing 90 items, adapted from Bar-On (1997) for the context of Iran by Dehshiri (2003) (A copy of this questionnaire appears in Appendix B).The questionnaire's items are in the form of short sentences which measure 15 factorial components of emotional self-awareness, assertiveness, self-regard, self-actualisation, independence, empathy, interpersonal relationship, social responsibility, problem solving, reality testing, flexibility, stress tolerance, impulse control, happiness, and optimism. For each sentence, there were five options for the participants to choose based on their own points of view. The participants were given

enough time to choose the options they thought were the most appropriate. Dehshiri (2003) found this questionnaire and its subscales enjoyed sufficient reliability and validity indices in Iranian context. Although the internal consistency reliability of the questionnaire in Dehshiri's (2003) study was found to be 0.76, the internal consistency of the questionnaire in the present study was recalculated using Cronbach's alpha which turned out to be 0.91.

(3) The Language Oral Ability Assessment was an 11-item speaking ability checklist partly adapted from IELTS Speaking Skill Test. For each item, there were five options for the researcher scorers to choose based on the participants' speaking ability performance. Through the checklist, the participants' accuracy, fluency, pronunciation, and their lexical resource (i.e. use of words, idioms and expressions) in speaking were assessed. Each participant's ability was assessed in nearly 10 minutes in the interview.

4.3 Data Collection Procedure

The translated versions of California Critical Thinking Skills Test Form B and the Bar-On emotional intelligence questionnaire adapted for the context of Iran, as mentioned in 3. 2, were administered to the participants in two different sessions. Participants' speaking ability was also assessed through a 10 minute interview which was checked through a checklist named Language Oral Ability Assessment as explained earlier. The questions and the procedures for completing the emotional intelligence questionnaire and CCTST were elucidated for the participants. The participants were requested to write down their names on all the three instruments which they were assured would be kept confidential. Before answering the questions, the participants had time to look through the items in order to become acquainted with the forms and types of the questions. One of the researchers was present at the time of administering the questionnaires to resolve any likely ambiguities. The participants circled the answers they thought right for the CCTST, and the answers they liked for emotional

intelligence questionnaire. To assess the participants' speaking ability, a structured interview was conducted. The interviewers made the participants ready for the interview through a warm-up in which they were to briefly introduce themselves in English. Then, the researcher interviewers (i.e. two interviewers) asked the participants to speak about such general topics as "why they were learning English" and "what their likes and dislikes were". The interviewers also asked the participants to look at the pictures they were provided and describe what they saw. One of the interviewers acted as "interlocutor" (directing the interview, asking questions and scoring the participants' performance "globally") and the other as "assessor" (sitting silently, carefully listening and weighing the participants' spoken output against the checklist mentioned earlier, and scoring them "analytically"). The interviews were all recorded to be referred to and re-scored in case discrepancies in the scores assigned by both raters were high. The inter-rater reliability was calculated to be 0.89. On average, the CCTST administration took approximately one hour, the emotional intelligence questionnaire took forty minutes, and each interview lasted 10 minutes.

4.4 Data Analysis

Multiple correlation analyses were run to investigate the relationship among the variables of the study. That is, participants' critical thinking and emotional intelligence were correlated with their speaking ability. Critical thinking and emotional intelligence were also correlated. Two other multiple correlation analyses were also run to investigate the relationship among different components of emotional intelligence, and speaking ability, on the one hand, and emotional intelligence and critical thinking, on the other.

To find out which independent variable (i.e. critical thinking or emotional intelligence) is a stronger predictor of the participants' speaking ability, a multiple regression analysis was applied. Two other multiple regression analyses were run to investigate the predictive power of different components of emotional intelligence for speaking ability and critical thinking.

Relationship among emotional intelligence, critical thinking, and speaking

5. Results

Table 1 summarises the descriptive statistics of participants' scores in speaking ability interview and in CCTST, as well as their responses to emotional intelligence questionnaire and its various components.

Table 1: Descriptive statistics of participants' scores in speaking ability interview and in CCTST as well as their responses to emotional intelligence questionnaire and its various components

	N	Minimum	Maximum	Mean	Std. Deviation
Speaking ability	100	12.75	26.75	20.37	5.00
Critical thinking	100	.02	.88	.266	.18
Emotional intelligence	100	2.02	4.43	3.56	.49
Problem solving	100	1.32	5.00	3.59	.76
Happiness	100	1.35	5.00	3.78	.78
Independence	100	1.67	5.00	3.55	.66
Stress tolerance	100	1.17	5.00	3.24	.75
Self-actualisation	100	1.55	5.00	3.68	.77
Emotional self-awareness	100	2.00	5.00	3.55	.62
Reality testing	100	1.67	5.00	3.46	.72
Interpersonal-relationship	100	1.45	5.00	3.71	.74
Optimism	100	1.16	5.00	3.57	.79
Self-regard	100	1.33	5.00	3.67	.77
Impulse control	100	1.17	5.00	3.17	.90
Flexibility	100	1.17	5.00	3.25	.77
Social responsibility	100	1.36	5.00	3.75	.80
Empathy	100	1.33	5.00	3.72	.78
Assertiveness	100	1.83	5.00	3.72	.79

Valid N (listwise)	100

The first research question set out to investigate whether there was any significant relationship among critical thinking, emotional intelligence, and speaking ability of Iranian EFL learners. Multiple correlations were run to answer this question, the results of which are presented in Table 2.

Table 2: Multiple correlations investigating the relationship among critical thinking, emotional intelligence and speaking ability

		Critical Thinking	Emotional Intelligence	Speaking Ability
Critical Thinking	Pearson Correlation	1	.33	.50
	Sig. (2-tailed)	.	.00	.00
	N	100	100	100
Emotional Intelligence	Pearson Correlation	.33	1	.65
	Sig. (2-tailed)	.00	.	.00
	N	100	100	100
Speaking Ability	Pearson Correlation	.50	.65	1
	Sig. (2-tailed)	.00	.00	.
	N	100	100	100

As the results in Table 2 show, all the three variables of the study (i.e. critical thinking, emotional intelligence and speaking ability) were significantly correlated.

The second research question set out to examine the predictive power of the participants' emotional intelligence and critical thinking for their speaking ability. To this end, a multiple regression analysis was conducted, the results of which are summarised in Tables 3, 4 and 5.

First, Table 3 shows the multiple correlation coefficient and the adjusted and unadjusted correlation of critical thinking and emotional intelligence with speaking ability.

Table 3: Model summary investigating the multiple correlation coefficient, the adjusted and unadjusted R of critical thinking and emotional intelligence with speaking ability

R	R Squared	Adjusted R Squared	Std. Error of the Estimate
.72[a]	.51	.50	3.50

As the results in Table 3 indicate, the multiple correlation coefficient (R), using both predictors (i.e. critical thinking and emotional intelligence) simultaneously, is 0.72 (R^2= 0.52) and the adjusted R squared is 0.51. It indicates that 51 % of the variance in learners' speaking ability can be predicted from the combination of critical thinking and emotional intelligence.

Next, ANOVA was run to investigate whether the combination of the predictors (i.e. critical thinking and emotional intelligence) significantly predicted Iranian EFL learners' speaking ability, the results of which are summarised in Table 4.

Table 4: ANOVA investigating the prediction of the combination of emotional intelligence and critical thinking for speaking ability

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1287.22	2	643.61	52.25	.00
Residual	1194.84	97	12.31		
Total	2482.06	99			

As shown in Table 4, the combination of both emotional intelligence and critical thinking predicted speaking ability of the participants, $F(2, 97) = 52.25$, $p < .05$.

Table 5 shows the amount of contribution of each of the independent variables (critical thinking and emotional intelligence) to the dependent one (speaking ability).

Table 5: Multiple regressions investigating the predictive power of critical thinking and emotional intelligence of speaking ability

	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-1.70	2.59		-.657	.513
Critical Thinking	8.85	2.05	.32	4.318	.000
Emotional Intelligence	5.52	.75	.54	7.31	.00

As the results in Table 5 indicate, between emotional intelligence and critical thinking, the former was a stronger predictor of speaking ability of the participants, (Beta = .54, t = 7.3, p = .00 <.05).

The third research question was formulated to address whether there was any significant relationship among various components of emotional intelligence and speaking ability of Iranian EFL learners. To answer this question, multiple correlations were run, the results of which are summarised in Table 6.

Table 6: Multiple correlations, investigating the relationship among different components of emotional intelligence and speaking ability

	Speaking Ability	Sig.
Problem solving	0.45	0.00
Happiness	0.39	0.00
Independence	0.40	0.00
Stress tolerance	0.25	0.01
Self-actualisation	0.51	0.00
Emotional self-awareness	0.37	0.00
Reality testing	0.44	0.00
Interpersonal-relationship	0.33	0.00
Optimism	0.47	0.00
Self-regard	0.44	0.00

Impulse control	0.37	0.00
Flexibility	0.41	0.00
Social responsibility	0.52	0.00
Empathy	0.48	0.00
Assertiveness	0.44	0.00

As the results in Table 6 indicate, all fifteen components of emotional intelligence significantly correlated with speaking ability.

Additionally, the third research question set out to investigate whether there was any significant relationship among various components of emotional intelligence and critical thinking of Iranian EFL learners. In so doing, multiple correlations were run, the results of which are summarised in Table 7.

Table 7: Multiple correlations investigating the relationship among different components of emotional intelligence on critical thinking

	Critical Thinking	Sig.
Problem solving	0. 21	0.03
Happiness	0. 21	0.03
Independence	0. 27	0.00
Stress tolerance	0. 18	0.06
Self-actualisation	0. 23	0.01
Emotional self-awareness	0. 15	0.13
Reality testing	0. 30	0.00
Interpersonal-relationship	0. 10	0.29
Optimism	0. 19	0.04
Self-regard	0. 16	0.10
Impulse control	0. 17	0.08
Flexibility	0. 22	0.02

Social responsibility	0. 18	0.06
Empathy	0. 20	0.04
Assertiveness	0. 42	0.00

As shown in Table 7, there were significant relationships among problem solving, happiness, independence, self-actualisation, reality testing, optimism, flexibility, empathy, assertiveness, and critical thinking.

To examine which components of emotional intelligence had more predictive power for the participants' speaking ability and how other components contributed to this variable (i.e. to answer the last research question of the study), a multiple regression analysis was run. The results are summarised in Tables 8, 9 and 10.

First, Table 8 indicates the multiple correlation coefficient, and the adjusted and unadjusted correlation of different components of emotional intelligence with speaking ability.

Table 8: Model summary investigating the multiple correlation coefficient, the adjusted, and unadjusted R of different components of emotional intelligence with speaking ability

R	R Square	Adjusted R Square	Std. Error of the Estimate
.72[a]	.51	.43	3.77

As the results in Table 8 show, the multiple correlation coefficient (R), using all the predictors (i.e. all components of emotional intelligence) simultaneously, is 0.72 (R^2= 0.52) and the adjusted R squared is 0.43. It indicates that 43% of the variance in learners' speaking ability could be predicted from various components of emotional intelligence. ANOVA results in Table 9 corroborate the significance of the multiple regression.

Table 9: ANOVA investigating the prediction of the combination of different components of emotional intelligence for speaking ability

Model	Sum of Squares	df	Mean Square	F	Sig.

Regression	1286.12	15	85.74	6.02	.00
Residual	1195.93	84	14.23		
Total	2482.06	99			

As shown in Table 9, the combination of the predictors (i.e. various components of emotional intelligence) significantly predicted learners' speaking ability, $F (15, 84) = 6.02$, $p < .05$.

Table 10 shows the amount of contribution of each of the components of emotional intelligence to speaking ability of the participants.

Table 10: Multiple regressions investigating the predictive power of different components of emotional intelligence for speaking ability

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-3.69	3.24		-1.13	.25
Problem solving	.05	.77	.008	.06	.94
Happiness	-.12	.75	-.020	-.16	.86
Independence	.45	.79	.060	.57	.56
Stress tolerance	-.61	.62	-.092	-.97	.33
Self-actualisation	.83	.83	.130	1.00	.31
Emotional self-awareness	-.37	.79	-.047	-.46	.64
Reality testing	1.46	.68	.212	2.15	.03
Interpersonal-relationship	-.66	.67	-.100	-.98	.32
Optimism	.62	.85	.099	.73	.46
Self-regard	.55	.75	.086	.73	.46
Impulse control	.79	.59	.143	1.34	.18
Flexibility	-.21	.73	-.032	-.28	.77
Social responsibility	1.40	.85	.225	2.60	.01
Empathy	.86	.81	.136	1.05	.29
Assertiveness	1.55	.59	.226	2.61	.01

As the results in Table 10 indicate, among various components of emotional intelligence, assertiveness, social responsibility, and reality testing significantly predicted learners' speaking ability.

The last research question also aimed at exploring which components of Iranian EFL learners' emotional intelligence more strongly predicted their critical thinking and how other components contributed to this variable. To this end, another multiple regression analysis was run, the results of which are summarised in Tables 11, 12 and 13.

Table 11 shows the multiple correlation coefficient, and the adjusted and unadjusted correlation of different components of emotional intelligence with critical thinking.

Table 11: Model summary investigating the multiple correlation coefficient, the adjusted, and unadjusted R of different components of emotional intelligence on critical thinking

R	R Square	Adjusted R Square	Std. Error of the Estimate
.50[a]	.25	.11	.17

As shown in Table 11, the multiple correlation coefficient (R), using all the predictors (i.e. all components of emotional intelligence) simultaneously, is 0.50 (R^2= 0.25) and the adjusted R squared is 0.12. It indicates that only 12% of the variance in learners' critical thinking can be predicted from various components of emotional intelligence.

Next, ANOVA was run to investigate whether the combination of various components of emotional intelligence significantly predicted Iranian EFL learners' critical thinking abilities, the results of which are summarised in Table 12.

Table 12: ANOVA investigating the prediction of the combination of different components of emotional intelligence for critical thinking

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.83	15	.05	1.89	.03
Residual	2.45	84	.02		

Total	3.29	99

As shown in Table12, the combination of the predictors (i.e. various components of emotional intelligence) significantly predicted learners' critical thinking, $F (15, 84) = 1.89$, $p < .05$.

Table 13 shows the amount of contribution of each of the components of emotional intelligence to critical thinking of the participants.

Table 13: Multiple regression investigating the predictive power of different components of emotional intelligence for critical thinking

	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.30	.14		-2.10	.03
Problem solving	.01	.03	.04	.304	.76
Happiness	.00	.03	.02	.178	.85
Independence	.04	.03	.16	1.24	.21
Stress tolerance	.01	.02	.07	.67	.50
Self-actualisation	.02	.03	.10	.67	.50
Emotional self-awareness	-.02	.03	-.08	-.68	.49
Reality testing	.05	.03	.22	1.82	.07
Interpersonal relationship	-.02	.03	-.10	-.83	.40
Optimism	-.01	.03	-.06	-.36	.71
Self-regard	-.03	.03	-.13	-.90	.37
Impulse control	-.01	.02	-.07	-.55	.58
Flexibility	-.00	.03	-.01	-.10	.91
Social responsibility	-.00	.03	-.01	-.08	.93
Empathy	.03	.03	.15	.98	.32
Assertiveness	.07	.02	.30	2.84	.00

As the results in Table 13 indicate, among the components of emotional intelligence, only assertiveness significantly predicted the participants' critical thinking.

6. Discussion

The present study sought to investigate, among other things, the possible relationship among critical thinking, emotional intelligence, and speaking ability of Iranian EFL learners. The results revealed positive relationships among the variables.

Examinations of how learners' critical thinking relates to their speaking ability are rare. To address this issue, the study, as one of its purposes, focused on the relationship between critical thinking and speaking ability. It was found that the learners who received a high score in the CCTST had high speaking ability, those who received a low score had low speaking ability. Critical thinking skills might thus be assumed to predict learners' speaking ability. The findings of the study in this regard are in line with those of Wang (2009), who, incorporating critical thinking skills into the English conversation class, found out learners who took part in critical thinking English conversation class attained significantly better critical thinking skills. The findings of the study are also harmonious with those of McCutcheon and Apperson (1992) who found that learners who thought critically were more curious and asked many questions.

Halvorsen (2005) claims, to think critically about an issue is to consider different perspectives of that issue. He further adds that learners could be provided with some opportunities to look at and challenge any possible assumptions that may underlie the issue and to explore its possible alternatives.

Critical thinking is also important in and applicable to many areas of life. It has been said that when people are not able to think critically and intelligently about important issues and problems that confront them, they then may come across many answers, and still may not know what the answers mean (Halpern, 1998).

Another purpose of this study was to investigate the relationship between emotional intelligence and speaking ability of Iranian EFL learners, and to examine the predictive power of the former for the latter. It was found that the learners who received a high score on the emotional intelligence questionnaire had a high speaking ability, and those who received a low score had a low speaking ability. Also, emotional intelligence was found to have a significantly stronger predictive power of speaking ability of Iranian EFL learners than critical thinking. The findings of the study in this regard are harmonious with those of Bora (2012) who found that learners with high level of emotional intelligence were engaged more in speaking and brain-based activities.

The findings of the study are also in line with those of Pishghadam (2009) who found a significant correlation between emotional intelligence and speaking ability in second language. It can thus be concluded that emotional intelligence might play an important role in speaking ability of EFL learners. EFL learners' emotional intelligence tends to enhance their beliefs in their speaking ability to organise and execute the courses of action required for successful performance. Learners who are able to perceive, control, and evaluate their emotions (i.e. are emotionally intelligent) in learning English might be thought to be successful language learners especially in learning speaking most plausibly because these learners communicate better, and they could consequently better develop their speaking ability.

The next purpose of this study was to investigate the relationship between critical thinking and emotional intelligence. It was found that the learners who received a high score in the critical thinking test scored high in the emotional intelligence test as well. Similarly, those who received a low score in the critical thinking test, also scored low in the emotional intelligence test. This suggests that, critical thinking and emotional intelligence are correlated and mutually supportive.

The findings of this study in this regard are harmonious with the results of Ghanizadeh and Moafian (2011) who found a

significant relationship between learners' emotional intelligence and their critical thinking. Meyers (1986), Brookfield (1987) and Paul (1987, all cited in Moon, 2008, p.142) also maintain that thoughts and emotions are interrelated. It could thus be suggested that a learner, in order to think critically, should first control his/her personal emotions and those of others (Brookfield, 1987).

The study also set out to investigate the predictive power of emotional intelligence and critical thinking for speaking ability. The results indicated the contribution of emotional intelligence to EFL learners' speaking ability was significantly higher. It might be assumed that learners' emotions are more involved in their ability in speaking than their thinking processes. That is, the learners who are more able to control their own emotions and those of the others might be considered as better speakers than those who think critically.

The study also aimed at finding which components of Iranian EFL learners' emotional intelligence could significantly correlate with and strongly predict their speaking ability. The results indicated that all components of emotional intelligence significantly correlated with speaking ability. The results also indicated, among the fifteen components of emotional intelligence, only three (i.e. assertiveness, social responsibility, and reality testing) came to be significant predictors of Iranian EFL learners' speaking ability. It might thus be possible to argue that the participants who were more assertive assumed themselves as being more confident and dominant; as a result, they might have looked for some more opportunities to speak. Also, the participants whose social responsibility was high seemingly sensed an obligation in themselves to act to benefit their societies. These kinds of people might need to be in more contact with the others; as a result, they need to speak more. Similarly, it could be argued that the learners whose reality-testing emotional intelligence is high would often evaluate whatever they encounter and would tend to differentiate between the external and the internal worlds and between the self and the others. In so doing, they might need to negotiate and share

their thoughts and feelings with the others and consequently speak more.

The next purpose behind the study was to find which component(s) of EFL learners' emotional intelligence could significantly correlate with and predict their critical thinking. The results indicated among different components of emotional intelligence, problem solving, happiness, independence, self-actualisation, reality testing, optimism, flexibility, empathy, and assertiveness significantly correlated with Iranian EFL learners' critical thinking. In this regard, Ghanizadeh and Moafian (2011) found that among the components of emotional intelligence, flexibility and social responsibility had the highest correlations with critical thinking. The results in the present study also revealed the contribution of only one of the components of EFL learners' emotional intelligence to critical thinking was significant. That is, among the fifteen components of emotional intelligence, assertiveness was found to be the only predictor of EFL learners' critical thinking. This might most plausibly be justified by the learners' confidence and dominance. The learners who are more assertive would often challenge the things and raise many questions which might go against the status quo, and thus might not accept what they are presented with easily, might not take the things for granted, and might thus be better critical thinkers.

7. Conclusion and Implications

The findings of the study revealed there were statistically significant relationships between critical thinking, emotional intelligence and speaking ability of Iranian EFL learners on the one hand, and between their critical thinking and emotional intelligence, on the other. The study also found all fifteen components of emotional intelligence significantly correlated with EFL learners' speaking ability, but only three components of emotional intelligence (i.e. assertiveness, social responsibility, and reality testing) significantly predicted their speaking ability. Furthermore, the results also indicated problem-solving, happiness,

independence, self-actualisation, reality testing, optimism, flexibility, empathy, and assertiveness significantly correlated with critical thinking. The results, in addition, revealed among different components of emotional intelligence, only assertiveness came to have significantly more predictive power as to Iranian EFL learners' critical thinking abilities.

Iranian EFL teachers are recommended to raise their learners' awareness of how to manage their emotions and those of the others (i.e. emotional intelligence) and how to think critically and analytically (i.e. critical thinking) which were found in the present study to have a significant contribution to EFL learners' speaking ability. EFL learners themselves should seek opportunities to enhance their emotional intelligence and critical thinking abilities if they are to succeed in the long and difficult journey of EFL learning, in general, and acquiring speaking ability, in particular. The findings also imply that ELT course designers and material developers design and develop courses and materials which incorporate in them various ways of enhancing critical thinking and emotional intelligence, especially the latter which was found to significantly contribute to Iranian EFL learners' speaking ability.

However, since the participants of the present study included only male students, caution should be exercised in interpreting the results. Future studies of the ilk are recommended to include both males and females and to have a larger pool of subjects if they are to enhance the generalisability of their findings.

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Relationship among emotional intelligence, critical thinking, and speaking