# The Relationship between Iranian EFL Students' Self-efficacy Beliefs and Critical Thinking Ability

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*Abstract*—The improvement of critical thinking and motivational factors such as self-efficacy seem to have great effects on students' academic achievements. The way in which learners identify their language learning abilities and their ability to control thinking may have a significant impact on their learning outcomes. This study aimed to investigate the relationship between Iranian students' self efficacy and their critical thinking ability. To this end 50 university students majoring in English teaching in Islamic Azad university of Amol and Ghaemshahr branch have been randomly selected to fill out the two questionnaires on Self-efficacy and Critical thinking skills. The finding of the study shows a strong relationship between Iranian students' critical thinking ability and self efficacy. In other words, the higher the students' self efficacy should be considered for developing learners' critical thinking skills.

Index Terms—critical thinking ability, self-efficacy, language achievement

# I. INTRODUCTION

The ability to think is one of the distinguishing features of human beings. We think because we are human. But how do we think? The quality of our thinking is what distinguishes us from other members of our own species. Critical thinking is the cause of our species' improvement and progress. Not every natural thinking process leads to excellence. Hence, Scriven and Paul (2004) suggest its cultivation to prevent it from becoming biased, distorted, partial, uninformed, and prejudiced. That is the reason for recent enthusiasm for the development of critical thinking in education. The field of foreign language education is not an exception. Researchers and teachers in this field are now concerned with identifying the effect of different learner characteristics such as critical thinking abilities and self-efficacy beliefs on learning a foreign/second language.

# II. REVIEW OF RELATED LITERATURE

# A. Critical Thinking

Many definitions of critical thinking have been proposed up to now. When examined closely, however, they all point to some common principles and criteria. For the purpose of this study Paul, Elder and Bartell's (1997) definition has been adopted. In their definition, they consider critical thinking as "the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action."(p.4)

As the above definition suggests, at the core of critical thinking are abilities such as analysis, evaluation, interpretation, and making judgment. Pithers and Soden (2000) enumerate the underlying abilities of critical thinking as follows: uncovering assumptions underlying a problem; focusing on the problem; inferencing; inductive and deductive reasoning; and judging the validity and reliability of assumptions and sources of information.

Based on such underlying abilities, the attributes of a critical thinker is summarized by Facione (2011) as follows:

- inquisitiveness with regard to a wide range of issues,
- concern to become and remain well-informed,
- · alertness to opportunities to use critical thinking,
- trust in the processes of reasoned inquiry,
- self-confidence in one's own abilities to reason,
- · open-mindedness regarding divergent world views,
- flexibility in considering alternatives and opinions

- understanding of the opinions of other people,
- fair-mindedness in appraising reasoning,
- honesty in facing one's own biases, prejudices, stereotypes, or egocentric tendencies,
- prudence in suspending, making or altering judgments,
- willingness to reconsider and revise views where honest reflection suggests that change is warranted (p.11).

Many writers such as Atkinson (1997) and Fox (1994) argue that CT is embedded in western culture and is incompatible for Asian learners. Other scholars such as Paton (2011) have rejected this idea and speak for the universality of CT. Critical thinking is but one kind of good thinking. It has been equaled by some scholars such as Crombie (1994) to scientific thinking. Despite debate over the definition of critical thinking, it has been acknowledged as a desirable trait that must be embedded in the education system. There is consensus among scholars that education must not only provide learners with the "what" of knowledge, but also with the "how". Pennycook (1994) points to the shift which has occurred in the conceptualization of learning as an ever- evolving process of discovering, questioning, and reformulating hypotheses rather than rote learning. As a result, teaching critical thinking skills have gained attention in educational research. For instance, Glaser's (1941) seminal work reports that training programs can have beneficial effect on different aspect of CT variable. McBride and Bonnette (1995) have also reported that training and education can foster CT in at-risk groups. In his comment on Atkinson's (1997) article, Davidson (1998) maintains that even if critical thinking be considered as a culture-specific trait, the more reason there is for the introduction of critical thinking training. He bases this claim on the idea that "part of the English teacher's task is to prepare learners to interact with native speakers who value explicit comment, intelligent criticism, and intellectual assertion" (p. 121).

## B. Self-efficacy

Learners' perception of their language learning abilities may have a significant impact on their learning outcomes. Cotterall (1999) defines the sense of self-efficacy as "the learners' confidence in their overall ability to learn language"(p. 502). Self-efficacy has emerged as the result of Bandura's social cognitive theory. Bandura (1989) views self-efficacy as a kind of belief held by people about their abilities which helps them to take control over events and tasks. Bandura believes that a person's self-system, which has self-efficacy belief as its essential part, plays a major role in their response to demanding situations.

Self-efficacy is considered as an important source of motivation for people. As Tilfarlioglu and Cinkara (2009, p. 130) state "self-efficacy beliefs regulate human functioning through cognitive, motivational, affective, and decisional processes." That is why it is believed that knowledge is necessary but not sufficient for effective practice. This leads Bandura (1997) to the conclusion that to make effective use of their knowledge, people must also be guided by a kind of self-efficacy belief. Research has shown the enhancing effect of self-efficacy increase on motivation, achievement and confidence. As Linnenbrick and Pintrich (2003) believe, sense of self-efficacy is closely entwined to students' behavioral, cognitive, and motivational engagement and hence learning and achievement. The more self-efficacy learners have, the more they become engaged. Increased engagement leads to better performance. In their 1995 study Ehrman and Oxford (1995) declare that "believing that one can learn languages well was significantly correlated with proficiency in both speaking and reading" (p. 79). In her study, Cotterall (1999) identified six variables leading to autonomy one of which is the self-efficacy beliefs of the learner.

It must be noted that efficacy is not a permanent and steady capability which could be claimed to be present or absent in the learners' inventory of behaviors; rather, as Bandura (1997) maintains, it is "a generative capability in which cognitive, social, emotional and behavioral subskills must be organized and effectively orchestrated to serve innumerable purposes" (pp. 36-37). Pajares (2003, p. 140) identifies interpreted information from four sources which form individuals' self-efficacy perceptions. They include mastery experience (the interpreted result of one's performance), the vicarious experience (the social comparisons made with other individuals), the verbal messages and social persuasions received from others, and physiological states such as anxiety and stress. In the conclusion to his paper, Victori (1992 as cited in Victori &Lockhart, 1995, p. 225) maintains that if people misconceive their own learning and attribute their achievement in learning to external factors rather than their own action, they will not be able to adopt an active role in their learning and this may be a hindrance to their autonomy.

If self-efficacy is a generative capability and if external factors are so influential in its enhancement, so there must be some strategies to develop such beliefs. Research has proposed several strategies for the purpose, some of which include the use of vicarious and imaginal experiences (Maddux and Lewis, 1995) and controlling physiological and emotional states (Schunk, 1996). Bandura (1997) believes that schools are very great places for the cultivation of self-efficacy beliefs due to some factors such as the presence of peers who provide a good opportunity for modeling and comparison, the presence of teachers who provide essential feedback, modeling and encouragement, along with parental involvement. Pintrich and Schunk (1996) put forward several recommendations to be utilized by teachers with a concern to increase their students' sense of efficacy and achievement:

- Choose materials for which students are competently ready.
- ▶ Make students aware of the usefulness of learning in their lives.

► Familiarize students with different learning strategies and make them evaluate the effects of strategy use on their performance.

► Take individual differences into consideration while presenting the content and make sure that it is understandable for them.

- Define learning goals and tell students to keep to them.
- ▶ Provide students with as much attributional feedback as necessary.
- ► Make students aware of their progress and reward them accordingly.
- ► Use models that build self-efficacy and enhance motivation.

Therefore, it is important to explore how one can enhance self-efficacy among FL learners. Since Glaser's (1941) seminal work, the effect of attitude on CT has been widely acknowledged. Researchers such as Facione, Facione, and Sanchez (1994) maintain that although necessary, mere training does not lead to good critical thinking. Paul and Elder (2001) point to the importance of attitudes or "the characteristics of mind" on CT skills. Different attitudes have been proposed to play a role in this process. The list might include self-regulation, self-confidence, self-esteem, autonomy, and self-efficacy. In Paul, Elder and Bartell's (1997) definition, critical thinking has been considered "as a guide to belief and action"(p.4). It has been concluded that critical thinking and self-efficacy may be related to each other and this study has been conducted, as a result, to prove the claim.

## **III. RESEARCH QUESTION**

As it was mentioned earlier, this research was designed to answer the following question regarding the relationship between Iranian students' self efficacy and their critical thinking ability. The research question is:

Is there any relationship between Iranian students' self efficacy and their critical thinking ability?

# IV. METHOD

# A. Participants

50 university students majoring in English teaching have been randomly selected. They were all in their first year of study in Islamic Azad university of Amol and Ghaemshahr branch. Their ages ranged from 19 to 23. The subjects were verbally informed that there was no compulsion in their participation in the study and that it would not influence their grades in the courses.

## **B.** Instruments

Self-efficacy Questionnaire: Banduras' self-efficacy questionnaire was utilized to measure the self-efficacy of students. It includes 40 items with corresponding 5-piont Likert-scale response options. This questionnaire has been adapted from a survey by Albert Bandura, who has a say in issues related to self-efficacy. Each item expresses certain behavior followed by 5 numbers from which the participants choose the one which best represented their attitude towards the corresponding statement. The Persian version of the questionnaire was validated with 100 university student.

California Critical Thinking Skills Questionnaire: The 34-item California Critical Thinking Skills Test-Form B (CCTST-B-34) was developed to evaluate the critical thinking skills of students. This scale has 34 multi-optional items with only one true answer and integrates 5 critical thinking skills including evaluation, inference, analysis, deductive reasoning and inductive reasoning. The highest score is 34 and the scale must be finished during 45 minutes (Facion & Facion, 1994). The confident coefficient of the scale according to Khalili et al. (2003) was 0.62 and the construct validity of all subscales was between 0.60-0.65. In this study Kronbach's alpha coefficients was 0.78.

#### C. Procedure

In order to test the hypothesis the subjects were supposed to response the self efficacy questionnaire in 15 minutes. A standardized Persian questionnaire consisting of 40 likert scale items were used in this study. The Persian version was validated with 100 university students from Ferdosi University. Self efficacy scores range from 0-200. For the second variable of the study, critical thinking skills, the students finished the questionnaire within 45 minutes.

## D. Design

This study is a descriptive one. According to Seliger and Shohamy (1989), this is the kind of research which provides a description of phenomenon in language teaching and processing while it is naturally taking place. The Ex-Post Facto design has been used since the researcher had no control over what has already happened to the participants in the study.

#### V. DATA ANALYSIS AND RESULTS

A Pearson correlation is used to find the relationship between self-efficacy and students' critical thinking ability. In order to have a better overview of the variables of the study a descriptive statistics of students' critical thinking and self-efficacy is presented. The following table represents the results of the descriptive statistics for the two instruments, Critical Thinking and Self-efficacy questionnaires.

DESCRIPTIVE STATISTICS FOR SELF-EFFICACY AND CRITICAL THINKING					
	-	self efficacy	Critical Thinking		
N	Valid	50	50		
	Missing	0	0		
Mean		154.9000	24.4000		
Median		157.5000	25.0000		
Std. Deviation		26.95215	4.76809		
Variance		726.418	22.735		
Minimum		108.00	14.00		
Maximum		195.00	33.00		

TABLE 1

In order to find the relationship between the two variables, a Pearson correlation was conducted. As clearly shown in the following table, students' critical thinking ability and self efficacy are strongly correlated.

PEARSON CORREL	TABLI LATION BETWEEN SELF-EFFIC.	E 2 ACY AND CRITICAL TH	INKING OF STUDENTS
		Self-efficacy	Critical Thinking
self efficacy	Pearson Correlation	1	.761**
	Sig.(2-tailed)		.000
	Ν	50	50
Critical Thinking	Pearson Correlation	.761**	1
	Sig.(2-tailed)	.000	
	Ν	50	50

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The correlation is 0.761 which indicates a strong relationship between the two variables. In fact it can be claimed that there is a positive relationship between self-efficacy and subjects' critical thinking ability. Individuals with higher selfefficacy tend to be better critical thinkers.

# VI. CONCLUSION AND IMPLICATIONS

The present study was carried out to investigate the relationship between self-efficacy beliefs and critical thinking ability in Iranian EFL students. The result of Pearson's correlation coefficient indicates that EFL learners' self-efficacy beliefs have significant effect on their critical thinking levels. In other words, the higher the level of students' selfefficacy, the higher their critical thinking ability. In particular, the results reinforce previous research which indicates a close relationship between critical thinking ability and learners' self-efficacy in learning a second language (Dehghani, et al. 2011; Phan, 2009; Sariolghalam & Noruzi, 2010). The results lend support to Bandura's (1986) claim made about the influential role of self-efficacy on helpful or debilitating thought patterns and affective reactions. By improving sense of self-efficacy and perceived competence in EFL learners, they would feel more confident, and as a result, more willing to participate critically in class activities. This sense can motivate the learners to take responsibility for their language learning. As Bernat and Gvozdenko (2005, p. 2) state "beliefs are a central construct in every discipline that deals with human behavior and learning." Riley (1996) argues that beliefs will directly shape learner's strategy use and motivation. He claims:

What they [learner] believe will influence their learning much, much more than what we believe, because it is their beliefs that hold sway over their motivations, attitudes and learning procedures. And obviously if there is a misfit between what learners believe and the beliefs embedded in the instructional structure in which they are enrolled, there is bound to be some degree of friction or dysfunction. (p. 152-153)

In the conclusion to her study Cotterall (1995) states that language learners' receptiveness to what has been presented in language classes is affected by their beliefs and if they are not positive, they might act as a kind of hindrance to their success. Low self-efficacy beliefs can demotivate students and hinder their ability to thinking critically. The relationship between self-efficacy, motivation, and achievement is supported in the literature (Bandura, 1986). Studies also show that high level of self-efficacy results in the application of high level learning strategies (Wanga & Yi Wub, 2008) and can regulate human performances by cognitive and thoughtful processes (Benight & Bandura, 2004) and the finding of this study supports the assumption that self-efficacy beliefs can influence high level cognitive processes such as critical thinking ability.

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