

Do Critical Thinking Skills Lead to Success in Language Teaching? A Case of Iranian EFL Teachers Based on Their Gender and Degree of Education

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Abstract

The present study attempted to discover whether there is a significant relationship between EFL teachers' critical thinking ability and their teaching success. To this end, 113 Iranian male and female English teachers were required to fill out Watson Glaser Critical Thinking Appraisal. Besides, their students were asked to answer the Characteristics of Successful EFL Teachers questionnaire. The statistical analysis of the data showed that there was a significant correlation between EFL teachers' critical thinking skill and their teaching success. Besides, findings revealed that there was a significant difference between male and female teachers regarding their critical thinking skills, and that BA teachers differed from AS teachers with regard to critical thinking skills. More specifically, male BA teachers took the most advantages from critical thinking skills than others.

Keywords: critical thinking, B.A. and A.S. degrees, gender, teaching success

Introduction

With the advanced development of science and technology, the needs, desires, and expectations of every individual in every profession change. According to Qing, Ni, and Hong (2010), in the new millennia, the ability to think critically has been recognized as a key factor in guiding every individual toward progress and success. The primary way for enhancing this ability is education. On the other side, Green and Jax (2011) stated that teachers are required to develop their perceptions, change their long-established outlooks, and modify their roles to interconnect with the challenges, complexities, demands, and expectations of education since education is a complicated procedure which entails high level of knowledge, critical thinking, and problem solving skills. In other words, the focus of education has changed from conveying mere information and knowledge to improving critical and creative thinking abilities.

As Ghaemi and Taherian (2011) pointed out, to live and advance in the information age, every learner has to pose questions, apply their knowledge in every needed context, and try to find new ways for solving problems; in other words, both teachers and learners have to enhance their critical thinking skills as they are the main objectives of every educational program. Actually, every individual should be equipped with different skills and abilities to cope with the 21st century complexities through thinking critically and creatively (Green & Jax, 2011).

Moradan and Pourasadollah (2014) claimed that humans are reflective creatures as they have the ability to think about everything that happens around them and decide what they want to do. In other words, what an individual performs is the manifestation of his or her thinking, judgment, and perception. This interaction between human beings' thinking and actions is very significant and noteworthy in the educational contexts in which teaching and learning are interconnected. More specifically, in every educational environment, teachers play the key role for reaching the educational objectives and have the most impacts on the students' learning. In general, their perceptions, ideas, and thinking are interconnected with their way of teaching and how they act in an instructive course.

To present more insight about critical thinking, Demirhan and Köklükaya (2014) declared that thinking is a distinctive feature of human beings. In fact,

the ability to think makes human the most developed creature. It is generally accepted that thinking skills can be improved through teaching, so teachers play a major role in developing their students regarding those skills such as critical thinking skills. Furthermore, Ghaemi and Taherian (2011) announced that teachers should bear in mind the valuable characteristics of critical thinking skills since almost 84 percent of teachers who benefit from critical thinking abilities are successful in their teaching profession.

Regarding the importance of teachers, Hoesein (2015) stated that most people believe that teachers play key role in education due to the fact that the quality of their teaching will affect their students' success. In order to be effective, teachers should constantly expand their knowledge and develop their skills and abilities to apply the best methodologies and approaches in their classrooms. To put it in other words, teachers' professional development is considered as an essential issue which led to development of the teachers' efficacy, and consequently growth of students' achievements. Indeed, if the teachers dynamically engage in the professional development activities, they become more academically powerful, prepared to change their teaching ideologies, and more qualified for multiple instructional environments.

Duța, Panișoara, and Panișoara (2014) hold the idea that in this new millennia, teacher is considered a highly respected individual, and teaching profession is the most unique and significant profession. As a result of such importance, the teaching profession necessitates both an initial training and a constant academic growth and promotion. These researchers also added that teachers should be improved not only in terms of their knowledge and pedagogical competencies but also in terms of their meticulous responsibilities in their teaching profession. However, Buyukyavuz (2013) pointed out that teachers are not fully knowledgeable about the concept of professional development, so it is recommended to familiarize the teachers with the rationale of the professional development and also the types of the professional development activities through up-to-date courses. He, further, stated that in order to tackle with the persistently changing world and its challenges, teachers have to do professional development exercises and develop themselves regarding educational reforms.

Furthermore, Worawuth, Kanokorn, Udomporn, Chadchawarn, and Wilawan (2014) stated that human growth and success is crucial and requires organized plans and decisions. Particularly, teacher development is one of the important and controversial topics to achieve wanted objectives in an educational context. Worawuth et al. (2014), in their study, concluded that to be successful, teachers ought to apply effective teaching approaches, take an appropriate role, cooperate with students, have to be up to date and attentive to the changes in technology, solve the students' problems, improve their own achievements, know and use different teaching methods, and concentrate on the learning process and reforms of learning.

In the new century, a drastic shift has been created in the focus of educational system. In fact, the educational system does not need teachers just to inject the information into students' minds (Green & Jax, 2011). But, teachers are required to provide an opportunity for learners to negotiate their own identities, question concepts critically, think creatively and critically, and co-construct the knowledge (Yayli, 2009). To this end, teachers themselves should be able to think critically and modify their roles in accordance with the primary aim of the current intellectual education (Green & Jax, 2011).

Furthermore, Vanicheva, Kah, and Ponidelko (2015) hold the idea that education is beyond teaching and learning information, yet it involves both teachers and learners' emotions, views, and different skills which are essential to daily life. They, also, added that critical thinking skill is one of those skills which are fundamental in fulfilling the objectives of education. Grosser and Lombard (2008), also, stated that improving critical thinking skills should start from teacher education programs since informing teachers about the significance of teaching critical thinking skills is as important as training them to become effective thinkers. In fact, teachers themselves have to acquire critical thinking skills before teaching their students to become effective thinkers.

According to Ngang, Chan, and Vetriveilmany (2015), the major challenge of education has become training teachers to modify their teaching approaches and techniques compliant with new generations' demands and desires. Therefore, teachers should have both knowledge and talent to make sophisticated decisions and judgments for developing students' achievements and success (Hoesein, 2015). Ijaiya, Alabi, and Fasasi (2011) hold the idea that

due to enhancing the quality and the effectiveness of the teachers and avoidance from unproductive transferring knowledge to the learners, teachers ought to be aware of the importance of critical thinking. Similarly, Grosser and Lombard (2008) suggested that critical thinking skills have to be intentionally integrated in all teacher education programs. In fact, teachers should become familiar with critical thinking skills and be trained how to obtain and use them to become effective thinkers. Despite the importance of critical thinking and teachers' success, previous studies have not given enough attention to these concepts. Therefore, due to the scarcity of research in this ground and the significance of teacher's role and characteristics, this study tried to investigate the relationship between critical thinking skills and teachers' success. To reveal more insights regarding teacher success, the present study posed the following questions:

Q1: Is there any significant relationship between EFL teachers' critical thinking skills and their teaching success?

Q2: Is there any significant difference between male and female EFL teachers with regard to their critical thinking skills?

Q3: Is there any significant difference between EFL teachers holding BA and AS degrees regarding their critical thinking skill?

Method

Participants

Two groups of participants were selected to meet the aims of the current study. The first group included 113 teachers who taught English at different high schools in three different cities of Iran (Neyshabur, Esfarayen, and Ferdows). Out of 160 male and female English teachers, 113 were selected according to Morgan's table which determines the random sample size from a determined population. 69 teachers were female and 44 were male teachers. 60 out of 113 teachers as the participants of this study held AS. Degrees and 53 held BA. Degrees.

The second group of the BA or AS participants included 2345 students who studied in the first, second, or third year of their study at high school. These participants' age ranged from 16 to 19, the mother tongue of these participants was Persian, and for this group of the participants, no distinction was made between males and females.

Instrumentation

The Characteristics of Successful EFL Teachers questionnaire, which is designed by Moafian and Pishghadam (2009), was used in this study to investigate the teachers' success. It is a 47-item questionnaire that is 5-point Likert Scale, ranging from 'strongly agree' to 'strongly disagree'. This questionnaire looks into 12 characteristics of a successful teachers namely accountability, interpersonal relationships, attention to all, examination, commitment, learning boosters, creating a sense of competence, teaching boosters, physical and emotional acceptance, empathy, class attendance and dynamism. It was filled out by the students to determine their own teachers' characteristics.

The second instrument of this study was Watson Glaser Critical Thinking Appraisal (WGCTA). It includes 80 items investigating 5 subscales of critical thinking skills such as inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments. It consists of 16 questions measuring inference, 16 questions assessing recognition of assumptions, 32 questions evaluating deduction and interpretation, and 16 other questions measuring evaluation of arguments. Generally, this questionnaire is applied to explore an individual's critical thinking abilities.

Procedure

At first, the total number of male and female English high school teachers of three cities in three provinces of Iran was explored by the researcher. It was found that 160 teachers taught there; so, according to Morgan's table, 113 teachers were randomly selected. Each teacher was asked to answer the questions of Watson Glaser Critical Thinking Appraisal, and their students were required to fill out the Characteristics of Successful EFL Teachers questionnaire, too. After gathering the data, the researcher calculated the correlation between teachers' critical thinking skills and their teaching success through the Pearson product-moment correlation. Moreover, Independent sample t-test was used to answer the research questions 2 and 3, posed above.

Design

The design of the current study was ex post facto because the relationship between the teachers' critical thinking and their pedagogical success was

investigated in this study. Cohen, Manion, and Morrison (2007) stated that ex post facto refers to design of the studies investigating relationships between two dependent and independent variables. In the present study, critical thinking is the attribute independent variable of the study which is the characteristics of the participants, and pedagogical success is the dependant variable.

Results

The assumptions of Pearson correlation, including normal distribution of the data and the linear relationship between the variables were met; thus, in order to explore the relationship between the two variables and find out the strength and direction of the relationship, Pearson Correlation was utilized.

Descriptive Statistics

Table 1 reports the descriptive statistics related to the results of Watson Glazer Critical Thinking Appraisal based on the participants' gender.

Table 1

Descriptive Statistics of Critical Thinking Based on Gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Critical thinking	Male	44	54.64	13.23	1.99
	Female	69	48.04	15.05	1.81

Table 1 presents the descriptive statistics of male and female teachers' critical thinking scores. The data revealed that the mean score of the male (54.64) is higher than the female teachers (48.04). Yet, an independent sample t-test had to be used to determine whether there is a significant difference between male and female teachers regarding their critical thinking skills. Table 2 reports the descriptive statistics related to the results of Watson Glazer Critical Thinking Appraisal according to the participants' degree of education.

Table 2

Descriptive Statistics of Critical Thinking Based on Degree

	degree	N	Mean	Std. Deviation	Std. Error Mean
Critical thinking	BA	53	63.22	8.53	1.17
	AS	60	39.46	8.67	1.12

As it can be seen in Table 2, the critical thinking mean score of the teachers holding BA (63.22) is higher than the teachers holding AS (39.46). Again, to explore whether BA and AS teachers differ significantly from each other, another independent Sample t-test had to be used to compare the mean scores of these two groups.

Inferential Statistics

In order to find the correlation between the teachers' critical thinking and success, Pearson correlation coefficient was calculated for both male and female teachers.

Table 3

Pearson correlation between male and female teachers' critical thinking and their professional success

Variables	Pearson correlation	Sig
critical thinking	0.87	0.00
pedagogical success		

It can be clearly seen from Table 3 that there is a positive correlation between EFL teachers' critical thinking and their professional success ($r= 0.87, p \leq .05$). This indicates that the more the teachers benefit from higher level of critical thinking, the more they will be considered as successful teachers among their students. Therefore, the results obtained from Tables 3 show that the first null hypothesis that is "*There is no significant relationship between EFL teachers' critical thinking skill and their teaching success*" is rejected.

To test the second hypothesis of the study, an independent Sample t-test was run on the mean scores of the participants' critical thinking, the results of which are presented in Table4.

Table 4

Independent-Sample T-Test Results for Comparing male and female teachers' critical thinking

	N	Mean	t	df	Sig
Male teachers	44	54.64	2.37	111	.01
Female teachers	69	48.04			

Table 4 shows that there is a significant difference in the mean scores of the male and female teachers' critical thinking ($T=2.37$, $sig = .01$). Consequently, it can be stated that male and female teachers differ significantly from each other regarding their critical thinking ability, and thus, the second null hypothesis, that is, *There is no significant difference between male and female Iranian EFL teachers regarding their critical thinking abilities*, is rejected.

The third hypothesis addressed the significant difference between teachers holding AS. and BA and their teaching success. To test this hypothesis, another Independent Sample t-test was run on the mean scores of the participants' critical thinking. Table 5 illustrates the result.

Table 5
Independent-Sample T-Test Results for Comparing BA and AS teachers' critical thinking

	N	Mean	t	df	Sig
BA teachers	53	63.22	14.64	111	.000
AS teachers	60	39.46			

As shown in Table 5, there is a significant difference between teachers holding BA and AS degree with regard to their critical thinking, $t(111)=14.64$, $p = .000$. As a result, it can be stated that teachers holding BA and AS differ significantly from each other regarding their critical thinking abilities, which rejects the third null hypothesis that *There is no significant difference between Iranian EFL teachers holding BA and AS degree regarding their critical thinking abilities*.

Discussion

Highlighting the importance of critical thinking in educational contexts, this study aimed to investigate the relationship between teachers' critical thinking and their professional success. The results of the data analyses revealed that there was significant relationship between English teachers' critical thinking skills and their professional success. In other words, the higher the teachers'

critical thinking skills, the more successful they seem to be in class from their students' point of view.

Our findings are in line with the results obtained by Ghaemi and Taherian (2011) that showed a positive significant correlation between teachers' critical thinking and their pedagogical success. Moreover, the current study results confirmed the findings of the study done by Birjandi and Bagherkazemi (2010), revealing that critical thinking and teacher success significantly correlated with each other.

However, Purali (2011) mentioned that teachers in Iran are mere consumers of the theories and approaches made by the experts instead of being critical reflective thinkers. In such a context, students habituate to be consumers of prescribed knowledge and consider themselves as passive learners because they are mostly engaged in rote learning of information which is transmitted from teachers. Therefore, for both teachers and students, critical and creative thinking skills are replaced by memorization and soon-to-be-obsolete information.

Considering the second research question of this study, the analysis of the data revealed that there was a significant difference between male and female teachers regarding their critical thinking skills. Male teachers got better mean scores in the critical thinking questionnaire as compared to female teachers; in other words, males took more advantages of critical thinking skills than females. Such results confirm the findings obtained by Demirhan and Köklükaya (2014) which revealed that there was a statistically significant difference between male and female teachers in terms of their critical thinking abilities. They concluded that male teachers performed better than female teachers in critical thinking tests.

Another significant finding of this study regarding the teachers' critical thinking was that teachers holding AS and BA degrees were significantly different from each other regarding their critical thinking abilities. In fact, the results revealed that those teachers who held BA degrees had higher critical thinking abilities as compared to those who held AS. degrees. Perhaps, it is due to the fact that every individual can improve his/her levels of thinking through exercising, practicing, and profiting from opportunities provided by an educational context (Gokhale, 1995).

The results of the current study are consistent with the results gained by Talebi and Shirmohammadi (2012) which asserted teachers with higher levels of education possessed much higher level of critical thinking abilities.

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Biodata

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