

Critical Thinking Skill as a Determinant Factor for Learners' English Language Achievement

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Abstract

This study examined the nature of grade 8 students' critical thinking ability, investigated the correlation of critical thinking skill with learners' English language achievement, and explored the effect of critical thinking ability on learners' English language achievement. The study involved 99 grade seven students from two government primary schools. In order to gather data, standardized critical thinking test was administered and semester-based learners' English language achievement scores were used. So, Pearson product moment correlation and linear regression were employed to analyze the data. Results of Pearson product moment correlation coefficient showed that there was a positive significant correlation between the critical thinking ability and English language achievement. Furthermore, the finding from the linear regression analysis also showed that learners' critical thinking proficiency could predict learners' English language achievement. Finally, the researchers made conclusions and forwarded recommendations based on the findings.

Keywords: Competence, Critical Thinking, Elementary School, Foreign Language, Language Achievement

Introduction

Education is the formal and informal processes of teaching and learning used to develop a person's knowledge, skills, attitudes, understanding, etc., in a certain area or domain. Scholars also confirmed that the absolute purpose of education is getting learners ready for the challenges and uncertainties of their future life. In other words, it is believed that education equips learners with the necessary skills and knowledge that

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helps them to go along with the fast growing technology and scientific discoveries. These skills comprise enormous ideas like creativity, innovation, problem solving, communication, collaboration, teamwork, and critical thinking (Hove, 2012). Hence, the practice of producing creative and novel ideas has been noted as a fundamental target and core principle of the contemporary education system (Beaumont, 2010). To put it more explicitly, the notion of education is to produce ingenious citizens who are reflective, creative and critical thinkers. Robinson, as cited in Cotton (1991) states in her 1987 practicum report:

Teaching children to become effective thinkers is increasingly recognized as an immediate goal of education....If students are to function successfully in a highly technical society, then they must be equipped with lifelong learning and thinking skills necessary to acquire and process information in an ever-changing world (p. 16).

It has been long since scholars have identified the relevance of critical thinking skills as an outcome or output of students' learning. For instance, Marin and Halpern (2011) argued that the primary rationale of formal education is to enhance learners' critical thinking skills because the capacity to think critically is indispensable to be successful in the modern world where the tempo for the creation of new knowledge is increasing in alarming rate. Besides, Snyder and Snyder (2008) noted that critical thinking skills are essential because they serve as a vehicle for educating the mind and empower students to handle social, scientific, and practical problems effectively. Especially, in the past two or three years, educators have emphasized the value of teaching critical thinking within and across academic areas (Iakovos, 2011; Lai, 2011; Tung & Chang, 2009; Bracken et al., 2009). Moreover, critical thinking is identified as one of the determinant factors that predict learners' academic performance. (Tsui; Elias; Freire, cited in Keihaniyan, 2013, p. 25)

More recently, the Partnership for 21st Century Skills has identified critical thinking as one of several learning and innovation skills necessary to prepare students for post-secondary education and the workforce. That is why notional shifts in the education system tend to value critical, creative and innovative ideas. It also emphasizes over the appropriateness and practicality of critical thinking in education (Facione, 2011; Paul, 2004). Therefore, the ability to think critically is a crucial life skill. It is also strongly believed that enhancing learners' critical thinking capacity on their own learning process can assist them to improve their learning.

This skill is one of component skills of higher-order thinking that prop up higher order learning skills which in turn allow students to accomplish higher levels of language proficiency (Renner, 1996). According to Tung and Chang (2009), scholars have argued on the soundness of incorporating the instruction of critical thinking skills in EFL lessons, since such skills are increasingly required for success in a knowledge-based society. To strengthen the idea of teaching critical thinking skills in the language classroom, Iakovos (2011, p. 82) mentioned that language classes, in particular, are more suitable for the instruction of critical thinking skills, because of the context and pedagogy that language is taught: richness in material and the use of interactive approaches.

Research evidence has shown that critical thinking and language development are closely related. Such close relationships between language and thinking skills have long been recognized by theorists and educators (Chomsky, 1993; Piaget, 2005; Vygotsky, 1962). For instance, as Shahini and Riazi (2011, p. 171) noted, “Language is a mental tool that each member of the social community (classroom) uses to think and it is through language and communication that abstract thinking becomes possible.” It is also believed that children come to know the world through language. Shirkhani and Fahim (2011) also claim that the improvement of learners’ critical thinking skills is necessary, for the importance it has in the development of effective language learning. Therefore, helping learners to acquire critical thinking skills has to be regarded as one of the everyday jobs of EFL teachers (Liaw, 2007). They can do this task through various ways, including choosing appropriate materials, using appropriate exercises, and designing and implementing standardized and relevant assessments.

Besides, various scholars provided various definitions for the term critical thinking from different perspectives. Ennis (1985), for instance, defined critical thinking as it is reflective and reasonable thinking that is focused on deciding what to believe or do. On the other hand, Cotton (1991) defined critical thinking as it is the process of determining the authenticity, accuracy, or value of something; characterized by the ability to seek reasons and alternatives, to perceive the total situation, and to change one's view based on evidence.

In addition to Ennis and Cotton, Keihaniyan (2013, p. 25) used the term critical thinking as:

a way of deciding whether a claim is true, partially true, or false.
Critical thinking is a process that leads to skills that can be

learned, mastered and used. Critical thinking is a tool by which one can come about reasoned conclusions based on a reasoned process. This process incorporates passion and creativity, but guides it with discipline, practicality and common sense.

In contrast to the aforementioned scholars, Facione and Facione (2009) defined the term critical thinking as active process of constructing purposeful, reflective and rational decisions on what to accept and what to do. Furthermore, Lai (2011, p. 2) also noted that critical thinking incorporates various skills like “analyzing arguments, making inferences using inductive or deductive reasoning, judging or evaluating, and making decisions or solving problems.”

Critical thinking is a learned ability that must be taught. Thus, experts have argued that critical thinking skills are not likely to develop spontaneously or innately. To strengthen this, Lombard as cited in Hove (2011, p. 21) cautioned that “Critical thinking is not a product of simple growth and maturation; instead, critical thinking skills must be explicitly taught and consistently practiced.” Furthermore, Iakovos (2011) noted that critical thinking is a skill which can be learned in the classroom, since the ability to think critically constitutes a kind of intelligence which students do not necessarily or naturally acquire. By contrast, it is believed that teachers must take a directive role in initiating and guiding critical thinking, since it is considered as a learnable skill. The teaching of critical thinking needs to be well organized and consistent, and it must be given all the way through the entire educational hierarchies. Thus, Beyer (2008) encouraged schools to constantly familiarize learners of all ages to thinking strategies. Besides Beyer, Thompson and Evans (2005, p. x) also claimed that “teaching children to ‘think’ has now become an acceptable part of educational practice.” These strengthens the assumption of applying various thinking strategies effectively and consistently predicts considerably what learners learn, produce and achieve in class.

On the contrary, Shirkhani and Fahim (2011) argued that thinking skills and language learning are often treated as distinct practices in actual classrooms although there is massive understanding among theorists and educators about the invaluable importance of critical thinking skills in learners’ over all lifelong success and language development to be specific. The existing educational trend which focuses on test scores also constraints teachers’ capacity to deal with critical thinking in the classroom (Snyder & Snyder, 2008). Giving more emphasis on teaching to enhance the test result of learners distracts the teaching-learning

process from learners' self-construction of knowledge and places the emphasis on memorization of facts presented by teachers. If the focus is on learning, students should be given the autonomy and accountability to explore content, analyze resources, and apply information.

Similarly, Ethiopian students are used to rote learning, so the use of critical thinking skills is not part of their daily routine. Linked to this argument, Wondifraw (2018, p. 28) in his study conducted at a university level found out that "the students' disposition towards critical reading tasks and intellectual standards of critical thinking was found very limited and the students were not interested to question writers while reading." Furthermore, he learned from the intervention that students gave little attention to carry out critical reading tasks. Students have been trying to read for a mere comprehension. As a result, Wondifraw concluded that learners had little or no insights concerning the logical principles of critical thinking.

Furthermore, in the summary report of the Institute of International Education briefing paper (2012), various groups of participants of the conference on 'Enhancing the Quality of English Language Education in Ethiopia' reflected on issues like a continuous deterioration in the quality of English language education, the production of exam-oriented students who do not internalize their learning; and the declining tendency in critical thinking.

The aforementioned problems have instigated the researcher to investigate the relationship between critical thinking with English language achievement, and the predictive power of critical thinking on elementary school learners' English language achievement. Therefore, the researchers formulated the following research questions.

Research Questions

- Is there a significant relationship between critical thinking and English language achievement?
- Does critical thinking predict learners' English language competence?

Methodology

Design of the Study

This research employed a quantitative research approach and an explanatory, correlation, research design. In order to gather data related to the research questions, standardized critical thinking test was administered and the semester aggregate result of learners' English language achievement score was used. The critical thinking test is adapted from the Test of Critical Thinking (TCT) which is a researcher developed test at the College of William and Mary. The scores of EFL achievement were taken from the students' cumulative result records in the first semester of 2010 E.C. (2017/2018 G.C.). All of the respondents were further given a test on critical thinking skills in reading at the beginning of the second semester of the same academic year.

Participants

The study was conducted on upper primary students: grade 7 in focus from two schools. There were two government full cycle primary schools in the district that this study is conducted. As a result, two sections of students from these schools were selected as sources of data. Besides, the researcher used a simple random sampling technique to select one section of students from each school. In general, a total of ninety-nine grade seven students participated in this study.

Data Collection Instruments

A critical thinking test which was adapted from the Test of Critical Thinking (TCT) which is a researcher developed test at the College of William and Mary was used to measure learners' critical thinking skills. The test was originally designed for measuring the effects of curriculum interventions with gifted and general education students in upper elementary grades (Bracken et al., 2003). The test consisted of 45 items, arranged across ten brief scenarios. Each scenario was followed by 3 to 6 critical thinking items. A multiple-choice item format was used for all scenarios, with four options presented per item (i.e., one keyed response and three foils). The internal consistency of the instrument was 81.

Data Analysis

The data is analyzed quantitatively, and the Statistical Package for the Social Sciences (SPSS), Version 20.0 was used for analysis. Both the

result of critical thinking test and first semester achievement scores of learners were used for data analysis purpose. Pearson correlation and linear regression were employed. Since this study aims to describe the degree of association between learners' English language achievement and their critical thinking skill, Pearson correlation is calculated. In this study, the correlation was represented by a participant's performance on the test of critical thinking and their semester based English language achievement and describing the degree of relationship between the variables. Therefore, the correlation was calculated using the Pearson Product Moment Coefficient. Finally, a simple linear regression is used to see the effect of critical thinking on English language achievement which is the main purpose of this study.

Results of the Study

The purpose of this study was to investigate the correlation of critical thinking skill with learners' English language achievement, and to explore the effect of critical thinking ability on learners' English language achievement. Thus, the data were analyzed quantitatively and results are presented as follows.

Pearson correlation coefficient was employed in order to find out if there existed any significant relationship between learners' critical thinking skill and their English language achievement. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity and homoscedasticity. A significant positive relationship ($r = .598$, $p < 0.01$ level) was found between the scores for critical thinking and foreign language achievement.

Further, simple linear regression analysis was applied in order to find out what percent of variability in learners' English language achievement can be accounted for their critical thinking skill. The results indicate that learners' total score of critical thinking skill is a significant positive predictor of their English language achievement ($F_{2, 98} = 12.156$, $p < .01$). Therefore, the obtained R square ($R^2 = .357$) indicates that total scores of critical thinking can predict 35.7% of the variance in the learners' English language achievement. This means that about 36% of the variation in learners' English language achievement can be explained by their scores of critical thinking skills in the data.

Discussion

Currently, enhancing learners' critical thinking skills has been widely considered as one of the most fundamental objectives of education (Iakovos, 2011). However, the idea of effective amalgamation of critical thinking skills with the teaching of English as a foreign language is a recent phenomenon. This belief is based on the empirical evidences that there is a positive degree of association between knowledge and thinking and between language learning and thinking processes. Having said this, the results of the study are discussed hereafter in relation with the literature and research findings.

Scholars, in the literature, highly acknowledged that language and thought, language and cognition, and language and critical thinking are highly interrelated. In line with this, the Pearson product-moment correlation coefficients of the study showed significant and positive correlations between the total score for the test of critical thinking with the semester-based assessment score for learners' English language achievement. As the score for critical thinking increased the score for English language achievement increased, or vice versa. In other words, those who score higher on the critical thinking test are found to be higher achievers in the English language assessment. This finding, however, is quite in line with what is obtained in other studies (Grosser & Nel, 2013; Junining, 2015; Liaw, 2007; Rashid & Hashim, 2008), and with a substantial theoretical and empirical base in the literature demonstrating the association of critical thinking with students' foreign language achievement (e.g., Ghanizadeh & Mirzaee, 2012; Iakovos, 2011; Lia, 2011).

However, some studies have come up with different findings. For instance, unlike previously mentioned researchers, Tung and Chang (2009) found a different result that the proficiency of students' English language did not correlate with their critical thinking proficiency: in both the pretest and posttest of California Critical Thinking Skills Test. Likewise, Nordin and Dakwah (2015, p. 46) conducted a correlation study and they found out that there was no significant relationship between level of critical thinking skills and CGPA of students at the alpha level of .05.

Finally, the data is analyzed with a multiple linear regression in order to calculate the predictive power of critical thinking ability on learners' English language achievement. In the study, it is found out that learners' level of critical thinking can predict about 35% of their English language

achievement. Thus, it can be claimed that critical thinking is a crucial factor in explaining EFL learners' levels of language proficiency. Similarly, in their study Ghanizadeh and Mirzaee (2012, p. 463), have come up with a similar but not identical result that critical thinking is a predictor variable for achievement, and it was also revealed that "EFL learners' CT can predict about 28% of their achievement." Thus, the pedagogical implication is that critical thinking skill can be taught in the classroom to improve the achievement of students' English language.

Conclusions and Recommendations

Taking the results found into account, the following conclusions were drawn.

The study revealed that a positive correlation is found between learners' English language achievement with their critical thinking ability. Besides the correlation between these two variables, it is also discovered that the level of learners' English language achievement can be predicted by their critical thinking skill. Therefore, the researchers concluded that the integration of critical thinking activities in the English language learning strategies can help students to enhance their way of thinking and English language achievement. In other words, critical thinking and language skills are the two faces of the same coin. The effective acquisition or learning of these two skills cannot be achieved discretely: therefore, the enhancement of students' critical thinking capacity should be nurtured in the strategies and lessons for students' English language learning.

- The strategy of enhancing learners' critical thinking ability has to be incorporated in a foreign language teaching pedagogy.
- English Language Teachers should have been given sustainable trainings on the pedagogy of using strategies to promote critical thinking in language learning and to teach language for reasoning.
- The old cycle of transmission pedagogy which emphasizes on improving learners' test scores should be replaced with critical thinking pedagogy in language education. This may promote learners to thoroughly discover themselves in the process of language learning, and develop an understanding of using language appropriately to reason.

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