

The Relationship between Critical Thinking and Gender: A Case of Iranian EFL Learners

Nahid Salahshoor

English Department, Faculty of Humanities, Najafabad Branch, Islamic Azad University, Najafabad, Iran

Marzieh Rafiee *

English Department, Faculty of Humanities, Najafabad Branch, Islamic Azad University, Najafabad, Iran

Abstract

The present paper investigates the relationship between critical thinking (CT) and gender among Iranian EFL learners and it also attempts to trace any difference between male and female learners in applying this skill. With this purpose in mind, 186 EFL learners from five private language institutes were selected in order to participate in the study. The participants were requested to complete the validated Persian version of Watson-Glaser's Critical Thinking Appraisal which consisted of 80 items and took 45 minutes to be filled out. The findings indicated a poor status of CT among the learners and also it was revealed that males and females were not significantly different from one another in applying CT skills. The conclusion and implications of the study are furthered discussed.

Keywords: critical thinking, gender, EFL learners, Watson-Glaser's critical thinking appraisal

INTRODUCTION

The literature related to Critical thinking (CT) reveals that the definition of CT encompasses many dimensions. Ennis (1985, pp. 44-48) defines CT as "reasonable and reflective thinking that is focused on deciding what to believe or do". CT has been long viewed as a skill for a lifetime of complicated choices which individuals have to make in their personal, academic and social lives. In this fast-paced and ever-changing world we live in, CT is not a mere luxury; it has been considered by many scholars a basic survival skill (Facione & Facione, 1996; Wright, 2002; Moon, 2008).

The CT Community published an essay in 2011 and described an ideal critical thinker as follow (p. 143):

- Raises vital questions and problems, formulating them clearly and precisely.

- Gathers and assesses relevant information, using abstract ideas to interpret it effectively.
- Comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards.
- Thinks open-mindedly within alternative systems of thought, recognizing and assessing, as needs be, their assumptions, implications, and practical consequences.
- Communicates effectively with others in figuring out solutions to complex problems.

Some people have more knowledge or are more eloquent than others. Still, two equally intelligent people can be equally articulate and knowledgeable, but not be equally good thinkers. If only one of them is thinking critically, that one will be better at analyzing and evaluating facts and opinions, sources and claims, options and alternatives. The critical thinker will be a better problem-solver and better decision-maker (Carrol, 2004).

But people rarely examine their motivations to see if they make sense. They rarely scrutinize their reasons critically to see if they are rationally justified; Non-critical thinkers are not interested in facts, they don't think, don't trust their reasons for solving problems, and don't understand others' thoughts, no matter whether they are male or female. (Schapersman, 1991). In educational setting, it is widely accepted that learning to think is one of the most important goals of formal schooling.

Dewey (1999) stated that the central purpose of education is learning to think. As part of that education, learners need to develop and learn to apply CT skills to their academic studies effectively, to the complex problems that they will face in their professions, and to the critical choices they will be forced to make as a result of the information explosion and other rapid technological changes in L2 context.

It seems that attention to CT deserves additional considerations. Likewise, more recently, ways in which CT might be interpreted and taught have become highly debated questions for L2 learning scholars and practitioners. According to Wal (1999) two main approaches can be taken in the assessment of CT: by assessing in relation to other relevant academic skills, such as writing, oral presentation, or practical problem solving and by assessing proceedings of CT skills as a trait or individual feature of the learner, by inviting the learner to complete an assessment scale.

More recently, in an L2 context, ways in which CT might be interpreted and taught have become highly debated questions for L2 learning scholars and practitioners (Thompson, 2002). A shift has occurred from viewing learning primarily as rote training to conceptualizing learning as a constantly evolving process of discovering, questioning, and reformulating hypotheses (Pennycook, 1994).

There is wealth of research projects conducted on CT all over the world. For example, Halpern et al. (2012) used operation ARA (Acquiring Research Acumen), a

computerized learning game that teaches CT and scientific reasoning. Early results showed that students who play operation ARA had higher proportional learning gains than students who did not play the game. There was no difference in proportional learning gains between the colleges, nor was there an interaction between type of college and if they played the game.

A research done by Hashemi and Ghanizadeh (2012), investigated the impact of critical discourse analysis (CDA) on TEFL students' CT ability in reading journalistic texts classes. The results of the posttest indicated that CDA has a positive and significant influence on learners' CT ability. CDA was also found to have the highest impact on two components of CT, interpretation and recognizing unstated assumption.

Having a glance on the related literature, gender as a predictor of CT skills or dispositions and such conflicting results was a variable that has been evaluated by nearly all of the CT studies. One study which considered gender in CT research was Wilson (1989). Using the Watson-Glaser test and ACT College Reports, he realized that gender was a significant predictor of CT skill. Aliakbari and Sadeghdaghighi (2012) attempted to examine the extent to which Iranian students in Ilam University are critical thinkers. The effect of gender and field of study on CT ability was supported.

Despite aforementioned work, there have been just as many studies indicating the null nature of gender effect on CT. Nazem Ghadia et al. (2012) conducted a study aimed to determine the level of CT dispositions (CTD) among the surveyed male and female undergraduate students. The findings showed that there was no significant difference between male and female students in this regard.

Knowing the degree to which people are critical thinkers can help them improve themselves and their CT potential which, in turn, results in enhancement of the quality of their life and learning. Importance of the CT, its rarity in Iranian educational system and research, and conflicting results with respect to gender led the researcher to pose the following research questions.

1. Does CT exist among EFL learners? To what extent?
2. Is there any difference between male and female language learners with regard to CT?

METHOD

Participants

Five private language institutes located in Fooladshahr were selected based on convenience sampling. In order to make the sample size larger, all the intermediate classes, each comprised nearly 10 to 15 male and female learners, whose age ranged between 16 to 45 were selected as the participants of this study. As the placement process of each institute certifies, the students were at intermediate level and most of the members of the classes took part in the study (n=186).

Material

The required data for the study were in the form of 80 items of Watson-Glaser Critical Thinking Appraisal Test (1980) (WGCTA) questionnaire. As WGCTA was designed for the English speakers, the translated version of this test, which was validated by Mohammadyari (2002) was used.

Procedure

After choosing the participants of this study, the researcher started to distribute the questionnaires among them. The participants took the questionnaires home, completed and during the following two weeks submitted them to their teachers. It took 45 minutes for each learner to fill the questionnaire. In addition, the researcher asked teachers to give the participants extra mark, as a motivator, for persuading them into participating actively in the research. As the classes were not mixed, the questionnaires were distributed separately among all of the male and female learners.

RESULTS AND DISCUSSION

This study aimed at showing the current situation and existence of CT among Iranian EFL learners besides investigating the contribution of gender in this context. Upon the administration of the questionnaire and collection of the results, the scores were calculated. Then descriptive statistics regarding the raw data were measured. The results of descriptive analyses are summarized in Table 1.

Table 1. Descriptive Statistics of the CT Scores

| | | |
|--------------------------|---------|-------|
| N | Valid | 186 |
| | Missing | 0 |
| Mean | | 41.82 |
| Median | | 40.00 |
| Mode | | 38.00 |
| Std. Deviation | | 8.10 |
| Variance | | 65.72 |
| Skewedness | | .10 |
| Std. Error of Skewedness | | .17 |
| Kurtosis | | .24 |
| Std. Error of Kurtosis | | .35 |
| Range | | 43.00 |
| Minimum | | 20.00 |
| Maximum | | 63.00 |

Table 1 reveals that the lowest score obtained in the CT questionnaire was 20.00 and the highest score was 63.00. As for measures of central tendency, the mean in the distribution was found to be 41.82, while the median was 40.00 and the most frequently occurring score (the mode) was 38.00. With respect to measures of variability, a

standard deviation of 8.10 and a variance of 65.72 were obtained. The distribution here is, although to a very small extent, positively skewed, and it is not very peaked.

In order to compare the difference between male and female language learners as regards with their abilities in CT skill, independent-sample t-test was conducted whose results are shown in Table 2.

Table 2. Results of the Independent-Samples T-test for Comparing the CT Scores of Male and Female Learners

| | Levene's Test for Equality of Variances | | t test for Equality of Means | | | | | | |
|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | Lower | Upper |
| Equal variances assumed | 2.92 | .089 | 1.86 | 184 | .064 | 2.26 | 1.21 | -.13 | 4.65 |
| Equal variances not assumed | | | 1.77 | 127.998 | .078 | 2.26 | 1.27 | -.25 | 4.77 |

According to Table 4, there was not a statistically significant difference in CT scores for females ($M = 43.20, SD = 9.07$) and males ($M = 40.94, SD = 7.37$), $t(184) = 1.86, p = .064$ (two-tailed). This is so because the p value was greater than the specified level of significance (i.e. 0.05). The conclusion to be drawn would be that gender did not affect the CT level of the learners. The results of this comparison is graphically shown in Figure 1.

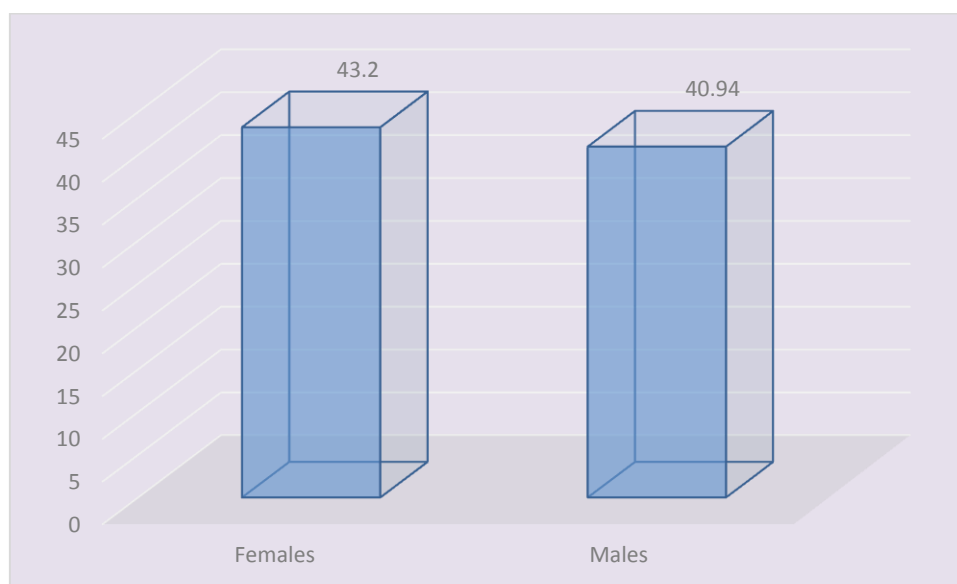


Figure 1. Comparing the Mean Scores of Males and Females on the CT Questionnaire

CONCLUSION

The present study set out to answer three important questions which are in need of Iranian context. In fact the researcher firmly intended to apparently indicate the current status of CT among Iranian EFL learners and has been seeking to find any difference between male and female learners in applying CT skills. According to the data analysis, it can be concluded that some signs of CT skills does exist among Iranian EFL learners. All of the studies done in this domain acknowledge the existence but poor condition of CT among learners; in other words not disappointing, not satisfactory enough. The other finding of this study is that there was not statistically significant difference between male and female EFL learners in accordance with CT skills.

Some important causes can be plausibly considered here; At the outset, it seems the deficiency in thinking ability in Iran's education system and consequently among its students to some extent is rooted in a long inconsistent history of unrest and lack of establishing any long-term thinking institutions (Sariolghalam, 2007). When the inferior kings and emperors governed the land of Persia annihilated any thinking system before being well set (Katouzian, 2010). Moreover, people in a collectivist society like Iran judge the appropriateness of such issues by heavily relying on their congruity and harmony with what is conventionally considered as right by the society (Ghanbari (2011). In addition Sariolghalam (2007) argued that Iran's education system from the very start of students school life seeks to convey some raw materials without satisfactory instruction in how to critically apply, analyze, synthesize, and evaluate these materials. These factor are some major influential causes to the poor status of CT among Iranian EFL learners.

The findings of this study can be regarded as a guideline for teachers to empower themselves with this vital skill. It can be asserted that all the teachers must pay attention to the poor condition of CT in Iranian context and should learn how to think and how to be equipped themselves with CT skills. In this way, they will be able to teach this vital and everlasting skill to their students in order to enable them to be powerful critical thinkers who possess sharp analytical mind.

Furthermore, the current study had some implications for material designers and decision makers as well. It goes without saying that material designers should develop some truly useful CT courses and decision makers in educational system must open their eyes then pave the way for such courses to be included in the whole system; The sooner they try to pave this way in the educational lives of EFL learners, the better results they would come up with. This is absolutely an important step towards an ideal educational system.

REFERENCES

- Aliakbari, M., Sadeghdaghighi, A., (2012). Investigation of the relationship between gender, field of study, and critical thinking skill: the case of Iranian students. *Proceedings of 16th Conference of Pan-Pacific Association of Applied Linguistics*.
- Carrol, T. (2004). *Becoming a critical thinker. A guide for the millennium*. London: Pearson Education.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: Heath.
- Ennis, R. H. (1996). *Critical thinking*. New Jersey: Prentice Hall.
- Facione, P.A. (1984). Toward a theory of critical thinking. *Liberal Education*, 70, 253-261.
- Ghadi, I., Abu Bakar, K., Alwi, N., & Talib, O. (2012). Gender analysis of critical thinking disposition instrument among university putra, malaysia undergraduate students. *Recent Technological Advances in Education*. ISBN: 978-1-61804-172-2.
- Ghanbari, A. (2011). A pathological inquiry into the limits and howness of critical thinking in Shiraz university post graduate classroom discourse.
- Halpern, D. F. (2003). *Thought and knowledge: an introduction to critical thinking (4th ed.)*. Hillsdale, NJ: Larwence Erlbaum Associates.
- Hashemi, M. R., & Ghanizadeh, A. (2012). Critical discourse analysis and critical thinking: An experimental study in an EFL context. *System*, 40, 37-47.
- Katouzian, H. (2010). *The Persians: Ancient, mediaeval and modern Iran*. New Haven and London: Yale University Press.
- Moseley, D., Baumfield, V., Elliot, J., Gregson, M., Higgins, S., Miller, J., & Newton, D. (2005). *Frameworks for thinking: A handbook for teaching and learning*. Cambridge: CUP.
- Pennycook, A. (1999). Introduction: Critical approaches to TESOL. *TESOL Quarterly*, 33, 329-348.
- Sariolghalam, M. (2007). *Rationality and the future of Iran's development*. Tehran, Center for Scientific Research and Middle East Strategic Studies.
- The Critical Thinking Community (2011). Retrieved on 10/21/2015. <http://www.criticalthinking.org/>
- Watson, G. B., & Glaser, E. M. (2002). *Watson-Glaser Critical Thinking Appraisal UK*. London: The Psychological Corporation.