

From Students' Perspective: Teaching Critical Thinking in an ELT Studies Course

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Abstract

The current study is a quantitative research that aims to throw light on the place of students' views on teaching critical thinking (TCT from now on) in the field of foreign language teaching. Hence, the study investigates whether any significant correlation exists between the fourth year university students' attitudes concerning TCT in terms of their individual differences and their achievement scores. In this sense, a case-specific attitude scale was also developed for the purpose of the study. The results juxtaposed with the previous findings in the literature indicate that TCT would serve new benefits for the interests of foreign language teaching.

Keywords: Critical Thinking, Language Teaching, Student Attitude, Scale Development.

Öğrencilerin Perspektifinden: Bir İngiliz Dili Eğitimi Çalışmaları Dersinde Eleştirel Düşünme Öğretimi

Öz

Mevcut çalışma öğrencilerin yabancı dil eğitimi alanında eleştirel düşünme öğretimi hakkındaki değerlendirmelerine ışık tutmaya çalışan nicel bir araştırmadır. Böylelikle, çalışma, dördüncü sınıf üniversite öğrencilerinin tutumları ile eleştirel düşünme öğretimi arasında bireysel farklılıklar ve başarı açısından karşılıklı bir ilişki olup olmadığını araştırmaktadır. Bu anlamda, çalışmanın amacı doğrultusunda ayrıca vakaya özgü bir ölçek de geliştirilmiştir. Sonuçlar, literatürde yer alan önceki bulgularla karşılaştırıldığında eleştirel düşünme öğretiminin yabancı dil öğretimine yeni kazançlar sağlayabileceğine işaret etmektedir.

Anahtar Kelimeler: Eleştirel Düşünme, Dil Öğretimi, Öğrenci Tutumu, Ölçek Geliştirme.

1. Introduction

Critical thinking appears to be on the agenda of teaching circles especially over the past few decades (Grauerholz & Bouma-Holtrop, 2003). Yet, it has been a serious case of discussion since the earlier periods of Western Philosophy (Siegel, 2010). Unfortunately, little has been achieved to

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provide an epistemological common ground for its definition, even for a long period of time after the earlier teachings of Socrates (“Stanford University”, 2003). More contemporarily, starting with Glasier’s work (1941) many successive attempts have been realized to delineate a conceptual framework (Abrami et al., 2008). After all, notwithstanding a contemporary body of literature (Ennis, 1962, 1987, 1997, 2011; Kurfiss, 1988; Siegel, 1988; Facione, 1990; Paul & Binker, 1990; Lipman, 1991; Watson & Glaser, 1994; Scriven & Paul, 1996; Halpern, 1997; Facione & Facione, 1996, 2007; Facione, Facione & Giancarlo, 2000; Vaughn, 2005; Scriven, & Paul, 2008; Siegel, 2010; Facione, 2015), there appears to be no consensus on a scholarly definition. At any rate, a well-accepted definition above all, put forth by 46 experts in a Delphi Panel held by American Philosophical Association in 1990 defines critical thinking as follows:

We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. CT is essential as a tool of inquiry. As such, CT is a liberating force in education and a powerful resource in one's personal and civic life. While not synonymous with good thinking, CT is a pervasive and self-rectifying human phenomenon. The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. Thus, educating good critical thinkers means working toward this ideal. It combines developing CT skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society (Facione, 1990, p.2)

Within this framework, the 6 skills, 16 subskills and 19 dispositions identified by the Delphi Committee in 1990 (Abrami et al., 2008) seem to provide sound grounds for a stabile terminology and an understanding for human cognition at first step, which would make for dealing with measurement problems caused by the vague terminology of conceptual definitions (Dixon et al., 2004).

However, this definition, albeit widely accepted, has also oppositions. In their recent meta-analysis Abrami et al. (2015, pp. 277-278) report the leading arguments of these oppositions (Aston, 2001; Thayer-Bacon, 2000; Biesta & Stams, 2001; Marshall, 2001). The arguments mainly consist of issues such as its impractical broadness, its analysis of critical thinking as comprising skills and dispositions instead of evaluating it as a case of social practice, its criteria foundation that depends on critical dogmatism instead of Derridean deconstruction respectively. All these put aside, the definition also fails to tackle a classical dichotomy: whether critical thinking should be identified via a psychological or a philosophical conception (Siegel, 2010).

In the face of all these predicaments, Bernard et al. (2008, p.16) report ‘13 standardized measures of critical thinking’ devised for different teaching environments (teaching critical thinking skills, Heraty & Morley, 2000; Wood, 1981; the success of educational programs, Sandor, Clark, Campbell, Rains, & Cascio, 1998; Dale, Ballotti, Handa, & Zych, 1997; teaching clinical skills, Miller, Sadler, & Mohl, 1993, and a variety of abilities such as general academic success, McCammon, Golden, & Wuensch, 1988; Gadzella, Ginther, & Bryant, 1987; the ability to communicate with depressed patients, Gonzalez, 1996). The Watson–Glaser CT Appraisal (WGCTA), the Cornell CT Test (CCTT), the California CT Skill Test (CCTST), and the Test of Critical Thinking-Form G, being the most prominent ones, WGCTA is reported to be ‘the oldest and most widely used and studied CT measure’ above all (p. 15). Nevertheless, it is still not so certain a case for

researchers as to unanimously report at which age and to which students both critical thinking and these tests should be introduced (Kettler, 2014; Dixon et al., 2004).

In this sense, there appears to be a serious gap in the literature for empirical studies focusing on the relationship between the phenomenon of critical thinking, its teaching context, its target population and the individual differences of this target population (Facione, Facione & Giancarlo, 2000).

Hence, the current study aims to shed light on the aforementioned issues in the language teaching context focusing on the effect of the target population's individual differences on their attitudes towards TCT in addition to the effect of their attitudes towards TCT on their achievement. Finally, the most effectual aspects of TCT in the students' regard are also scrutinized. Accordingly, the present study tries to convey answers for the following research questions:

1. Is there a statistically significant relation between the students' attitudes towards TCT, and their ages?
2. Is there a statistically significant relation between the students' attitudes towards TCT and gender?
3. Is there a statistically significant relation between the students' attitudes towards TCT and their success levels?
4. Which aspects of TCT were mostly appreciated by the learners?

2. Materials and Methods

The present study is a quantitative research that aims to explore the role of age, gender and success in the students' attitudes towards TCT in an ordinary undergraduate course at a foreign language department. Moreover, the most appreciated aspects of TCT were also investigated. With this aim, the ELT Studies course of the English Language and Literature Department of Selcuk University was selected as a model. Accordingly, following a 14-week ELT Studies course, a questionnaire that investigates the students' attitudes towards the role of the technique was distributed to the fourth year students of the English Language and Literature Department of Selcuk University. The students' attitudes towards the technique and their individual differences were investigated through statistical procedures to detect any possible relation separately. The same process was repeated for their attitudes and their achievement scores. Besides, the most appreciated aspects of the technique were analyzed again through statistical procedures.

2.1. Participants of the Study

This study was carried out at the English Language and Literature Department of Selcuk University in Konya, Turkey. The number of the participant was 40, which were evaluated in two main age groups: 22 and below and 23 and above. The first age group represents the age range of the normal students who are supposed to start their university education at the age of 18 and who are again supposed to graduate from the university at the age of 22. The second group represents those who may enter the university at their later ages or who are at the extension period for graduation.

Since the majority of the English Language and Literature Department usually comprises female students, most of the participants were females. The undergraduate program of the English Language and Literature Department accepts the students after a placement test that vindicates them to be proficient in English. Thus, the participants of the present study were acknowledged to be proficient in English despite their label of non-native speakers. Consequently, the entire participants of the study were supposed to be almost at the same proficiency level.

2.2. Data Collection

The data collection of the current study was realized by means of both quantitative and qualitative methods. The statistics were measured by means of the Statistical Package for Social Sciences (SPSS) 22.0. The quantitative data were secured using a 15-item Likert-type scale (1 = Strongly Agree; 6 = Strongly Disagree). The questionnaire was prepared by the researcher depending on the opinions of experts in the same field. During the measurement of the results attained from the questionnaires both descriptive and inferential statistics were used to determine any probable association of the students' attitudes with their age, gender and their achievement scores separately.

2.3. The Questionnaire

The questionnaire consisted of 15 questions. The participants answered these questions as: 1. *Strongly Agree* 2. *Agree* 3. *Not Decided* 4. *Disagree* 5. *Strongly disagree* in terms of their stance towards the technique applied. All question items of the scale were constructed by the researcher.

2.4. Procedure

TCT was applied to the fourth year students in the ELT Studies Course for a period of 14 weeks before the distribution of the questionnaire to the students. In the first day of the course, the participants were all informed about the additional self-study reference books (*Meno* by Plato, *A Brief History of Time* by Stephen Hawking, *Improbable* by Adam Fawer, *What Went Wrong* by Bernard Levis, and *The Spirit of Laws* by Montesquieu) that were bound to be referred to during the course. However, different from a reading list announced on the bulletin board which makes students responsible for reading, these books were only recommended further reading materials and the students were not obliged to read them lest there should have been any loss of confidence or disappointment. On the contrary, they were ensured that the teacher would provide the entailed information about these books where necessary. As the next step, the students were also informed about the concepts *reality* and *fact* which both separate and consolidate *science* and *social science* on one common ground: determinism. In this way, they were introduced how to relate and discriminate abstract concepts and subjects to and from each other within a scientific codification negotiating both embodiment and abstraction.

The application of TCT rests on providing students with an interconnecting scientific vision dependent on the ability of questioning while teaching them the three fundamental epistemologies (Behaviorism, Cognitivism and Constructivism) of the last century and the methodological history of language teaching as their subsidiary practice. The units taking part in the books selected for the ELT Studies Course are interconnected by the teacher with the ones taking part in the recommended supplementary books both in the same and different contexts. In this sense, the teacher should be capable of drawing a philosophical projection that is necessary for connecting any social science discipline to another.

What is more, in order to apply TCT it is strongly recommended that the teacher also be predominant over the issues taking part in the recommended books as well.

Accordingly, following the permission procedure of Selcuk University in the Fall term of 2014-2015, the 40 copies of a two-page questionnaire with another blank sheet were distributed to the fourth year students of the English Language and Literature Department of Selcuk University. Finally, both the entire questionnaires and the blank sheets distributed for the students' additional suggestions were all returned back to the researcher by the students without any loss.

2.5. Data Analyses

The original questionnaire constructed for the current study consisted of 20 items. However, the pilot study realized on 40 fourth- year students of the English Language and Literature Department of Selcuk University made it obligatory to discard 5 items from the questionnaire. Following the rearrangement of the scale items, they were submitted to the other experts in the field for additional consultancy.

For the quantitative analysis of the present study Statistical Package for Social Sciences (SPSS) 22.0 was used. The scale of the study was subjected to statistical procedures to examine both its reliability and validity. The results monitoring the relation between the responses given to the 15 questionnaire items and the students' age, gender and achievement scores, and the most appreciated aspects of TCT are all submitted in the tables with the abbreviations: number of participants with (N), mean with (Mean), mean difference with (Mean Diff.), standard deviation with (Std. D.), standard error with (Std. Err.), standard error mean with (Std. Err. Mean), standard error difference with (Std. Err. Diff.), F statistics with (F), degrees of freedom with (df), significance (p) value of Levene's Test (Sig.), 95% Confidence Interval of the Difference with (95% Con. Inter. Diff.), the two-tailed p value associated with the t-test with (Sig. (2-tailed)).

2.5.1. Reliability Analysis

The scale was examined through Cronbach's alpha Analysis to check the internal consistency level representing the homogeneity or coherence of the scale items and the result was .872 reliable. Despite the close mean and standard deviation values monitored in the item statistics, an explanatory factor analysis was carried out to determine the main factors of the scale items. Inter-Item Correlation Matrix showed either positive or negative correlation with absolute minimum and maximum values between 0.034 and 0.739. The items of the scale were exposed to ANOVA with Tukey's Test for Nonadditivity and the results showed that the items possessed additivity ($p < 0.001$). Furthermore, Hotelling's T-Squared Test validated that the scale items possessed homogeneity. Finally, Intraclass Correlation Coefficient criterion was tested and both the internal consistency for items ($p < 0.001$) and the average measure ($p < 0.001$) screened reliable results.

2.5.2. Validity Analysis

In order to determine the Construct validity of the scale an exploratory factor analysis using Principal Component Analysis (PCA) was implemented. Prior to PCA, the factorability of the scale was measured through the tests; Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity respectively. The KMO result was 0.67. , which was acceptable. The Bartlett's test of Sphericity had a significant test value ($p < 0.05$), which necessitated an explanatory factor analysis. Then a factor analysis via PCA was carried out to measure the construct validity of the scale. Four factors with eigen values greater than 1 were detected. The factors accounted for the total variance with a value of 69 % cumulatively. Each factor accounted for the total variance with the percentages of 19.7 %, 16.6%, 16.4%, 16.3% respectively. Still, the Scree Plot singled out the first factor from the others with a sharp decline in the plot. Hence, the scale appeared to possess a one-factor pattern, which made the factor rotation process unnecessary. Instead, the factor analysis was repeated with the fixed number of factor extraction. As a result of the repeated factor analysis all the factors taking part in the Component Matrix were over .30 and the explained percentage of variance was 37.72. This was slightly over the acceptability criterion 30%. In line with these results, it was necessary to either reclaim or discard two items from the scale. On the grounds that the study was a psychometrical one, the scale items were reclaimed instead of being discarded. Accordingly, the validity of the scale was preserved.

3. Results

Research Question 1. Is there a statistically significant relation between the students' attitudes towards the technique, and their ages?

Table 1 demonstrates that age groups and attitudes do not possess any correlation ($m=1,8$ for age group 22 and below; $m=1.9$ for age group 23 and above). The similar mean values represent no difference between the two age groups, which means there is no significant correlation between the students' age and attitudes towards TCT in general.

Table 1. *Descriptive Statistics for Age and Attitudes*

Mean	Age Groups	N	Mean	Std. D.	Std. Err.
Attitudes Mean	22 and below	29	1.8	0.4	0.07
	23 and above	11	1.9	0.5	0.16

A careful analysis of Table 2. demonstrates that Levene's Test for Equality of Variances shows no diversity between the variances of the two age groups, which enables t-test for Equality of Means to be taken into consideration and thus, the H_0 –null hypothesis- that assumes no relation between the students' age and attitudes is tested. Since the Sig. (2-tailed) value (0.38) is greater than p value=0.05, the H_0 hypothesis may not be rejected. This denotes that there is no significant correlation between the students' age and attitudes towards TCT.

Table 2. *t-test for two Independent Samples in terms of Age*

Levene's Test for Equality of Variances			t-test for Equality of Means						
Attitudes Mean			t	df	Sig. (2-tailed)	Mean Diff.	Std. Err. Diff.	95% Con. Inter. Diff.	
F	Sig.							Lower	Upper
0.95	0.33		-0.87	38	,38	-,13	,15	-,45	,18
			-0,76	14,3	,45	-,13	,18	-,52	,24

Research Question 2. Is there a statistically significant relation between the students' attitudes towards the technique and gender?

Table 3. monitors no significant correlation between the students gender and their attitudes ($m=1,94$ for males; $m=1.85$ for females). The slight difference between the mean values of the two groups demonstrates hardly any difference between the male and the female students, which means there is no significant correlation between the students' gender and attitudes towards TCT in general.

Table 3. *Descriptive Statistics for Gender and Attitudes*

Gender of the Participants	N	Mean	Std. D.	Std. Err. Mean
Attitudes Mean Male	12	1.94	0.40	0.11
Female	28	1.85	0.46	0.08

Levene's Test for Equality of Variances in Table 4. reveals no difference between the variances of the two genders. This makes the H_0 –null hypothesis- that assumes no relation between the students' gender and attitudes valid. Since the Sig. (2-tailed) value (0.59) is greater than p value=0.05, the H_0 hypothesis may not be rejected. Thus, this result vindicates there is no significant correlation between the students' gender and attitudes towards TCT.

Table 4. *t-test for two Independent Samples in terms of Gender*

Levene's Test for Equality of Variances			t-test for Equality of Means						
Attitudes Mean	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Err. Diff.	95% Con. Inter. Diff.	
								Lower	Upper
Equal variances assumed	1.98	0.16	0.53	38	0.59	0.08	0.15	-0.23	0.39
Equal variances not assumed			0.56	23.8	0.58	0.08	0.14	-0.21	0.38

Research Question 3. Is there a statistically significant relation between the students' attitudes towards the technique and their success?

Table 5. reveals no significant correlation between successful and unsuccessful students ($m=1.88$ for successful students; $m=1.88$ for unsuccessful students). The similar mean values indicate no difference between the two groups, which means there is no significant correlation between the students' success and attitudes towards TCT in general.

Table 5. *Descriptive Statistics for Success and Attitudes*

Successful / Unsuccessful	N	Mean	Std. D.	Std. Err. Mean
Attitudes Mean Successful	19	1.88	0.42	0.09
Unsuccessful	21	1.88	0.47	0.10

Table 6. monitors no diversity between the variances of two groups in terms of success when Levene's Test for Equality of Variances is checked (Sig. value= 0,41), which necessitates t-test for Equality of Means be taken into consideration. Hence, the H_0 –null hypothesis- that assumes no relation between the students' success and their attitudes is tested. Since the Sig. (2-tailed) value (0.98) is greater than p value=0.05, the H_0 hypothesis is accepted. This verifies that there is no significant correlation between the students' success and attitudes towards TCT.

Table 6. *t-test for two Independent Samples in terms of Success*

Levene's Test for Equality of Variances			t-test for Equality of Means						
Attitudes Mean	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Err. Diff.	95% Con. Inter. Diff.	
								Lower	Upper
Equal variances assumed	0.66	0.41	-0.02	38	0.98	-0.002	0.14	-0.29	0.28
Equal variances not assumed			-0.02	37.9	0.98	-0.002	0.14	-0.28	0.28

Research Question 4. Which aspects of the technique were mostly appreciated by the learners?

The results of the research question 4 are submitted in Table 7. Only the items that reached a percentage over 50% of the participants with the response *1) Strongly Agree* are listed in the frequency distribution. In line with the research criterion 50% (20 participants), only one item succeeded the desired level; item 1. Accordingly, the results denote that the majority of the participants (50%) evaluate the most effective side of TCT to be its relaxing power through providing peer-to-peer study opportunity (f=20). Table 7. submits both the frequencies and the percentages of item 1: I feel more relaxed doing peer to peer predicting exercises in ELT Studies Course .

Table 7. *I feel more relaxed doing peer to peer predicting exercises in ELT Studies Course*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	20	50.0	50.0	50.0
	agree	16	40	40	90
	not decided	3	7.5	7.5	97.5
	disagree	1	2.5	2.5	100
Total		40	100,0	100,0	

4. Discussion

Research Question 1. Is there a statistically significant relation between the students' attitudes towards TCT, and their ages?

In view of the findings of the present study, the quantitative data revealed no existent correlation between students' attitudes towards TCT and their ages. As hypothesized previously the result verified no correlation was existent between age groups that represent four-year university education (either 22 and below or 23 and above at university level) and their attitudes toward TCT. This was concurrent with the previously implemented various university-level studies (Soku, Simpeh, & Osafo-Adu, 2011; Charkins, O'Toole, & Wetzel, 1985; Wetzel, James, & O'Toole, 1982) reporting no correlation between students' attitudes towards instruction technique and age. However, this non-existent correlation between students' age and their attitudes towards TCT should not be confused with the correlation between students' age and their achievement since research suggests a strong correlation between students' age and their achievement (Zimmerman & Dale, 2001).

Research Question 2. Is there a statistically significant relation between the students' attitudes towards TCT and gender?

Although gender appears to be a prevalent factor in the field of language teaching (Schmenk, 2004; Norton, & Pavlenko, 2004; Echeverria, 2004; Flood, 2003; Kobayashi, 2002; McMahill, 2001; Sunderland, J., 1992, 1994), there is little, if any, empirical study (Kettler, 2014; Walsh & Hardy, 1999; Loesch-Griffin, 1986) that indicate its impact on TCT. Correspondingly, the findings of the current study revealed no significant correlation between students' attitudes towards TCT and their gender, which indicates TCT seems to be a totally discrete issue from other forms of teaching.

Research Question 3. Is there a statistically significant relation between the students' attitudes towards TCT and their success levels?

Research (Van de gaer, Pustjens, Van Landeghem, Van Damme, & De Munter, 2007; Van de gaer, Pustjens, Van Damme, & De Munter, 2006; Wenden, 2014; Csizér, & Dörnyei, 2005, Dörnyei, 2001; Flood, 2003) signifies that a close relationship of attitudes and achievement in teaching is frequently existent. Contrary to this general situation, the present study revealed no significant correlation between student attitudes and achievement. Gardner (1985) explicates the present situation maintaining that the correlation between student attitudes and achievement would enact with diverse results subject to the course content or the teacher factor. What is more, attitudes as an additional classification would also be 'educational' or 'social' in variable kind, which may lead to diverse results for attitude and achievement-correlation again (pp.41-42). In this sense, while social variables appear to be relevant to 'cultural implications' of the language to be taught, 'educational' ones appear to be associated with the course-content and the teacher factor. Accordingly, sometimes the correlation between attitudes and achievement may turn out to be non-existent depending on the individual differences of both the students, and the teachers or the content of the course alone.

Research Question 4. Which aspects of TCT were mostly appreciated by the learners?

The current study revealed that students appreciated only one aspect of TCT more prevalently. The majority of the students (50%) seem to evaluate its relaxing property as the strongest side of TCT. This result most likely has much to do with the ambiance that avoids any affective filter (Krashen, 2003), which is generally acknowledged to be a fundamental component of TCT (Facione, 1990). Students who had the chance to experience peer-to-peer study which is a common venue both for constructivism and critical thinking (Vygotsky, 1986) appear to be not suffering from any anxiety that impedes language learning (Krashen, 2002).

5. Limitations and Conclusion

The current study should be evaluated in several limitations.

First and foremost, the criterion for the minimum amount of sample size for any study is a serious case of discussion in the field of statistics (Lenth, 2001). While some researchers suggest a minimum amount of sample size comprising at least 100 samples (MacCallum, Widaman, Zhang, & Hong, 1999), others may reduce this number down to 30 or even 18 (Willet, 2013; McCrum-Gardner, 2010). This situation reveals the arbitrariness in standard with scale development procedures. In this sense, although the results of the current study are sound, more precision may be reached with large sample sizes utilized for factor analysis.

As a second case, Likert Scales unfortunately still seem to be in need of projection for statistical identification. In other words, it is hard to decide which kind of scale type a Likert Scale belongs to, ordinal or interval, since there is research either sides that evaluate Likert Scale items as ordinal or interval (Brown, 2011). Therefore, this ambiguity makes it hard to determine the test type which the researcher would choose depending on the scales of measurement.

Third, the current study has been realized in the outer circle as far as ELT is concerned. Thus, the same study would provide more different results when applied in the inner circle environment on the grounds that language and thought may not be separated as far as cognition is the focal point of the discussion (Wittgenstein, 1986; Bakhtin, 1986). In this sense, TCT would screen theoretically more beneficial and different results with native speakers of a language when thought and language is considered in a psychosociological context.

Consequently, the current study, albeit within aforementioned limitations, would be beneficial for providing an empirical contribution for the application of TCT, especially in situations where students' attitudes reveal no correlation with both their individual differences and their success. In addition, the study would have implications for further studies such as different content-based courses. Also, different age groups such as high school students would be new cases for investigation.

References

- Abrami, P. C., Bernard, R. M., Borokhovski, E., Waddington, D. I., Wade, C. A., & Persson, T. (2015). Strategies for teaching students to think critically: A meta-analysis. *Review of Educational Research*, 85(2), 275-314. Retrieved from <http://rer.sagepub.com/content/early/2014/09/25/0034654314551063>
- Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. (2008). Instructional interventions affecting critical thinking skills and dispositions: A stage 1 meta-analysis. *Review of Educational Research*, 78(4), 1102-1134. Retrieved from <http://www.jstor.org/stable/40071155>
- Bakhtin, M. M. (1986). *Speech genres and other late essays*. Austin: University Of Texas.
- Bernard, R. M., Zhang, D., Abrami, P. C., Sicol, F., Borokhovski, E., & Surkes, M. A. (2008). Exploring the structure of the Watson–Glaser critical thinking appraisal: One scale or many subscales? *Thinking Skills and Creativity*, 3 (1), 15–22. Retrieved from http://www.researchgate.net/publication/223412836_Exploring_the_structure_of_the_WatsonGlaser_Critical_Thinking_Appraisal_One_scale_or_many_subscales
- Brown, J. D. (2011). *Likert items and scales of measurement?* 15(1), 10-14. Retrieved from <http://webcache.googleusercontent.com/search?q=cache:pkNSrHFkOK4J:jalt.org/test/PDF/Brown34.pdf+&cd=4&hl=tr&ct=clnk&gl=tr>
- Charkins, R. J., O'Toole, D. M., & Wetzel J. N. (1985). Teacher and student learning styles with student achievement and attitudes. *The Journal of Economic Education*, 16(2), pp. 111-120. Retrieved from <http://www.jstor.org/stable/1182513>
- Csizér, K., & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *Modern Language Journal*, 89, 19-36. Retrieved from : <http://www.jstor.org/stable/3588549>
- Dixon, F. A., Prater, K. A., Vine, H. M., Wark, M. J., Williams, T., Hanchon, T., & Shobe, C. (2004). Teaching to their thinking: a strategy to meet the critical-thinking needs of gifted children. *Journal for the Education of the Gifted*, 28(1), 56-76. Retrieved from <http://jeg.sagepub.com/>

- Dörnyei, Z. (2001). New themes and approaches in second language motivation research. *Annual Review of Applied Linguistics*, 21, 43-59. Retrieved from <http://webcache.googleusercontent.com/search?q=cache:am-4gHEiQiYJ:www.zoltandorneyi.co.uk/uploads/2001-dornyei-aral.pdf+&cd=1&hl=tr&ct=clnk&gl=tr>
- Echeverria, B. (2004). Language in society [Review of the books *Multilingualism, second language learning, and gender, variation past and present: VARIENG studies on English for Terttu Nevalainen.*] Cambridge University Press, 33(1), 127-130. Available from <http://www.jstor.org/stable/4169323>
- Ennis, R. H. (2011, revised). The nature of critical thinking: An outline of critical thinking dispositions and abilities. Retrieved from http://webcache.googleusercontent.com/search?q=cache:GOfldFRxyuMJ:faculty.education.illinois.edu/rhennis/documents/TheNatureofCriticalThinking_51711_000.pdf+&cd=2&hl=tr&ct=clnk&gl=tr
- Ennis, R. H. (1997). Incorporating critical thinking in the curriculum: An introduction to some basic issues. *Inquiry: Critical Thinking Across the Disciplines*, 16(3), 1-9. Retrieved from <http://faculty.education.illinois.edu/rhennis/documents/IncorpY400dpiBWNNoDropPp1-9PrintD.pdf>
- Ennis, R. H. (1987). *A taxonomy of critical thinking dispositions and abilities*. New York: Freeman.
- Ennis, R. H. (1962). A concept of critical thinking: A proposed basis for research in the teaching and evaluation of critical thinking ability. *Harvard Educational Review*, 32(1), 81-111.
- Facione, N. C., & Facione, P. A. (1996). Externalizing the critical thinking in knowledge development and clinical judgment. *Nursing Outlook*, 44, 129-136. Retrieved from [http://www.nursingoutlook.org/article/S0029-6554\(06\)80005-9/pdf](http://www.nursingoutlook.org/article/S0029-6554(06)80005-9/pdf)
- Facione, P. A. (2015). Critical thinking: What it is and why it counts. Retrieved from https://www.academia.edu/11052756/Critical_Thinking_What_It_Is_and_Why_It_Counts_2015_-_English
- Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. Retrieved from https://assessment.trinity.duke.edu/documents/Delphi_Report.pdf
- Facione, P. A., & Facione, N. C. (2007). Talking critical thinking. *Change: The magazine of higher learning*, 39(2), 38-45. Retrieved from https://www.academia.edu/10233454/Talking_Critical_Thinking
- Facione, P.A., Facione N. C., & Giancarlo, C. (2000). The disposition toward critical thinking: Its character, measurement, and relationship to critical thinking skills. *Journal of Informal Logic*, 20(1), 61-84. Retrieved from http://webcache.googleusercontent.com/search?q=cache:FAvcZHMhKYkJ:https://www.insightassessment.com/content/download/755/4787/file/J_Infrml_Ppr%2B_2000%2B-%2BDisp%2B%2526%2BSkls.pdf+&cd=1&hl=tr&ct=clnk&gl=tr
- Flood, C. P. (2003). *Where the boys are: What's the difference?* Paper presented at the Kentucky Teaching and Learning Conference, Louisville. Retrieved from <http://gap2.onlinelibrary.wiley.com/>
- Gardner, C. R. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.
- Glasier, E. (1941). *An experiment in the development of critical thinking*. New York: Teachers College, Columbia University.
- Grauerholz, L., & Bouma-Holtrop, S. (2003). Exploring critical sociological thinking. *Teaching Sociology*, 31(4), 485-496. Retrieved from <http://www.jstor.org/stable/3211372>
- Halpern, D. F. (1997). *Critical thinking across the curriculum. A brief edition of thought and knowledge* [Kindle DX version]. Retrieved from Amazon.com
- Kettler, T. (2014). Critical thinking skills among elementary school students: Comparing identified gifted and general education student performance. *Gifted Child Quarterly*, 58(2), 127-136. Retrieved from <http://gcq.sagepub.com/content/58/2/127.short?rss=1&ssource=mfr>
- Kobayashi, Y. (2002) The role of gender in foreign language learning attitudes: Japanese female students' attitudes towards English learning, *Gender and Education*, 14(2), 181-197, DOI: <http://dx.doi.org/10.1080/09540250220133021>
- Krashen, S. (2003). *Explorations in language acquisition and use*. Portsmouth: Heinemann.
- Krashen, S. (2002). *Second language acquisition and second language learning*. Retrieved from http://webcache.googleusercontent.com/search?q=cache:u4obkpU7HSUJ:www.sdkrashen.com/content/books/sl_acquisition_and_learning.pdf+&cd=1&hl=tr&ct=clnk&gl=tr
- Kurfiss, J. G. (1988). *Critical thinking: Theory, research, practice, and possibilities*. Retrieved from <http://www.eric.ed.gov/PDFS/ED304041.pdf>

- Lenth, R. V. (2001). Some practical guidelines for effective sample size determination. *The American Statistician*, 55(3), 187-193. Retrieved from http://webcache.googleusercontent.com/search?q=cache:g0jBu2veq_IJ:conium.org/~maccoun/PP279_Lenth.pdf+&cd=1&hl=tr&ct=clnk&gl=tr
- Lipman, M. (1991). *Thinking in education*. Cambridge, England: Cambridge University Press.
- Loesch-Griffin, D. A. (1986). Gender differences in the instruction and intelligent behavior of fifth- graders. Paper presented at the annual meeting of the American Psychological Association, Washington, DC. Retrieved from <http://webcache.googleusercontent.com/search?q=cache:FLaFGL3NL2cJ:files.eric.ed.gov/fulltext/ED284668.pdf+&cd=1&hl=tr&ct=clnk&gl=tr>
- MacCallum, R. C., Widaman, K. F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods*, 4(1), 84-99. Retrieved from http://webcache.googleusercontent.com/search?q=cache:gmYSCkIHtVUJ:www.researchgate.net/profile/Keith_Widaman/publication/254733888_Sample_Size_in_Factor_Analysis/links/548b85ae0cf214269f1dd66f.pdf+&cd=1&hl=tr&ct=clnk&gl=tr
- McCrum-Gardner, E. (2010). Sample size and power calculations made simple. *International Journal of Therapy and Rehabilitation*. 17(1), 10-14. Retrieved from http://webcache.googleusercontent.com/search?q=cache:KUqf9W1RwPIJ:www.uv.es/uvetica/files/McCrum_Gardner2010.pdf+&cd=5&hl=tr&ct=clnk&gl=tr
- McMahill, C. (2001). Self-expression, gender, and community: A Japanese feminist English class. In A. Pavlenko, A. Blackledge, I. Piller, & M. Teutsch-Dwyer (Eds.), *Multilingualism, second language learning, and gender* (pp. 307-344). Berlin, Germany: Mouton de Gruyter
- Norton, B., & Pavlenko, A. (2004). *Gender and English language learners*. (Ed.) Alexandria, VA: TESOL. Retrieved from <http://tesl-ej.org/ej31/r10.html>
- Paul, R. W., & Binker, A. J. A. (1990). Strategies: Thirty-five dimensions of critical thinking. In A. J. A. Binker (Ed.), *Critical thinking: What every person needs to survive in a rapidly changing world* (pp. 305-349). Rohnert Park, CA: Centre for Critical Thinking and Moral Critique, Sonoma State University.
- Schmenk, B. (2004). Language learning: A feminine domain? The role of stereotyping in constructing gendered learner identities. *TESOL Quarterly*. 38(3), 5514-524. Retrieved from <http://www.jstor.org/stable/3588352>
- Scriven, M. & Paul, R. (2008) Defining critical thinking, *Foundation for Critical Thinking*. Retrieved from: <http://www.criticalthinking.org/aboutCT/definingCT.cfm>
- Scriven, M., & Paul, R. (1996). *Defining critical thinking: Critical thinking as defined by the National Council for Excellence in Critical Thinking, 1987*. Retrieved from <http://www.criticalthinking.org/pages/defining-critical-thinking/766>
- Siegel, H. (2010). Critical thinking. *International Encyclopedia of Education*, 6, 141-145. Retrieved from <http://webcache.googleusercontent.com/search?q=cache:O4qwwtDzkBgJ:https://www.uio.no/studier/emner/uv/uv/UV9407/critical-thinking.pdf+&cd=1&hl=tr&ct=clnk&gl=tr>
- Siegel, H. (1988). *Educating reason: Rationality, critical thinking, and education*. New York: Taylor & Francis, Inc.
- Soku, D., Simpeh, K. N., & Osafo-Adu, M. (2011). Students' attitudes towards the study of English and French in a private university setting in Ghana. *Journal of Education and Practice*, 2(9). Retrieved from <http://webcache.googleusercontent.com/search?q=cache:UEUuLs5UL1AJ:iiste.org/Journals/index.php/JEP/article/viewFile/774/677+&cd=1&hl=tr&ct=clnk&gl=tr>
- Speaking of Teaching. (2003, Fall). The socratic method: What it is and how to use it in the classroom: *Newsletter of Stanford University*. Retrieved from http://webcache.googleusercontent.com/search?q=cache:ep4mO4bVL5sJ:web.stanford.edu/dept/CTL/Newsletter/socratic_method.pdf+&cd=8&hl=tr&ct=clnk&gl=tr
- Sunderland, J. (1992). Gender in the EFL classroom. *ELT Journal*, 46, 81-91. doi: <http://dx.doi.org/10.1093/elt/46.1.81>
- Sunderland, J. (1994). *Exploring gender: Implications for English language education*. New York: Prentice Hall.
- Van de gaer, E., Pustjens, H., Van Damme, J., & De Munter, A. (2006). The gender gap in language achievement: The role of school-related attitudes of class groups. *Springer Science + Business Media, Inc.*, 55, 397-408. doi: <http://dx.doi.org/10.1007/s11199-006-9092-1>
- Van de gaer, E., Van Landeghem, G., Pustjens, H., Van Damme, J., & De Munter, A. (2007). Impact of students' and their schoolmates' achievement motivation on the status and growth in math and language achievement of boys and girls across grades 7 through 8. *Psychologica Belgica*, 47(1/2) 5-29. doi: <http://dx.doi.org/10.5334/pb-47-1-5>

Vaughn, L. (2005). *The power of critical thinking: Effective reasoning about ordinary and extraordinary claims*. Oxford: Oxford University Press.

Vygotsky, L. (1986). *Thought and language*. Retrieved from http://s-f-walker.org.uk/pubsebooks/pdfs/Vygotsky_Thought_and_Language.pdf

Walsh, C. M., & Hardy, R. C. (1999). Dispositional differences in critical thinking related to gender and academic major. *Journal of Nursing Education*, 38(4), 149-155. Retrieved from http://webcache.googleusercontent.com/search?q=cache:udW-H_IbHNOJ:textos.pucp.edu.pe/pdf/1111.pdf+&cd=3&hl=tr&ct=clnk&gl=tr

Watson, G., & Glaser, G. M. (1994). *The Watson Glaser critical thinking appraisal*. Cleveland, OH: Psychology Corporation.

Wenden, A. L. (2014). Metacognitive knowledge in SLA: The neglected variable. In Michael, B. (Ed.), *Learner contributions to language learning: New directions in research* (pp. 44-64). NewYork, USA: Routledge.

Wetzel, J. N., James, P. W. & O'Toole, D. M. (1982). The influence of learning and teaching styles on student attitudes and achievement in the introductory economics course: A case study. *Journal of Economic Education*, 13(1), 33-39. Retrieved from <http://www.jstor.org/stable/1182869>

Willet, T. (2013). *Analyzing Likert scale data: The rule of n=30*. Retrieved from <http://www.sim-one.ca/community/tip/analyzing-likert-scale-data-rule-n30>

Wittgenstein, L. (1986). *Philosophical investigations*. Oxford: Basil Blackwell.

Zimmerman, B. J. & Dale, H. S. (2001). *Self-regulated learning and academic achievement*. Mahwah, N.J.: Lawrence Erlbaum.

Appendix

QUESTIONNAIRE

Age: Gender: Female / Male

Please rate how strongly you agree or disagree with each of the following statements by placing a check mark in the appropriate box.

Thank you for your kind cooperation in advance.

Bahadır Cahit TOSUN
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STUDENTS' ATTITUDES TOWARDS "TEACHING CRITICAL THINKING IN ELT STUDIES COURSE CONSISTENT WITH CONSTRUCTIVIST EPISTEMOLOGY".	Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree
1. I feel more relaxed doing peer to peer predicting exercises in ELT Studies Course.					
2. I feel free to speak about my previous experiences in class in ELT Studies Course.					

STUDENTS' ATTITUDES TOWARDS "TEACHING CRITICAL THINKING IN ELT STUDIES COURSE CONSISTENT WITH CONSTRUCTIVIST EPISTEMOLOGY".	Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree
3. I feel free to behave as an individual of the society with my teacher's support in ELT Studies Course.					
4. I feel relaxed to criticize the information I learn from the teacher in ELT Studies Course.					
5. I have learnt how to relate the text to my own knowledge interest or view in this course.					
6. I find this course beneficial for developing my encouragement and self-esteem.					
7. I have learned how to connect all branches of social sciences to each other in this course.					
8. I find this course successful to make the topics hard to forget via critical thinking.					
9. I find this course useful to learn how to make contextual inferences via critical thinking.					
10. I find this course sufficient to create curiosity.					
11. I find this course useful to develop my critical judgment skill.					
12. I find this course useful to develop my critical reading skill.					
13. I find this course useful to develop my critical writing skill.					

STUDENTS' ATTITUDES TOWARDS "TEACHING CRITICAL THINKING IN ELT STUDIES COURSE CONSISTENT WITH CONSTRUCTIVIST EPISTEMOLOGY".	Strongly Agree	Agree	Not Decided	Disagree	Strongly Disagree
14. I find this course useful to develop my critical speaking skill.					
15. I find this course entertaining.					