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## A QUANTITATIVE STUDY OF TURKISH EFL LEARNERS' PERCEPTIONS ABOUT CRITICAL THINKING DISPOSITIONS

*Research Article*

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### **Abstract**

This study is an attempt to determine learners' attitudes and perceptions about critical thinking dispositions and their achievement levels in Business English classes. The participants (N=91, 61 males and 30 females) are second- and third-year undergraduate students from Management and Information Systems department enrolled in the Faculty of Economics and Administrative Sciences at a state university in Turkey, who have taken the Business English Course during the 2018-2019 academic year, fall term. The research was designed as a quantitative study. For the measurement of learners' tendency towards critical thinking dispositions, the California Critical Thinking Disposition Inventory (CCTDI), a survey instrument (51 questions, 6 subscales) adapted and translated into Turkish by Kökdemir (2003) was employed as a data collection tool. These subscales are about truth-seeking, open-mindedness, analyticity, systematicity, critical thinking, self-confidence and inquisitiveness. At the end of the semester, for the English achievement level of learners, final exam results were taken into consideration and evaluated. The data collected were analyzed through SPSS 22.0. Findings indicate that the relationship between students' critical thinking dispositions (CTD hereafter) and the final scores are not statistically significant. Also, students' level of education does not affect the tendency of the participants in terms of CTD. However, it can be said that female students are more successful than male students in academic English course. Implications are included for critical thinking dispositions to enhance academic/business English language courses in Turkey.

*Keywords:* Turkish EFL learners, perceptions, critical thinking dispositions, academic/business English course

### **1. Introduction**

Nowadays, critical thinking is a significant determiner for an individual to become successful not only in a workplace but also in life itself (Rincker, 2014). Rapid changes in the 21<sup>st</sup> century and its demands on people who are a part of a society are not clear enough to keep up with for someone who cannot think critically. The expectancy of recent developments, especially in education, demands students to become critical thinkers who can analyze and evaluate before judging. In these terms, students should be able to question the ideas and knowledge they are expected to learn, have their own ideas when it comes to judging others, and have reasoning to find out what is lacking (Alagözlü, 2007).

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In education, there is no differentiation of how significant critical thinking is for students from different academic majors or professions (Rincker, 2014; Kabeel & Eisa, 2016). However, its significance for ELT classes cannot be noticed considering a new language student is also exposed to a new culture and various ideas. To illustrate this point, Külekçi and Kumlu (2015) claimed that teaching or learning English can be different from other languages because of its identity, entitled as the lingua franca. According to them, the global role of this language connects more than one culture and broadens students' horizons to an international level. Stating that what shapes our language and thoughts is our culture, Alagözlü and Süzer (2010) believe that this is why we need critical thinking in language classes in order to understand different cultures and have different perspectives.

It is suggested that social structure is an effective determiner for learners to have critical thinking skills; moreover, this is why Turkish learners have difficulty with them (Alagözlü & Süzer, 2010). In this regard, the current study is going to analyze and evaluate this particular situation using a quantitative research design. In light of this purpose, the following research questions were determined to find answers about the participants' perceptions regarding CTD and their achievement levels in Business English course.

1. What are Turkish EFL learners' perceptions about CTD?
2. Which aspects are used more by Business English learners?
3. What is the relationship between CTD and participants' achievement level in Business English course?

## 1.1. Literature Review

### 1.1.1. Critical Thinking

The concept of critical thinking firstly appeared in the middle and late 20<sup>th</sup> century, however, it is believed that this concept is more than two thousand years old ("Defining Critical Thinking," n.d.). Contrary to its historic roots, it is not possible to say that there is one certain definition for critical thinking used by all. The word 'critical' appears in different collocations such as critical theory and critical pedagogy. Unlike the abstract features of critical theory, Freire (1973, 1974) mentioned about critical pedagogy as a social action and educational change and contributed to the literature by stating *praxis*, which connects theory and practice into each other in order to provide a room for change. While Chance (1986) defines CT as an ability to analyze, organize and evaluate situations for a solution, Beyer (1995, p. 8) simply calls it "... making reasoned judgments" (as cited in Alagözlü, 2007). Kabeel and Eisa (2016) relate the lack of one certain definition to multifaceted dispositional influences on thinking. Another researcher, Asleitner (2002) defined critical thinking as evaluating arguments requiring higher-order thinking skills. Similarly, Halpern (1999) stated that CT means solving problems and making inferences and decisions.

According to Facione, Sánchez, Facione and Gainen (1995), it was not even possible to make a judgment about people's critical thinking skills scientifically until the formation of The California Critical Thinking Disposition Inventory (CCTDI). They define CCTDI as an instrument through which it is possible to learn about participants' critical thinking skills and to report them on seven different scales: Analyticity, Open-mindedness, Self-confidence, Inquisitiveness, Systematicity, Truth-seeking and Maturity. Kabeel and Eisa (2016) states that a skill is what turns the knowledge we have learned into habits, attitudes and ideas. Therefore, these seven skills have different importance for individuals with different features. Taking a closer look into these skills, Facione et al. (1995) and Kabeel and Eisa (2016) defined these skills as:

**Analyticity.** The individuals who have analyticity need reasons before deciding. Defined as “the inquiring minds”, they try to find out pieces of evidence for problem-solving.

**Open-mindedness.** Individuals who are tolerant of new beliefs and lifestyles.

**Self-confidence.** The individuals who trust their own judgments and rational capacity to lead others to resolutions.

**Inquisitiveness.** The individuals who desire always to learn more and to reach new knowledge.

**Systematicity.** The individuals who think and find solutions in an ordered and organized way.

**Truth-seeking.** The individuals who seek the best objective knowledge (absolute truth) and they are open-minded to new facts, reasons and perspectives as long as they reflect the truth.

**Maturity.** The individuals who are judicious or reasonable in their own decision making.

Considering all the definitions above, critical thinking has been seen as vital for an individual to reason new inputs and different situations in various conditions. However, to put these thoughts into practice, one should improve the mentioned skills to reach reasonable solutions and judgments. Even though we all have these skills at very young ages to improve, rather than focusing on family support and effect on this issue, their improvement in our education life is widely spoken because of the long time we spend in schools and with teachers (Enciso, Enciso and Daza, 2017).

#### *1.1.2. Critical Thinking Skills in ELT and Academic Achievement*

The purpose of educating learners as critical thinkers and helping them to improve their skills is to prepare them for future; and for the sake of this purpose, teachers should adopt and enforce critical thinking skills to their students (Leach, 2011). Similarly, Enciso et al. (2017) state that students’ present and future life quality depends on their ability to improve or develop their critical thinking skills and education has a significant role in it.

Toharudin (2017) defines critical thinking as an active process containing interpretations, evaluations, observations, communications, arguments, and solutions; hence, the students should be active participants in learning by sharing or performing their processes. Enciso et al. (2017) explain that it is only possible for them to be active participants of their own learning process when educators give up transferring others’ knowledge and experience into them. They also claim that teachers can provide regular classroom practices to help their students think critically.

The problem of lack of critical thinking is seen as a situation mainly related to teachers in education. In particular, it is thought that the absence of critical thinking in their training process could be the reason of their lack of capability to use and encourage students to use critical thinking skills, which is a product of traditional teaching model (Enciso et al., 2017). Considering generations are following similar ways in a cycle, it is necessary to find new solutions. Külekçi and Kumlu (2015) explain that as a consequence of traditional education, lack of practising in classes is causing students not to improve or develop their skills. Even so, they define these students as “passive thinkers” who learn others’ experiences and knowledge not likely to use it for producing.

It may not be surprising that these educational situations need critical thinkers to find a solution in order to improve the quality of education (Toharudin, 2017). As far as the previous studies have shown, there is a positive effect of thinking on achievement (Karabıyık, 2019). Especially in ELT classes, it is more possible to come across with critical thinking in order to provide a better framework for learning English and new cultures. In his study, Ördem (2017)

claims that language teachers who are critical thinkers specifically choose thought-provoking tasks for their students and expect from them to approach these tasks in an unusual way.

Considering the previous literature, Turkish EFL learners were observed that they had a problem with expressing their own thoughts in the thought-provoking tasks (Alagözli, 2007). According to the findings of the study, the traditional Turkish society structure is a big determiner for Turkish learners; hence, their hesitation to express their thoughts turns into a serious problem in terms of critical thinking. Alagözli (2007) conducted a study about L2 writing and critical thinking which reports that Turkish EFL students are weak to use their own judgment and reasoning. Similarly, Tarakçioğlu's (2008) study showed that Turkish EFL learners had difficulty to express themselves orally by using critical thinking skills. However, Floyd (2011) found out that language fluency performance is of vital importance in EFL learners' critical thinking skills. In a study about CTD, Genç (2017) aimed to find out the relationship between academic achievement, reading habits and critical thinking disposition of Turkish EFL learners. This study showed that Turkish EFL learners have low critical thinking dispositions. However, female students were found more successful, analytic and open-minded. However, Ördem (2017) carried out a study about critical thinking performances of Turkish EFL learners' listening and speaking classes and found out that they were better at some critical thinking skills such as inquisitiveness, truth-seeking, open-mindedness, and confidence. In addition to these studies, there are also research showing a positive relationship between critical thinking skills and EFL learners' listening-speaking skills (Elekaei, Faramazi & Tabrizi, 2016; Lee, 2017).

## 2. Method

### 2.1. Research context and participants

The sample group consists of 91 Business English undergraduate Turkish EFL students (61 males and 30 females). They were aged between 20-24 and second- and third-year students from Management and Information Systems department enrolled in the Faculty of Economics and Administrative Sciences at Osmaniye Korkut Ata University in Turkey, who have taken compulsory Business English course during the 2018-2019 academic year, fall term.

### 2.2. Instruments

The data collection instruments consisted of the California Critical Thinking Disposition Inventory (CCTDI), a survey instrument (51 questions, 6 subscales) adapted and translated into Turkish by Kökdemir (2003) in order to measure learners' tendency towards critical thinking dispositions. This survey was applied to the participants in Turkish for the purpose of making students understand the items properly. These subscales were about truth-seeking, open-mindedness, analyticity, systematicity, critical thinking self-confidence and inquisitiveness. In addition to this, for the English achievement levels of learners, final exam results were taken into consideration and evaluated at the end of the semester.

### 2.3. Data collection and analysis

The data were collected through questionnaires and during the class hour in the midst of the 2018-2019 academic year, fall term. After that, final exam scores were obtained at the end of the term to see whether there is any relationship in terms of participants' grades. The study was designed as a quantitative research method. The data were analyzed through SPSS 22.0 software package.

## 3. Findings

In this part, the findings of the study in line with the research questions are given. The first table provides a demographic analysis of the participants.

Table 1. Demographic analysis of the participants

		S	%
Gender	Female	59	66,3
	Male	30	33,7
Age	18	1	1,1
	19	5	5,7
	20	13	14,8
	21	40	45,5
	22	20	22,7
	23	9	10,2
	Mean±Standart Deviation	21,14±1,05	
Education Group	Daytime education	44	51,2
	Evening education	42	48,8
Class	2 <sup>nd</sup> class	48	52,7
	3 <sup>rd</sup> class	43	47,3

Looking at the Table 1, it is observed that while 66.3% of the learners are female, 33.7% of them are male; 1.1% of them are 18 years old, 5.7% of them are 19, 14.8% of them are 20, 45.5% of them are 21, 22.7% of them are 22, and 10.2% of them are 23; the mean value of their ages is  $21.14 \pm 1.05$ ; 51.2% of them are in daytime education, 48.8% of them are in evening education; 51.7% of them are sophomores, and 47.3% of them are juniors.

The arithmetic mean and standard deviation values related to critical thinking dispositions and academic English course grades of the participants are given in Table 2.

Table 2. The arithmetic mean and standard deviation values related to critical thinking dispositions and academic English course grades of the participants

	N	Min.	Max.	Arithmetic Mean	S.s.
Analyticity	80	31	58	46,41	4,67
Open-mindedness	78	17	70	33,80	8,25
Inquisitiveness	82	26	99	44,93	9,45
Self-confidence	84	17	58	40,06	9,50
Truth-seeking	85	19	104	37,65	9,80
Systematicity	85	13	50	35,16	7,45
Critical Thinking Dispositions	91	19	53	39,44	4,92
Business Language Course Achievement Level	91	32,0	98,0	63,91	17,23

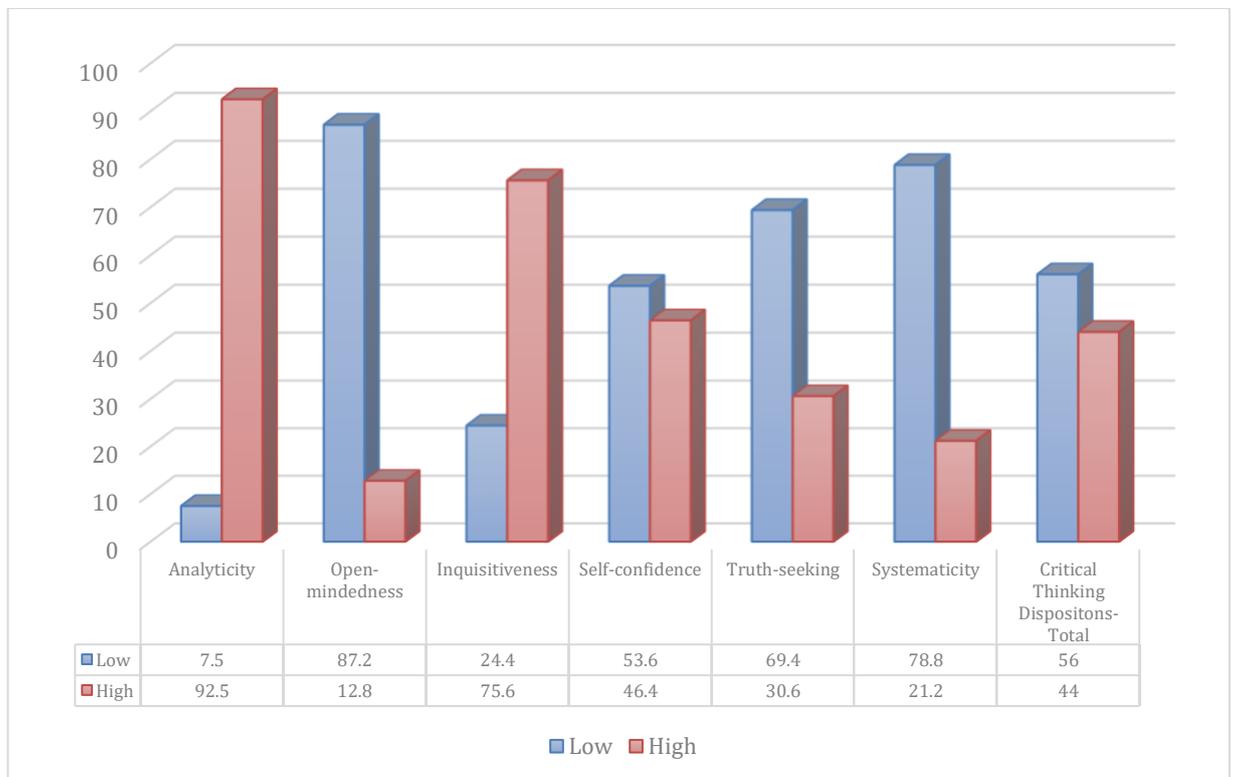
Note = Lack of answers in some questions caused differences in the number (N) of participants.

As given in the second table, it is seen that mean value of *Analyticity* is  $46.41 \pm 4.67$ , mean value of *Open-mindedness* is  $33.80 \pm 8.25$ , mean value of *Inquisitiveness* is  $44.93 \pm 9.45$ , mean value of *Self-confidence* is  $40.06 \pm 9.50$ , mean value of *Truth-seeking* is  $37.65 \pm 9.80$ , mean value of *Systematicity* is  $35.16 \pm 7.45$ ; in total, mean value of *Critical Thinking Dispositions* is  $39.44 \pm 4.92$  and mean value of *Achievement in Academic English Course* is  $63.91 \pm 17.23$ . The following table shows the participants' critical thinking dispositions.

Table 3. *The participants' critical thinking dispositions*

	Critical Thinking Dispositions			
	Low		High	
	n	%	n	%
Analyticity	6	7,5	74	92,5
Open-mindedness	68	87,2	10	12,8
Inquisitiveness	20	24,4	62	75,6
Self-confidence	45	53,6	39	46,4
Truth-seeking	59	69,4	26	30,6
Systematicity	67	78,8	18	21,2
Critical Thinking Dispositions	51	56,0	40	44,0

In the third table, it is seen that 7.5% of the participants' analytical disposition is low, while 92.5% of them have higher disposition; 87.2% of them have low open-mindedness, 12.8% of them have higher; 24.4% of them have low inquisitiveness, 75.6% of them have higher; 53.6% of them have low self-confidence, 46.4% have higher; 69.4% of them have low truth-seeking, 30.6% of them have higher; 78.8% of them have low systematic behaviour disposition, 21.2% of them have higher, and 56% of them have low critical thinking disposition while 44% of them have higher (Figure 1). These findings can also be seen in the following figure.

Figure 1. *The participants' critical thinking dispositions*

The third research question was related to the relationship between critical thinking dispositions and academic English course grades. For the purpose of this, Pearson correlation analysis was used to provide information (Table 4).

**Table 4.** *The correlation values about the relationship between critical thinking dispositions and academic English course grades*

	Business Language Course grades	
Analyticity	r	,060
	p	,596
Open-mindedness	r	-,010
	p	,930
Inquisitiveness	r	,053
	p	,639
Self-confidence	r	-,051
	p	,644
Truth-seeking	r	,034
	p	,758
Systematicity	r	-,074
	p	,502
Critical Thinking Dispositions	r	,015
	p	,888

Analyzing Table 4, all of the correlation values between critical thinking dispositions and Business English course grades were not statistically significant. As a result, it can be said that there is no significant relationship between critical thinking dispositions and Business English course grades.

According to the descriptive features of the learners participated in this study, variations in critical thinking dispositions and Business English course grades are given in Table 5.

Table 5. According to descriptive features of the participants, variations in critical thinking dispositions and academic English course grades

		Analyticity	Open-mindedness	Inquisitiveness	Self-confidence	Truth-seeking	Systematicity	Critical Thinking Disposition	Business Language Course-Grades
		Mean ± S.d.	Mean ± S.d	Mean ± S.d					
Gender	Female	46,81±5,08	33,51±7,07	45,65±6,48	41,61±9,30	38,52±11,22	35,09±8,00	40,33±4,13	66,034±16,70
	Male	45,67±3,75	34,14±10,29	43,82±14,54	37,72±8,75	35,82±6,10	35,37±6,51	37,95±5,89	59,067±17,92
	TEST	t=1,816 p=,073	t=1,000 p=,320	t=-,318 p=,583	t=,751 p=,565	t=1,815 p=1,188	t=,073 p=,238	t=-,159 p=,874	<b>t=2,216</b> <b>p=,029</b>
Age	Aged 20 and below	45,26±3,66	32,68±6,54	44,51±15,22	38,95±9,99	36,47±7,61	34,91±7,70	39,02±4,48	63,90±20,42
	Aged 21 and above	46,72±4,76	33,99±8,85	44,89±7,18	40,63±9,44	38,03±10,45	35,10±7,54	39,82±4,48	63,99±16,34
	TEST	U=386,000 p=,172	U=508,500 p=,692	U=445,000 p=,192	U=531,500 p=,461	U=551,000 p=,910	U=556,000 p=,822	U=605,500 p=,612	U=640,500 p=,879
Education	Daytime	45,74±5,10	33,59±9,36	43,19±7,83	41,28±9,86	38,23±11,77	34,72±6,72	38,89±5,54	63,273±18,90
Group	Evening	46,92±4,39	33,78±7,19	47,31±10,33	39,59±8,75	37,14±7,42	35,39±8,458	40,26±4,23	64,571±14,96
	TEST	t=-1,076 p=,286	t=-,101 p=,920	t=-1,977 p=,052	t=,811 p=,420	t=,494 p=,623	t=-,396 p=,693	t=-1,286 p=,202	t=-,354 p=,724
Class	2 <sup>nd</sup> class	46,88±4,58	33,46±6,45	44,92±10,99	39,24±10,14	38,02±5,86	36,43±6,93	39,40±4,88	63,96±18,52
	3 <sup>rd</sup> class	45,88±4,76	34,19±10,03	44,94±7,64	41,05±8,69	37,25±12,82	33,85±7,81	39,50±5,02	63,86±15,90
	TEST	t=,964 p=,338	t=-,387 p=,700	t=-,011 p=,991	t=-,870 p=,387	t=,361 p=,719	t=1,615 p=,110	t=-,099 p=,921	t=,027 p=,979

As can be seen in the previous table, while  $t$  values in the level of  $p < 0.05$  were statistically significant in terms of the gender differences in academic English course grades, the gender differences in values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition” were not significant in terms of  $t$  values in the level of  $p > 0.05$ . These findings show that there is a difference considering the learners’ genders in terms of their grades in Business English course. It is also seen in Table 5 that the mean value of the female learners’ Business English course grades is 66.03, which is higher than the mean value of the male learners’ grades, 59.07. In conclusion, it can be said that female learners are more successful in academic English course compared to male participants.

Analyzing the table in terms of the learners’ ages, all of the  $U$  values in the level of  $p > 0.05$  were not statistically significant with regard to values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition”. These findings point out that there is no difference between the learners’ age considering the values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition”.

On the other hand, the results given in the table shows that  $t$  values in the level of  $p > 0.05$  were not statistically significant to provide a relation between the learners’ education groups, whether it is daytime or evening, and the values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition”. These findings indicate that there is no difference between the learners’ class time in terms of the values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition”.

Moreover, analyzing the results shown in Table 5, all of  $t$  values in the level of  $p > 0.05$  related to the values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition” were not statistically significant in terms of the learners’ classes. These findings demonstrate that there is no difference between the learners’ classes considering the values of “Analyticity”, “Open-mindedness”, “Inquisitiveness”, “Self-confidence”, “Truth-seeking”, “Systematicity”, and “Total Critical Thinking Disposition”.

In order to find out the internal consistency of critical thinking dispositions scale, Cronbach Alpha factor was also measured.

Table 6. Cronbach alpha factor of critical thinking dispositions scale

	Cronbach Alfa coefficient	Item
Analyticity	,617	12
Open-mindedness	,660	11
Inquisitiveness	,639	9
Self-confidence	,757	6
Truth-seeking	,642	7
Systematicity	,686	6
Critical Thinking Dispositions	,606	51

#### 4. Discussion and conclusion

The present study explores Turkish EFL learners' perceptions of CTD by using a quantitative research method. According to the overall findings of the study, CTD does not differ much in terms of analyticity, open-mindedness, inquisitiveness, self-confidence, truth-seeking and systematicity from the perspectives of participants. This may stem from participants' insufficient academic background about CTD and had different cultures and learning environments than western students (Atkinson, 1997; Yang & Chou, 2008). This particular finding does not overlap with the study carried out by Ördem (2017). In his study, it was found out that the learners use specific critical thinking skills better, like inquisitiveness, truth-seeking, open-mindedness, and confidence. With this regard, it is not possible for the current study to make such an indication. In a similar line with the findings of the current study, the studies by Alagözlü (2007) and Tarakçıoğlu (2008) show that Turkish EFL learners lack critical thinking skills when it comes to express themselves written or oral. In parallel to this, the findings of the previous study (Genç, 2017) also showed learners' low critical thinking dispositions similar to previous studies except that the female students had higher scores (Kökdemir, 2003) and were found to be more analytic and open-minded. From this perspective, female students are more successful than males in academic English course in this study as well. However, Özdemir (2005) concluded that there was no difference between male and female students in terms of CTD.

Akbıyık and Seferoğlu (2002) investigated CTD and academic achievement of ninth-grade students and claimed that CTD had an influence regarding general academic achievements on science and social courses except for English lesson, which was not found to be statistically significant. There are also studies showing the impact of CT and critical discourse analysis (CDA hereafter) in EFL classes. For example, Hashemi and Ghanizadeh (2012) studied the impact of CDA to learn whether there is any influence on learners' CT skills and concluded that CDA has a positive and significant effect on CT. Another study (Afshar, Rahimi & Rahimi, 2014) stated that critical thinking was a stronger indicator in EFL Iranian learners' academic achievement rather than autonomy and instrumental motivation.

It can be concluded from these findings that critical thinking dispositions among business EFL students are not much comprehensible in terms of sub-scales of the survey employed in this study. Furthermore, as for the relationship between CTD and the final scores of the participants do not correlate positively, thus it can be said that students' critical thinking dispositions do not have much influence on improving learners' foreign language learning process.

Based on the findings, the following implications can be suggested for the benefit of all stakeholders. First, CTD should be given importance and improved through courses in the native language not just in the foreign language teaching environments, thus making them ready to think critically and creatively for foreign language learning. This can also help students raise awareness about CTD. Second, it is a prerequisite for the students to involve actively in the class for the purpose of promoting critical thinking skills (Bedir, 2013). Third, materials used in these language classes might be developed in order to make students analyze, synthesize and interpret the learning items critically. In relation to this, teacher training programs should also be supported to develop pre-service teachers' being aware of critical thinking skills in teacher education (Şeker & Kömür, 2008). Last but not least, there is a need to prepare a common syllabus for these courses because the universities in Turkey offer business language classes differ from each other in terms of class, credits and materials.

This study is, nevertheless, limited in some ways regarding methodological design, sampling and procedure. A quantitative research design was applied to obtain data from 91 Turkish EFL students in a business language class. Further research could also investigate critical thinking dispositions using mixed-method research design with larger sampling.

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