Pre-Service Teachers' Attitudes towards English Courses and Their Critical Thinking Skills

Muzaffer Barın[1,*]

[1]Faculty of Letters, Atatürk University, Erzurum, Turkey

*Correspondence: Department of English Language and Literature, Faculty of Letters, Atatürk University, Erzurum, Turkey. E-mail: barinmuzaffer@yandex.com

Received: February 2, 2019 Accepted: March 14, 2019 Online Published: March 27, 2019

doi:10.5430/wje.v9n2p46 URL: https://doi.org/10.5430/wje.v9n2p46

Abstract

The aim of the current research is to reveal the relationship between pre-service teachers' attitudes towards compulsory English courses and their critical thinking skills. The study also investigates the effect of the participants' age, gender and department on their attitudes towards compulsory English courses and their critical thinking skills. California Critical Thinking Disposition Inventory (CCTDI) and Attitude Scale towards English Classes (ASTEC) were used as data collection instruments. 159 pre-service teachers from different departments of a public university's faculty of education. The results showed that there is no significant relationship between the participants' age, gender and department and their CCTDI and ASTEC scores. According to the correlational analyses, it is found that there is no correlation between CCTDI and ASTEC scores of the participants. The results have been discussed under the light of relevant literature and implications are presented for further research and pedagogy.

Keywords: attitudes, compulsory English courses, critical thinking

1. Introduction

Regarding its current status all over the world, teaching and learning English has gained importance with all aspects. Oral and productive skills have also been key concepts for an effective language teaching and learning (Akdemir & İlhan, 2019).

It is obvious that the current special position of English as an international language requires more research to reveal the effective ways of teaching or learning English as a foreign language. Regarding the fact that teacher is the crucial factor of an effective teaching and learning process (Akdemir, 2013; Kaya & Akdemir, 2016) pre-service teachers, one of the most important components of educational setting, deserve particular attention (Ataş Akdemir, 2019). The current study aims at revealing the relationship between pre-service teachers' attitudes towards compulsory English courses and their critical thinking (CT) skills.

The compulsory English Course, as recommended by YÖK (The Council of Higher Education) is received as minimum two hours a week, generally in the first year of their undergraduate program by the students in the state universities where Turkish medium instruction is delivered. The attitudes of a teacher as a determinant of the learners' attitudes and their motivation to learn have such an important role that needs to be investigated comprehensively as well. The significance of teacher attitudes lies in their effect on teachers' motivation to engage their students, leading to increased student motivation and performance (Ayık & Ataş, 2014; Ayık, Ataş Akdemir, & Seçer, 2015; Karabenick & Noda, 2004; Khonamri & Salimi, 2010).

Gardner and Lambert (1972) point out the positive attitudes of teachers towards the lesson have direct influence on learners' motivation, which brings success. However, studies on motivation and attitudes as affective variables have mostly focused on learners rather than teachers. It has been observed that the relevant literature has a gap in terms of the pre-service teachers' attitudes toward the language when the relevant literature is reviewed. Several studies have investigated the attitudes and their relationships with other factors such as motivation (Al-Nofaie, 2010; Gardner, 1968; Gardner & Lambert, 1972; Liu, 2007; Kızıltepe, 2000; Shirbagi, 2010), foreign language achievement (İnal, Evin & Saracaloğlu, 2005), gender (Gökçe, 2008; Kobayashi, 2002), age (Dilitemizoğlu, 2003; Henry & Apelgren, 2008), peer-group influences (Bartram, 2006), culture (Wright, 1999), classroom language learning (Littlewood,

2001), language and its uses (Karahan, 2007). The age group of the subjects varied in previous research with learners from the primary level (Henry & Apelgren, 2008; Merisuo-Storm, 2007; Dilitemizoğlu, 2003) and the secondary level (Karahan, 2007; Bağçeci, 2004; Bartram, 2006; Wright, 1999) to the tertiary level (Shirbagi, 2010; LoCastro, 2001; Verma, 2008; Pudjiati, 1996). A great majority of the scientific studies, conducted at tertiary level university context, involves learners from various departments (Shirbagi, 2010; Yang & Lau, 2003) and teacher candidates of departments other than ELT (Saracaloglu & Varol, 2007).

The relevant literature reveals that the attitudes of pre-service teachers toward the target language have not been investigated thoroughly. The current research is an attempt to contribute to the research literature by investigating pre-service teacher attitudes toward the compulsory English course.

The term critical thinking (CT) has been used since the mid-late 20th century though as a rich concept, it has been developing throughout the past 2500 years. The definition of this term is overlapped since it is a substantive, transdisciplinary concept. At the 8th Annual International Conference on Critical Thinking and Education Reform, Scriven and Paul (1987) tried to define this term as follows: "Critical thinking is the intellectually disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness". According to Ennis (2013) CT, as it is focused on deciding the believed act, means reflective thinking. Myers (2003) described CT as a tool to examine assumptions, values, evidence and conclusions. CT is a skill needed to foster students' thinking skill (Fuad, Zubaidah, Mahanal & Suarsini, 2017; Hashemi, 2011).

As a "core outcome in higher education" (Lederer, 2007, p. 525) CT keeps a central role in learning (Beyer, 1987; McPeck, 1981). At university context, CT is connected with assessment criteria (Elander, Harrington, Norton, Robinson, & Reddy, 2006), employability and academic achievement (Facione, Facione, & Giancarlo, 2000; Halx & Reybold, 2005) as well as student engagement and learning (Carini, Kuh & Klein, 2006). In spite of its close connection with educational settings, CT is a challenging term to be defined concisely. The experts of APA defined it as: "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" (Facione, 1990, p. 2). CT skills are expected to enable learners understand, identify and reflect logical connections between ideas as well as solve problems in a reasonable way.

Since one of the ultimate goals of education is to prepare individuals who are able to think well, CT is a quality that is desired to be owned by both students and teachers. From Socrates to Plato, from Descartes to Dewey, the importance of incorporating CT into education curricula was emphasized vigorously.

Among several studies on CT, some of them focused on developing CT skills in addition to the CT dispositions (Türnüklü & Yesildere, 2005; White & Hargrove, 1996) as well as CT dispositions (Facione, 1998; Kökdemir, 2003; Leader & Middleton, 2004). Facione, Giancarlo, Facione and Gainen (1995) stressed that CT dispositional attributes help predicting CT skills.

Davies and Barnett (2015) identify three broad perspectives on CT within the literature: A skills perspective on it, the criticality perspective and the critical pedagogy perspective. Çetinkaya (2011) tried to determine the views of Turkish education teacher candidates related to CT and the researcher used the "California Critical Thinking Disposition Inventory" (CCTDI) in order to obtain the data. According to the findings of her study, Turkish Education teacher candidates' CT dispositions are low; besides she concluded that there is not any meaningful difference regarding school type they graduated; yet her study indicated meaningful differences for gender and class variances. Türnüklü and Yesildere (2005) aimed at investigating the CT dispositions and abilities of mathematics teacher candidates and revealed that CT dispositions of teacher candidates of elementary mathematics were positive but not high enough.

Akgün and Duruk (2016), aimed to determine the CT dispositions of pre-service science teachers to observe possible effects of personal and social factors. They also pointed out that previous studies focused on social factors, along with genetic factors, as having influence on pre-service teachers' CT skills. Data were collected through CCTDI. The research revealed that pre-service science teachers' CT dispositions are low and there is not a significant difference between pre-service science teachers' CT dispositions scores by gender, grade, school and authority at home variables. Aybek and Aslan (2017) tried to analyse the relationship between pedagogical formation training certificate program prospective teachers' CT attitudes and their perceptions on professional ethical principles by using "Critical Thinking Attitude Scale" and "Code of Professional Ethics Scale" as the instruments of the study. They concluded that a medium level of relationship between the CT attitude of prospective teachers and their

professional ethical principles exist. Facione et al. (1995) are on the opinion that preservice teachers should be able to make analysis, interpretation, and evaluation in order to ensure reasonable judgment about a given situation. Dutoglu and Tuncel (2008) investigated the relationship between pre-service teachers' CT skills tendencies and their emotional intelligence levels by using "Critical Thinking Attitude Scale" and "Bar-On Emotional Intelligence Questionnaire" and the study revealed that there is a positive, low and at intermediate level relationship between these two. Comer, Schweiger, & Shelton, (2019) investigated the effects of CCTDI on academic success and achievement. In another study, Ekinci and Aybek (2010) examined the possible relationships between teacher candidates' CT dispositions and their empathy inclinations, curriculum, grades, genders, parental education levels, and perceived socio-economic status. The study revealed a low level of significant and positive relation between the teacher candidates' CT dispositions and empathy inclinations.

Most studies investigating the relationship between the CT of pre-service teachers and various variables use CCTDI as the instrument. The current study also used it to obtain the data of the research. CCTDI is the premier tool for surveying the dispositional aspects of CT. Facione (1990) conducted a cross-discipline Delphi study with 46 CT experts. This study yielded a conceptual consensus of CT that included cognitive skills and affective dispositions. There are several other examples where CT is investigated for health students at various levels (Cui, Li, Geng, Zhang & Jin, 2018; Noone & Seery, 2018)

The CCTDI is specifically designed to measure the disposition to engage problems and make decisions using CT. The CCTDI is designed for use with the general adult population. It is a 75-question survey, which takes about 20 minutes to complete while addressing the "dispositional" dimension of CT—as opposed to the "skills" dimension, which is evaluated in the Critical Thinking Skills Test (CCTST). The CCTDI was designed to measure CT dispositions of truth-seeking (12 items), open-mindedness (10 items), analyticity (11items), systematicity (12 items), inquisitiveness (11 items), self-confidence (9 items) and maturity (10 items), which has been approved with a significant difference from prior conceptualizations of CT dispositions. Gupta, Iranfar, Iranfar, Mehraban and Montazeri (2012) conducted a research in order to determine validity and reliability of CCTDI and CT disposition of nursing and midwifery students of Kermanshah University of Medical Sciences and concluded that the CCTDI is a proper instrument for nursing and midwifery students in Kermanshah University of Medical Sciences. In another research study, Sulaiman, Rahman & Dzulkifli (2010) inestigated CCTDI's construct validity at a university context.

The aim of the current research is to reveal the relationship between pre-service teachers' attitudes towards compulsory English courses and their CT skills within the context of their social, academic and educational backgrounds. The research questions of the study are:

1) Do pre-service teachers' attitudes towards English courses and their CT skill scores vary according to their demographic variables (gender, age and department)?

2) Is there any relationship between pre-service teachers' attitudes towards English courses and their CT skill scores?

2. Method

Current study is conducted as a quantitative research in which several statistical analyses such as t-test, one-way ANOVA and bivariate correlation have been conducted through SPSS in order to explore the relationships between the concepts (CCTDI, ASTEC and personal variables) and to seek the answers to the research questions

2.1 Participants and Setting

The participants of the study are 159 pre-service teachers of a public university in Turkey. The participants have all enrolled in compulsory English courses as part of the curriculum of their faculty. The participants are selected from various departments of faculty of education.

2.2 Instruments

The data of the research were obtained by using a quantitative method. Two data collection instruments were deployed, which are CCTDI and an Attitude Scale towards English Classes (ASTEC) developed by Aydoslu (2005). The CCTDI is specifically designed to measure the disposition to engage problems and make decisions using CT. The CCTDI was designed to measure CT dispositions of truth seeking (12 items), open-mindedness (10 items), analyticity (11items), systematicity (12 items), inquisitiveness (11 items), self-confidence (9 items) and maturity (10 items). Facione et al (1994) tested the reliability and found that the initial reliability coefficients (Cronbach's alpha .90 overall and .71 - .80 for the seven internal scales) remained relatively stable when the 75-item instrument was administered to 1,019 additional college students (.90 overall, .60 -.78 scales). Yeh (2001) conducted a research

translating the California Critical Thinking Disposition Inventory (CCTDI) from English to Chinese and ascertaining the reliability and validity of Chinese CCTDI; and the research has shown that content validity index (CVI) ranged from 0.50 to 0.80, with an overall CVI of 0.85. Pearson r ranged from 0.33 to 0.79, with an overall correlation of 0.79, indicating that evidence for stability in truth-seeking, open-mindedness and self-confidence existed.

Attitude Scale Toward English Classes (ASTEC) developed by Aydoslu has 30 items (15 of them positive and 15 of them negative) and lasts 20-25 minutes to apply it. It has two sections; in the first section personal information is gathered and the second section is a five-point graded Likert scale consisting of 30 items, and was found to measure valid and reliable with three factors. The following five categories were used to respond to all items in the scale; 1=strongly disagree, 2=disagree, 3=agree and 4= neutral 5=strongly agree. The items were scored reverse that express negative attitudes: 5 for "strongly disagree" and 1 for "strongly agree". for the items 4., 5., 8., 9., 12., 13., 14., 17., 18., 20., 22., 23., 25., 26. and 30. ; while the items 1., 2., 3., 6., 7., 10., 11., 15., 16., 19., 21.,24., 27., 28. and 29. express positive attitudes. The scale consists of three dimensions: cognitive, affective and behavioural. The Cronbach's alpha coefficient of the scale is measured as $\alpha = 0.9364$. Other studies using this scale tested the reliability and found that the initial reliability coefficients, the Cronbach's alpha coefficient of it as $\alpha = 0.93$ (Kömürcü, 2015), $\alpha=0.94$ (Semerci, 2013).

2.3 Data Collection Procedure and Analysis

As a quantitative investigation, current study is consisted of the statistical analysis of the two instruments (ASTEC and CCTDI) conducted to 159 pre-service teachers. The data was collected and then conveyed to SPSS for basic statistical analysis. The research questions have been replied according to the data analysis results.

In order to investigate the relationship between pre-service teachers' CCTDI and ASTEC scores and their demographic variables (gender, age, department, and educational background), the data was analysed for means, independent samples t-tests and one way ANOVA through SPSS. The relationship between pre-service teachers' attitudes towards English courses and their CT skill scores was investigated through bivariate correlation.

3. Results

The results of data analysis reveal answers for research questions. The relationship between pre-service teachers' CCTDI and ASTEC scores and their demographic variables (gender, age and department) is explored by the analyses of means, independent samples t-tests and one way ANOVA through SPSS. According to independent sample t-test results, there is no significant difference between the participants' gender and their average CCTDI and ASTEC scores (Table 1).

Table 1. Independent Sample T-Test Results for Gender and Average CCTDI and ASTEC Scores

	gender	N	Mean	Std. Deviation	Std. Error Mean
CCTDI	Female	109	3,3582	,28414	,02722
	Male	50	3,3769	,28498	,04030
ASTEC	Female	109	2,9511	,37495	,03591
	Male	50	2,8700	,38239	,05408

CCTDI $t(157) = -,385$, $p > .05$; ASTEC $t(1,258) = -,385$; $p > .05$.

According to one way ANOVA analysis, there is no difference between the participants' age groups and their average CCTDI and ASTEC scores (Table 2). Saglam and Büyükuysal (2013), in their mixed method survey, found significant difference between gender and CCTDI scores of teacher candidates. However, the total CCTDI scores of their participants were low.

Table 2. One Way ANOVA Results for Age Groups and Average CCTDI and ASTEC Scores

		Sum of Squares	df	Mean Square	F	Sig.
CCTDI	Between Groups	,067	2	,033	,412	,663
	Within Groups	12,644	156	,081		
	Total	12,711	158			
ASTEC	Between Groups	,005	2	,003	,018	,982
	Within Groups	22,568	156	,145		
	Total	22,574	158			

CCTDI $F(2, 156) = ,412$, p> ,05; ASTEC $F(2, 156) = ,,018$ p> ,05.

Mean and SD values for age groups of the participants are shown in Table 3.

Table 3. Mean and SD Values for Age Groups of the Participants

		N	Mean	Std. Deviation
CCTDI	17-21	121	3,3636	,28712
	22-26	35	3,3776	,27287
	27 +	3	3,2222	,33179
	Total	159	3,3640	,28363
ASTEC	17-21	121	2,9253	,37193
	22-26	35	2,9229	,40759
	27 +	3	2,9667	,40000
	Total	159	2,9256	,37798

The participants of this study were pre-service teachers from different departments of the faculty of education at a public university in Turkey. These departments are; computer and instructional technologies (CIT), science teaching (ST), elementary mathematics teaching (EMT), early childhood education (ECE) and Turkish teaching (TT). It is found that there is no difference between participants' departments and their average CCTDI and ASTEC scores (Table 4).

Table 4. One Way ANOVA Results for Departments and Average CCTDI and ASTEC Scores

		Sum of Squares	df	Mean Square	F	Sig.
CCTDI	Between Groups	,163	4	,041	,501	,735
	Within Groups	12,548	154	,081		
	Total	12,711	158			
ASTEC	Between Groups	,313	4	,078	,541	,706
	Within Groups	22,261	154	,145		
	Total	22,574	158			

CCTDI $F(4, 154) = ,501$, p> ,05; ASTEC $F(4, 154) = ,541$ p> ,05.
Mean and SD values for the departments of the participants are shown in Table 5.

Table 5. Mean and SD Values for the Departments of the Participants

		N	Mean	Std. Deviation
CCTDI	CIT	12	3,2941	,30526
	ST	36	3,3878	,32291
	EMT	25	3,3325	,29723
	ECE	48	3,3950	,26973
	TT	38	3,3452	,25113
	Total	159	3,3640	,28363
ASTEC	CIT	12	2,9472	,41206
	ST	36	2,9056	,41515
	EMT	25	2,9280	,37338
	ECE	48	2,9819	,38842
	TT	38	2,8649	,32567
	Total	159	2,9256	,37798

In order to answer the second research question of the study, the correlation between pre-service teachers' attitudes towards English courses and their CT skill scores was investigated through bivariate correlation analysis. According to data analysis, there is no meaningful correlation between the participants CCTDI and ASTEC scores (Table 6).

Table 6. The Correlation between the Participants CCTDI and ASTEC Scores

		CCTDI	ASTEC
CCTDI	Pearson Correlation	1	,047
	Sig. (2-tailed)		,557
	N	159	159
ASTEC	Pearson Correlation	,047	1
	Sig. (2-tailed)	,557	
	N	159	159

(r=,047; p> ,05)

The results of this study show that there is not any significant relationship between CT disposition of the pre-service teachers and their attitudes towards compulsory English courses. Also, there is no difference between their ASTEC and CCTDI scores and their age, gender and department. It should be noted that the participants of the current study are not from English language teaching department but from different departments. Thus, it is not surprising that their awareness and interest towards compulsory English courses is low and this is reflected in the results of the current study. There are several studies conducted to explore the correlation between CCTDI scores and other variables (Ordem, 2016; Saglam & Büyükuysal, 2013; Yüksel & Alci, 2012); most of these studied found slight correlations between the scores and variables. Current study differs from previous ones in that according to the results, there are no correlations between CCTDI and ASTEC as well as personal variables.

4. Conclusion and Discussion

Current study has been conducted in order to investigate the relationship between pre-service teachers' ASTEC and CCTDI scores and their age, gender and department as well as the correlation between their ASTEC and CCTDI scores. The data was collected by two Likert type instruments (ASTEC and CCTDI). The results of data analyses showed that there is no significant relationship between pre-service teachers' ASTEC and CCTDI scores and their age, gender and department; also, there is not any correlation between their ASTEC and CCTDI scores. The results of this study conform with previous studies in which gender was found to be ineffective regarding CCTDI scores

(Salahshoor & Rafiee, 2016; Walsh & Hardy, 1999) The relationships between attitudes and CT have been investigated in several studies for various courses. Elliott, Oty, McArthur and Clark (2001) have studied the relationship between problem solving, CT and attitudes towards science courses. As they concluded, there was no significant difference between the concepts. In another study, Stapleton (2011) explored attitudes towards CT among Hong Kong secondary school teachers and discovered that the teachers have narrow conception of CT. He suggested raising awareness of CT in curriculum development. Tsui (2001), in her extensive research, highlighted that more research and practical action is needed to raise the awareness on CT, thus CT will shape the learners' attitudes towards language courses.

As a limitation of the study, it should be noted that the participants have English courses as compulsory which may influence their attitudes and awareness towards English. This is the first quantitative study which uses the two instruments, CCTDI and ASTEC, together to explore pre-service teachers' demographic variables. More research is needed to validate the results in various contexts at university level.

As a pedagogical implication, it should be reminded that compulsory English courses are expected to be designed in accordance with learners' CT skills. Also, the practitioners are invited to benefit from research results while they are preparing the curriculum. CT skills should be fully integrated in teacher training as well as other undergraduate program. Another crucial implication to be drawn from current study is the fact that, regardless of their departments, pre-service teachers need to raise their awareness towards CT which will enlighten their language learning process.

This study sheds light on the research gap on the possible relationships between CT and several factors shaping the educational settings of university students. An important implication which can be drawn from the current research is that more and in depth research designs are needed to reach a better understanding of this relationship.

References

Akdemir, A. S. (2013). Türkiye'de öğretmen yetiştirme programlarının tarihçesi ve sorunları. *Electronic Turkish Studies, 8*(12).

Akdemir, A. S., & İlhan, B. (2019). EFL Instructors' Majors and Their Speaking Activity Choices for Informal Oral Assessment. *AJESI - Anadolu Journal of Educational Sciences International, 9*(1), 1-26. https://doi.org/10.18039/ajesi.520805

Akgün, A., & Duruk, U. (2016). The Investigation of Pre-service Science Teachers' Critical Thinking Dispositions in the Context of Personal and Social Factors. *Science Education International, 27*(1), 3-15.

Al-Nofaie, H. (2010). The attitudes of teachers and students towards using Arabic in EFL classrooms in Saudi public schools-a case study. *Novitas-Royal, 4*(1), 64-95.

Ataş Akdemir, Ö. (2019). Student Teachers' Preparedness to Teach: The Case of Turkey. *International Education Studies, 12*(3), 90-96. https://doi.org/10.5539/ies.v12n3p90

Aybek, B., & Aslan, S. (2017). The relationship between pedagogical formation training certificate program prospective teachers' CT attitudes and their perceptions on professional ethical principles. *European Journal of Education Studies, 3*(2), 227-237.

Aydoslu, U. (2005). Öğretmen Adaylarının Yabancı Dil Olarak İngilizce Dersine İlişkin Tutumlarının İncelenmesi (B.E.F. Örneği), *Yayınlanmamış Yüksek Lisans Tezi,* Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü, Isparta.

Ayık, A., & Ataş, Ö. (2014). Öğretmen adaylarının öğretmenlik mesleğine yönelik tutumları ile öğretme motivasyonları arasındaki ilişki. *Eğitim Bilimleri Araştırmaları Dergisi, 4*(1), 25-43.

Ayık, A., Ataş Akdemir, Ö., & Seçer, İ. (2015). Öğretme Motivasyonu Ölçeğinin Türkçeye Uyarlanması: Geçerlik ve Güvenirlik Çalışması. *Current Research in Education, 1*(1), 33-45.

Bağçeci, B. (2004). *Ortaöğretim kurumlarında İngilizce öğretimine ilişkin öğrenci tutumları (Gaziantep ili örneği).* XIII. Ulusal Eğitim Bilimleri Kurultayı, 6-9 Temmuz 2004. İnönü Üniveristesi, Eğitim Fakültesi, Malatya.

Bartram, B. (2006). Attitudes to language learning: A comparative study of peer group influences. *Language Learning Journal, 33,* 47-52. https://doi.org/10.1080/09571730685200101

Brashears, M. T., & Baker, M. (2018, April). *Disposition Towards Critical Thinking: A Longitudinal Study of Latin American Undergraduate Interns at a US College of Agriculture* Dr. Baleshka Brenes Sarahi Morales. In Conference Proceedings: 34th Annual Conference of AIAEE Celebrating the Intersection of Human, Natural,

and Cultural Systems April 16-20, 2018 Merida, Yucatan, Mexico (p. 33).

Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in higher education, 47*(1), 1-32. https://doi.org/10.1007/s11162-005-8150-9

Cetinkaya, Z. (2011). Determining of the views of prospective Turkish teachers on critical thinking. *Journal of Ahi Evran University Faculty of Education, 12*(3), 93-108.

Comer, R. D., Schweiger, T. A., & Shelton, P. (2019). Impact of Students' Strengths, Critical Thinking Skills and Disposition on Academic Success in the First Year of a PharmD Program. *American Journal of Pharmaceutical Education, 83*(1), 93-99.

Cui, C., Li, Y., Geng, D., Zhang, H., & Jin, C. (2018). The effectiveness of evidence-based nursing on development of nursing students' critical thinking: A meta-analysis. *Nurse education today, 65,* 46-53. https://doi.org/10.1016/j.nedt.2018.02.036

Davies, M., & Barnett, R. (Eds.). (2015). *The Palgrave handbook of critical thinking in higher education.* Springer. https://doi.org/10.1057/9781137378057

Dilitemizoğlu, N. (2003). *An evaluation of young learners' attitudes towards learning English: A comparison of teaching methods*. (Unpublished M.A. thesis). Uludağ University, Institute of Social Sciences, Bursa, Turkey.

Dutoğlu, G., & Tuncel, M. (2008). Aday öğretmenlerin eleştirel düşünme eğilimleri ile duygusal zeka düzeyleri arasındaki ilişki. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 8*(1), 11-32.

Ekinci, O., & Aybek, B. (2010). Analyzing of emphatical and critical thinking tendencies of prospective teachers. *Primary Education Online, 9*(2), 816-827.

Elliott, B., Oty, K., McArthur, J., & Clark, B. (2001). The effect of an interdisciplinary algebra/science course on students' problem solving skills, critical thinking skills and attitudes towards mathematics. *International Journal of Mathematical Education in Science and Technology, 32*(6), 811-816. https://doi.org/10.1080/00207390110053784

Facione, N. C., Facione, P. A., & Sanchez, C. A. (1994). Critical thinking disposition as a measure of competent clinical judgment: The development of the California Critical Thinking Disposition Inventory. *Journal of Nursing Education, 33,* 345-350.

Facione, P. A. (1998, March). *The relationship of critical thinking skills and the disposition toward critical thinking.* In American Philosophical Association Western Division Meetings, Los Angeles, CA.

Facione, P. A., Sánchez, C. A., Facione, N. C., & Gainen, J. (1995). The disposition toward critical thinking. *The Journal of General Education, 44*(1), 1-25.

Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction (The Delphi Report).* Millbrae: California Academic Press.

Fuad, N. M., Zubaidah, S., Mahanal, S., & Suarsini, E. (2017). Improving Junior High Schools' Critical Thinking Skills Based on Test Three Different Models of Learning. *International Journal of Instruction, 10*(1), 101-116. https://doi.org/10.12973/iji.2017.1017a

Gardner, R. C. (1968). Attitudes and motivation: Their role in second language acquisition. *TESOL Quarterly, 2*, 141-150. https://doi.org/10.2307/3585571

Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and Motivation in Second Language Learning.* Newbury House: Rowley, Massachusetts.

Gökçe. (2008). *Attitudes and motivational intensity of foreign language learners at vocational high schools: A comparative study*. (Unpublished M.A. thesis). Middle East Technical University, The Graduate School of Social Sciences, Ankara, Turkey.

Gupta, K., Iranfar, S., Iranfar, K., Mehraban, B., & Montazeri, N. (2012). Validly and Reliability of California Critical Thinking Disposition Inventory (CCTDI) in Kermanshah University of Medical Sciences. *Educational Research in Medical Sciences Journal, 1*(1), 61-68.

Hashemi, S. A. (2011). The Use of Critical Thinking in Social Science Textbooks of High School: a Field Study of Fars Province in Iran. *International Journal of Instruction, 4*(1), 63-78.

Henry, A., & Apelgren, B. M. (2008). Young learners and multilingualism: A study of learner attitudes before and

after the introduction of a second foreign language to the curriculum. *System, 36,* 607-623. https://doi.org/10.1016/j.system.2008.03.004

İnal, S., Evin, İ., & Saracaloğlu, A. S. (2005). The relation between students' attitudes toward foreign language achievement. *Dil Dergisi, 130*, 38-52.

Karabenick, S. A., & Noda, P. A. C. (2004). Professional development implications of teachers' beliefs and attitudes toward English language learners. *Bilingual Research Journal, 28*(1), 55-75. https://doi.org/10.1080/15235882.2004.10162612

Karahan, F. (2007). Language attitudes of Turkish students towards the English language and its use in Turkish context. *Çankaya University, Faculty of Arts and Humanities Journal of Arts and Sciences, 7,* 73-87.

Kaya, Z., & Akdemir, A. S. (2016). *Learning and teaching: Theories approaches and models*. Ankara: Çözüm Eğitim Yayıncılık.

Khonamri, F., & Salimi, M. (2010). The interplay between EFL high school teachers' beliefs and their instructional practices regarding reading strategies. *Novitas-ROYAL (Research on Youth and Language), 4*(1), 96-107.

Kızıltepe, Z. (2000). Attitudes and motivation of Turkish EFL students towards second language learning. I.T.L. *Review of Applied Linguistics, 129*(1), 141-161. https://doi.org/10.1075/itl.129-130.01kiz

Kobayashi, Y. (2002). The role of gender in foreign language learning attitudes: Japanese female students' attitudes towards English learning. *Gender and Education, 14,* 181-197. https://doi.org/10.1080/09540250220133021

Kökdemir, D. (2003). Belirsizlik Durumlarında Karar Verme ve Problem Çözme. *Yayınlanmamış doktora tezi,* Ankara Üniversitesi, Ankara.

Kömürcü, A. (2015). İlahiyat fakültesi hazırlık sınıfı öğrencilerinin Arapça dersine ilişkin tutumlarının incelenmesi (DÜİF örneği). *Celal Bayar Üniversitesi Sosyal Bilimler Dergisi, 13*(3), 120-140.

Leader, L. F., & Middleton, J. A. (2004). Promoting critical-thinking dispositions by using problem solving in middle school mathematics. *RMLE Online, 28*(1), 1-13. https://doi.org/10.1080/19404476.2004.11658174

Littlewood, W. (2001). Students' attitudes to classroom English learning: A cross-cultural study. *Language Teaching Research, 5,* 3-28.

Liu, M. (2007). Chinese students' motivation to learn English at the tertiary level. *The Asian EFL Journal Quarterly, 9,* 126-146.

LoCastro, V. (2001). Individual differences in second language acquisition: Attitudes, learner subjectivity, and L2 pragmatic norms. *System, 29,* 69-89. https://doi.org/10.1016/S0346-251X(00)00046-4

Merisuo-Storm, T. (2007). Pupil's attitudes towards foreign-language learning and the development of literacy skills in bilingual education. *Teaching and Teacher Education, 23,* 226-235. https://doi.org/10.1016/j.tate.2006.04.024

Noone, T., & Seery, A. (2018). Critical thinking dispositions in undergraduate nursing students: A case study approach. *Nurse Education Today, 68,* 203-207. https://doi.org/10.1016/j.nedt.2018.06.014

Ordem, E. (2016). Developing Critical-Thinking Dispositions in a Listening/Speaking Class. *English Language Teaching, 10*(1), 50-55. https://doi.org/10.5539/elt.v10n1p50

Pudjiati, S. (1996). *Students' attitude toward foreign language (SAFL).* Paper presented at the Annual Mid-South Educational Research Association. Tuscaloosa, Alabama.

Sağlam, A. Ç., & Büyükuysal, E. (2013). Critical thinking levels of senior students at education faculties and their views on obstacles to critical thinking Eğitim fakültesi son sınıf öğrencilerinin eleştirel düşünme düzeyleri ve buna yönelik engellere ilişkin görüşleri. *Journal of Human Sciences, 10(*1), 258-278.

Salahshoor, N., & Rafiee, M. (2016). The Relationship between Critical Thinking and Gender: A Case of Iranian EFL Learners. *Journal of Applied Linguistics and Language Research, 3*(2), 117-123.

Saracaloğlu, A. S., & Varol, S. R. (2007). Beden eğitimi öğretmen adaylarının yabancı dile yönelik tutumları ve akademik benlik tasarımları ile yabancı dil başarıları arasındaki ilişki. *Eğitimde Kuram ve Uygulama, 3*(1), 39-59.

Scriven, M., & Paul, R. (2003) Defining critical thinking. A draft statement for the national council for excellence in critical thinking. Retrieved January 13, 2017, from http://www.criticalthinking.org/University/univclass/Defining/html

Semerci, A. (2013). Polis meslek yüksekokulu öğrencilerinin İngilizce dersine yönelik tutumlarının farklı değişkenler açısından incelenmesi. *Türk Eğitim Bilimleri Dergisi, 11*(4), 389-409.

Shirbagi, N. (2010). An exploration of undergraduate students' motivation and attitudes towards English language acquisition. *Journal of Behavioral Sciences, 20,* 1-14.

Stapleton, P. (2011). A survey of attitudes towards critical thinking among Hong Kong secondary school teachers: Implications for policy change. *Thinking Skills and Creativity, 6*(1), 14-23. https://doi.org/10.1016/j.tsc.2010.11.002

Sulaiman, W. S. W., Rahman, W. R. A., & Dzulkifli, M. A. (2010). Examining the construct validity of the adapted California Critical Thinking Dispositions (CCTDI) among university students in Malaysia. *Procedia-Social and Behavioral Sciences, 7,* 282-288. https://doi.org/10.1016/j.sbspro.2010.10.039

Tsui, L. (2001). Faculty attitudes and the development of students' critical thinking. *The Journal of General Education, 50*(1), 1-28. https://doi.org/10.1353/jge.2001.0008

Türnüklü, E. B., & Yeşildere, S. (2005). A Profile from Turkey: Critical Thinking Dispositions and Abilities of Pre Service Mathematics Teachers of 11-13 Year. *Journal of Ankara University Faculty of Education, 38*(2), 167-185.

Verma, M. H. (2008). Learner's attitude and its impact on language learning. Retrieved January 13, 2017, from: http://147.8.145.43./clear/conference08/doc/handouts/VERMA Meenakshi H_handout.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.

White, W. F., & Hargrove, R. (1996). Are Those Preparing to Teach Prepared to Teach Critical Thinking?. *Journal of Instructional Psychology, 23*(2), 117.

Wright, M. (1999). Influences on learner attitudes towards foreign language and culture. *Educational Research, 41,* 197-208. https://doi.org/10.1080/0013188990410207

Yang, A., & Lau, L. (2003). Student attitudes to the learning of English at secondary and tertiary levels. *System, 31,* 107-123. https://doi.org/10.1016/S0346-251X(02)00076-3

Yuksel, G., & Alci, B. (2012). Self-efficacy and critical thinking dispositions as predictors of success in school practicum. *International Online Journal of Educational Sciences, 4*(1), 81-90.