

## **Investigation of the Cultural Intelligence Levels of the Turkish University Students at Foreign Language Departments**

**Müfit Şenel**

Ondokuz Mayıs University, Turkey

*Email: msenel@omu.edu.tr*

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### **Abstract**

The aim of this study was to investigate and explore the level of Cultural Intelligence of students majoring at the English, German and French Departments at Samsun 19 Mayıs University, Faculty of Education in 2018-2019 academic year. 200 students participated in the study. Study also aimed to determine whether their Cultural Intelligence was associated with their gender, age, and departments they attended. As data collection instruments, Cultural Intelligence Scale which was developed by Ang et al. in 2007 and Demographic Information Form which was developed by the researcher were used. Cultural Intelligence Scale was adapted to Turkish and assessed by İlhan and Çetin in 2014. Collected data were analyzed and evaluated by SPSS 23 statistical package program. According to the results obtained from the research, it could be stated that there was a significant difference for some subcategories of Cultural Intelligence. In addition, it was observed that the students who participated in the study differed significantly in terms of the type of departments in which they studied and the high schools that they had graduated from. Regard with mean scores of the participants it was observed that mean scores of males were higher than females in terms of some variables. In the end of the paper, limitations and pedagogical dimensions of the study were discussed. Additionally, suggestions were given for future research in the light of the yielded results.

**Keywords:** cultural intelligence, foreign language, education, learning, Turkish university students

### **Introduction**

Culture is the essential element which brings societies together and reflects their social behavior. It bridges national borders and develops our capability to operate globally. There is a two-dimensional relationship between culture and language, of course. It is well known by everybody that we live in a globalized world and we can easily expose to other cultures and interact with other people from different cultures. This globalization, technological developments and ease of travel to foreign regions have made our world smaller in many ways (Friedman, 2005), ‘increasing cultural diversity will create challenges for people and organizations and the world will not be the same anymore’ (Ang et. al., 2007). In the literature, there are several studies that explain the difficulties and the problems of people who have been working in different cultural settings perhaps as a result of interpreting the world through their own cultural perspectives.

It ought to be noted here that since we have been living in a globalized world, to see each other, not to neglect to property contrasts in practices and convictions to social impacts, to forestall disarray and tension in different settings, to improve relations, to wipe out preference, and to defeat all social vulnerable sides, the information on Cultural Intelligence (CQ) is as significant as the information on culture. Because of globalization in multicultural communities, people display practices explicit to the way of life to which they have a place, and to decipher a few practices showed from different societies in various manners can prompt correspondence issues inside society. In other words, the ability to work successfully in various social settings requires the information on CQ and remainder and it is required when there is social unique and issues go unsolved.

Depending upon those explanations, it should be stated that it is highly important for prospective language teachers at foreign languages departments because being able to communicate in a foreign language goes far beyond knowing only its vocabulary, grammar, pronunciation, and syntax. It should also be noted that knowledge of a foreign language requires knowledge of other cultures. The ability of teachers to educate individuals with advanced CQ depends first on their development in this field of intelligence. It is also about developing cultural sensitivity, international and cultural awareness and a global mindset. Learning new languages improves CQ because language and culture are heavily intertwined.

Additionally, in order to be able to adapt and live in today's multicultural and globalized world and also to teach at multicultural classrooms (B. Peterson, 2004) it becomes an indispensable issue to have CQ. In the literature since there were a few studies on CQ levels of EFL students, this present study is believed to make a beneficial contribution to the field.

### Cultural intelligence

Today, CQ emerges as a type of intelligence that has gained importance through studies on social intelligence and emotional intelligence. With its sub-cultures, understanding our own culture that we belong to and what it means to us can be known as CQ. To establish successful and effective intercultural interaction, people are assumed to have high CQ. CQ is, at the same time, being aware of what makes us who we are, and how our culture effects the way we deal with other people from different cultures. Having the ability to relate and work efficiently across cultures can be understood as CQ. The construct of CQ was developed (Earley & Ang., 2003) based upon the contemporary theories of intelligence (Sternberg, 1986). In the literature, CQ was defined by Ang, Van Dyke and Koh (2006, p.101) as "an individual's capability to interact effectively with others from different cultures and in situations characterized by cultural diversity". CQ is also defined as "a person's capability to adapt effectively to new cultural contexts and in this manner, it alludes to a type of arranged intelligence where insightfully versatile behaviors is culturally bound to the values and convictions of a given society or cultural" (Earley & Ang, 2003, p.26). CQ, in another definition, is expressed as "the ability of an individual to understand and interpret the gestures, mimics, body language and familiar or unfamiliar behavior of a person from different culture like the individuals from the same culture" (Earley & Mosakowski, 2004, p.139). According to Livermore (2010) CQ is closely related to cultural theories and researches, and CQ studies are supported with information obtained from motivational, cognitive, metacognitive and behavioral researches (p.19).

What makes the concept of CQ different from other theories is that its main focus in intelligence studies is based on behaviors learned through education and experience and it is difficult to change this situation and CQ states that the behavior of people arises from their

intercultural interaction (Kiznyte et al., 2015, p.5). Being different from other intelligence theories, CQ keeps many differences within. These are,

- a. CQ depends on contemporary intelligence theories
- b. CQ is interpreted with behavioral results that arise only from knowledge, intercultural interaction.
- c. CQ has been explained as a learned behavior
- d. CQ is universal, not merely belongs to one culture (Aksoy, 2015, p.91).

In the formation of a CQ in the individual, it is necessary to go through certain stages following each other. Some features of CQ are as follows:

- a. Reaction to external warnings,
- b. Recognition of other cultural norms and stimulation of the desire to learn more about them,
- c. Settling other cultural norms and rules in one's own mind,
- d. Integrating different cultural norms into alternative behaviors,
- e. Trying to recognize and understand changing cultural cues that others do not perceive (Clinton & Inkson, 2003 as cited in Akdemir et al., 2016, p.33)

According to Thomas and Inkson, (2004, pp.182-183), CQ is a “multifaceted competency consisting of cultural knowledge, the practice of mindfulness, and the collection of behavioral talents”. “It can also be understood as a capability that allows individuals to understand and act appropriately across a wide range of cultures” (Thomas, 2006). Furthermore, CQ is “a system which interfaces information and talents and connected by cultural metacognition which empowers individuals to adjust to, select, and shape the cultural aspects of their environment” (Thomas et al., 2008). In this respect, CQ can be characterized as a field of intelligence that is proposed to explain the differences between people in terms of their capability to interact with other societies and different cultures within the community.

#### Subdimensions of cultural intelligence

CQ is a multidimensional concept. Early and Ang (2003) put forward that CQ should not merely include cognitive abilities (Ackerman, 1996; Gardner, 1993, Sternberg, 1986) but at the same time it can be categorized under four subdimensions such as metacognitive, cognitive, motivational and behavioral dimensions. These four dimensions of CQ constitute overall CQ and they are the different aspects of the overall capability to function (Earley & Ang, 2003). These dimensions can be explained as follows:

- a. metacognitive intelligence is the control of cognition; the procedures that people use to procure and fathom data and person's cognizant social mindfulness. Those with this intelligence can easily adjust their mental models during and after interactions (Brislin, Worthley & Macnab, 2006; Triandis, 2006).
- b. cognitive intelligence refers to an individual's knowledge of different cultures and the ability to understand how cultures are different from or similar to each other. If any person has this dimension of CQ, it means that s/he has the ability to understand similarities and differences across different cultures (Brislin, Worthley & Macnab, 2006).
- c. motivational intelligence focuses on learning about cultural differences. It includes an individual's inherent interest in experiencing other cultures. It is a kind of ability that focuses on magnitude and direction of energy. Those with this intelligence have confidence in their cross-cultural effectiveness (Bandura, 2002).

- d. behavioral intelligence focuses on individual abilities to show suitable verbal and non-verbal behaviors while interacting with people from different cultures. Those with this intelligence are good at using mimics, gestures, facial expressions and tone.

The main conclusion that can be drawn is that if an individual has these four dimensions of CQ, s/he can effectively manage in different cultural settings

### Literature review

This section reviews the literature related to CQ. When a series of studies has been searched, it has been found that there exists a considerable body of literature on CQ, but the majority of them is about the relationship with expatriates, business, tourism, leadership, business schools, international experiences, and so on. Since quite a few relevant studies have been found about CQs of students majoring at foreign language departments at the universities; therefore, this present study will attempt to make a useful contribution to the filed.

In the light of mentioned information, it will be conceivable to explain some relevant studies here. A study conducted by Lee & Sukoco (2010) about the effects of CQ on expatriate performance revealed that the positive effect of CQ needs to be mediated by cultural adjustment and cultural effectiveness before affecting expatriate performance. A similar recent study of Akhal and Liu (2019) on CQ effects on expatriates' adjustment and turnover intentions in Mainland put forward that three dimensions of CQ had different positive effects on the three facets of expatriates' cross-cultural adjustment. Likewise, Chen, Kirkman, Kim, Farh, and Tangirala (2010) analyzed the work adjustment of expatriates and the results revealed that their motivational CQ was influenced more because of cultural distance. Another researcher Crowne (2007) defined that staying at a hotel in a foreign country and eating local food in that country or city increases peoples' CQ. According to a CQ study conducted by Huff, Song and Gresch's in 2013 about personality and cross-cultural adjustment of expatriates in Japan, it was indicated that motivational CQ clarifies fluctuation in expatriate general.

Other studies led by Eisenberg et al., 2013; Kurpis, 2009; MacNab, 2012 to set clear business school students' CQs put forth that the curricula administered at those schools helped students develop their CQs in intercultural settings. Kurpis and Hunter (2016) implemented a study to investigate business school students' CQ through experiential activity and they stressed that experiential activity led an observable increase in students' cultural knowledge, motivation and self-confidence. They also emphasized that students' CQ was highly developed. In one empirical study, CQ predicted adjustment of global professionals were researched and it was found that those who were more interacting with other people from different cultures had higher CQ (Templer, Tay & Chandrasekar, 2006). In relation to the aforementioned studies, in 2017, Frias-Jamilena et al. made a research on CQ in tourism with some British tourists in Spain and they concluded that the tourists' previous experience in Spain utilized an effect on their CQ.

Here, it may be helpful to handle some limited studies that had been done on university students. But none of these studies had been done with foreign languages students. Additionally, when the relevant literature is examined, it is observed that limited number of studies have been conducted on the relationship between CQ and the attitudes of teachers (Taştekin et al., 2016) and prospective teachers (Koçak & Özdemir, 2015) towards multicultural education. For example, some scholar have declared that in our present day's societies education programs need to be restructured in line with multicultural education (Cogan & Morris, 2001; Balay, 2004) and it was also emphasized that a multicultural education system should be integrated into teacher training programs Ambe, 2006; Chou, 2007; Ensign, 2009; Fox & Greenberg, 2006; Gay, 2009; Rao, 2005; Szabo & Anderson, 2009). Another study found that it would be useful for teachers who had just

started their profession to take part in pre-service training programs about multicultural education (Gasbarro & Matthews, 1994).

Regarding studies involving university students, one empirical study conducted in Hungary by Balogh et al. in 2011 examined the CQ of fulltime university students and the organizational culture of several hundred companies. They stated that they had found a significant correlation between the CQ of university students and the organizational culture of their future workplaces. To identify the level of CQ of some Jordanian university students showed that the level of CQ of those students was moderate and there was no significant difference in terms of gender (Momani & Atoum, 2016). Findings of the other research conducted by Abaslı and Polat (2018) at three public universities in Ankara, Turkey with Turkish and international students pointed out that Turkish and international students' perception levels on intercultural sensitivity was moderate and on CQ were high.

Another research about the evaluation of CQ levels of female university students examined the negative automatic thoughts of CQ levels of female university students and concluded that negative automatic thoughts had its effects on CQ (Ergün & Güzel, 2017). Moreover, Rafie, Khosravi and Nasiri (2016) conducted a study with Iranian EFL learners and put forward that of the four components of CQ (metacognitive, cognitive, behavioral, and motivational CQs), motivational CQ was the best predictor for the listening ability of EFL learners. In 2018, Bahrami and Narafshan focused on the importance of authentic exposure that affected the nature of L2 learners' cultural intelligence and interpersonal communication in the EFL context of Iran. To this end, one more study employed by Edwards, Peralta, Aquino, Ramos and García (2007) highlighted the factors that promoted CQ within the EFL/ESL curriculum and argued that providing more relevant and real-life activities helped participants develop CQ in conjunction with communicative activities to establish better professional personal relationships with people from other cultures.

#### Aim and objective of the study

It must be pointed out that there have been no studies aimed at determining the intercultural sensitivity and CQ levels of Turkish foreign language learners at the faculties of education in Turkey. In this respect, this study is thought to make a contribution to the relevant field. Therefore, the aim of this study is to investigate and explore the CQ levels of some university students majoring at foreign languages departments at Samsun Ondokuz Mayıs University, Faculty of Education in terms of some variables. This study also tries to unearth whether the CQ levels of foreign languages department students are associated with their age, gender, departments and graduated high schools. With these aims, the answers of the following research questions are going to be searched for.

1. Is there a significant difference between the CQ levels of the participants who are majoring at different language departments?
2. Are the CQ levels of the participants who had graduated from different high schools different?
3. Are the CQ levels of female participants higher than males?
4. Is there a significant difference between the CQ levels of the participants in terms of their ages?
5. Is there a significant difference between the CQ levels of the participants in terms of their grades?

## Research method

### Participants

Two hundred students, 166 females (83%) and 34 males (17%), from English (106 females, 22 males), French (25 females, 7 males) and German (35 females, 5 males) departments took part in the present study voluntarily. Number of the participants according to the distribution of their graduated high schools was: Anatolian High School (94), Anatolian İmam Hatip High School (76) and Anatolian Teacher's High School (30). Their ages ranged between 20 and 24. 148 (74%) of them were between 20-22 years old and 52 (26%) of them were between 22-24 years old. Of these participants, 98 of them were 3<sup>rd</sup> grade and 102 of them were 4<sup>th</sup> grade students. Number of the students according to the departments enrolled was 128 English (64%), 40 German (20%) and 32 French (16%).

### Data collection

#### *Instruments*

Two instruments were employed in this research. First one was demographic information form and the second one was CQ scale.

#### *Demographic information form*

As a first data collection instrument, a Demographic Information Form was used consisting six questions dealing with the participants' department, grade, age, gender, graduated high schools and foreign languages known. They were given sufficient enough time (15 minutes) to complete the form. Participants were informed that all data would only be used for this study and would not be published and shared anywhere. All participants voluntarily took part in this research.

#### *CQ scale*

The theory has been successfully operationalized into a CQ Scale (CQS) by Van Dyne, Ang and Koh (2008) consisting of twenty items. The CQ Scale developed by Ang et al. (2007) was administered in order to assess learners' CQ levels. The CQS is a seven-point Likert type scale ranging from "strongly disagree" and "strongly agree" and it includes 20 items in total. It does not include any reverse item. Additionally, the questionnaire has four subscales of CQ: 4 items (1, 2, 3, and 4) for meta-cognitive CQ ( $\alpha = .76$ ); 6 items (5, 6, 7, 8, 9, and 10) for cognitive CQ ( $\alpha = .84$ ); 5 items (11, 12, 13, 14, and 15) for motivational CQ ( $\alpha = .76$ ) and 5 items (16, 17, 18, 19, and 20) for behavioral CQ ( $\alpha = .83$ ). The adaptation of CQS to Turkish was conducted by İlhan and Çetin (2014). They managed reliability and validity measurements of the scale with 1104 university students (Doğutaş, 2015). After translation work was completed, language equivalence results showed that the correlation between Turkish and English form was .98 for total items, .91 for Metacognition, .96 for Cognition, .94 for Motivation and .91 for Behavior subscales. This meant that the language equivalence between two languages was succeeded. Explanatory and confirmatory factor analysis also showed Turkish version of CQS had four subscales as in the original version. İlhan and Çetin (2014) also measured concurrent validity and it was found that correlation between Turkish version of CQS and Intercultural Sensitivity Scale was .61 and the correlation between Turkish version of CQS and Tromso Social Intelligence Scale was .44. They also used internal consistency and test-retest reliability for calculating reliability and corrected item total correlation to calculate item discrimination. The results presented that internal consistency coefficient was .85 and test-retest reliability was .81. As for item analysis, corrected item-total correlations were found to be between .33 and .64. These findings suggested that Turkish

version of CQS is a valid and reliable instrument for measuring university students' CQ. The following Table 1 reliability statistics.

Table 1. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.903	.906	20

#### Data analysis

Quantitative data analysis method was employed in this study. Statistical Package for the Social Sciences (SPSS) 23 was used to analyze the items in the scale. Each of the independent variables evaluated in the study was probed whether the data showed a normal distribution. It was figured out that the data was not normally distributed ( $p < .05$ ) (Table 2), nonparametric tests were applied in order to analyze the data Kruskal-Wallis test for making multiple comparisons and Mann-Whitney U test for making dual or more comparisons were used to analyze the data (Büyüköztürk, 2009). Descriptive statistics was made on the quantitative data by taking into consideration mean scores, frequencies, standard deviations, and percentages.

Table 2. Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statisti			Statisti		
	c	df	Sig.	c	df	Sig.
CQ MEANS	.079	200	.004	.968	200	.000

a. Lilliefors Significance Correction

#### Findings and results

This section addresses the evaluation of the findings of the study regarding the five research questions. The first research question of this study to be dealt with is whether there is a significant difference between the CQ levels of the participants who are majoring at different language departments. The results have been shown in Table 5 and it has been seen that there is only significant different for metacognitive subcategory of CQ ( $X^2(2) = 5.990$ ;  $p = .050$ ). Additionally, it should be noted here that French department participants have the highest mean scores at metacognitive level rather than the other subcategories.

Table 3. CQ distribution of the participants according to their departments

Subcategories	Department	N	Mean Rank	SD	$X^2$	$p$
Metacognitive	English	128	95.81			
	German	40	97.34	2	5.99	.050
	French	32	123.22		0	
Cognitive	English	128	97.43			
	German	40	105.70	2	1.00	.604
	French	32	106.30		8	
	English	128	94.73			

Motivational	German	40	104.55	2	4.59	.100
	French	32	118.53		7	
Behavioral	English	128	96.58			
	German	40	105.20	2	1.78	.409
	French	32	110.31		8	
	Total	200				

$X^2(2)=5.990$ ;  $p=.050$ ;  $p < 0.05$ ;  $X^2(2)=1.008$ ;  $p=.604$ ;  $p > 0.05$ ;  $X^2(2)=4.597$ ;  $p=.100$ ;  $p > 0.05$ ;  $X^2(2)=1.788$ ;  $p=.409$ ;  $p > 0.05$

The second research question of this study aimed at investigating the CQ levels of the participants who had graduated from different high schools. As mentioned previously, participants had graduated from three different high schools of Turkey. When the results were analyzed, it was viewed that while metacognitive and cognitive strategies indicated significant difference between schools, there was no statistically significant difference for motivational and behavioral strategies (See Table 4).

Table 4. CQ distribution of the participants according to their high schools

Subcategories	School	N	Mean Rank	SD	$X^2$	$p$
Metacognitive	Anatolian High School	94	91.06			
	Anatolian İmam Hatip High School	76	108.66	2	4.797	.091
	Anatolian Teacher's High School	30	109.40			
Cognitive	Anatolian High School	94	86.74			
	Anatolian İmam Hatip High School	76	108.83	2	11.265	.004
	Anatolian Teacher's High School	30	122.52			
Motivational	Anatolian High School	94	96.60			
	Anatolian İmam Hatip High School	76	106.71	2	1.419	.492
	Anatolian Teacher's High School	30	96.98			
Behavioral	Anatolian High School	94	94.69			
	Anatolian İmam Hatip High School	76	106.12	2	1.824	.402
	Anatolian Teacher's High School	30	104.48			
	Total	200				

$X^2(2)=4.797$ ;  $p=.091$ ;  $p < 0.05$ ;  $X^2(2)=11.265$ ;  $p=.004$ ;  $p < 0.05$ ;  $X^2(2)=1.419$ ;  $p=.492$ ;  $p > 0.05$ ;  $X^2(2)=1.824$ ;  $p=.402$ ;  $p > 0.05$

To compare the CQ levels of genders, the third research question was included in the study. Table 5 highlights the results of female and male participants for four different subcategories of CQ. Among these categories, it was observed that participants only showed difference in terms of metacognitive strategy ( $p < .05$ ). Another finding that emerged these results put forward that mean scores of males were higher than females specifically at metacognitive, cognitive and behavioral



subcategories. For motivational subcategory, there was a slight difference between males and females.

Table 5. CQ distribution of the participants according to their genders

Subcategories	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	<i>p</i>
Metacognitive	Female	166	95.46	15846.00	1985	.006
	Male	34	125.12	4254.00		
Cognitive	Female	166	99.61	16534.50	2673	.629
	Male	34	104.87	3565.50		
Motivational	Female	166	100.36	16660.00	2799	.940
	Male	34	101.18	3440.00		
Behavioral	Female	166	99.54	16523.00	2662	.601
	Male	34	105.21	3577.00		
Total		200				

To probe whether there was a significant difference between the CQ levels of the participants in terms of their ages, the results of the fourth research question (Table 8) put forth that mean scores of the participants at the age of 20-22 were higher than female participants, but however, there was no significant difference for all subcategories of CQ ( $p > .05$ ).

Table 6. CQ distribution of the participants according to their ages

Subcategories	Age	N	Mean Rank	Sum of Ranks	Mann-Whitney U	<i>p</i>
Metacognitive	20-22	148	102.26	15134.00	3588	.465
	22-24	52	95.50	4966.00		
Cognitive	20-22	148	102.13	15114.50	3607	.502
	22-24	52	95.88	4985.50		
Motivational	20-22	148	101.76	15060.00	3662	.604
	22-24	52	96.92	5040.00		
Behavioral	20-22	148	104.44	15456.50	3265	.103
	22-24	52	89.30	4643.50		
Total		200				

Finally, the last research question of this present study was to compare the CQ levels of the participants in terms of their grades. Regarding the results in Table 7, it could be evaluated that the mean scores of the 3<sup>rd</sup> grade students were higher than those of the 4<sup>th</sup> grade participants.

What's more, there was no statistically significant difference for subcategories of CQ levels ( $p > .05$ ).

Table 7. CQ distribution of the participants according to their grades

Subcategories	Grade	N	Mean Rank	Sum of Ranks	Mann-Whitney U	$p$
Metacognitive	3th Grade	98	101.78	9974.00	4775	.666
	4th Grade	102	98.28	9926.00		
Cognitive	3th Grade	98	103.23	10117.00	4632	.434
	4th Grade	102	96.86	9783.00		
Motivational	3th Grade	98	103.10	10103.50	4645	.454
	4th Grade	102	97.00	9796.50		
Behavioral	3th Grade	98	101.24	9921.50	4827	.764
	4th Grade	102	98.80	9978.50		
	Total	200				

## Discussion

This present study was run to investigate the CQ levels of some students from different foreign language departments majoring at Samsun Ondokuz Mayıs University, Faculty of Education. Hereby, the required data were collected and maintained by CQ scale developed by Ang et.al (2007) and the findings were analyzed. Additionally, five specific research questions were included in the study to evaluate the findings. The first research question sought whether there was any significant difference between participants majoring at different foreign language departments. Regard with the implications of this research question were discussed above, it was interesting that the French department participants, although they were only 32 students, had the highest mean scores at metacognitive subcategory. Among the other subcategories it was observed that there was also a slight advantage for the French department students. The result for this research question is significant only at metacognitive level, that is to say, there was a statistically significant difference for metacognitive subcategory. As urged by Brislin, Worthley, and MacNab (2006) and Triandis (2006), people with high metacognitive intelligence question their cultural assumptions and adjust them during and after interactions.

In the literature there were many examples of cultural intelligence studies, but unfortunately most of them had almost exclusively focused on the CQ levels of expatriates, business companies, travel agencies, etc. Therefore, no clear and related studies were matched with this present study to compare the findings to relate with EFL students' CQ levels, especially for this research question.

The findings of the second research question associated with the investigation of the CQ levels of the participants who had graduated from different high schools revealed a significant difference at both metacognitive and cognitive levels. Surprisingly, although the number of the Anatolian High School participants were more than the others, their mean scores were at the lower level for metacognitive, cognitive and behavioral categories. But their motivational levels were

so close to the motivational levels of the Anatolian Teacher's High Schools participants. For metacognitive and cognitive strategies, a significant difference was observed.

The third research question was of central interest to evaluate whether the CQ levels of female and male participants were different. The findings provided confirmatory evidence that male participants had higher mean scores than female participants although the number of the female participants were more than those of the males. Only at metacognitive level a significant difference had emerged. A study conducted by Azizi, Fatemi, Pishghadam and Ghapanchi (2015, p.575) outlined that there was a statistically significant difference between Iranian EFL male and female subjects with regard to their CQ. The results of another study (Khodadady & Ghahari, 2011, p. 70) also showed that female participants differed significantly from their male counterparts on their Meta-cognitive CQ. According to the findings obtained from the research sustained by Demirel and Demir (2016, p.58), there were significant differences between male and female participants in terms of their mean scores obtained in all dimensions of CQs. Those findings are also in line with the findings of this research question. On the contrary, the findings of this present study were in contradiction with the results reported by Ghonsooly and Golparvar (2013). They found that male and female Iranian EFL learners were not different with regard to CQ.

To determine whether there was a significant difference between the CQ levels of the participants in terms of their ages, the findings of fourth research question were evaluated and it was declared that no significant difference was found at CQ subcategories; however, participants at the age of 20-22 had higher levels. When comparing our results to those of older studies, it must be pointed out that there is a contradiction with them. For instance, Azizi, Fatemi, Pishghadam and Ghapanchi (2015, p.575) found no statistically significant difference among the age groups of Iranian EFL students with regard to their CQ. Keavanloo, Seyedahmadi and Mokhtari (2013, p.483) also declared the positive relationship between CQ and age.

The last research question was formulated to investigate the CQ levels of the participants in terms of their grades and the mean scores of the 3<sup>rd</sup> grades were found as higher than those of the 4<sup>th</sup> grades. One of the specific reasons of this result might be related with their main courses at the departments. Most of the courses include culture-based content at skill-based level. Unfortunately, no information and relevant studies were found in the literature at the grade levels of the participants.

CQ, in a general sense, is an ability to interact with people from different cultures, be aware of the social norms and values of the target language community, become a globalized person, function in cross-cultural context, etc. The general purpose of this study was to determine and analyze the role and emphasis of CQ on foreign language departments students at Faculty of Education at Samsun Ondokuz Mayıs University. The findings of this study revealed that participants had different tendencies towards subcategories of CQ. But generally, a statistically significant difference at metacognitive and cognitive subcategories was observed according to the high schools and departments of the participants. Having a higher mean score of cognitive subcategory can be considered as an indicator of being familiar with economic, social norms and religious orientations of the target language community (Khodadady & Ghahari, 2012, p.22). But Muzychenko (2008) and Thomas et al., (2008) found no significant relationships related with the cognitive factor of the CQs and abilities such as foreign language proficiency (as cited in Khodadady & Ghahari, 2012, p.22). One more evidence (Ng & Early, 2006) proposed that "metacognitive subcategory of CQ basically reflects the mental capacity of a person who acquires and understands cultural knowledge and also enables one to acquire knowledge and develop strategies to adapt to the new environment. Those with higher metacognitive CQ are aware of

others' cultural preferences before and during interactions" (p.18). In light of the findings of those studies it can be urged that metacognitive and cognitive CQs are among the most useful and noticeable CQs to improve a better relationship and interaction with people from different cultures. It can be elucidated that there is a significant correlation between the findings of this present study and those mentioned above.

Regarding the gender factor, between the subcategories of CQ there was only a positive significant difference at metacognitive CQ level. Additionally, it could be stated that male participants showed a higher degree of mean scores than females. However, at cognitive, motivational and behavioral CQ levels since only a slight difference was observed, it could be argued that CQ levels of male and female participants were not impacted by gender. This finding of this present study was supported by a case study conducted by Johnson in 2015 in Moldova and Ukraine declared that CQ levels of male and female participants in two countries did not make any impact.

On the other hand, pertaining to age factor, this study unearthed that participants at the age of 20-22 had a higher level of mean scores, but there was not any statistically difference between subcategories of CQ. This result ties well with a previous study of Berry (1997) wherein younger students experience less acculturative stress and easily integrate with mainstream society. From this point of view, it can be concluded that younger people can easily cope with adjustment problems with the traditions of other cultures and they easily reflect their emotions. This finding can also correlate with the similar results taken at grade levels of the participants. That is to say, the 3<sup>rd</sup> grade students were younger than the 4<sup>th</sup> grade students, and they were generally at the age of 20 and 22.

Consequently, the findings of this study can shed further light on EFL learners and educators. Being aware of the importance and the role of CQ will help EFL learners, teachers, educators, scholars and instructors benefit. As mentioned by Koç and Turan (2018) students' cultural intelligence levels may be effective on their social skills. Subsequently, in order to develop healthy relationships with culturally diverse people and societies, it is essential to have higher cognitive cultural intelligence. The metacognitive CQ refers to how students make sense of the multicultural experiences.

Tzu-Ping and Wei-Wen (2017) also put forward that metacognitive and behavioral CQ were significant predictors of psychologically well-being people (as cited in Gebregergis, Huang, & Hong, 2019). Behavioral CQ, on the one hand, may be helpful for students to depict appropriate verbal and nonverbal behaviors during their sociocultural interactions with people from different cultures (Ang & Van Dyne, 2008). "Behavioral cultural intelligence is the most salient dimension of cultural intelligence because it enables individuals to gain a sense of control and regulation over their social behaviors in new multicultural setting with minimal misunderstanding and attributional problems" (Ghahremani, Monterosso, Jentsch, Bilder & Poldrack, 2010).

Motivational CQ helps foreign students develop the requisite desire to absorb valuable cultural information and learn from other students who are culturally diverse. Besides, motivational CQ encapsulates the intrinsic motivation of the students (Van Dyne et al., 2012). In this way, they may improve their self-confidence, self-reliance and self-esteem. Therefore, interaction with students from different cultures and societies may be helpful especially for Turkish students at ELT departments. Erasmus exchange programs; therefore, may be effective for students to communicate more effectively in multicultural settings because if students have a higher CQ before they sojourn in foreign country, they will feel less stress and depression.

### Conclusion and suggestions

Importantly, a number of potential limitations of this study need to be considered here. First of all, this present study was conducted in only one state university in Samsun at foreign language departments. The medium of instruction at those departments was English, French and German. Since approximately 40-50 students of 200 participants can find a chance to attend Erasmus exchange programs at the mentioned departments, the rest cannot have any experience with students from different cultures. Therefore, the findings of this study may not reflect sufficient enough outcomes because insufficient or lack of intercultural interaction may affect the preferences of the participants in a negative way. More students who were exposed to cultural interaction or those who had visited foreign countries can be included in a future study. Secondly, the number of the participants seem to be limited for these types of studies. So, sample size can be increased and other students from different universities can be invited to take part in further studies. Regardless, a future research may continue to explore the CQs of students from private universities and a comparison between state and private universities may be done. As a third limitation, for this study only 3<sup>rd</sup> and 4<sup>th</sup> grade students were invited. For further researches, 1<sup>st</sup> and 2<sup>nd</sup> grade students can also be included, additionally a different study can be conducted with MA and PhD students. Finally, in this study only three foreign languages departments were taken into evaluation. Therefore, number of the departments may be expanded, for instance students from the other departments of the faculty of education (Turkish Language Education, Educational Sciences Department, Fine Arts Education Department, etc.) may be asked to join a further research. This may give a chance to researchers to compare and contrast the CQ levels of the students from different departments and to determine the students who have a higher degree of CQ.

To sum up, as for the implications of this study, it is seen that participating in intercultural programs, communicating with people from different cultures, attending Erasmus exchange programs, etc. improve the cultural intelligence significantly. To increase the number of the courses in ELT programs that help students increase their cultural awareness and CQs. Significantly, online conferences, webinars, synchronous discussion sessions and meeting may be held and students may be encouraged to take part in these programs. Chat and email groups may also be helpful increase cultural awareness and CQ. Since most of the young generation may be known as 'digital natives', integration of technology may also be very effective to improve CQ. As a part of technology, e- and mobile learning applications may be suggested. The findings of this study may also be of benefit to material designers, curriculum writers, syllabus makers, publishers and coursebook writers because in light of those findings, they may redesign and reorganize their ideas, programs, coursebooks and materials.

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The author states that there is no conflict of interest concerning the publication of this paper.

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#### References

- Abaslı, K. ve Polat, Ş. (2018). Öğrencilerin kültürlerarası duyarlılık ve kültürel zekâya ilişkin görüşlerinin incelenmesi. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi*, 6(x).

- Ackerman, P.L. (1996). A theory of adult intellectual development: Process, personality, interests, and knowledge. *Intelligence*, 22, 227–257.
- Ackerman, P.L., & Humphreys, L.G. (1990). Individual differences theory in industrial and organizational psychology. In M.D. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (pp. 223–282). Palo Alto, CA: Consulting Psychologists Press.
- Akdemir, B., Çalış, M. and Tunanlar, T. T. (2016). “Uluslararası işgücü pazarının yeni rolü: Kültürel Zekâ”, *The Journal of Academic Social Science*. 25 (4).
- Akhal, K. and Liu, S. (2019). CQ effects on expatriates’ adjustment and turnover intentions in Mainland China. *Management research review*, v.42, n.7, doi: 10.1108/MRR-04-2018-0157
- Aksoy, Z. (2015). Kültürel zekâ- CQ. İstanbul: Beta Yayınları.
- Al-Momani, A-L. and Atoum, A. (2016). CQ among Jordanian university students. *International journal of education and training*, 2(1),1-9.
- Ambe, E.B. (2006). Fostering multicultural appreciation in pre-service teachers through multicultural curricular transformation. *Teaching and Teacher Education*, 22, 690-699.
- Ang, S., Van Dyne, L. and Koh, C.S.K. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group and Organization Management*, 31, pp. 100-123.
- Ang, S., Van Dyne, L., Koh, C. K. S., Ng, K. Y., Templer, K. J., Tay, C. et al. (2007). CQ: Its measurement and effects on cultural judgment and deCQsion making, cultural adaptation, and task performance. *Management and Organization Review*, 3, 335–371.
- Ang, S., & Van Dyne, L. (2008). *Handbook of cultural intelligence: Theory, measures and applications*. Armonk: M.E. Sharpe.
- Azizi, Z., Fatemi, A. H., Pishghadam, R., & Ghapanchi, Z. (2015). Investigating the relationship between Iranian EFL learners' cultural intelligence and their home cultural attachment. *Mediterranean Journal of Social Sciences*, 6(3 S1), 575.
- Bahrami, A., & Narafshan, M. H. (2018). Original paper enhancing Cultural Intelligence and Interpersonal Communication: Multi-authenticity exposure in English as a foreign language (EFL) context. *Journal of Education and Culture Studies*, ISSN 2573-041X (Online) Vol. 2, No. 2, 2018.
- Balay, R. (2004). Küreselleşme, bilgi toplumu ve eğitim. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 37(2), 61-82.
- Balogh, A., Szabo, L. & Gaal, Z. (2011). CQ versus organizational Culture: Relationship between Hungarian students' CQ and the organizational culture of their prospective workplaces. *International Journal of Diversity in Organizations, Communities & Nations*. v. 11 Issue 1, 223-236.
- Berry, J.W. (1997). Immigration, acculturation and adaptation. *Applied Psychology: An international review*, 46(1), 5-68.
- Brislin, R., Worthley, R., & Macnab, B. 2006. CQ: Understanding behaviors that serve people's goals. *Group and Organization Management*, 31, pp. 40-55.
- Büyüköztürk. Ş. (2009). *Sosyal bilimler için veri analizi el kitabı*. (10. Baskı). Ankara: Pegem Akademi.

- Chen, G., Kirkman, B. L., Kim, K., Farh, C. I. C., and Tangirala, S. (2010). When does crosscultural motivation enhance expatriate effectiveness? A multilevel investigation of the moderating roles of subsidiary support and cultural distance. *Academy of Management Journal*, 53, 1110-1130.
- Chou, H.M. (2007). Multicultural teacher education: Toward a culturally responsible pedagogy. *Essays in education*, 21, 139-162.
- Cogan, J. J., Morris, P. (2001). The Development of Civics Values: An Overview. *International Journal of Educational Research*, 35, 1-9.
- Crowne, K. (2007). *The relationships among social intelligence, emotional intelligence, cultural intelligence, and cultural exposure*. Unpublished doctoral dissertation, Temple University.
- Doğutaş, A. (2015). Cultural intelligence level of Turkish teacher candidates in globalized world. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, Cilt 4, Sayı 2, s.530-547.
- Earley, P. C., & Ang, S. (2003). CQ: Individual interactions across cultures. Palo Alto, CA: Stanford University Press.
- Earley, P. C. and Mosakowski, E. (2004). "CQ", *Harvard Business Review*.
- Edwards, A., Peralta, F., Aquino, R., Ramos, A., & García, M. (2006). Promoting Cultural Intelligence within the EFL/ESL curriculum1. *MEXTESOL*, v.31 (3).
- Eisenberg, J., Lee, H.-J., Bruck, F., Brenner, B., Claes, M.-T., Mironski, J., & Bell, R. (2013). Can business schools make students culturally competent? Effects of cross-cultural management courses on CQ. *Academy of Management Learning and Education*, 12, 603- 621.
- Ensign, J. (2009). Multiculturalism in four teacher education programs: For replication or transformation. *Multicultural Perspectives*, 11(3), 169-173.
- Ergün, G. and Güzel, A. (2017). Üniversite öğrencilerinin kültürel zeka düzeylerinin olumsuz otomatik düşünceler ve bazı diğer değişkenlere göre değerlendirilmesi. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 6(4), 33-40.
- Fiske, D. L. Schacter & C. Zahn-Waxler (Eds.), *Annual Review of Psychology*, 58, 479–514. Palo Alto, CA: Annual Reviews.
- Frías-Jamilena, D.M., M. Sabiote-Ortiz, C., Martín-Santana, J.D., and Beerli-Palacio, A. (2017). Antecedents and consequences of CQ in tourism. *Journal of destination marketing & management*, <http://dx.doi.org/10.1016/j.jdmm.2017.07.006>.
- Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. New York: Farrar, Straus, and Giroux.
- Fox, R.K., Greenberg, R.D. (2006). Culture, multiculturalism and foreign/ world language standards in U.S. teacher preparation programs: Toward a discourse of dissonance. *European Journal of Teacher Education*, 29(3), 401-422.
- Gardner, H. (1993). *Multiple intelligence: The theory in practice*. New York: Basic Books.
- Gasbarro, S., Matthews, D. (1994). New teachers' perceptions of the meaning the term "Multiculturalism" in pre-service education. Paper presented at the annual meeting of the American educational research association. New Orleans, LA, April 4-8.
- Gay, G. (2009). Multicultural infusion in teacher education: Foundations and applications. *Peabody Journal of Education*, 72(1), 150-177.

- Gebregergis, W. T., Huang, F., & Hong, J. (2019). Cultural intelligence, age and prior travel experience as predictors of acculturative stress and depression among international students studying in China. *Journal of International Students*, 9(2), 511-534.
- Gelfand, M. J., Erez, M., & Aycan, Z. (2007). Cross-cultural organizational behavior. In S. T. Ghahremani, D. G., Monterosso, J., Jentsch, J. D., Bilder, R. M., & Poldrack, R. A. (2010). Neural components underlying behavioral flexibility in human reversal learning. *Cerebral Cortex*, 20(8), 1843–1852.
- Ghonsooly, B., & Golparvar, S. E. (2013). Probing the predictive power of cultural intelligence on Iranian EFL learners' performance on IELTS writing test. *Studies in Applied Linguistics*, 3(2), 3-18.
- Huff, K.C., Song, P. and Gresch, E.B. (2013). CQ, personality, and cross-cultural adjustment: A study of expatriates in Japan. *International Journal of intercultural studies*, <https://doi.org/10.1016/j.ijintrel.2013.08.005>, USA.
- İlhan, M., & Çetin, B. (2014). Kültürel zekâ ölçeğinin Türkçe formunun geçerlik ve güvenirlik çalışması. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 29(2), 94-114.
- Johnson, R.B. (2015). Cultural intelligence and gender: Case study of Ukraine and Moldova. *International Symposium on Women's Studies*, 5 December, 2015, Warsaw: Poland.
- Keavanloo, F., Seyedahmadi, M., & Mokhtari, R. (2013). A comparison of cultural intelligence in students. *International Research Journal of Applied and Basic Sciences*, 6(4), 481-483.
- Kiznyte, J., Ciutiene, R. and Dechange, A. (2015). Applying CQ in international project management, *PM World Journal*.5(6).1-16.
- Khodadady, E., & Ghahari, S. (2011). Validation of the Persian cultural intelligence scale and exploring its relationship with gender, education, travelling abroad and place of living. *Global Journal of Human Social Science*, 11(7), 65-75.
- Koçak, S., Özdemir, M. (2015). Öğretmen adaylarının çok kültürlü eğitime yönelik tutumlarında kültürel zekanın rolü. *Elementary Education Online*, 14(4): 1352-1369.
- Kurpis, L. H. (2009). Developing students' CQ in an international marketing course, *Journal of Global Business Development*, 2, 110-122.
- Kurpis, L.H. and Hunter, J. (2016). Developing students' CQ through an experiential learning activity: A Cross-Cultural Consumer Behavior Interview. *Journal of marketing education*, 1-7, DOI: 10.1177/0273475316653337.
- Lee, L-Y., and Sukoco, B.M. ( 2010). The effects of CQ on expatriate performance: the moderating effects of international experience. *The international journal of human resource management*, doi: 10.1080/09585191003783397
- Livermore, D. (2010). *Leading with CQ: The New Secret to Success*, New York: Amacom.
- MacNab, B. R. (2012). An experiential approach to CQ education. *Journal of Management Education*, 36(1), 66-94.
- Muzychenko, O. (2008). Cross-cultural entrepreneurial competence in identifying international business opportunities. *European Management Journal*, 26: 366– 377.
- Ng, K.Y., & Earley, P.C. (2006). Culture and intelligence: Old constructs, new frontiers. *Group & Organization Management*, 31, 4-19.



- Rafie, A., Khosravi, R., & Nasiri, M. (2016). An investigation of the relationship between Iranian EFL learners' Cultural Intelligence and their performance on the IELTS Listening Modules. *Advances in Language and Literary Studies*, 7(3), 13-20.
- Rao, S. (2005). Effective multicultural teacher education programs: Methodological and conceptual issues. *Education*, 126(2), 279-292.
- Sternberg, R. J. (1986). A framework for understanding conceptions of intelligence. In R. J. Sternberg, R.J. and Detterman, D.K. (Eds.), *What is Intelligence? Contemporary Viewpoints on its Nature and Definition* (pp. 3–15). Norwood, NJ: Ablex.
- Szabo, S. and Anderson, G. (2009). Helping teacher candidates examine their multicultural attitudes. *Educational Horizons*, 87(3), 190-197.
- Taştekin, E., Bozkurt-Yükçü, Ş., İzoğlu, A., Güngör, İ., Işık-Uslu, A.E., and Demircioğlu, H. (2016). Okul öncesi öğretmenlerinin çokkültürlü eğitime yönelik tutumlarının ve algılarının incelenmesi. *Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü Eğitim Araştırmaları Dergisi*, 2(1), 1-20.
- Templer, K.J., Tay, C., & Chandrasekar, N.A. (2006). Motivational CQ: Realistic job preview, realistic living conditions preview, and cross-cultural adjustment. *Group and Organization Management*, 31, 154-173.
- Thomas, D. C., et al. (2008). Development of the Cultural Intelligence assessment. Technical report: Center for global workforce strategy Beedie School of Business, Simon Fraser University.
- Thomas, D.C. (2006) Domain and development of CQ. *The importance of mindfulness. Group and Organization Management* 31(1): 78–99.
- Thomas, DC. and Inkson, K. (2004) Cultivating your CQ. *Security Management* 48(8): 30–3.
- Thomas, D.C, Stahl G, Ravlin EC, et al. (2008) Culture and intelligence: domain and assessment. *International Journal of Cross Cultural Management* 8: 123–43.
- Triandis, H.C. (2006). CQ in organizations. *Group and Organization Management*, 31, pp. 20-26.
- Van Dyne, L., Ang, S., Yee Ng, K., Rockstuhl, T., Ling Tan, M., & Koh, C. (2012). Sub-dimensions of the four-factor model of cultural intelligence: Expanding the conceptualization and measurement of cultural intelligence. *Social and Personality Psychology Compass*, 6(4), 295–313.