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THE EFFECT OF EMOTIONAL INTELLIGENCE LEVELS OF TOURISM STUDENTS ON THEIR CRITICAL THINKING DISPOSITION

Turizm Öğrencilerinin Duygusal Zekâ Düzeylerinin Eleştirel Düşünme Eğilimi Üzerindeki Etkisi

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ABSTRACT

When considering the necessities of this age, critical thinking is a primary skill that tourism students should be qualified in. Investigation on the critical thinking disposition of tourism students and emotional intelligence, which is an effective factor on it, can guide tourism academics on how to provide students with effective critical thinking. In this regard, this study aimed to determine the effect of the emotional intelligence levels of the undergraduate tourism education students on their critical thinking disposition. A survey was utilized as data collection tool, and it was administrated on a total of 471 students from undergraduate tourism schools of 5 different universities, including 3 faculties and 2 colleges. The data were analyzed by frequency, percentage distribution, arithmetic mean, standard deviation, t test, analysis of variance and Pearson correlation analysis. The research concluded that students' emotional intelligence levels and critical thinking dispositions were quite above the medium level. In addition, a positive and strong correlation of $r=0.671$ was specified between emotional intelligence levels and critical thinking dispositions of the students. It was also found out that students' emotional intelligence levels and critical thinking dispositions showed significant differences according to the variables of gender, academic success and monthly expense.

ÖZ

Eleştirel düşünme, eğitimin en önemli ilkelerinden biri olup, her ülkenin büyüme ve refaha ulaşmak için eleştirel düşünmeye ihtiyacı bulunmaktadır. Duygusal zekâ, eleştirel düşünmenin önemli bir yordayıcısıdır. Bir kişinin duygusal zekâsı geliştikçe, eleştirel düşünme eğilimi de artmaktadır. Bu doğrultuda araştırmada, lisans düzeyinde turizm eğitimi alan öğrencilerin duygusal zekâ düzeylerinin eleştirel düşünme eğilimi üzerindeki etkisinin belirlenmesi amaçlanmıştır. Araştırmada veri toplama tekniği olarak anket kullanılmış ve 3 fakülte, 2 yüksekokul olmak üzere 5 farklı üniversitenin lisans düzeyindeki turizm okullarından toplam 471 öğrenci üzerinde uygulama gerçekleştirilmiştir. Verilerin analizinde frekans, yüzde dağılımı, aritmetik ortalama, standart sapma, t testi, varyans analizi ve Pearson korelasyon analizi kullanılmıştır. Araştırma sonucunda, öğrencilerin duygusal zekâ düzeyleri ile eleştirel düşünme eğilimlerinin orta düzeyin oldukça üzerinde olduğu tespit edilmiştir. Bununla birlikte öğrencilerin duygusal zekâ düzeyleri ile eleştirel düşünme eğilimleri arasında $r=0,671$ 'lik pozitif ve kuvvetli bir korelasyon bulunmuştur. Ayrıca, öğrencilerin duygusal zekâ düzeyleri ile eleştirel düşünme eğilimlerinin cinsiyet, akademik başarı ve aylık harcama değişkenlerine göre anlamlı farklılıklar gösterdiği saptanmıştır.

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1. Introduction

Thinking and correct thinking skill are considered among the primary issues regarding scientists, and nurturing various thinking skills is nowadays one of the basic goals of education system (Akbari Lakeh, Naderi and Arbabisarjou, 2018). Critical thinking is one of the most important of different thinking skills (Rahimnia and Hoshyar, 2013). The word critical should be explained in order to clarify critical thinking completely. Regarding an etymological perspective, Paul and Elder (2008) argue that the word critical is derived from *kriticos* (meaning, well-thought judgment) and *kriterion* (meaning, criteria) words, which are originally Greek. In this regard, the term etymologically refers to the development of meticulous judgment based on criteria (Karimi, Hashemi and Sarbazfard, 2015). Critical thinking is the highest level of thinking skills (Akbari Lakeh et al., 2018). Bodi (1988) urges that critical thinking is associated with an individual's ability to systematically and logically evaluate and analyze any information or events. Based on their intelligences and experiences in exploring evidences, they may lead to reasonable and logical conclusions (Boonsathirakul and Kerdsonboon, 2021). By supporting this view, Halpern (2003) considers critical thinking "the ability to think about intentional, logical and goal-oriented problem solution, formulating inferences, calculating probabilities, and making decisions" (Karimi et al., 2015).

Critical thinking consists of a series of cognitive skills that increase the probability of success in education, profession and daily life issues (Franco, Costa and Almeida, 2017). Development and establishment of these cognitive skills take a long time, and education plays a significant role in this process. For this reason, critical thinking is at the center of higher education today, and the development of critical thinking skills is considered one of the primary goals of higher education (Boonsathirakul and Kerdsonboon, 2021; Li, 2021; Moore, 2013; Tsvetkova, 2018; Wilson, 2016). Academics consider the development of critical thinking skills a criterion of being gifted, which has psychophysiological grounds, thus, critical thinking level is accepted as an indicator of learning quality (Gilmanshina, Smirnov, Ibatova and Berechikidze, 2021). Furthermore, Bagheri and Nowrozi (2015) argue that professors and students must improve their critical thinking skills so that they can make a reasonable decision on any event. It is generally accepted that 21st century business world needs human resources with critical thinking skills (AlJaafi and Şahin, 2019). To this end, it is of paramount importance for academics to raise students with critical thinking skills (Silviariza, Sumarmi and Handoyo, 2021).

A holistic review of literature shows that critical thinking and emotional intelligence are associated with each other (Akbari Lakeh et al., 2018; Christianson, 2020; Li et al., 2021). This relationship between critical thinking and emotional intelligence was first argued in the 1980s (Sk and Halder, 2020). By arguing that emotions are essential for critical thinking, Brookfield (1987) asserts that critical thinking requires an individual to evaluate his/her emotions and actions, to search and question his/her hypothesis (Christianson, 2020). Emotional intelligence is considered a series of skills that are accepted to contribute to the accurate expression and evaluation of emotions for himself/herself and others (Afshar and Rahimi, 2014). Mayer, Caruso and Salovey (2016) defines the emotional intelligence as the ability to control an individual's his/her own and others' emotions, to distinguish between them, and to direct one's thoughts and actions with this information. Yao et al. (2018) argue that those with high emotional intelligence can process emotional information more efficiently and automatically, thus, they always show higher-order critical thinking skills.

Prior studies also support that emotional intelligence has a significant effect on critical thinking. In these studies, while the effect of emotional intelligence was discussed on critical thinking, medicine (Li et al., 2021), nursing (Akbari Lakeh et al., 2018; Eskidmir, 2020; Kaya, Şenyuva and Bodur, 2017; Soheili, Bagheri, Ashouri, Mohammadi and Kamani, 2021), teacher education (Dutoğlu and Tuncel, 2008; Erdem, İlğan and Çelik, 2013; Torun, 2011) and English language students (Afshar and Rahimi, 2014; Ghanizadeh and Moafian, 2011; Karimi et al., 2015), tourism students were found to be an ignored group. However, both tourism industry and academic programs have undergone significant changes in recent years due to innovative technologies, evolving tourist expectations, and the impact of globalization (Mayburry and Swanger, 2011). As the diversity and complexity of the products and services offered by the industry (accommodation, travel, food and beverage, entertainment, etc.) continues to increase, highly qualified graduates are needed. In order to be successful, future tourism professionals must be creative, innovative and entrepreneurial. All these requires the critical thinking skill. Moreover, global epidemics (Covid 19, etc.), climate change, terrorism and similar risks, the major challenges facing the industry, must be overcome. It is likely with critical thinking to analyze these difficulties and subsequent effects, developing possible solutions and choosing the solution with the highest

probability of success (Stone, Duffy, Pinckney and Templeton Bradley, 2017). To this end, this study aimed to determine the effect of the emotional intelligence levels of undergraduate tourism students on their critical thinking. *This study is original as the effect of emotional intelligence levels of undergraduate tourism students on their critical thinking was not studied.*

2. Method

This study aiming to determine the effect of the emotional intelligence levels of undergraduate tourism education students on their critical thinking disposition, are as follows:

Hypothesis 1: Emotional intelligence has a significant and positive effect on critical thinking disposition.

Hypothesis 1a: Optimism has a significant and positive effect on critical thinking disposition.

Hypothesis 1b: Use of emotions has a significant and positive effect on critical thinking disposition.

Hypothesis 1c: Evaluation of emotions has a significant and positive effect on critical thinking disposition.

In the research, a questionnaire with three parts was utilized as the data collection tool. The survey was administered in May, June, September, October, November and December 2021. In the first part of the survey, the variables regarding students' individual traits (gender, age, academic average, class, type of high school graduated, average monthly expense) were included. In the second part, emotional intelligence scale with 41 items, developed by Schutte et al. (2001) and then revised by Austin, Saklofske, Huang and McKenney (2004) and finally adapted into Turkish language by Tatar, Tok, and Saltukoğlu (2011) (optimism, utilizing emotions, assessment of emotions), was used. In the third part, critical thinking disposition scale, developed by Semerci (2016), was utilized. The scale includes five dimensions (metacognition, systematicity, flexibility, perseverance and patience, open-mindedness) and a total of 49 items. Each item in the scales were in 5 Likert type and were rated as follows: 1=Strongly Disagree", "2= Disagree", "3= Neither Agree Nor Disagree", "4=Agree", "5= Completely Agree". Negative items in the scales were reverse coded and then analyzed. The population of this study was the undergraduate tourism students in Turkey. In Turkey, there is a total of 64 higher education institutions, 49 faculties and 15 colleges, providing education in bachelor degree in 2021-2022 academic year. Due to the limitations of time and distance, sampling was administered in the study by cluster sampling method, thus, 3 faculties (Afyon Kocatepe University Faculty of Tourism, Çanakkale Onsekiz Mart University Faculty of Tourism, Pamukkale University Faculty of Tourism) and 2 colleges (Harran University School of Tourism and Hotel Management, Düzce University Akçakoca School of Tourism and Hotel Management) were specified as the sampling cluster. For sampling size, the formula $n = s^2 Z_{\alpha}^2 / d^2$ suggested by Özdamar (2001) for quantitative research was utilized. After the pilot study conducted with 40 students from in tourism and hospitality, minimum sample size was computed as 465 in the significance level of $\alpha=0.05$ and $Z_{0,05}=1.96$, the standard deviation as $s=1.1$ and the effect size as $d=0,1$. Accordingly, data were obtained from 550 questionnaires and 471 of them were found to be valid and reliable.

The data collected via the survey were analyzed by the SPSS 21.0 for Windows program, and the individual traits of the students were provided with frequency and percentage distributions. Descriptive statistics (arithmetic mean and standard deviation, etc.) were used for the scales and their dimensions utilized in the study. Moreover, as the data distributed normal in the comparison of students' emotional intelligence levels and critical thinking dispositions according to their individual traits, t test and analysis of variance were conducted. As a result of variance analysis Tukey test, one of the pos-doc tests, was applied in pairwise comparison of the groups. On the other hand, the relationships between emotional intelligence and critical thinking disposition were specified by Pearson correlation analysis and regression analysis. Finally, factor analysis was administered for the construct validity of the scales, and Cronbach's Alpha coefficients were calculated for reliability.

3. Results

48.4% of the students, the sample group of the study, were female while 51.6% of them were male. 54.6% of them were 21 years old and under, 34.2% of them were 22-24 years old and 11.3% of them were 25 years old and above. It was determined that the academic average of 13.8% of the students was below 2.00, while 57.1% of them were between 2.00-3.00 and 29.1% of them were 3.00 and above. While grade levels of students are almost same, 30.1% of them stated that they graduated from a general high school, 17% from a tourism high

school and 52.9% from other high schools. 42.9% of the participating students expressed that they spent less than 1000 TL, 32.5% of them between 1000-1499 TL and 24.6% of them 1500 TL and more (Table 1).

Table 1. Distribution of Students according to Their Individual Traits

Variables	Groups	f	%
Gender	Female	228	48.4
	Male	243	51.6
Age	21 and/or below	257	54.6
	Between 22-24	161	34.2
	25 and above	53	11.3
Academic Average	Between 1.00-1.49	35	7.4
	Between 1.50-1.99	30	6.4
	Between 2.00-2.49	103	21.9
	Between 2.50-2.99	166	35.2
	Between 3.00-3.49	94	20.0
Grade	Between 3.50-3.99	43	9.1
	Grade 1	98	20.8
	Grade 2	109	23.1
	Grade 3	120	25.5
Type of Graduated High School	Grade 4 and above	144	30.6
	General High School	142	30.1
	Tourism High School	80	17.0
Average Monthly Expense	Other	249	52.9
	0-999 TL	202	42.9
	1000-1499 TL	153	32.5
	1500-1999 TL	89	18.9
	2000 TL and above	27	5.7
Total		471	100.0

In Table 2, the results of the factor analysis administered for the construct validity of the emotional intelligence and critical thinking disposition scales and the internal consistency coefficients (Cronbach's Alpha) of their reliability as well as some descriptive statistics are given in Table 2. The findings regarding KMO values and Bartlett's tests show that the sample size is sufficient, and factor analysis can be carried out (KMO>0.70, Bartlett's Test; P<0.001). What is more, while the emotional intelligence scale had 3 factors (optimism, utilizing emotions, assessment of emotions) explaining 57.678% of the total variance, the critical thinking disposition scale had 5 factors (metacognition, systematicity, flexibility, perseverance, patience and open-mindedness) explaining 58.539% of the total variance. Cronbach's Alpha coefficients were computed as 0.827 for the emotional intelligence scale and 0.793 for the critical thinking disposition scale. When examining the mean total score values for the scale and its sub-dimensions, it was determined that the average score of the students from general emotional intelligence levels was quite above the middle value of 3 on the 5-point Likert scale (\bar{x} =3.84), their total score was 157.71 out of 205 points, the dimension with the highest mean was "optimism" (\bar{x} =4.05), the dimension with the lowest mean was "utilizing emotions" (\bar{x} =3.62). Students' mean critical thinking disposition score was calculated as \bar{x} =4.10 (201.35 out of 245 total score), and it was specified that the mean values of all dimensions were above 4 and very close to each other (Table 2).

The results of the Pearson correlation analysis conducted regarding the relationship between emotional intelligence and critical thinking disposition are provided in Table 3. In this respect, significant (P<0.01) relationships were found among emotional intelligence and dimensions with critical thinking disposition and dimensions, and relationships regarding all variables were specified to be positive and strong ($0.60 < r < 0.80$). A correlation of $r=0.671$ was determined between the students' general emotional intelligence levels and their general critical thinking dispositions. However, it was determined that the dimension of critical thinking disposition with the highest correlation with emotional intelligence was "perseverance and patience" ($r=0.678$). In addition, the emotional intelligence sub-dimension, which has the highest relationship with critical thinking disposition, was found to be "optimism" ($r=0.658$).

Table 2. Factor and Reliability Analysis Results of the Scales and Some Descriptive Statistics

Scales and subdimensions	Item Number	Eigenvalues	Explained Variance %	Cronbach's Alpha	\bar{X}	SS	Tot.	SD
					Optimism	18	6.212	29.587
Utilizing Emotions	13	4.112	19.585	0.792	3.62	0.65	47.09	8.51
Assessment of Emotions	10	1.786	8.507	0.765	3.75	0.89	37.54	8.95
General Emotional Intelligence	41	-	57.678	0.827	3.84	0.82	157.71	34.01
Metacognition	14	6.824	21.454	0.834	4.05	0.93	57.10	13.09
Systematicity	13	5.765	18.125	0.813	4.12	0.98	45.45	10.84
Flexibility	11	3.146	9.891	0.801	4.14	0.98	53.72	12.85
Perseverance and patience	8	1.766	5.552	0.774	4.09	0.97	32.78	7.76
Open Mindedness	3	1.119	3.518	0.723	4.09	1.09	12.29	3.27
General Critical Thinking Disposition	49	-	58.539	0.793	4.10	0.95	201.35	46.56

For Emotional Intelligence Scale: Kaiser-Meyer-Olkin (KMO) = 0.816; Bartlett's Test: $\chi^2 = 4325.7$; $P < 0.001$

For the Critical Thinking Disposition Scale: Kaiser-Meyer-Olkin (KMO) = 0.844; Bartlett's Test: $\chi^2 = 4653.2$; $P < 0.001$

Table 3. Correlation Analysis Results Regarding the Relationship between Emotional Intelligence and Critical Thinking Disposition

Scales and Dimensions	Metacognition	Systematicity	Flexibility	Perseverance and patience	Open mindedness	General Critical Thinking Disposition
Optimism	0.623*	0.893*	0.607*	0.653*	0.602*	0.658*
Utilizing Emotions	0.625*	0.601*	0.607*	0.633*	0.620*	0.636*
Assessment of Emotions	0.613*	0.603*	0.607*	0.635*	0.626*	0.633*
General Emotional Intelligence	0.645*	0.613*	0.631*	0.678*	0.635*	0.671*

* $P < 0.01$

In Table 4, the findings regarding the comparison of the emotional intelligence and critical thinking dispositions of tourism students according to their individual traits are shown. T test and analysis of variance results suggested that students' emotional intelligence and critical thinking dispositions did not differ significantly according to age, grade and type of high school graduated ($P > 0.05$), but showed significant differences according to gender, academic success and monthly expense variables ($P < 0.01$). Based on the mean scores, both emotional intelligence ($\bar{x} = 4.00$) and critical thinking dispositions ($\bar{x} = 4.28$) of female students were found to be higher than males ($\bar{x} = 3.70$; 3.94). Moreover, it was specified that the emotional intelligence and critical thinking tendencies of the students increased as their academic success raised. On the other hand, it is also shown in the Table 4 that emotional intelligence and critical thinking dispositions of the students with the lowest and the highest incomes were higher than the students with the middle income.

Table 4. Comparison of Students' Emotional Intelligence and Critical Thinking Disposition according to Their Individual Traits

Variables	Groups	Emotional Intelligence			Critical Thinking Disposition		
		\bar{X}	SS	P	\bar{X}	SS	P
Gender	Female	4.00	0.62	0.000*	4.28	0.76	0.000*
	Male	3.70	0.96		3.94	1.07	
Age	21 and/or below	3.87	0.69	0.324	4.14	0.84	0.435
	Between 22-24	3.83	0.86		3.12	0.95	
	25 and above	3.77	1.12		3.99	1.22	
Grade	Grade 1	3.91	0.80	0.462	4.20	0.90	0.262
	Grade 2	3.73	0.92		3.95	1.03	
	Grade 3	3.85	0.82		4.12	0.95	
	Grade 4 and above	3.87	0.77		4.14	0.90	
Academic Success	1.00-1.49	3.41 ^d	1.20	0.000*	3.52 ^c	1.26	0.000*
	1.50-1.99	3.68 ^c	0.63		4.12 ^b	0.76	
	2.00-2.49	3.71 ^c	1.13		4.01 ^b	1.17	
	2.50-2.99	3.76 ^c	0.74		4.07 ^b	0.91	
	3.00-3.49	3.99 ^b	0.68		4.19 ^b	0.79	
	3.50-3.99	4.12 ^a	0.60		4.61 ^a	0.62	
Monthly Expense	0-999 TL	4.06 ^b	0.62	0.000*	4.31 ^b	0.69	0.000*
	1000-1499 TL	3.71 ^c	0.88		4.00 ^c	1.04	
	1500-1999 TL	3.44 ^d	1.02		3.68 ^d	1.23	
	Above 2000 TL	4.25 ^a	0.13		4.51 ^a	0.21	
Type of High School	General High School	3.81	0.90	0.710	4.16	0.98	0.579
	Tourism High School	3.80	1.00		4.02	1.15	
	Other	3.87	0.71		4.10	0.85	

* $P < 0.01$; ^{a,b,c,d}: There was a significant difference between groups containing different letters ($P < 0.05$).

4. Discussion and Conclusion

When considering the dynamic, complex nature of the contemporary tourism industry, it is clear that tourism students should be equipped with twenty-first century skills. In this regard, critical thinking is ranked as an ability that must be encouraged by academic programs providing tourism education (Stone et al., 2017). Emotional intelligence is a significant predictor of critical thinking. Individuals with a high level of emotional intelligence can process emotional information more efficiently and automatically, and thus they can always show higher critical thinking skills (Yao et al., 2018). Accordingly, this research aimed to determine the effect of the emotional intelligence levels of the undergraduate tourism students on their critical thinking disposition. A total of 471 students from undergraduate tourism schools of 5 different universities, including 3 faculties and 2 colleges, participated in the study. Factor analysis and Cronbach's Alpha coefficients showed that the scales were valid and reliable in terms of construct validity and internal consistency.

It has been concluded in the research that the general emotional intelligence of the undergraduate tourism students was quite above the medium level (3,84), while the highest level has been found to be "optimism", the lowest level has been specified to be "utilizing emotions". Similarly, in the studies carried out by Büyükşalvarcı and Gündoğan (2018); Pelit, Karaçor and Kılıç (2018); Turhan and Çetinsöz (2019) on tourism students, students have been determined to have high emotional intelligence levels. Therefore, undergraduate tourism students can be referred as the individuals who can recognize and understand their own and others' emotions, and then use any knowledge they have obtained to guide their behaviors and thoughts (Gebregergis, Huang and Hong, 2020; Salovey and Mayer, 1990). These students, who are more successful in controlling their emotions by means of their high emotional intelligence (Mayer et al., 2016), are more advantageous in terms of achieving success in their academic, professional and social lives. With the development of emotional intelligence, students' speaking skills (Afshar and Rahimi, 2014), conflict resolution skills (Akbari Lakeh et al., 2018), critical thinking skills (Ghanizadeh and Moafian, 2011; Li et al., 2021; Sk and Halder, 2020) also

develop. On the other hand, an uncontrolled emotional life will prevent any skill from development because there is always an emotional conflict which delays focusing on identified goals (Goleman, 1998; Pelit et al., 2018). Salovey and Sluyter (1997) argue that family interaction, content of education programs and value judgments are the factors playing a role in the development of emotional intelligence. High emotional intelligence of undergraduate tourism students may be explained with these factors urged by Salovey and Sluyter. In addition, the fact that the dimension of optimism has the highest score shows that these students are more satisfied, have higher morale and expectation levels, have positive goals, are not daunted by difficulties, and are more motivated to achieve any assigned task (Hırlak, Taşlıyan and Sezer, 2017). As optimism can be learned and developed (Seligman, 2011) like despair, this may be the reason why this ability is included in tourism education programs. In the literature, optimism is also discussed as one of the indicators representing psychological capital (Luthans, Youssef and Avolio, 2007). Thus, the psychological capital of the tourism students can be stated to be high in terms of the optimism dimension.

It has been determined that students' critical thinking scores have had a high value (4,10) in the five-point Likert rating. Stone et al. (2017) argue that the critical thinking skills of tourism students at Kent State University in the United States have increased 5% while their precourse and postcourse data have been generally low. Furthermore, the studies carried by Kaya, et al. (2017); Makafui Boso, Merwe and Gross (2021); Searing and Kooken (2016); Wood and Toronto (2012) about high level critical thinking dispositions of nursing students confirm the aforementioned research. Considering that critical thinking is described as a basic skill for the twenty-first century and therefore demanded in the labor market (Li, 2021), high critical thinking scores of tourism students can be thought as a positive result. Students' critical thinking skills can develop throughout the learning process (Niu, Behar Horenstein and Garvan, 2013). Application of various learning models in this process provides an opportunity to support students' critical thinking skills development (Shim and Walczak, 2012). Problem-Oriented Project-Based Learning, Student Team Achievement Division, POPBLSTAD integration, and conventional learning may be ranked some of these methods. In the investigation carried out by Supratman, Zubaidah, Corebima and Ibrohim (2021), it is suggested that the POPBLSTAD integration provided a higher critical thinking score (highest difference CL, lowest difference POPBL) compared to the other three models. Accordingly, it is likely to say that an effective learning model has been administered by tourism academics in order to strengthen students' critical thinking skills. Students cannot actively participate in the critical thinking process when they are only guided to listen and memorize any information, rather than being encouraged to construct knowledge and interpret meaning (Mc Cormick, Clark and Raines, 2016). Therefore, it may be stated that tourism academics encourage students to construct knowledge and interpret meaning. They do not only use traditional, instructional method, designed for tests. Supratman et al. (2021) urges that students can think critically when they can perform the analysis, synthesis and evaluation process during learning. In this respect, undergraduate tourism students can fulfill analysis, synthesis and evaluation activities. These analyses, synthesis and evaluations have developed tourism students' ability to solve complex problems (Fong, Kim, Davis, Hoang and Kim, 2017), supported them to make logical decisions (Heidari and Ebrahimi, 2016), prevented them from taking unnecessary risks (Franco et al., 2017), and also functioned as an effective predictor for their social integration (San, Roslan and Sabouripour, 2016).

At the end of the the research, significant, positive and strong relationships have been found between emotional intelligence and critical thinking disposition as well as among dimensions. This refers that if emotional intelligence increases, critical thinking disposition will also raise highly. In a similar vein, the following studies suggest a significant positive relationship between emotional intelligence and critical thinking: Li et al. (2021) medical students, Christianson (2020) nursing students, Vahedi, Heydarlou and Imanzadeh (2015) and Kaya, et al. (2017) undergraduate nursing students, Eskidemir (2020) undergraduate and graduate nursing students, Kang (2015), graduate students at Faculty of Educational Research, Sk and Halder (2020) first year undergraduate students, Afshar and Rahimi (2014), Iranian English learners. On the other hand, the investigation conducted by Lease (2018) on fifth grade students does not back this research. Accordingly, related study urges that as there is no relationship between emotional intelligence and critical thinking skills, emotional intelligence has almost no contribution to students' critical thinking skills. Emotional intelligence mostly refers to having self-awareness skills, an individual knows who he is, what his thoughts, feelings and behavioral characteristics are. This type of intelligence helps an individual to make the right decision by establishing a balance between his thoughts and feelings. It also covers the ability to control and recognize the

emotions of others, accept the opinions of others, and control social relationships (Akbari Lakeh et al., 2018). All these emotional intelligence skills develop the personality and reason of an individual (Agarwal and Chaudhary, 2013). It also guides an individual to think critically, make evidence-based decisions, and act professionally (Wang and Zheng, 2016). As is seen, emotional intelligence and critical thinking are two interconnected terms (Akbari Lakeh et al., 2018; Christianson, 2020; Li et al., 2021). This relationship between critical thinking and emotional intelligence was first identified in the 1980s (Sk and Halder, 2020). Brookfield (1987) argues that critical thinking requires an individual to evaluate his/her emotions and actions, and to explore and question his/her assumptions based on the belief that emotions are fundamental to critical thinking (Christianson, 2020). Therefore, if the emotional intelligence of tourism students increases, it is normal for their critical thinking disposition to raise highly. In addition, as emphasized by Neurologist Damasio (2005), emotion is the key element and center of the rational thought process. On the other hand, reasoning is managed by emotions (Sk and Halder, 2020). Feelings and thoughts should not be considered different terms because emotions establish the basis of thoughts (Ghanizadeh and Moafian, 2011; Li et al., 2021). All human behaviors are affected by emotions for a behavioral disposition, thus critical thinking disposition should also be influenced by emotion (Sk and Halder, 2020). Brookfield (1987) even believes that emotion is central to critical thinking, therefore, as backed by a lot of studies (Afshar and Rahimi, 2014; Christianson, 2020; Eskidemi, 2020; Kang, 2015; Kaya et al., 2017; Sk and Halder, 2020; Vahedi et al., 2015), it is argued that there is a positive relationship between emotional intelligence and critical thinking. For this reason, it is an expected result that there is a positive and strong relationship between the emotional intelligence levels of the undergraduate tourism education students and their critical thinking dispositions.

In the research, it was determined that the dimension of critical thinking disposition with the highest correlation with emotional intelligence was "perseverance and patience" ($r=0.678$). In addition, the emotional intelligence sub-dimension, which has the highest relationship with critical thinking disposition, was found to be "optimism" ($r=0.658$). Emotional intelligence is a significant skill that should be developed in tourism students as it enables tourism industry employees to maintain customer service quality, to cope with stressful situations (England and Nagel, 2021; Jung and Yoon, 2016; Lee and Ok, 2012), to establish quality interactions and show social sensitivity (Tolegenova et al., 2015), to make more cooperation and to trust (Arfara and Samanta, 2016), to provide more individual and organizational support (Hagelskamp, Brackett, Rivers and Salovey, 2013), to have more organizational commitment and motivation (Rivers, Brackett, Reyes, Elbertson and Salovey, 2013; Schneider et al., 2021). If an increase is seen in emotional intelligence of tourism students, their critical thinking disposition also increases highly. This increase is most witnessed in "perseverance and patience" dimension of critical thinking. It can be stated that the tourism students with high perseverance and patient are those who do their best, engage in any work continuously, being more motivated, do not give up before difficulties (Gözüyeşil, 2020). As argued by Goleman (1995), emotional intelligence is the ability to maintain one's motivation and continue to struggle to be hopeful even when satisfaction is delayed (Karimi et al., 2015). Therefore, the students with high emotional intelligence ability can be stated to show more perseverance and patience (Miao, Humphrey and Qian, 2017). Tourism students can also be argued to become more self-confident when they have higher perseverance and patience (Gözüyeşil, 2020). As emotional intelligence contributes to the development of an individual's self-awareness, self-management, social awareness and relationship management skills (Mura, Zsigmond and Machova, 2021), all these factors may have a positive effect on the self-confidence of tourism students. On the other hand, the emotional intelligence sub-dimension affecting the critical thinking disposition of tourism students most is "optimism". In this respect, Leasa (2018) argues that a critical thinker has an optimistic view on anything. Accordingly, optimistic tourism students may be described as those who have higher morale and expectation levels, have positive goals, and develop more positive attitudes about being successful today and in the future (Hırlak and Taşhyan, 2017), attach importance to critical thinking and think critically in order to achieve success today and in the future. Critical thinking is associated with logical reasoning, and helps students become successful by analysis, synthesis and assessment (Boonsathirakul and Kerdsonboon, 2021).

In this study, emotional intelligence and critical thinking disposition of students have been compared according to their individual traits, and significant differences have been identified according to gender, academic success and monthly expense. Thus, it has been found that female students have higher emotional intelligence and critical thinking disposition than males, and the students with low and high incomes are higher emotional

intelligence and critical thinking disposition than those with middle income. This result shows that female tourism students with low and high incomes have a positive point of view as well as see better sides of the life (Alcan, 2021; Bar-On, 2006). It can also be stated that these students are more capable in creating a certain emotion and using this emotion to support the thinking process, and have a high capacity to analyze the determinants of emotions and their results (Mayer et al., 2008). Some of these students' characteristics are as follows: sharing ideas, listening to opinions of others, defending and/or validating their ideas, summarizing concepts with analysis, solving problems and making decisions (Chukwuyenum, 2013; Silviariza et al., 2021; Zivkovic, 2016). While some studies on gender differences in critical thinking disposition do not argue any significant gender differences (Kang, 2015; Li et al., 2021), some studies report that male (Rodzalan and Saat, 2015) and some studies indicate that female (Ahmad and Duscri, 2018; Kaya et al., 2017) have relatively higher critical thinking disposition. The research investigating whether gender leads to any difference in emotional intelligence mostly report that female have higher emotional intelligence (Day and Carroll, 2004; Meshkat and Nejati, 2017; Salguero et al., 2012; Pelit et al., 2018). However, some studies confirm that there is no significant relationship between gender and emotional intelligence (Hopkins and Bilimoria 2008). As seen above, there are different conclusions on gender differences regarding both critical thinking disposition and emotional intelligence. This investigation also concludes that as an increase is observed in the academic success of the students, their emotional intelligence and critical thinking tendencies raise. Similarly, Akbari Lakeh, et al. (2018) has determined that there is a positive and significant relationship between the critical thinking skills and emotional intelligence of nursing students and their academic success. On the other hand, Soheili, et al. (2021) has not found a significant relationship among emotional intelligence and critical thinking with academic success regarding nursing students. In the literature, there are a lot of studies on the relationship among emotional intelligence and critical thinking with academic success. The conclusions of such studies, which were managed in different sample groups, show that these variables have a positive relationship with academic success (Carter, Creedy and Sidebotham, 2017; Suleman et al., 2019; Wyk and Mason, 2021). On the other hand, some studies report that these variables have a negative relationship (Aghaei et al., 2012) or an insignificant relationship with (Keshavarz et al., 2014) academic success. Therefore, the research discussing the relationship between these variables and the academic success show disputable conclusions. However, it should be kept in mind that the scientists such as Salovey and Mayer, Goleman, Bar-On, who have carried out extensive research on emotional intelligence, argue that emotional intelligence contributes to success in professional, social and academic life. This study urges that the students, who are more successful in controlling both their own and other people's emotions by means of their high emotional intelligence (Mayer et al., 2016), show a development in their critical thinking skills, as their emotional intelligence skills improve (Ghanizadeh and Moafian, 2011; Li et al., 2021; Sk and Halder, 2020), thus undergraduate tourism students are more advantageous in obtaining academic success.

5. Suggestions

When considering the results obtained in this research, it is observed that emotional intelligence has a significant place in the increase of undergraduate tourism students' critical thinking disposition. Therefore, increasing the emotional intelligence level of tourism students is necessary to encourage the increase in their critical thinking disposition. To this end, it can be firstly suggested to revise the curriculum of academic programs providing tourism education by enabling to develop emotional intelligence and critical thinking dispositions of tourism students, and tourism academics should also be trained in this respect. Unfortunately, there are indications that many educators do not fully understand how to properly teach critical thinking or develop high-level cognitive skills (Ahuna, Tinnesz and Kiener, 2014) and fail to include in critical thinking activities into the lessons (Shim and Waciczak, 2012). In order to encourage students to think critically and to learn actively, academics should remove the myth that students cannot learn unless accompanied by an instructor. Many academics still believe that students should be taught before they learn something. This point of should be changed. Academics should explain students that a problem has more than one solutions. They should also consider the impression on how students learn (Boonsathirakul and Kerdsomboon, 2021). Instructors should support the development of students' critical thinking disposition by administering various learning models such as POPBLSTAD integration, POPBL (Problem-Oriented Project-Based Learning), STAD (Student Team Achievement Division), CL (Conventional Learning). The research by Supratman,

Zubaidah, Corebima and Ibrohim (2021) argues that POPBLSTAD integration resulted in a higher critical thinking score than other three models. If students are encouraged to only listen and memorize information instead of being encouraged to construct knowledge and interpret meaning in the learning process, their critical thinking disposition reduces (Mc Cormick et al., 2016). Academics should avoid such an approach. Supratman et al. (2021) state that students can think critically when they can fulfill the analysis, synthesis and assessment process in learning. Instructors should guide students to these processes by means of methods such as brainstorming, concept mapping, and mind mapping.

On the other hand, this study has some limitations that should be considered. Firstly, sampling consist of only undergraduate tourism students, thus research conclusions cannot be generalized for all undergraduate students. A profile for emotional intelligence level and critical thinking disposition of university students can be established by sampling students from different programs. Suggestions may be offered for development by assessing such profiles. However, these suggestions should be put into practice, which is important to meet human resource need that 21st century business world needs. Secondly, this study has investigated the effect of emotional intelligence levels on critical thinking disposition. It is considered that investigation of the relationships between these two variables, which have significant, positive and strong relationships, regarding academic achievement, job performance, job satisfaction, motivation, organizational commitment, organizational harmony, organizational trust, conflict management, professional burnout, leadership will bring important contributions to the relevant literature.

References

- Afshar, H. S., and Rahimi, M. (2014). The relationship among critical thinking, emotional intelligence, and speaking abilities of Iranian EFL learners. *Procedia - Social and Behavioral Sciences*, 136, 75-79. (PDF) The relationship among emotional intelligence, critical thinking, and speaking ability of Iranian EFL learners (researchgate.net)
- Agarwal, N., and Chaudhary, N. (2013). Role of emotional intelligence in ethical decision making a study of Western U.P. *International Journal of Management and Business Studies*, 3(1), 28-30. nisha.pdf (ijmbs.com)
- Aghaei, N., Souri, R., and Ghanbari, S. (2012). Comparison of the relationship between critical thinking and academic achievement among physical education students and students in other fields of study in Bu Ali Sina University, Hamedan. *Management of Sport and Movement Sciences*, 2(4), 35-45.
- Ahmad, M. A., and Duskri, M. (2018). Gender differences of mathematical critical thinking skills of secondary school students. *Journal of Physics Conference Series*, 1088(1), 1-6. <http://dx.doi.org/10.1088/1742-6596/1088/1/012054>
- Ahuna, K. K., Tinnesz, C. G., and Kiener, M. (2014). A new era of critical thinking in professional programs. *Transformative Dialogues: Teaching and Learning Journal*, 7(3), 1-9. TD.7.3.7_Ahuna_et_al_New_Era_of_Critical_Thinking .pdf (kpu.ca)
- Akbari Lakeh, M., Naderi, A., and Arbabisarjou, A. (2018). Critical thinking and emotional intelligence skills and relationship with students' academic achievement. *La Prensa MedicaArgentina*, 104(2), 2-6. 10.4172/lpma.1000280
- Alcan, A. A. (2021). *Duygusal zekanın vizyoner liderlik üzerindeki rolü: Turizm işletmesi yöneticileri üzerinde bir uygulama*. Master Thesis, Bayburt Üniversitesi Lisansüstü Eğitim Enstitüsü, Bayburt.
- AlJaafi, E., and Şahin, M. (2019). Critical thinking skills for primary education: The case in Lebanon. *Turquoise International Journal of Educational Research and Social Studies*, 1(1), 1-7.
- Microsoft Word - ESLAM 1-7 (ed.gov)
- Arfara, C., and Samanta, I. (2016). The impact of emotional intelligence on improving team-working: The case of public sector (National centre for public administration and local government). *Procedia - Social and Behavioral Sciences*, 230(12), 167-175. <https://doi.org/10.1016/j.sbspro.2016.09.021>
- Austin, E. J., Saklofske, D., Huang, S. H. S., and McKenney, D. (2004). Measurement of trait emotional intelligence: Testing and cross-validating a modified version of Schutte et al.'s (1998) measure. *Personality and Individual Differences*, 36(3), 555-562. [https://doi.org/10.1016/S0191-8869\(03\)00114-4](https://doi.org/10.1016/S0191-8869(03)00114-4)
- Bagheri, M., and Nowrozi, R. A. (2015). A comparative study of the critical thinking skills among the students of accounting and software in the female technical and vocational university in the city of Borojerd. *Journal of Education and Practice*, 6(13), 43-46. EJ1080601.pdf (ed.gov)
- Bar-On, R. (2006). The Bar-On model of emotional-social intelligence. *Psicothema*, 18, 13-25.

3271.pdf (psicothema.com)

- Bodi, S. (1988). Critical thinking and bibliographic instruction: The relationship. *The Journal of Academic Librarianship*, 14(3), 150-153.
- Boonsathirakul, J., and Kerdsomboon, C. (2021). The investigation of critical thinking disposition among Kasetsart University Students. *Higher Education Studies*, 11(2), 1-9. <https://doi.org/10.5539/hes.v11n2p224>
- Brookfield, S. (1987). *Developing critical thinkers*. Milton Keynes, England: Open University Press.
- Büyükkalvarcı, A., and Gündoğan, H. (2018). Duygusal zeka ve yaratıcılık arasındaki ilişkiler: Üniversite öğrencileri üzerine bir çalışma. *Uluslararası Sosyal Araştırmalar Dergisi*, 11(61), 782-792. <http://dx.doi.org/10.17719/jisr.2018.2971>
- Carter, A. G., Creedy, D. K., and Sidebotham, M. (2017). Critical thinking evaluation in reflection writing: Development and testing of carter assessment of critical thinking in midwifery (reflection). *Midwifery*, 54, 73-80. <https://doi.org/10.1016/j.midw.2017.08.003>
- Christianson, K. L. (2020). Emotional intelligence and critical thinking in nursing students. *Nurse Educator*, 45(6), 1-4. doi: 10.1097/NNE.0000000000000801
- Chukwuyenum, A. N. (2013). Impact of critical thinking on performance in mathematics among senior secondary school students in Lagos State. *IOSR Journal of Research and Method in Education*, 3(3), 18-25. doi:10.9790/7388-0351825
- Day, A. L., and Carroll, S. A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviours. *Personality and Individual Differences*, 36(6), 1443-1458. [http://dx.doi.org/10.1016/S0191-8869\(03\)00240-X](http://dx.doi.org/10.1016/S0191-8869(03)00240-X)
- Dutoğlu, G., and Tuncel, M. (2008). Aday öğretmenlerin eleştirel düşünme eğilimleri ile duygusal zeka düzeyleri arasındaki ilişki. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 8(1), 1-22. AİBÜ Dergi 8.cdr (dergipark.org.tr)
- England, T. K., and Nagel, G. L. (2021). Developing emotional intelligence skills for negotiations. *Journal of Education for Business*, 1-7. <https://doi.org/10.1080/08832323.2021.1972276>
- Erdem, M., İlgan, A., and Çelik, F. (2013). Lise öğretmenlerinin duygusal zeka düzeyleri ile eleştirel düşünme eğilimleri arasındaki ilişki. *International Periodical For the Languages, Literature and History of Turkish or Turkic*, 8(12), 509-532. <http://dx.doi.org/10.7827/TurkishStudies.5932>
- Eskidemir, S. (2020). *Hemşirelik lisans ve yüksek lisans öğrencilerinde eleştirel düşünme ve duygusal zeka arasındaki ilişkinin incelenmesi*. Master Thesis, İzmir Katip Çelebi Üniversitesi, Sağlık Bilimleri Enstitüsü, İzmir.
- Fong, C. J., Kim, Y., Davis, C. W., Hoang, T., and Kim, Y. W. (2017). A meta-analysis on critical thinking and community college student achievement. *Thinking Skills and Creativity*, 26, 71-83. <https://doi.org/10.1016/j.tsc.2017.06.002>
- Franco, A. R., Costa, P. S., and Almeida, L. S. (2017). Do critical thinkers drink too much alcohol, forget to do class assignments, or cheat on exams? Using a critical thinking measure to predict college students' real-world outcomes. *Psychology Studies*, 62(2), 178-187. 10.1007/s12646-017-0402-1
- Gebregergis, W. T., Huang, F., and Hong, J. (2020). The impact of emotional intelligence on depression among international students studying in China: The mediating effect of acculturative stress. *International Journal of Intercultural Relations*, 79, 82-93. <https://doi.org/10.1016/j.ijintrel.2020.08.008>
- Ghanizadeh, A., and Moafian, F. (2011). Critical thinking and emotional intelligence: Investigating the relationship among EFL learners and the contribution of age and gender. *Iranian Journal of Applied Linguistics*, 14(1), 23-48. 2 Ghanizadeh-Moafian.doc (ensani.ir)
- Gilmanshina, S., Smirnov, S., Ibatova, A., and Berechikidze, I. (2021). The assessment of critical thinking skills of gifted children before and after taking a critical thinking development course. *Thinking Skills and Creativity*, 39. <https://doi.org/10.1016/j.tsc.2020.100780>
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. London, England: Bloomsbury.
- Goleman, D. (1998). *İşbaşında duygusal zeka. (Çeviren: Banu Seçkin)*. İstanbul: Varlık Yayınları.
- Gözüyeşil, A. G. (2020). *Öğrenci hemşirelerinin algıladıkları stresin eleştirel düşünme eğilimlerine etkisi*. Master Thesis, Sağlık Bilimleri Fakültesi, Hemşirelik Anabilim Dalı, Çukurova Üniversitesi, Adana.
- Hagelskamp, C., Brackett, M. A., Rivers, S. E., and Salovey, P. (2013). Improving classroom quality with the RULER approach to social and emotional learning: Proximal and distal outcomes. *American Journal of Community Psychology*, 51(3), 530-543. <https://doi.org/10.1007/s10464-013-9570-x>
- Halpern, D. F. (2003). *Thought and knowledge: An introduction to critical thinking*. Mahwah, New Jersey: Erlbaum.
- Heidari, M., and Ebrahimi, P. (2016). Examining the relationship between critical-thinking skills and decision-

- making ability of emergency medicine students. *Indian Journal of Critical Care Medicine*, 20(10), 581-586. doi: 10.4103/0972-5229.192045
- Hırlak, B., Taşlıyan, M., and Sezer, B. (2017). İyimserlik ve yaşam doyumu arasındaki ilişki, demografik özellikler bağlamında algı farklılıkları: Bir alan araştırması. *Kahramanmaraş Sütçü İmam Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 7(1), 95–116.
- Hopkins, M. M., and Bilimoria, D. (2008). Social and emotional competencies predicting success for male and female executives. *Journal of Management Development* 27(1), 13-35. doi: 10.1108/02621710810840749
- Jung, H. S., and Yoon, H. H. (2016). Why is employees' emotional intelligence important? The effects of EI on stress-coping styles and job satisfaction in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 28(8), 1649–1675. <https://doi.org/10.1108/IJCHM-10-2014-0509>
- Kang, F. (2015). Contribution of emotional intelligence towards graduate students' critical thinking disposition. *International Journal of Education and Literacy Studies*, 3(4), 6-17. <http://dx.doi.org/10.7575/aiac.ijels.v.3n.4p.6>
- Karimi, M. N., Hashemi, M. R. and Sarbazfard, M. (2015). Emotional intelligence and critical thinking ability as correlates of EFL learners' vocabulary knowledge, *RALs*, 7(1), 1-20. 10.22055/RALS.2016.11778
- Kaya, H., Şenyuva, E., and Bodur, G. (2017). Developing critical thinking disposition and emotional intelligence of nursing students: A longitudinal research. *Nurse Education Today*, 48, 72-77. <http://dx.doi.org/10.1016/j.nedt.2016.09.011>
- Keshavarz, N., Amini, M., Mani, A., Nabeiei, P., Saffari, Z., and Jafari, M. M. (2014). A study on the relationship between emotional intelligence and academic achievement in students of Shiraz University of Medical Sciences. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 5(18), 70-77. article_46120_50ad1574db3fbedd78975f9f051ccb31.pdf (sums.ac.ir)
- Leasa, M. (2018). The correlation between emotional intelligence and critical thinking skills with different learning styles in science learning, *International Conference on Science and Applied Science*, 1-9. <https://doi.org/10.1063/1.5054539>
- Lee, J. J., and Ok, C. (2012). Reducing burnout and enhancing job satisfaction: Critical role of hotel employees' emotional intelligence and emotional labor. *International Journal of Hospitality Management*, 31(4), 1101–1112. <https://doi.org/10.1016/j.ijhm.2012.01.007>
- Li, Y., Li, K., Wei, W., Dong, J., Wang, C., Fu, Y., Li, J., and Peng, X. (2021). Critical thinking, emotional intelligence and conflict management styles of medical students: A cross-sectional study. *Thinking Skills and Creativity*, 40, 1-9 <https://doi.org/10.1016/j.tsc.2021.100799>
- Li, Z. (2021). Critical thinking cultivation in Chinese learning classes for international students during the COVID-19 pandemic, *Thinking Skills and Creativity*, 40, 1-8. <https://doi.org/10.1016/j.tsc.2021.100845>
- Luthans, F., and Youssef, C. M. (2004). Human, social and now positive psychological capital management: Investing in people for competitive advantage. *Organizational Dynamics*, 33(2), 143-160. <https://doi.org/10.1016/j.orgdyn.2004.01.003>
- Luthans, F., Youssef, C. M., and Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*. Oxford, UK: Oxford University Press.
- Makafui Boso, C., S. van der Merwe, A., and Gross, J. (2021). Critical thinking disposition of nursing students: A quantitative investigation. *Nurse Education in Practice*, 55, 1-7. <https://doi.org/10.1016/j.nepr.2021.103167>
- Mayburry, T., and Swanger, N. (2011). Identification of industry needs for baccalaureate hospitality graduates: A Delphi study. *Journal of Hospitality and Tourism Education*, 23(4), 33-45. <https://doi.org/10.1080/10963758.2011.10697018>
- Mayer, J. D., Caruso, D. R., and Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, 8(4), 290-300. <https://doi.org/10.1177/1754073916639667>
- Mayer, J. D., Salovey, P., and Caruso, D. R. (2008). Emotional Intelligence: New Ability or Eclectic Traits? *American Psychologist*, 63, 503-517. <https://doi.org/10.1037/0003-066X.63.6.503>
- Mc Cormick, N. J., Clark, L. M., and Raines, J. M. (2016). Engaging students in critical thinking and problem solving: A brief review of the literature. *Journal of Studies in Education*, 5(4), 100. <https://doi.org/10.5296/jse.v5i4.8249>
- Meshkat, M., and Nejati, R. (2017). Does emotional intelligence depend on gender? A study on undergraduate english majors of three Iranian Universities. *Sage Open*, 7(3), 1-8. <https://doi.org/10.1177/2158244017725796>
- Miao, C., Humphrey, R. H., and Qian, S. (2017). A meta-analysis of emotional intelligence and work attitudes.

- Journal of Occupational and Organizational Psychology*, 90(2), 177-202.
<https://doi.org/10.1111/joop.12167>
- Morre, T. (2013). Critical thinking: Seven definitions in search of a concept. *Studies in Higher Education*, 38, 506-522. <https://doi.org/10.1080/03075079.2011.586995>
- Mura, L., Zsigmond, T., and Machova, R. (2021). The effects of emotional intelligence and ethics of SME employees on knowledge sharing in Central-European countries. *Oeconomia Copernicana*, 12(4), 907-934. <https://doi.org/10.24136/oc.2021.030>
- Niu, L., Behar Horenstein, L., and Garvan, C. W. (2013). Do instructional interventions influence college students' critical thinking skills? A meta-analysis. *Educational Research Review*, 9, 114-128. <https://doi.org/10.1016/j.edurev.2012.12.002>
- Pelit, E., Karaçor, M., and Kılıç (2018). Duygusal zekanın iletişim becerilerine etkisi: Turizm öğrencileri üzerinde bir araştırma. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20(1), 85-107. <http://dx.doi.org/10.16953/deusosbil.27968>
- Rahimnia, F., and Hoshyar, V. (2013). Effect of organizational justice on desire to quit job through job satisfaction. *Modiriat Farda Journal*, 9, 23-42.
- Rezaei, H., Shafiabady, A., Ghaedi, Y., Delavar, A., Esmaeili, M. and Moghaddam, L. F. (2017). Reasoning, critical thinking and attitudes toward substance abuse in adolescence: Explaining the mediator role of emotional intelligence. *European Psychiatry*, 41(1), 861-872. <https://doi.org/10.1016/j.eurpsy.2017.01.1719>
- Rivers, S. E., Brackett, M. A., Reyes, M. R., Elbertson, N. A., and Salovey, P. (2013). Improving the social and emotional climate of classrooms: A clustered randomized controlled trial testing the RULER approach. *Prevention Science*, 14(1), 77-87. doi: 10.1007/s11121-012-0305-2
- Rodzalan, S. A., Saat, M. M. (2015). The perception of critical thinking and problem solving skill among Malaysian Undergraduate students. *Procedia - Social and Behavioral Sciences*, 172, 725-732. <https://doi.org/10.1016/j.sbspro.2015.01.425>
- Salguero, J. M., Extremera, N., and Fernandez-Berrocal, P. (2012). Emotional intelligence and depression: The moderator role of gender. *Personality and Individual Differences*, 53(1), 29-32. <https://doi.org/10.1016/j.paid.2012.02.006>
- Salovey, P., and Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition, and Personality*, 9(2), 189-194. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>
- Salovey, P., and Sluyter, D. J. (1997). *Emotional development and emotional intelligence: Educational implications*. Basic Books.
- San, Y. L., Roslan, S. B., and Sabouripour, F. (2016). Relationship between self-regulated learning and academic procrastination. *American Journal of Applied Sciences*, 13(4), 459-466. doi: 10.3844/ajassp.2016.459.466
- Schneider, T. R., Nusbaum, H. C., Kim, Y., Borders, M. .R., and Ryan, T. J. (2021). Emotional intelligence predicts wise reasoning. *The Journal of Positive Psychology*, 1-15. <https://doi.org/10.1080/17439760.2021.1991448>
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., and Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25(2), 167-177. [https://doi.org/10.1016/S0191-8869\(98\)00001-4](https://doi.org/10.1016/S0191-8869(98)00001-4)
- Searing, L. M., and Kooken, W. C. (2016). The relationship between the California critical thinking disposition inventory and student learning outcomes in baccalaureate nursing students. *Journal Nurse Education*, 55(4), 224-226. <https://doi.org/10.3928/01484834-20160316-08>
- Semerci N. (2016). Eleştirel düşünme eğilimi ölçeğinin geliştirilmesi: Geçerlik ve güvenilirlik revize çalışması. *International Periodical for the Languages, Literature and History of Turkish*, 11(9), 725-740. <http://dx.doi.org/10.7827/TurkishStudies.9573>
- Shim, W., and Walczak, K. (2012). The impact of faculty teaching practices on the development of students' critical thinking skills. *International Journal of Teaching and Learning in Higher Education*, 2(4), 16-30. Microsoft Word - IJTLHE1128.doc (ed.gov)
- Silviariza, W. Y., Sumarmi, and Handoyo, B. (2021). Improving critical thinking skills of geography students with spatial-problem based learning (SPBL). *International Journal of Instruction*, 14(3), 1-21. <https://doi.org/10.29333/iji.2021.1438a>
- Sk, S., and Halder, S. (2020). Critical thinking disposition of undergraduate students in relation to emotional intelligence: Gender as a moderator. *Heliyon* 6, 1-10. <https://doi.org/10.1016/j.heliyon.2020.e05477>
- Soheili, M., Bagheri, M., Ashouri, E., Mohammadi, A., and Kamani, A. (2021). The relationship between emotional intelligence and tendency toward critical thinking with academic success in nursing students:

- An analytic sectional descriptive study. *Future of Medical Education Journal*, 11(3), 1-7.
10.22038/FMEJ.2021.54464.1373
- Stone, G., Duffy, L. N., Pinckney, H. P., and Templeton Bradley, R. (2017). Teaching for critical thinking: Preparing hospitality and tourism students for careers in the twentyfirst century. *Journal of Teaching in Travel and Tourism*, 3-20. <http://dx.doi.org/10.1080/15313220.2017.1279036>
- Suleman, Q., Hussain, I., Syed, M. A., Parveen, R., Lodhi, I. S., and Mahmood, Z. (2019). Association between emotional intelligence and academic success among undergraduates: A cross-sectional study in KUST, Pakistan. *PloS one*. 14(7).<https://doi.org/10.1371/journal.pone.0219468>
- Supratman, Zubaidah, S., Corebima, A. D. and Ibrohim (2021). The effect size of different learning on critical and creative thinking skills of biology students. *International Journal of Instruction*, 14(3), 1-21. <https://doi.org/10.29333/iji.2021.14311a>
- Tatar, A., Tok, S., and Saltukoğlu, G. (2011). Gözden geçirilmiş Schutte Duygusal Zeka Ölçeğinin Türkçe'ye uyarlanması ve psikometrik özelliklerinin incelenmesi. *Klinik Psikofarmakoloji Bülteni*, 21(4), 325-338. <https://doi.org/10.5455/BCP.20110624015920>
- Tolegenova, A., Madaliyeva, Z., Jakupov, M., Naurzalina, D., Ahtayeva, N., and Taumysheva, R. (2015). Management and understanding features in communication depending on level of emotional intelligence. *Procedia - Social and Behavioral Sciences*, 171(16) , 401-405. <https://doi.org/10.1016/j.sbspro.2015.01.139>
- Torun, N. (2011). *Fen ve teknoloji öğretmenlerinin eleştirel düşünme eğilimleri ile duygusal zeka düzeyleri arasındaki ilişki*. Master Thesis, Çukurova Üniversitesi, Sosyal Bilimler Enstitüsü, Adana.
- Tsvetkova, M. (2018). Lies of the reader: Disadvantages of the sociological research methods for the study of the reading. *European Journal of Contemporary Education*, 7(1), 190-213. <https://ssrn.com/abstract=3140890>
- Turhan, M. and Çetinsöz, B. C. (2019). Duygusal zeka ve motivasyon arasındaki ilişki: Turizm programı öğrencileri üzerine bir araştırma. *Elektronik Sosyal Bilimler Dergisi*, 18(69), 268-287. <https://doi.org/10.17755/esosder.438269>
- Wang, X., and Zheng H. (2016). Reasoning critical thinking: Is it born or made? *Theory and Practice in Language Studies*, 6(6), 1323. doi: <http://dx.doi.org/10.17507/tpls.0606.25>
- Wilson, K. (2016). Critical reading, critical thinking: Delicate scaffolding in English for Academic Purposes (EAP). *Thinking Skills and Creativity*, 22, 256-265. doi:10.1016/J.TSC.2016.10.002
- Wood, R. Y., and Toronto, C. E. (2012). Measuring critical thinking dispositions of novice nursing students using human patient simulators. *Journal Nurse Education*, 51(6), 349-352. <https://doi.org/10.3928/01484834-20120427-05>
- Vahedi, S., Heydarlou, M. M., and Imanzadeh, A. (2015). The relationship between emotional intelligence and critical thinking in nursing students of Tabriz University of Medical Sciences. *Development Strategy Medical Education*, 2(1), 47-57. 10.14196/mjiri.32.40
- Yao, X., Yuan, S., Yang, W., Chen, Q., Wei, D., Hou, Y., Zhang, L., Qui, J. and Yang, D. (2018). Emotional intelligence moderates the relationship between regional gray matter volume in the bilateral temporal pole and critical thinking disposition. *Brain Imaging and Behavior*, 12(2), 488-498. doi: 10.1007/s11682-017-9701-3
- Zivkovic, S. (2016). A model of critical thinking as an important attribute for success in the 21st Century. *Procedia-Social and Behavioral Sciences*, 232, 102-108. doi: 10.1016/j.sbspro.2016.10.034

Etik, Beyan ve Açıklamalar

1. Etik Kurul izni ile ilgili;

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2. Bu çalışmanın yazarı, araştırma ve yayın etiği ilkelerine uyduğunu kabul etmektedir.

3. Bu çalışmanın yazarı kullanmış oldukları resim, şekil, fotoğraf ve benzeri belgelerin kullanımında tüm sorumlulukları kabul etmektedir.

4. Bu çalışmanın benzerlik raporu bulunmaktadır.
