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Predicting Academic Achievement of EFL Prospective Teachers: The Role of Emotional Intelligence, Critical Thinking Dispositions, and Academic Self-Efficacy

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Abstract

This study aimed to examine the predictive power of emotional intelligence, critical thinking dispositions, and academic self-efficacy on academic achievement of EFL prospective teachers. The study was carried out with 141 EFL prospective teachers studying in departments of English Language Teaching of different universities in Türkiye. Trait Emotional Intelligence Questionnaire–Short Form, Sosu Critical Thinking Dispositions Scale, and Academic Self-Efficacy Scale were employed to collect the data. This study revealed that EFL prospective teachers possessed high emotional intelligence and critical thinking dispositions as well as high academic self-efficacy. Also, they had high GPA scores indicating that they had high academic success. In addition, it was revealed that emotional intelligence, critical thinking dispositions, and academic self-efficacy significantly predicted EFL prospective teachers' academic achievement. In addition, EFL prospective teachers' critical thinking dispositions had the largest effect on their academic achievement and it was followed by emotional intelligence and academic self-efficacy, respectively.

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Introduction

Academic achievement means the performance outcomes that can be used to measure what extent an individual has accomplished an academic goal (Steinmayr & Spinath, 2009) and academic achievement of learners is one of the most crucial indicators of the quality of education. There has always been an interest in the factors that may have an effect on academic achievement like cognitive skills, socioeconomic status, personality traits, teacher-student relationship, motivation, previous performance, and contextual effects. Research over the past few decades has integrated emotional intelligence (EI), critical thinking dispositions, and academic self-efficacy among the most critical determinants of academic achievement. It can be said that there is a well-established theoretical base on the relationship between EI, critical thinking dispositions, academic self-efficacy, and academic achievement. A huge body of previous literature has proven that EI (Aminuddin et al., 2009; Fernandez et al., 2012; MacCann et al., 2011; Mohammadi, 2012; Pishghadam, 2009), critical thinking (Giddens & Gloeckner, 2005; Ghanizadeh, 2017; Pitt et al., 2015), and academic self-efficacy (Cussó-Calabuig et al., 2018; Honicke & Broadbent, 2016; Travis et al., 2020; Yokoyama, 2019) are significantly related to academic achievement although there are some contradictory studies concluding EI (Abera, 2021; Bastian et al., 2005; O'Connor & Little, 2003) and critical thinking (Azar, 2010; Ku & Ho, 2010; Mohammadi et al., 2016; Shirazi & Heidari, 2019) are not significantly related to academic achievement.

We can say that in spite of a well-established theoretical base on the relationship between EI, critical thinking, academic self-efficacy, and academic achievement, empirical evidence regarding this relationship is limited and this limited research has yielded inconsistent results. Also, most of the research on the relationship between these variables consists of correlational studies which cannot tell the direction of the relation between the variables. In other words, these studies cannot tell whether individuals' academic achievement is high because of high academic self-efficacy, or whether their academic self-efficacy is high because of high academic achievement although they can tell whether there is a relation between these variables or not. Therefore, studying the predictive power of EI, critical thinking dispositions, and academic self-efficacy on academic achievement can be seen as a promising area of research which has a potential to reveal how effective these variables are on the academic achievement of learners. Also, the effectiveness of EI, critical thinking dispositions, and academic self-efficacy of learners on academic achievement have not drawn enough attention in the context of ESL or EFL. Therefore, it can be definitely said that the dearth of studies regarding the predictive power of the aforementioned variables on academic achievement and the contradictory results revealed by this limited research provide a sufficient reason for further investigation into the effectiveness of these variables on EFL prospective teachers' academic achievement. Therefore, the aim of this study was to examine the predictive power of EI, critical thinking dispositions, and academic self-efficacy of EFL prospective teachers on their academic achievement. In this study, these questions were sought:

1. What are EFL prospective teachers' levels of EI, critical thinking dispositions, academic self-efficacy, and grade point average (GPA)?
2. Are EFL prospective teachers' EI, critical thinking dispositions, and academic self-efficacy significant predictors of their GPA?

Literature Review

Emotional Intelligence and Academic Achievement

In the literature, there are a multitude of definitions for what EI is and what constitutes it. Based on these diverse definitions, three types of model regarding EI can be proposed: skill-based model, mixed model, and trait model. We can define EI broadly as the capability of understanding and managing emotions (Barchard & Hakstian, 2004). EI refers to a set of skills which are required to appraise and express emotions accurately in oneself and in others, to regulate emotions in self and others, and to use feelings for motivation, planning, and achieving in life (Salovey & Mayer, 1990). Therefore, it can be said that EI includes a wide range of interpersonal and intrapersonal skills irrespective of personality traits. While the ability of understanding, recognizing, and managing one's own emotions comprises intrapersonal skills, the capability of comprehending other people's emotions and feelings, creating and retaining relations with other people, and a sense of social responsibility composes interpersonal skills of EI (Katyal & Awasthi, 2005). This skill-based model includes only a set of interpersonal and intrapersonal abilities and excludes preferred ways of behaving or personality traits. This model proposes that EI should be measured using performance tests constrained to a set of emotion-related skills (e.g. Mayer-Salovey-Caruso Emotional Intelligence Test). On the other hand, some other models and definitions of EI have proposed that it includes a mixture of perceived skills, abilities, and personality traits. EI is defined by Goleman (1998), who is an important name for the field, as the capacity of individuals to recognize both their own feelings and those of others to motivate themselves and to manage emotions well in themselves and during their relations with others. Similarly, EI is defined by Bar-On (2000) as the collection of capabilities, non-cognitive skills, and competencies which may affect individuals' personal skills to be successful under environmental pressures. In other words, EI can be seen as the capability of understanding emotions and the way these emotions may affect relationships with other people. This mixed model proposes that EI should be measured using self-report measures comprising a set of perceived skills and traits (e.g. Emotional Quotient Inventory). In addition to these, Petrides and Furnham (2000) have proposed a trait model which suggests the distinction of EI as an ability and as a trait. Trait EI includes some behavioral dispositions and self-perceptions regarding the individuals' capability of recognizing, processing, and utilizing emotion-laden information (Petrides et al., 2004) and it should be measured via self-report questionnaires (e.g. Trait Emotional Intelligence Questionnaire).

According to Bar-On (2000), EI can be seen as a non-cognitive intelligence and this intelligence is a vital factor to determine individuals' ability to be successful in life and overcome the difficulties in this world because individuals with high emotional intelligence can recognize, manage, control, and use their emotions to overcome the difficulties that they face in their daily life and they prevent negative effects of their emotions on their behaviors (Carmeli, 2003; Salami, 2007). Being competent to manage emotions, validate feelings, and solve problems of a personal and interpersonal nature is critical to be successful in school life, and therefore, emotionally intelligent individuals are expected to be able to achieve better whatever they do (Goleman, 1995) because they are better able to self-direct their academic work and have higher self-management ability, and can understand the factors that have an effect on their success (Rode et al., 2007). Besides, emotionally intelligent individuals can set goals for themselves and they are self-motivated and optimistic enough to accomplish these goals (Bar-On, 2000). Also, Jaeger and Eagan (2007) state that EI is vital for individuals' personal health and academic

achievement because EI helps students learn better and have higher academic performance. Emotionally intelligent individuals are better at managing stress and more adaptable, have higher interpersonal and intrapersonal skills, can realize and manage their emotions, and cope with demanding, challenging, and complex experience of learning, and hence, they have more successful learning experience and better academic performance.

Pishghadam (2009) conducted a study with 508 EFL university students to investigate the role of EI in second language learning and he concluded that EI and academic achievement is strongly related to each other. In a similar vein, MacCann et al. (2011) revealed that EI is important for academic achievement in their study. Fayombo (2012) also conducted a study with 151 undergraduate psychology students to investigate the relation between EI and academic achievement and she concluded that EI is significantly and positively correlated to students' academic achievement. In their study aiming to examine the influence of some variables including EI on first year university students' GPA scores, Garg et al. (2016) concluded that EI has a significant effect on first year university students' GPA scores, i.e. their academic achievement. Also, Mohammadi (2012) and Aminuddin et al. (2009) concluded similar results regarding the positive association of EI with academic performance. In their study with 3500 participants, Jaeger and Eagan (2007) concluded that EI significantly predicted academic achievement. Similarly, Fernandez et al. (2012) found that EI is a significant predictor of academic achievement in their study. Therefore, it can be said that a huge body of recent literature has concluded that EI is significantly associated with academic achievement.

Academic Self-efficacy and Academic Achievement

Self-efficacy which is one of the most important components of social cognitive theory (Bandura, 1986), can be broadly defined as individuals' beliefs in their ability to achieve assignments (Bandura, 2001). Self-efficacy is effective on what goals individuals will set for themselves, how much effort they will spend on achieving these goals, and how they will be persistent in the face of difficulties (Gore, 2006). According to Zimmerman (1995), in an academic context, this construct refers to academic self-efficacy which includes personal beliefs about individuals' competence to organize and perform actions to achieve a desired level of academic performance and it is positively related to academic achievement and effort (Multon et al., 1991). Academic self-efficacy works as an important factor in learning process and various academic outcomes (Schunk & Meece, 2006; Zhang & Ardasheva, 2019) and is one of the most critical determinants of academic achievement (Huang, 2012; Schunk et al., 2010) because it equips individuals for strong thinking and necessary confidence during the learning process (Bandura 1986) and allows them to be more involved in the learning processes (Anam & Stracke, 2016). Individuals with strong academic self-efficacy apply more effort and determination while trying to achieve goals, remain resolute when faced obstacles, and choose difficult learning tasks instead of easier ones if they have a choice. On the other hand, individuals who have weak academic self-efficacy apply minimal energy to perform tasks, give up easily when they face obstacles and challenges, and choose easier tasks instead of more difficult and challenging ones if they have a choice. Therefore, it can be said that individuals with strong academic self-efficacy are inclined to behave in ways that are more likely to improve the learning process and academic performance while individuals with weak academic self-efficacy behave in ways which are likely to diminish the

possibility of achieving learning objectives resulting in poorer academic performance.

Çakır and Gazioglu (2021) found that academic self-efficacy was a significant predictor of transition from primary to secondary education exam (TEOG) scores in their study with 334 eighth-grade students in Türkiye. In a study with 853 participants, Travis et al. (2020) found that academic self-efficacy is significantly associated with students' GPA. Affuso et al. (2017) concluded that academic self-efficacy significantly affects academic achievement in their study with 501 adolescents. Similarly, Hanham et al. (2021) concluded that academic self-efficacy is positively associated with academic achievement of university students. Bozkurt et al. (2021) revealed that academic self-efficacy had a significant role on academic performance in their study with 948 participants aiming to investigate the effect of different variables including academic self-efficacy on academic achievement. Also, Honicke & Broadbent (2016) found that there is a moderate and positive association between academic self-efficacy and academic achievement of university students in their meta-analysis study. Therefore, it can be said that previous literature has showed that academic self-efficacy is significantly associated with academic achievement.

Critical Thinking Dispositions and Academic Achievement

Ennis (2000) defines critical thinking as a reflective, reasonable, and functional thinking process which helps individuals decide what to do or to believe. Individuals employ their critical thinking skills before deciding on an idea or their actions and they make true and reasonable decisions. In other words, critical thinking helps individuals make the most accurate decisions about anything in their life because it includes systematic and logical evaluation of arguments, ideas, or information (Ruggerio, 1988). Individuals investigate and evaluate the quality and accuracy of arguments, ideas, or information thanks to critical thinking and they look for sound evidence before deciding on their quality, value, and accuracy (Lewis & Smith, 1993; Paul & Elder, 2001). Critical thinkers are always willing to inquire, habitually inquisitive, look for diverging ideas, and think that all assumptions, ideas, and arguments are questionable (Facione, 1990; Kurfiss, 1988).

Critical thinking equips individuals with the necessary skills to be successful not only in their daily life but also in their school life (Facione & Facione, 1997; Halpern, 2003). Critical thinking helps individuals use their time in an efficient way, plan, organize, and use the limited time and knowledge well, make sound decisions, use their knowledge and experience in new situations, and reach reliable and valid results (Beyer, 1995; Ennis, 2011; Pascarella & Terenzini, 1991; Pirozzi, 2003). Besides, critical thinkers know their strengths, weaknesses, and limitations (Ruggerio, 1990) and they are able to analyse their thinking and learning process, find out the deficiencies and shortcomings, and improve it (Paul & Elder, 2001). Thanks to critical thinking, learners can focus on and monitor their learning process, analyze it critically, find out the problems, revise it, and take responsibility in this process. In other words, critical thinking makes them experienced and efficient learners (Çeviker Ay & Orhan, 2020; Moon, 2008), and hence, it promotes academic achievement. Critical thinking always encourages learners to examine, evaluate, and research everything in their learning process such as problems, ideas, and knowledge. Therefore, it provides better learning environments and experience for learners resulting in higher academic achievement.

In a study with 195 participants, Kim and Shin (2021) found that critical thinking dispositions had a strong and significant correlation with academic achievement. Stupnisky et al. (2008) conducted a study with 1196 first-year university students to examine the comparative influences of critical thinking dispositions and perceived academic control on academic achievement and they concluded that critical thinking dispositions had a strong and significant correlation with academic achievement. Ren et al. (2020) revealed that critical thinking predicted academic achievement of students in their study investigating the effectiveness of critical thinking on academic achievement. Similarly, D'Alessio et al. (2019) found that critical thinking has a positive impact on academic achievement in their study with 1620 graduate students. Also, previous meta-analysis studies investigating the relation between critical thinking and academic achievement (Orhan, 2022; Fong et al., 2017) revealed that critical thinking (both skills and dispositions) is moderately related to academic achievement. Therefore, it can be said that most of the previous literature has found that critical thinking is significantly associated with academic achievement.

Method

A cross-sectional survey design was employed in this study. Critical thinking dispositions, academic self-efficacy, and EI levels of EFL prospective teachers were predictor variables of the study while their academic achievement was the dependent variable.

Study Group

The study was carried out with 141 EFL prospective teachers (83 female, 58 male) studying in departments of English Language Teaching in education faculties of different universities in Türkiye. All of the participants were recruited to the study on a voluntary basis. The mean age of the students was 19.92 (SD=1.51) ranging from 18 to 26. The majority of the students were in their senior year (28.4%) and they were followed by the students who were in their junior (24.8%), freshman (24.1%), and sophomore (22.7%) year, respectively. Most of the students' mothers graduated from high school (29.1%) and university (26.2%). Also, 22.7% and 20.6% of the students had a mother who graduated from secondary and primary school, respectively. Most of their fathers are high school (36.2%) and university (31.2%) graduates. Also, 15.6% and 12.8% of them had a father who graduated from secondary and primary school, respectively. Before the study, a-priori power analysis was carried out using G*Power 3 software (Faul et al., 2007) and it indicated that at least 119 data were needed for a linear multiple regression analysis ($\alpha=0.05$; power=0.95; 3 predictor variables) and to have a medium effect size ($f^2=0.15$). Therefore, the sample size of 141 for this study with 3 predictor variables (EI, critical thinking dispositions, and academic self-efficacy) was adequate.

Data Collection Tools

Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF)

EI levels of EFL prospective teachers were evaluated using the TEIQue-SF. Petrides and Furnham (2000, 2001) developed the scale and Deniz et al. (2013) adapted it into Turkish. The Turkish TEIQue-SF includes 20 items

and 4 sub-dimensions which are well-being, self-control, emotionality, and sociability. In his reliability generalization meta-analysis study, Orhan (2024) revealed that the TEIQue-SF is a reliable instrument with an overall alpha value of 0.86. Also, the reliability value of the TEIQue-SF was 0.81 in the adaptation study while it was calculated as 0.87 in this study.

Sosu Critical Thinking Dispositions Scale (CTDS)

Critical thinking dispositions of EFL prospective teachers were evaluated using the CTDS. Sosu (2013) developed the scale and Orhan (2023a) adapted it into Turkish. The CTDS includes 11 items and 2 sub-dimensions (critical openness and reflective skepticism). The data for the Turkish adaptation study of the scale were gathered from two independent samples and it revealed that Turkish CTDS has the same factor structure with the original scale. The reliability value of the CTDS was 0.92 for the first sample and 0.94 for the second sample in the adaptation study while it was calculated as 0.85 in this study.

Academic Self-Efficacy Scale (ASES)

Academic self-efficacy levels of EFL prospective teachers were determined using the ASES. Jerusalem and Schwarzer (1981) developed the scale and Yılmaz et al. (2007) adapted it into Turkish. Turkish adaptation study of the scale was conducted with 672 university students and it revealed that the Turkish ASES has the same factor structure with the original scale. The scale has 7 items and one sub-dimension. The reliability value of the ASES was 0.79 in the adaptation study while it was calculated as 0.80 in this study.

Academic Achievement

Academic achievement levels of EFL prospective teachers were determined using their GPA scores. It is common to use GPA scores as an indicator of students' academic achievement because the assessment of GPA scores is impersonal, trustworthy, and momentarily consistent (Bacon, 2006).

Data Collection

After getting the ethical committee approval from the first author's affiliated university, the data were gathered in the 2022-2023 academic year. The students were told about privacy and confidentiality issues and they were informed about their right of withdrawal from the study. The completion of the instruments took about 25-30 minutes.

Data Analysis

Firstly, all variables were investigated to ensure that there were no missing data and it was found that the data did not include any missing data. Second, an investigation of skewness and kurtosis values revealed that the data had normal distribution (see Table 1). Next, Z transformation values and Mahalanobis Distance scores were

investigated to detect possible outliers per variable and multivariate outliers. However, these values showed that there were not any influential outliers in the dataset. Besides, Pearson correlation, VIF, tolerance, and CI values were investigated to check the possibility of high correlation among the variables and these values indicated no high correlation. The data were analyzed using descriptive statistics, Pearson correlation, and multiple linear regression with enter method.

Results

Descriptive statistics for the EI, critical thinking dispositions, academic self-efficacy, and GPA can be seen in Table 1.

Table 1. Skewness and Kurtosis Values and Descriptive Statistics for EI, Critical Thinking Dispositions, Academic Self-efficacy, and GPA

	Skewness		Kurtosis		\bar{X}	sd
	Statistic	Std. Error	Statistic	Std. Error		
Emotional intelligence	0.391	0.204	-0.461	0.406	3.39	0.94
CT dispositions	-1.149	0.204	1.305	0.406	3.73	0.64
Academic self-efficacy	-0.411	0.204	0.019	0.406	3.51	0.68
GPA	-0.362	0.204	-1.051	0.406	2.95	0.52

As shown in Table 1, EFL prospective teachers had high EI (\bar{X} =3.39), critical thinking dispositions (\bar{X} =3.73), and academic self-efficacy (\bar{X} =3.51). Besides, their mean score for GPA is 2.95. As the students' GPA scores can range between one (lowest) to four (highest), we can say that they had high academic success.

Table 2. Inter-correlations among Variables

	CT dispositions	Academic self-efficacy	GPA scores
1. Emotional intelligence	0.205*	0.219**	0.356**
2. CT dispositions	-	0.185*	0.382**
3. Academic self-efficacy	-	-	0.304**
4. GPA scores	-	-	-

Note: *correlation is significant at $p < 0.05$; **correlation is significant at $p < 0.01$

As it can be seen in Table 2, EFL prospective teachers' EI scores ($r = 0.356$), critical thinking dispositions ($r = 0.382$), and academic self-efficacy scores ($r = 0.304$) have a positive and moderate association with their GPA scores. Also, their EI scores are moderately and positively related to their critical thinking dispositions ($r = 0.205$) and academic self-efficacy scores ($r = 0.219$). Besides, there is a moderate and positive association between their critical thinking dispositions and academic self-efficacy scores ($r = 0.185$).

As shown in Table 3, EFL prospective teachers' EI scores ($\beta=0.253$, $t_{(141)}=3.315$, $p<0.05$), critical thinking dispositions ($\beta=0.294$, $t_{(141)}=3.878$, $p<0.05$) and academic self-efficacy scores ($\beta=0.194$, $t_{(141)}=2.547$, $p<0.05$)

significantly predicted their GPA scores ($R=0.511$, $R^2=0.261$, $p<0.01$).

Table 3. The Results of Multiple Linear Regression Analysis

	B	Std. Error	β	t	p
Constant	1.072	0.283	-	3.783	0.00
Emotional intelligence	0.140	0.042	0.253	3.315	0.00
CT dispositions	0.238	0.061	0.294	3.878	0.00
Academic self-efficacy	0.149	0.058	0.194	2.547	0.01

$R=0.511$, $R^2=0.261$, $F_{(3, 140)}= 16.159$, $p<0.01$

Also, the established regression model was significant ($F_{(3,140)}=16.159$, $p<0.01$). Their EI scores, critical thinking dispositions, and academic self-efficacy scores together explained 26% of the total variance on their GPA scores. In addition, EFL prospective teachers' critical thinking dispositions ($\beta=0.294$) had the largest effect on their GPA scores and it was followed by EI ($\beta=0.253$) and academic self-efficacy ($\beta=0.194$) scores.

Discussion and Conclusion

The aim of this study was to examine the predictive power of EI, critical thinking dispositions, and academic self-efficacy of EFL prospective teachers on their GPA scores. This study showed that EFL prospective teachers had high critical thinking dispositions and EI as well as high academic self-efficacy. Also, they had high GPA scores indicating that they had high academic success. It was also found that EFL prospective teachers' EI scores, critical thinking dispositions, and academic self-efficacy scores have a positive and moderate association with their GPA scores. Besides, there is a moderate and positive association among their EI scores, critical thinking dispositions, and academic self-efficacy scores. This study also revealed that EFL prospective teachers' EI scores, critical thinking dispositions, and academic self-efficacy scores significantly predicted their GPA scores and these variables together explained 26% of the total variance on their GPA scores.

As emotionally intelligent individuals are able to recognize, manage, control, and use their emotions to overcome the difficulties in their school, work, and daily life and they do not let their emotions affect their behaviors negatively (Carmeli, 2003; Salami, 2007), EI is a vital factor for individuals' ability to be successful in school and life (Bar-On, 2000). Individuals with high EI have higher self-management ability, can self-direct their academic work, are aware of the factors which can be effective on their success, and more adaptable and better at managing stress (Rode et al., 2007). Also, they have higher interpersonal and intrapersonal skills, can realize and manage their emotions, and set goals for themselves and they are highly self-motivated and optimistic to make these goals real (Bar-On, 2000). Therefore, it can be said that EI is an important factor for individuals to be able to achieve better whatever they do (Goleman, 1995), and hence, it is vital for their personal health and their academic achievement (Jaeger & Eagan, 2007) and it helps individuals learn better because individuals can better cope with demanding, challenging, and complex experience of the learning thanks to EI.

Academic self-efficacy which includes individuals' personal beliefs about their ability to organize and perform

actions to achieve the desired level of academic performance has a critical role in the learning process (Zhang & Ardasheva, 2019; Zimmerman, 1995) and is important for higher academic performance, achievement, and effort (Multon et al., 1991). Individuals with high academic self-efficacy are able to set academic goals for themselves, organize their learning process, apply more effort and determination to achieve these goals, and remain resolute in the face of difficulties that appeared during their learning journey (Gore, 2006). It can be said that academic self-efficacy provides individuals with strong thinking and the necessary confidence to perform better academic performance, allows them to be more engaged in learning processes, and helps them behave in ways which are more likely to improve the learning process and academic achievement (Anam & Stracke, 2016; Huang, 2012), and hence, it can be seen as one of the most vital factors which are effective on academic performance (Bandura, 1997; Schunk et al., 2010; Vrugt et al., 1997).

Individuals with high critical thinking are able to plan, organize, and use their time efficiently, use their existing knowledge and experience in new situations, make rational and true decisions (Beyer, 1995; Ennis, 2011; Pirozzi, 2003), analyze their thinking and learning process, find out the problems and shortcomings and improve it (Paul & Elder, 2001). In other words, critical thinkers better organize, focus on, monitor, and analyze their learning process (Orhan, 2023b). Based on this analysis, they find out the deficiencies, revise their learning process, and improve it which makes them experienced and efficient learners (Moon, 2008). Therefore, it can be said that critical thinking provides individuals with the required skills to perform better in their school life resulting in higher academic performance (Facione & Facione, 1997; Halpern, 2003).

Therefore, we can say that the result showing the significant predictive effect of EI, critical thinking dispositions, and academic self-efficacy on EFL prospective teachers' academic achievement coincides with the theoretical background. Also, a huge body of recent studies found similar results regarding the positive effect of EI (Aminuddin et al., 2009; Fernandez et al., 2012; Jaeger & Eagan, 2007; MacCann et al., 2011; Mohammadi, 2012; Pishghadam, 2009), critical thinking dispositions (Afshar et al., 2014; D'Alessio et al., 2019; Ghanizadeh, 2017; Giddens & Gloeckner, 2005; Pitt et al., 2015), and academic self-efficacy (Affuso et al., 2017; Cussó- Calabuig et al., 2018; Honicke & Broadbent, 2016; Travis et al., 2020; Yokoyama, 2019) on academic achievement. Therefore, it can be said that the results of previous studies and theoretical background confirmed the results of this study indicating EFL prospective teachers' EI, critical thinking dispositions and academic self-efficacy significantly predicted their academic achievement.

Also, this study showed that EFL prospective teachers' critical thinking dispositions had the largest effect on their academic achievement and it was followed by EI and academic self-efficacy scores. This result shows us that critical thinking dispositions is a much stronger predictor of EFL prospective teachers' academic achievement. In other words, critical thinking dispositions have a stronger effect on EFL prospective teachers' academic achievement when compared to EI and academic self-efficacy. Similarly, EI has a stronger effect on EFL prospective teachers' academic achievement when compared to academic self-efficacy. Critical thinking is a reflective, reasonable, and functional thinking process (Ennis, 2000) and includes systematic and logical evaluation of arguments, ideas, or information (Ruggerio, 1988). Critical thinkers are habitually inquisitive, willing to reconsider, open-minded, and focused in inquiry (Facione, 1990) and they always monitor, evaluate

and analyze their own thinking and learning process (Paul & Elder, 2001). Based on this monitoring, evaluation, and analysis, they find out the deficiencies and shortcomings, revise their learning process, and improve it which makes them experienced and efficient learners (Moon, 2008). Also, this evaluation and analysis process is not affected by their emotions or prejudices (Kurfiss, 1988). Therefore, it can be said that the learning process of critical thinkers is under continuous evaluation and critical thinkers are always willing to revise it if needed resulting in better learning experience for individuals and higher academic achievement. In other words, critical thinking is effective on each and every thing related to the whole learning process and aims to evaluate, find out the problems, revise, and improve it. On the other hand, EI which can be seen as a non-cognitive intelligence (Bar-On, 2000) is about the ability of individuals to recognize, manage, control, and use their emotions to overcome difficulties and to prevent negative effects of their emotions on their behaviors (Carmeli, 2003; Salami, 2007). Emotionally intelligent individuals can realize and manage emotions, validate feelings, and manage stress and they are optimistic, self-motivated, more adaptable, and better at managing stress and have higher self-management ability. In other words, EI is about emotions, feelings, and stress which may be effective on academic achievement. Therefore, we can say that the result regarding critical thinking dispositions have a stronger effect on EFL prospective teachers' academic achievement when compared to EI can be explained by this.

In short, this study revealed that EFL prospective teachers' EI, critical thinking dispositions, and academic self-efficacy significantly predicted their academic achievement. Previous literature and theoretical background confirmed this result and it highlights the important role of EI, critical thinking dispositions, and academic self-efficacy to improve the academic achievement of EFL prospective teachers. It can be said that individuals with high EI, critical thinking dispositions, and academic self-efficacy are expected to be able to have better academic achievement. Therefore, we can say that enhancing EFL prospective teachers' EI, critical thinking dispositions, and academic self-efficacy is a great idea to equip them with the required skills to perform better in their school life resulting in better academic achievement. Also, enhancing EI, critical thinking dispositions, and academic self-efficacy of EFL prospective teachers would be beneficial to improve their daily and work life. This study also revealed that critical thinking dispositions have a stronger effect on EFL prospective teachers' academic achievement when compared to EI and academic self-efficacy although all these three variables have a significant effect on EFL prospective teachers' academic achievement. This result is important because it reveals that critical thinking dispositions is much more effective on the academic achievement of EFL prospective teachers. We can say that this study has made a remarkable contribution to the related literature and extends it because it presents additional evidence for the predictive power of EI, critical thinking dispositions, and academic self-efficacy on EFL prospective teachers' academic achievement. Also, this study has made a contribution to the literature by investigating the predictive role of EI, critical thinking dispositions, and academic self-efficacy comparatively because there is little evidence regarding this.

Limitations and Implications for Further Research

This study reveals some important results on the predictive power of EI, critical thinking dispositions, and academic self-efficacy on EFL prospective teachers' academic achievement. However, it has also some limitations. As only self-report quantitative tools that can be affected by social desirability were used to collect

the data in this study, data collection tools can be a limitation for the study. Therefore, similar studies can be conducted with qualitative or mixed methods because these methods can help us better understand the predictive relation of EFL prospective teachers' EI, critical thinking dispositions, and academic self-efficacy with their academic achievement.

Statements and Declarations

Availability of Data and Materials: The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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