

## **The Impact of Emotional Intelligence on the Achievement of Accounting Subject**

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### **Abstract**

*Emotional intelligence which can be defined as the ability to understand the emotions of oneself and others is one of the topics gaining importance in terms of particularly controlling and channeling emotions. Although there are many studies on emotional intelligence in the literature, there is limited number of studies focusing on accounting education. Emotional Quotient Inventory developed by Bar-On (1997) has been used in this study which is focused the impact of emotional intelligence on accounting subject. In the survey carried out on 177 students who are attending accounting lessons in two different state universities in Turkey, it has been found that Independency, Self-Fulfillment, Social Responsibility, Flexibility and Problem Solving which are the components of emotional intelligence had an impact on the achievement of accounting subject. Therefore, it has been concluded that some sub-components of the emotional intelligence are influential on accounting achievement.*

**Key Words:** Achievement of Accounting Subject, Emotional Intelligence.

### **1. Introduction**

Emotions have a significant role on human life and they are the inseparable part of the interpersonal relationships through physical and spiritual health. The idea that individuals who are aware of their emotions, able to control them, and can understand emotions of others can be happier and more successful has increased the significance of emotional intelligence concept (Certel *et al.*, 2011: 74)

In general terms, emotional intelligence is the whole abilities to help understanding and controlling the emotions of oneself and others in order to provide intellectual and emotional development (Bay & Mckeage, 2006: 443). In this respect, emotional intelligence requires showing emotional empathy, noticing nuances and considering them, recognizing and weighing up own and others' motives, being able to control emotions, and responding behaviors and emotions of individuals timely and properly depending on varying conditions (Doğan & Demiral, 2007: 212-213).

The concept of emotional intelligence first used by Salovey and Mayer has become popular thanks to the contribution of Goleman (Jones & Abraham, 2009: 50). While Salovey and Mayer considered emotional intelligence as the perception, evaluation, expression and control of emotions properly, Goleman emphasized that it is not rival of academic intelligence or emotional control but a supplementary and synergic enhancer (Certel *et al.*, 2011: 74).

Goleman has also assessed the link between emotional intelligence and leadership ability and listed five components of emotional intelligence that an effective leader exhibits: self-awareness, self-regulation, motivation, empathy and social skills (Seyal & Afzaal, 2013: 219). Thus, Goleman's popularized definition of emotional intelligence has largely displaced the more cautious and technical definition of Salovey and Mayer in the public imagination (Gendron, 2004: 7).

Emotional intelligence has been discussed in many academic studies through scientific contributions made from various aspects especially after the end of 1990s. These studies were commenced with the measurement of emotional intelligence of individuals and its adaptation to professional life under the guidance of Salovey, Mayer, Carus and Goleman, and were maintained with the discovery of the relationship of emotional intelligence with various variables such as academic achievement, demographic characteristics, organizational behaviors, professional exhaustion, and workplace performance etc. In the first studies focused on emotional intelligence, Salovey and Mayer mostly worked on emotional skills which can be improved by learning and experience, and developed Multifactor Emotional Intelligence Test in 1998 together with Caruso for assessing emotional skills in order to provide convenience for future studies to be carried out in this field (Salovey et al., 2003: 642-643). By his studies, Goleman matched emotional intelligence skills with the factors in business life and escalated the subject to organizational life (Avşar & Kaşıkçı, 2010: 2). Emotional intelligence was measured thanks to the contributions of Salovey, Mayer, Carus and Goleman, and it has been addressed in further studies within the context of its relationship with different variables, particularly in academic achievement.

Although the studies on emotional intelligence have been focused on the fields of business administration and educational sciences, there are a limited number of studies on accounting education which will provide contribution to the literature (Bay & Mckeage 2006, Jones 2008, Jones & Abraham 2009, Cook et al. 2011, Nicholls et al. 2012). In the studies performed, it has been aimed to measure and develop emotional intelligence of students having accounting education, and to put forth the relationship between their emotional intelligence and business experience.

In this study, it has been aimed to determine the impact of emotional intelligence of accounting students on their achievement in accounting subject. In this way, it has been aimed to determine which sub-component of emotional intelligence is effective on accounting achievement.

## **2. Literature Review**

Despite the studies performed on both the field of educational sciences (Vela 2003, Walker 2006, Evenson 2007, Yılmaz 2007, Diken 2007, Colston 2008, Olson 2008, Erdoğan & Kenarlı 2008, Arlı *et al.* 2011, Nwadinigwe & Azuka-Obieke 2012) and the field of business administration (Olatoye *et al.* 2010, Kavcar 2011), the number of studies addressing the emotional intelligence for accounting students (Bay & Mckeage 2006, Jones 2008, Jones & Abraham 2009, Cook *et al.* 2011, Nicholls et al. 2012) are limited in the literature. In this regard, the purposes and findings of the studies analyzing the relationship between emotional intelligence and academic achievement, and also addressing the impact of emotional intelligence on accounting students have been given briefly below.

Vela (2003), Walker (2006), Evenson (2007), Colston (2008), Olson (2008), Erdoğan & Kenarlı (2008) purposed to examine the relationship between emotional intelligence skills and academic achievement in university students. They concluded that there was a positive relationship between emotional intelligence skills and academic achievement.

In the studies performed to determine whether there is a relationship between emotional intelligence and academic achievement of candidate teachers, Yılmaz (2007) and Diken (2007) concluded that there is statistically no significant relationship between academic achievement and emotional intelligence level of students and total scores of emotional intelligence while Arlı *et al.* (2011) found that the levels of emotional intelligence vary significantly according to many variables such as graduated faculty, non-thesis master's program attended, gender and perspective on life.

Nwadinigwe & Azuka-Obieke (2012) aimed to examine the relationship between emotional intelligence and academic achievement among senior secondary school students. They revealed that there was a positive relationship between emotional intelligence skills and academic achievement such that developing emotional intelligence skills of a student would lead to the enhancement of his/her academic achievement.

Olatoye *et al.* (2010) investigated the extent to which the level of creativity and emotional intelligence influenced the level academic achievement of Higher National Diploma business administration students of Polytechnics in the South Western States of Nigeria. They found that emotional intelligence has negative though insignificant relationship with business administration students' academic achievement as measured by their cumulative Grade Point Average.

Kavcar (2011) tried to present the impact of emotional intelligence on academic achievement. It was found in Kavcar's study that there is a positive relationship at a weak level between total scores of emotional intelligence of students in business administration department and academic achievement. No significant relationship has been observed between academic achievement and personal skills, stress management and general mood.

Bay & Mckeage (2006) investigated the level of emotional intelligence of accounting students using Mayer-Salovey-Caruso Emotional Intelligence Test. They concluded that the level of emotional intelligence of the students in the sample could be a concern and there was no evidence that one term of traditional accounting education could be expected to provide an opportunity for improvement.

Jones (2008) wanted to determine if improving students' emotional intelligence could also meet the expected graduate qualities highlighted by universities and the requirements of the profession. He concluded that students who emotional intelligence levels were higher may enjoy success in the working environment, therefore providing students with the chance to develop and enhance emotional may directly impact on their future performance.

Jones & Abraham (2009) studied whether accounting students were provided with the opportunities to develop emotional intelligence and if promoting emotional intelligence development could improve student-learning outcomes and enable students to acquire the skills required in the professional environment and also attempted to determine if there were any factors that may influence the development of emotional intelligence. As a result of the research, they deduced that the working environment may assist individuals to understand themselves and enhance their ability to appreciate the need for emotional intelligence in the working environment and also that working within one type of environment may restrict the development of emotional intelligence skills, and that exposure to a variety of working environments may create the opportunity to enhance emotional intelligence levels.

Cook *et al.* (2011) examined the emotional intelligence of a total of 430 first- and fourth-year accounting and liberal arts students at three universities with accounting programs that include different liberal arts requirements. They also analyzed the relationship between four components of work experience and emotional intelligence. Their findings raised concerns for accounting program development and provide guidance for those seeking to facilitate relevant work experiences for students.

Nicholls *et al.* (2012) purposed to examine the ability of subjects studying accounting at a Canadian University to purposely alter their results on two of the most frequently used emotional intelligence tests (Emotional Quotient Inventory and the Mayer-Salovey-Caruso Emotional Intelligence Test). They found that subjects can purposely change their emotional intelligence score to fit the job description and also concluded that neither instrument was clearly better than the other was in the hiring process and both required revision as potential applicants were able purposely to alter their scores.

### **3. Methodology**

Survey method has been used as data collection technique in the study aiming to determine the impact of emotional intelligence on the success in accounting subject. The surveys prepared have been applied on students attending to accounting classes in two different state universities in Turkey. The surveys have been completed by giving 15 minutes to students.

The survey has two main sections. The first section had questions regarding to the demographical characteristics of the students, and the second section had questions for determining emotional intelligence of accounting students; the questions in both sections were prepared by using five point likert scale (1=strongly disagree and 5=strongly agree). Also the Emotional Quotient Inventory developed by Bar-On (1997) was used in the survey. Cronchbach Alpha test was used for determining the reliability of the results of the survey scale. Alpha value of the all questions in survey scale was found to be 0.901, therefore it has been concluded that the survey scale was reliable. Accordingly, the impact of emotional intelligence of accounting students on the success in accounting subject has been determined by SPSS 16.0 program.

#### 4. Research Model

In this study aiming to determine the impact of emotional intelligence of accounting students on academic achievement, the Emotional Quotient Inventory developed by Bar-On (1997) was used in the survey. The form including 88 articles adapted into Turkish by Acar (2001) from this scale was used in the study. Article numbers of the components and sub-components of the scale and scale questions have been given in the Table 1. As it can be seen in the Table, Bar-On Emotional Quotient Inventory has five components and fifteen sub-components (Yılmaz, 2007).

*Self-awareness* is the component regarding to self-assessment of individual. *Interpersonal Relationship* is the component measuring interpersonal skills and functions. *Adaptability* is the component where individual analyzes problematic situations and discovers how to handle environmental demands. *Stress management* is the component related with controlling emotions. *General mood* is the component measuring individual's perspective on life and satisfaction level.

By the components and sub-components of the scale used, the impact of emotional intelligence levels of the students participated in the study on the success in accounting subject has been measured by means of the model shown in the Figure 1.

#### 5. Empirical Results

General information about respondents participated into the study survey has been given in the Table 2.

As seen in Table 2, more than half of the students attending to the study are female. Participation from the university "A" is higher than the university "B". Also, the number of students having Grade Point Average over 2.00 is higher than those below 2.00. In addition, the rate of students interested in the accounting is higher than those who are not interested. Mean Accounting Passing Grade considered as the criteria for the success in accounting has been found as 44.3 in the study.

The correlation analysis was performed first in the study for "Self-Awareness", "Interpersonal Relationships", "Adaptability", "Stress Management", and "General Mood" which are the five components of Emotional Intelligence and the relationship among these components were evaluated. The results of the correlation analysis are given in the Table 3.

As seen in Table 3, a positive relationship has been seen between five main components of the emotional intelligence. It can be said that it is an expected result. Within the context of the result obtained, it can be said that the interaction between the components is in a positive way and any change that may occur in a component will cause other components to change in that way.

A regression analysis was performed in order to determine the impact of emotional intelligence on accounting subject for the purpose of this study. The equation of the regression analysis performed to identify the level of change on components has been improved as below:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_{15} X_{15} + \varepsilon$$

$Y_i$ : Accounting Passing Grade

$X_1, X_2, \dots, X_{15}$ : Sub-components of emotional intelligence

The results of the regression analysis have been given in the Table 4.

R coefficient showing the relationship between the dependent variable and independent variable was found to be 0.394. Also the value of  $R^2$  showing how much change in dependent variables is explained by the change in independent variables was found to be 0.155.

The results given in Table 5 suggest that the clarity of regression model is statistically significant. Unilateral variance analysis results of regression model were found to be 0.05, which were considered statistically significant.

In Table 6, "B" shows the impact of an independent variable on a dependent variable by stabilizing the impact of other independent variables (Altunışık *et al.*, 2010: 239). According to the model established, it has been observed that sub-components such as IND, REALITY, SOCIAL, FLEXIBILITY and PROBLEM have significant impact on the success in accounting subject. The result of the model can be formulated as below:

$$AGP = 56,052 - 0,230 IND - 0,238 REALITY + 0,235 SOCIAL - 0,204 FLEXIBILITY + 0,184 PROBLEM$$

According to these results obtained, it has been found that “Social Responsibility” and “Problem Solving” sub-components have a positive impact while “Independence”, “Self-Actualization” and “Flexibility” sub-components have a negative impact on the success of students in accounting subject.

## 6. Summary and Concluding Remarks

Emotional intelligence described as the ability to respond emotions and behaviors timely and properly is an inseparable part of the interpersonal relationships through physical and spiritual health. Therefore, many academic studies were carried to measure emotional intelligence, to adapt into business life and to find out its importance during the educational process of individuals. Although it is possible to see many studies researching emotional intelligence in educational sciences, there is limited number of studies on accounting education.

In this study, it has been aimed to determine the importance emotional intelligence on accounting education. For the purpose of this study, the impact of emotional intelligence on the success in accounting subject was researched. Emotional Quotient Inventory developed by Bar-On (1997) was used in the study conducted in two different state universities in Turkey.

The study was conducted with the help of Emotional Quotient Inventory which has five main components as “Self-Awareness”, “Interpersonal Relationships”, “Adaptability”, “Stress Management”, and “General Mood” and fifteen sub-components.

According to the results obtained, the relationship among five main components is strong and positive. This shows that any change that may occur in any of main components will cause also other components to change in the same direction.

The results of accounting exams were considered as an achievement criterion in the study and the impact of emotional intelligence on the success in accounting subject was measured by a regression model. When establishing the regression model, emotional intelligence was included into the model at the level of sub-components instead of main components in order to obtain more detailed results. The analysis showed that the sub-components “Independence”, “Self-Actualization”, “Social Responsibility”, “Flexibility” and “Problem Solving” affected the success in accounting subject at a significant level statistically.

Consequently, it has been determined that some of the components of the emotional intelligence are influential on the success in accounting. In this context, it can be said that the emotional intelligence is one of the variables which should be considered in accounting education.

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**Table 1:** Dimensions, Sub-Dimensions and Articles of Bar-On Emotional Quotient Inventory

<b>MAIN COMPONENT</b>	<b>SUB-COMPONENTS</b>	<b>ARTICLES</b>
<b>Self-Awareness</b>	<i>Independence</i>	22, 24, 47, 64, 73
	<i>Self-Actualization</i>	15, 17, 19, 21, 28, 35
	<i>Assertiveness</i>	7, 9, 20, 27, 39, 86
	<i>Self-Regard</i>	10, 14, 26, 44, 55, 69
	<i>Emotional Self-Awareness</i>	2, 9, 14, 38, 54, 84
<b>Interpersonal Relationship</b>	<i>Social Responsibility</i>	34, 43, 45, 48, 59, 79
	<i>Interpersonal Relationship</i>	16, 32, 42, 46, 57, 62, 67
	<i>Empathy</i>	25, 30, 49, 77, 81
<b>Adaptability</b>	<i>Flexibility</i>	18, 50, 58, 61, 71
	<i>Reality-Testing</i>	4, 12, 52, 56, 82
	<i>Problem-Solving</i>	1, 23, 33, 51, 87
<b>Stress Management</b>	<i>Stress Tolerance</i>	3, 6, 60, 63, 68, 75, 80
	<i>Impulse Control</i>	11, 29, 36, 41, 66, 70
<b>General Mood</b>	<i>Happiness</i>	37, 40, 54, 65, 72, 74, 83
	<i>Optimism</i>	31, 76, 78, 85

Figure 1 – Study Model

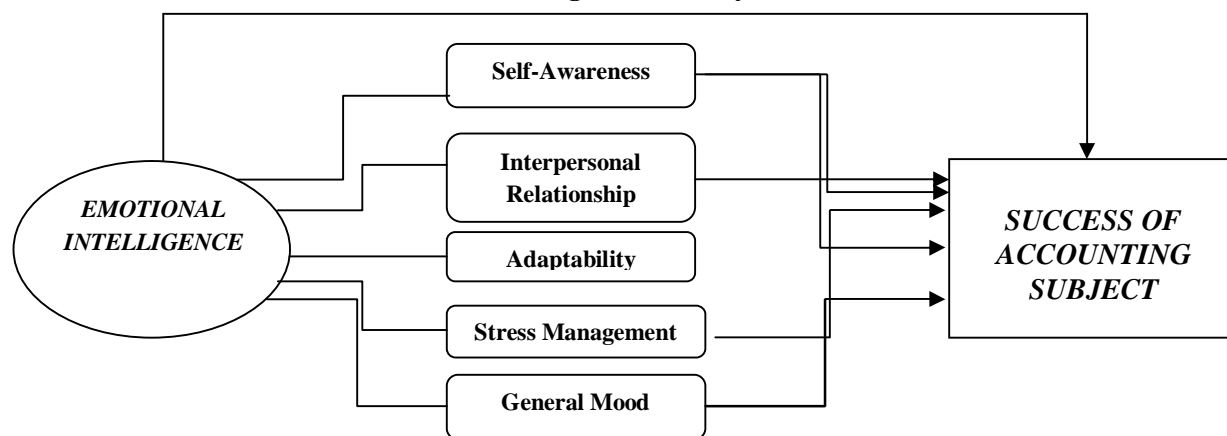


Table 2 – Descriptive Profile of Respondents

<b>Gender</b>	<b>N</b>	<b>%</b>	<b>University</b>	<b>N</b>	<b>%</b>
Male	59	33,3	A	124	70,1
Female	118	66,7	B	53	29,9
<b>Grade Point Average</b>	<b>N</b>	<b>%</b>	<b>Level of Interest</b>	<b>N</b>	<b>%</b>
< 1.00	8	4,6	Merely	17	9,9
1.01 – 1.80	28	16,2	Less	21	12,2
1.81 – 2.00	29	16,8	Medium	67	38,9
2.01 – 2.50	65	37,6	Much	38	22,1
2.51 – 3.00	30	17,3	Very Much	29	16,9
3.01 – 3.50	10	5,8	<b>Accounting Passing Grade</b>	<b>Mean</b>	
3.51 – 4.00	3	1,7		44,3	

Table 3 – Correlation between Main Components of the Emotional Intelligence

<b>Variables</b>	<b>AWARENESS</b>	<b>RELATIONSHIP</b>	<b>ADAPTABILITY</b>	<b>STRESS</b>	<b>MOOD</b>
<b>AWARENESS</b>	1				
<b>RELATIONSHIP</b>	0,619*	1			
<b>ADAPTABILITY</b>	0,469*	0,619*	1		
<b>STRESS</b>	0,410*	0,552*	0,430*	1	
<b>MOOD</b>	0,726*	0,672*	0,609*	0,518*	1

\*  $p < 0,01$

Table 4 – The Regression Analysis Model Summary Regarding to the Relationship between Emotional Intelligence and Accounting Passing Grade

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R<sup>2</sup></b>	<b>Std. Error of the Estimate</b>
1	0,394	0,155	0,068	20,746

Table 5 – ANOVA Test Result Regarding to the Validity of Regression Analysis

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>p</b>
1	Regression	11457,803	15	763,854	1,775**	0,043
	Residual	62406,535	145	430,390		
	Total	73864,338	160			

\*\* $p < 0,05$

**Table 6** – Coefficients of Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
<b>1</b> (Constant)	<b>56,052</b>	18,379		3,050	,003*
IND	-6,419	2,714	<b>-,230</b>	-2,365	,019**
ACT	-10,450	4,311	<b>-,238</b>	-2,424	,017**
ASSERT	2,910	4,433	,068	,656	,513
SELF-REG	-6,605	4,709	-,170	-1,403	,163
EMOTION	6,189	4,708	,141	1,315	,191
SOCIAL	10,459	4,560	<b>,235</b>	2,293	,023**
INTER-PERS	-2,555	5,614	-,052	-,455	,650
EMPATHY	-2,008	5,615	-,046	-,358	,721
FLEXIBILTY	-9,305	3,934	<b>-,204</b>	-2,365	,019**
REALITY	3,654	3,567	,095	1,024	,307
PROBLEM	7,216	4,276	<b>,184</b>	1,688	,094***
STRESS	-,043	4,431	-,001	-,010	,992
IMPULSE	-,97	2,524	-,040	-,387	,699
HAPPY	,712	6,243	,014	,114	,909
OPTIMIST	1,724	3,887	,047	,444	,658

\*  $p < 0,01$  \*\*  $p < 0,05$  \*\*\*  $p < 0,10$