
EMOTIONAL INTELLIGENCE EFFECTS ON ACADEMIC PERFORMANCE. AN EMPIRICAL STUDY OF UNIVERSITY STUDENTS

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ABSTRACT

The relationship between Emotional Intelligence (EI) and Academic Performance, although investigated in previous studies, has failed to yield consistent findings raising the need for further study. The purpose of this study is to further illuminate the link between EI and student scholastic achievements, closing the gap in the extant literature. Furthermore, the gender differences were investigated in regard to possible differences of EI and its facets and their respective relationship to performance. The 30-item Likert scale questionnaire used, was completed close to 600 university students who were asked to respond to the 30 EI-related questions and report their GPA, both the actual and the one they perceived they deserved. A regression analysis was used to determine the explaining power of EI over the student performance. The results indicate that there

is a statistically significant relationship between EI, overall as well as two of its facets with academic performance. Furthermore, gender differences were also found in self-control and emotionality. The implications of this study for educators and academic policy makers are considerable, since the systematic fostering of EI in students could lead to greater educational outcomes and more effective institutions

Key Words: Emotional Intelligence, Academic Performance, University Students

INTRODUCTION

Emotional Intelligence (EI) studies abound, since the popularizing of the concept by Goleman (1995) in the mid- 90's, examining the relationship of the concept with various personal as well as organizational outcomes (Karim, J. Bibi, Z. Rehman, S. and Khan, M, 2015); Jordan & Troth, 2011). The research on EI followed two diverging streams the Trait EI and the Ability EI. Among the leading scholars in the Trait EI approach Petrides and his associates define EI as "a constellation of behavioral dispositions and self-perceptions concerning one's ability to recognize, process, and utilize emotion-laden information." (Petrides & Furnham, 2003, p. 278). Trait EI is typically studied through self-reports along with other personality traits. Ability EI refers to "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189). Ability EI is measured through performance based questionnaires, in a similar way to the cognitive ability measurement (Mayer, Salovey, & Caruso, 2000). The ability EI approach is particularly challenging since it requires the construction of relevant items that can be objectively scored as correct or incorrect, posing thus measurement problems. Trait EI, on the other hand is relatively easy to use and it has been used by several researchers in the literature (Bar-On, 1997; Schutte et al., 1998; Petrides & Furnham, 2001; Petrides et al., 2016). Various researches have well-documented the empirical differences between the two approaches (Warwick & Nettelbeck, 2004). Although the two streams use different operationalization of their constructs both have shown strong predictive ability in regards to numerous academic, career, and life outcomes (Petrides et al., 2016; Amdurer, Boyatzis, Saatcioglu, Smith, & Taylor, 2014). The present study mainly concerns the first stream, that is, trait EI.

Several researchers endeavored to examine the relationship between trait EI and ability EI with academic achievement, investigating in parallel EI relationship with factors impeding or fostering student performance such problem-solving skills (Salovey, Mayer, Caruso, & Yoo, 2008), year retention at the university level (Qualter, Whiteley, Morley, & Dudiak, 2009), psychological wellbeing (Salami, 2011), quality of interpersonal relationships (Afolabi, Okediji and Ogunmwonyi, 2009) and Academic Achievement measured by standardized test scores, grade point average on graduation (Fernández, Salamonson, & Griffiths, 2012; Hogan et al., 2010; Keefer, Parker, & Wood, 2012; MacCann et al., 2011; Perera & Diggicommo, 2013). The influence of EI, as a facilitator, within academic domains has mostly been attributed to student abilities to manage the complexities of the social-emotional environment of academic environments (Matthews, Zeidner, & Roberts, 2002). More specifically, EI has been linked to psychological constructs that are believed to directly or indirectly contribute to academic success — such as need for achievement (Afolabi et al., 2009), adaptive coping strategies (MacCann et al., 2011; Tugade & Frederickson, 2008), and positive peer interactions (Mavroveli, Petrides, Rieffe, & Bakker, 2010; Petrides et al., 2008; Perera & Diggicommo, 2013).

TRAIT EI AND ACADEMIC PERFORMANCE

Trait EI in general refers to various affective personality traits, related to typical behavioural patterns, feelings and thoughts, associated with self-control and self-motivation dispositions. (Perera & Diggicommo, 2013; Petrides, 2011; Petrides, Furnham, & Mavroveli, 2007). Studies have shown that the EI trait is genetics-related, with the latter explaining variation at levels of between 20% and 80%, co-varying with other super-factors, such as the Big Five (Perera & DiGiacomo, 2013). Performance in occupational and educational settings is typically influenced by the ability to perform or achieve (Blumberg & Pringle, 1982; McKenzie, Gow, & Schweitzer, 2004; Mouw & Khanna, 1993). Ability to perform is indicative of intelligence, skills and competences, while willingness to achieve centers on motivation, initiative and determination. Students with high EI trait are achievement oriented, and that leads them to set academic goals in order to attain superior academic outcomes (Mount, Barrick, & Strauss, 1999). The determination of these students generates greater commitment to achieving their academic goals. One would expect then that high trait EI students would perform academically better than their low trait EI counterparts. In addition, relating to a student's proclivity to low impulsiveness (Petrides, 2009, 2011), students with a high EI trait will tend to delay momentary gratification in the service of environmental

demands and pursuit of established goals (Petrides, 2009). Low trait EI individuals, contrariwise, strongly tend toward impulsivity, yielding to the temptation of immediate gratification (Petrides, 2009; Petrides et al., 2004). In the words of Perera & DiGiacomo, (2013, p. 9) “To the extent that individuals set academic goals, which is typical of those with high trait EI, dispositional self-control tendencies may promote goal-approach and temptation avoidance in the service of maximising academic outcomes.”

It follows from the above that there are compelling reasons to further pursue an inquiry, into the relationship of EI with Academic Performance, in spite of the “inconsistent findings” reported in various studies (Mavroveli et al., 2007; Newsome, Day καὶ Catano (2000); Mavroveli & Sánchez-Ruiz, 2011). The purpose of this study then, is to investigate the relationship of trait EI with academic performance in the setting of a Greek university. No other studies with a similar sample have been conducted in Greece, to our knowledge and that is the contribution of our effort.

METHODOLOGY

The research was conducted in a large university in the area Athens, and it included students from a variety of schools and departments. In the period between October 2016 and February 2017, we invited the student population of the university to complete the online questionnaire we had set up and communicated it to them by electronic means. The respondents were 648, ranging in ages between 18 and 36. The questionnaire used in the present study TEIQue (Trait Emotional Intelligence Questionnaire) has been developed and tested widely by Petrides & Furnham, (2001) and Petrides, Pita and Kokkinaki (2007), among other researchers and it is considered to be among the most valid in the trait EI approach in the extant literature. Petrides & Furnham, (2001), proposed the measurement of EI with the use of 15 characteristics, which could then load on four factors:

- Wellbeing
- Self-control
- Emotionality
- Sociability

To avoid potential translation problems we used the Greek version of the EI instrument available by Petrides, Pita & Kokkinaki, (2007). The questionnaire used in this study is the 30-item short form

which is a concise form of the original 153-item one used originally by the authors above. After a number of tests Petrides et al., (2007), concluded that the short version is almost as effective as the long one, while at the same time it offers brevity and maintains the answering persons' attention.

The respondents were asked to complete the 7-grade Likert scale indicating agreement with the statement, while there were a number of reverse scored questions (7, 9, 10, 12, 13, 15, 17, 18, 19, 21, 23, 27, 30, 31, 33).

SPSS (Statistical Package for Social Sciences) 20.0 was used for the data analysis.

To measure Academic Performance, we used three different measures, the grade point average (GPA) which is used elsewhere in the literature, the GPA, "I deserve", to discern potential differences with the actual one, and to foster the respondents to be honest in disclosing their grades and a third one depicting the most recent performance of the student the GPA of the latest semester (Fernández, Salamonson, & Griffiths, 2012; Hogan et al., 2010; Keefer, Parker, & Wood, 2012; MacCann et al., 2011).

RESULTS

The statistical analysis produced the following EI scores for each of the factors of EI

Table 1. Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Self-control	648	25,22	4,063	11	39
Well-being	648	26,95	3,568	16	42
Sociability	648	26,18	3,687	15	36

Emotionality	648	29,72	5,162	16	51
Total EI	648	124,42	11,588	91	186

We subsequently conducted a t-test to detect possible differences between the sexes.

Table 2. T-Test Independent Samples (Male-Female)

	<i>Levene's Test for Equality of Variances</i>		<i>t-test for Equality of Means</i>				
	<i>F</i>	<i>Sig.</i>	<i>T</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>
<i>Self-Control</i>	,707	,401	-1,844	407	,066	-,721	,391
			-1,830	373,840	,068	-,721	,394
<i>Well-being</i>	,263	,608	-1,754	407	,080	-,641	,366
			-1,755	386,993	,080	-,641	,365
<i>Sociability</i>	,494	,483	-1,729	407	,085	-,642	,371
			-1,736	391,587	,083	-,642	,370

<i>Emotionality</i>	2,014	,157	,135	407	,893	,072	,533
			,137	404,263	,891	,072	,524
<i>General EI</i>	,051	,822	-1,695	407	,091	-1,948	1,149
			-1,702	392,566	,089	-1,948	1,144

No significant differences are reported between the sexes, in all of the EI factors and the Total EI as well. This is not surprising since in previous studies only one has reported a significant difference between genders (Mayer et al. (2000) and Schutte et al (1998).

In order to test the relationship of EI with the GPA (our main measure of Academic Performance) we used a three-way split of the GPA scores: Low GPA (5.0-6.49), Medium (6.5-7.9), and High (8-10)

Table 3. ANOVA

		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>Self-control</i>	<i>Between Groups</i>	30,508	2	15,254	,924	,398
	<i>Within Groups</i>	10649,492	645	16,511		
	<i>Total</i>	10680,000	647			
<i>Well-being</i>	<i>Between Groups</i>	11,754	2	5,877	,461	,631
	<i>Within Groups</i>	8224,462	645	12,751		
	<i>Total</i>	8236,216	647			

	<i>Between Groups</i>	17,389	2	8,695	,639	,528
<i>Sociability</i>	<i>Within Groups</i>	8777,845	645	13,609		
	<i>Total</i>	8795,235	647			
<i>Emotionality</i>	<i>Between Groups</i>	34,048	2	17,024	,638	,529
	<i>Within Groups</i>	17207,272	645	26,678		
	<i>Total</i>	17241,319	647			
<i>General EI</i>	<i>Between Groups</i>	343,531	2	171,766	1,280	,279
	<i>Within Groups</i>	86532,296	645	134,159		
	<i>Total</i>	86875,827	647			

Table 3 (One-way ANOVA .indicates no relationship between the EI factors and performance measured by the GPA. The findings of the present study are in agreement with earlier finding reported in related research and they should not come as a surprise (Newsome, Day & Catano, 2000; O' Connor & Little, 2003, Jaeger, Bresciani & Ward, 2003; Lyons & Schneider, 2005; Bastian, Burns & Nettekbeck, 2005; and Vishwanathan, 2008).

DISCUSSION AND CONCLUSIONS

A large number of studies suggest that EI relates to work performance. Occupational success, in a similar way to academic achievement is linked to setting reasonably high goals and achieving them, so as to experience the sense of accomplishment and at the same time avoiding the unpleasant experience of not attaining one's goals. We expected that in the face of diverging findings reported by researchers heretofore, we will lend further support to the notion that EI does have a positive

effect on student performance and the student support mechanisms in universities can actually help students improve their academic standing by adapting to the particularities of the local environment, helping them handle relationship problems and overall manage potential affective deficiencies.

The results of our study nevertheless do not support our expectations. According to Perera & DiGiacomo, (2013) it is possible that the use of any of the other two widely used instruments, i.e., Bar-On Emotion Quotient Inventory [EQ-i] and Schutte Emotional Intelligence Scale [SEIS], could lead to different outcomes as compared to TEIQue. Another possibility also is that the use of the long version of the instrument could result to other conclusions. The role of moderators which did have a role in the Petrides et al., (2004), study, has not been investigated in this study and it could potentially be an important limitation of it. Moderating variables such as age of the respondents, year of study, along with the instrument used could be important factors affecting the outcomes of the study and they may be taken into account in future studies.

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