Impact of emotional intelligence on academic performance

Beatrice Mihaela Radu
Tudor Timplarescu
Alexandra Maria Coporan

Abstract: *Emotional intelligence (EI) is an important skill in management and leadership, that defines the ability of one person to manage his own emotions and to understanding/empathies with the emotional states of other persons. There are five characteristics of EI: self-awareness, self-regulation, motivation, empathy, and social skills. The goal of our study is to analyze the impact of EI on the academic performance (AP). To achieve this purpose, we used an online questionnaire mainly distributed in 3 universities (The Bucharest University of Economic Studies, University of Bucharest and Politehnica University of Bucharest) and 300 students responded in March 2024. Using JASP software, we determined correlation coefficients between EI, self-assessed AP, and demographic/academic variables. Students with higher social skills have a better contextual performance, and those motivated have a better task performance. PhD students have a better self-awareness than undergraduates and graduates and higher motivation than undergraduates. Male students manage better their emotions than female students. No statistically significant changes of EI components were determined for "fellowship", "success in exams" or "field of study". In conclusion, EI is a relevant impact on AP, but the standard view of performance should be reconsidered.*

Keywords: emotional intelligence, motivation, emotional self-regulation, academic performance.

Rezumat: *Inteligenţa emoţională (IE) este o abilitate importantă în management şi leadership, care defineşte capacitatea unei persoane de a-şi gestiona propriile emoţii şi de a înţelege/empatiza cu stările emoţionale ale altor persoane. IE are 5 caracteristici: conştientizarea de sine, autoreglementarea, motivaţia, empatia şi abilităţile sociale. Scopul studiului este de a analiza impactul IE asupra performanţei academice (PA). Pentru atingerea acestui obiectiv, am folosit un chestionar online distribuit în principal în trei universităţi (Academia de Studii Economice Bucureşti, Universitatea Bucureşti şi Universitatea Politehnica Bucureşti) la care au răspuns 300 de studenţi în perioada martie 2024. Folosind software-ul JASP, am determinat coeficienţi de corelaţie între IE, PA autoevaluată şi parametri demografici/academici. Studenţii cu abilităţi sociale mai înalte au o performanţă contextuală mai bună, iar cei mai motivaţi au o performanţă crescută în sarcină. Doctoranzii au o conştiinţă de sine mai mare decât studenţii la licenţă şi la masterat, şi o automotivare mai bună decât studenţii la licenţă. Studenţii de gen masculin îşi gestionează mai bine emoţiile decât studenţii de gen feminin. Nu au fost rezultat diferenţe semnificative statistic ale componentelor IE în funcţie de "bursă", "restanţe" sau "domeniu de studiu". În concluzie, IE are un impact relevant asupra PA, dar viziunea standard asupra performanţei ar trebui reconsiderată.*

Cuvinte cheie: inteligenţă emoţională, motivaţie, gestionarea emoţiilor, performanţă academică.

JEL Classification: I23, I21, D91, D83, J24.

1. Introduction

Academic performance (AP) is an essential aspect in the educational process in universities. In general, students' AP is considered to be a basic indicator in the evaluation of the of a university AP. The individual AP of students is most often quantified either by grades at the end of individual courses, years of study or study cycles. Students' AP is a component in the analysis of a university AP as a whole. AP is a relevant criterion used in the positioning of various universities in national and international metarankings. Therefore, it is relevant to identify the best predictors of academic success in order to maximise the potential of students and to develop the most appropriate educational tools that optimise those components that would ensure future success in their career.

The most influential predictors of academic success are considered: previous academic achievements, demographic aspects, student environment, psychological aspects, etc. (Kuh et al., 2006). In addition, recent studies propose emotional intelligence (EI) as an important indicator of academic success (MacCann et al., 2020; Quílez-Robres et al., 2023; Zapata et al., 2023). In this context, the present study assumes that EI has an impact on academic success and tries to analyze

the contribution of several demographic and academic factors to AP. Considering university education in Romania, the study tries to cover several important fields of study, socio-economic, biomedical and technical.

2. Emotional intelligence and its impact on academic performance

Daniel Goleman proposed the term "emotional intelligence" (EI) (Goleman, 2020), having five components: ▪ *Self-awareness*. The ability to recognize what you are feeling, to understand your habitual emotional responses, and to recognize how emotions affect your own behavior and performance. ▪ *Managing emotions*. The ability to stay focused and think clearly even when experiencing strong emotions. ▪ *Self-motivation*. The ability to use one's emotions to achieve goals. ▪ *Empathy*. The ability to feel, understand and respond to what other people feel. ▪ *Social skills*. The ability to manage, influence and inspire the emotions of others.

There is an important difference between intelligence quotient (IQ) and the emotional quotient (EQ). To detail, IQ is a score that measures a person's intellectual capacity (e.g. mathematical reasoning, verbal reasoning, spatial awareness etc.) and is commonly believed to be a predictor of academic and professional success. However, EQ that describes the ability of one person to understand, manage and express emotions, is just as important as IQ in determining success in various aspects of life, including relationships, work, and overall well-being.

EI plays a crucial role in AP. Several studies have investigated and demonstrated the impact of EI on academic achievement in primary school (Arias, Soto-Carballo & Pino-Juste, 2022), in secondary education (Thapa, 2023) and in university education (Chew, Zain & Hassan, 2013; MacCann et al., 2020; Gupta, Parimal & Narang, 2023).

In particular, EI enables students to manage stress and anxiety related to exams or academic tasks and to develop positive relationships with their teachers and peers, which can facilitate collaboration, mutual learning and foster engagement (Romanelli, Cain & Smith, 2006; Gupta, Parimal & Narang, 2023). A recent meta-analysis analyzed the degree to which student EI is associated with AP and found an overall effect of $\rho = 0.20$ based on 158 citations (MacCann et al., 2020). A significant correlation is found between EI and AP, especially when using instruments that assess EI through abilities, compared to those based on self-report (Sánchez-Álvarez, Berrios Martos & Extremera, 2020). Students' EI has a positive impact on learning motivation and self-efficacy, even in the online environment (Chang & Tsai, 2022). Contradictory opinions have been reported on the existence or not of gender differences in EI levels, a possible explanation being the application of differentiated educational strategies due to stereotypes (Romanelli, Cain & Smith, 2006). The impact of EI on PA has been highlighted in multiple areas, e.g. biomedical, economic, technical (Romanelli, Cain & Smith, 2006; Chew, Zain & Hassan, 2013; Patil, Patil & Patil, 2023).

Corroborating these information a deeper understanding of EI impact on students' AP is very important and a comparative analysis between different domains of study is relevant. Therefore, our study considers the self-assessment of EI and AP of students from all university cycles (bachelor, master and doctorate degree) that are enrolled in different universities and in multiple domains of study.

3. Methodology

The aim of this paper is to analyze the impact of EI on AP by verifying some correlations between EI dimensions, contextual and task performance, grouped according to demographic/academic parameters.

3.1 Research hypotheses

In order to achieve the proposed goal, we formulated the following assumptions:

Hypothesis 1. The higher the level of students' EI, the higher their performance in the academic context and/or in the specific learning tasks.

Hypothesis 2. Students from a more advanced study cycle have more developed EI.

Hypothesis 3. Scholarship students have a higher level of EI than other students.

Hypothesis 4. Students that passed all exams have a higher EI level than other students.

Hypothesis 5. Female students have higher EI than male students.

Hypothesis 6. Students from the socio-economic field have higher EI compared to those from the technical or biomedical field.

3.2 Participants

The study was conducted on a number of 303 participants, of which only the responses of 300 participants were kept for further analysis (3 responses were eliminated as they did not have precise data on the students' affiliation). The participants are aged between 18 and 48 years, with an average value of 22.86 ± 5.18. The gender ratio was 3:1, 67% female and 32.7% male. The distribution according to the study cycle was 66% bachelor's degree, 21% master's degree and 13% doctorate. Of these, 33% have a scholarship (study, merit or performance) and 67% do not have a scholarship, instead only 24% passed all exams, while 76% missed some exams. Part of the students are employed 39%, while 61% are not employed. Also, the study participants are divided into 29% who volunteer, 71% who do not volunteer, and 20% who are part of student associations, 80% who are not part of student associations.

3.3 Instruments

The study is based on the use of two scales.

3.3.1 EI scale

We used a standardized tool by the NHS (National Health Service) (Emotionnal Inteligence Questionnaire, n.d.) for the assessment of EI which contains 50 items grouped into: self-awareness (items 1, 6, 11, 16, 21, 26, 31, 36, 41, 46), managing emotions (items 2, 7, 12, 17, 22, 27, 32, 37, 42, 47), self-motivation (items 3, 8, 13, 18, 23, 28, 33, 38, 43, 48), empathy (items 4, 9, 14, 19, 24, 29, 34, 39, 44, 49), social skills (items 5, 10, 15, 20, 25, 30, 35, 40, 45, 50). The scale is between 1 and 5: "1" - does not apply at all, "2" - rather does not apply, "3" - neutral (applies in about 50% of cases), "4" - rather applies, "5" - always applies. The Cronbach α internal consistency coefficients are: self-awareness (0.714), emotion management (0.724), self-motivation (0.798), empathy (0.734), social skills (0.740).

3.3.2 Performance scale

We used scale 430 (Research Central, 2022), Goodman and Svyantek's Performance Rating Scale, and adapted it to academic performance. The scale contains 16 items and measures the perception of performance in the task (items 2, 4, 6, 8, 10, 12, 14, 15, 16) and contextual (items 1, 3, 5, 7, 9, 11, 13, 39, 44, 49). The Cronbach α internal consistency coefficients are: contextual performance (0.747), task performance (0.894).

3.3.3 Study design and work protocol

The study design is non-experimental, transversal and exploratory. The study involves the use of an online questionnaire (Google Forms) during March 2024. The questionnaire is structured in 3 sections: (i) section 1 contains questions regarding the general data of the participants (age, gender, university, faculty, study cycle, scholarship, arrears, employment, volunteering and

membership in student associations); (ii) section 2 contains questions on EI; (iii) section 3 contains questions regarding self-assessment of task and contextual performance. It was distributed on Whatsapp and Facebook groups, and the data was collected for 2 weeks. The participants were not financially motivated to answer the questionnaire. Participation was voluntary, without a time limit, and the confidentiality of the data and answers was ensured, as the e-mail addresses or the names/surnames of the respondents were not collected. In the introductory part of the questionnaire, the participants were informed about the purpose of the study and the average duration of completion, and they were asked to agree to participate in the study. The questions in the online form were completed by all participants in the same order and all items were mandatory. In section 1 of general data, 3 items (age, university and faculty) allowed free completion of the information, in the rest all other items only allowed the selection of a single option. Partial completion of the questionnaire was not allowed.

4. Results

4.1 Descriptors

The statistical analysis of IE components and performance was performed (Table 1). The values of skewness and kurtosis fall within the range [-0.7; +0.7] for all variables. The Shapiro-Wilk test shows that none of the variables has a normal distribution ($p < 0.05$). Thus, non-parametric methods will be applied to test the hypotheses.

Table 1

Descriptive statistics on EI and performance parameters

	Self-awareness	Managing emotions	Self motivation	Empathy	Social skills	Contextual performance	Task performance
N	300	300	300	300	300	300	300
Mean	39.330	31.467	34.317	38.197	35.820	20.393	27.173
SD	5.262	5.527	6.462	5.135	5.832	3.984	5.588
Skewness	-0.384	-0.176	-0.364	-0.126	-0.214	-0.331	-0.397
SE skewness	0.141	0.141	0.141	0.141	0.141	0.141	0.141
Kurtosis	0.055	0.239	-0.272	-0.340	-0.506	-0.233	-0.292
SE kurtosis	0.281	0.281	0.281	0.281	0.281	0.281	0.281
Shapiro-Wilk	0.986	0.989	0.984	0.990	0.987	0.982	0.972
P Shapiro-Wilk	*0.005*	*0.020*	*0.002*	*0.040*	*0.009*	*<0.001*	*<0.001*
Min	21.000	16.000	15.000	22.000	22.000	8.000	10.000
Max	50.000	49.000	47.000	50.000	50.000	28.000	36.000

Source: Authors' own research

4.2 Testing hypotheses

4.2.1 Hypothesis 1. The higher the level of students' EI, the higher their performance in the academic context and/or in the specific learning tasks

The higher the students' EI level, the higher their performance in the academic context and/or in the specific learning tasks. Considering that the distribution of the variables is not normal, the Spearman correlation coefficients were calculated.

The hypothesis was confirmed. For all 5 components of EI there are statistically significant positive correlations ($p < 0.001$) with the 2 components of contextual and task performance (Table 2). Contextual performance has a strong positive correlation (Spearman correlation coefficient 0.552) with social skills. Task performance has a strong positive correlation (Spearman correlation coefficient 0.606) with self-motivation.

Table 2

Spearman correlations between EI and academic performance parameters

Variable		Self-awareness	Managing emotions	Self-motivation	Empathy	Social skills	Contextual performance	Task Performance
Self-awareness	*Rho*	—						
	P	—						
Managing emotions	*Rho*	0.429	—					
	P	*<0.001*	—					
Self motivation	*Rho*	0.452	0.552	—				
	P	*<0.001*	*<0.001*	—				
Empathy	*Rho*	0.626	0.344	0.414	—			
	P	*<0.001*	*<0.001*	*<0.001*	—			
Social skills	*Rho*	0.500	0.352	0.461	0.624	—		
	P	*<0.001*	*<0.001*	*<0001*	*<0.001*	—		
Contextual performance	*Rho*	0.293	0.231	0.348	0.427	**0.510**	—	
	P	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	—	
Task performance	*Rho*	0.244	0.304	**0.606**	0.279	0.327	0.578	—
	P	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	*<0.001*	—

Source: Authors' own research

4.2.2 Hypothesis 2. Students from a more advanced study cycle have more developed EI

The hypothesis is confirmed only for the variables "self-awareness" and "self-motivation". The Kruskal-Wallis test regarding the differences in motivation between study cycles is statistically significant $p < 0.05$ for "self-awareness" and "self-motivation" (Table 3). Dunn's post-hoc analysis regarding the differences in self-awareness between study cycles, demonstrates a statistically significant difference between doctorate and bachelor's degree ($p < 0.05$), respectively between doctorate and master's degree ($p < 0.05$) (Table 4). Dunn's post-hoc analysis regarding the differences in "self-motivation" between the study cycles, demonstrates a statistically significant difference between the doctorate and the bachelor's degree ($p < 0.05$) (Table 5). Thus, the more advanced the students are in an educational cycle, the more self-awareness and self-motivation they have.

Table 3

Kruskal-Wallis test regarding EI dependence on the study cycle

Variable	Factor	Statistics	Df	P
Self-awareness		10.077	2	*0.006*
Managing emotions		0.124	2	0.899
Self-motivation	Study cycle	6.632	2	*0.036*
Empathy		6.632	2	0.772
Social skills		0.902	2	0.637

Source: Authors' own research

Table 4

Dunn *Post Hoc* comparisons regarding differences in "self-awareness" between study cycles

Comparisons	z	W_i	W_j	P	p_{bonf}	p_{holm}
PhD vs Bachelor	3.118	191.551	144.247	0.002	0.005	*0.005*
PhD vs Master	2.653	191.551	144.738	0.008	0.024	*0.016*
Bachelor vs Master	-0.039	144.247	144.738	0.969	1.000	0.969

Source: Authors' own research

Table 5

Dunn *Post Hoc* comparisons regarding differences in "self-motivation" between study cycles

Comparisons	z	W_i	W_j	P	p_{bonf}	p_{holm}
PhD vs Bachelor	2.378	178.103	142.010	0.017	0.042	*0.042*
PhD vs Master	1.020	178.103	160.095	0.308	0.923	0.308
Bachelor vs Master	-1.443	142.010	160.095	0.149	0.447	0.298

Source: Authors' own research

4.2.3 Hypothesis 3. Scholarship students have a higher level of EI than other students

The hypothesis is not verified; For none of the 5 components of the EI, no statistical significance is obtained between the group with and without a scholarship by the Mann-Whitney test (Table 6a; Table 7). On the other hand, statistical significance is obtained for contextual performance ($p = 0.009$) and task performance ($p < 0.001$) (Table 6b; Table 7). Thus, the scholarship students have an increased performance both contextually and, in the task, but they do not have a different EI from the other students.

Table 6a

Descriptive statistics of EI components depending on "scholarship"

	Self-awareness		Managing emotions		Self motivation		Empathy		Social skills	
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
N	98	202	98	202	98	202	98	202	98	202
Mean	39.50	39.25	32.05	31.18	34.92	34.02	38.35	38.12	35.56	35.95
SD	5.43	5.19	5.55	5.50	6.41	6.48	5.19	5.12	5.67	5.92
Min	24	21	19	16	18	15	26	22	22	22
Max	50	50	49	48	47	47	48	50	50	48

Source: Authors' own research

Table 6b

Descriptive statistics of academic performance depending on "scholarship"

	Contextual performance		Task performance	
	YES	NO	YES	NO
N	98	202	98	202
Mean	21.26	19.97	29.42	26.08
SD	4.03	3.90	5.37	5.37
Min	8	8	11	10
Max	28	28	36	36

Source: Authors' own research

Table 7

Mann-Whitney test for EI components and performance depending on "scholarship"

Variable	W	P
Self-awareness	10,015.5	0.868
Managing emotions	10,784.5	0.208
Self-motivation	10,552.5	0.353
Empathy	10,185.5	0.683
Social skills	9,291.0	0.389
Contextual performance	11,734.0	*0.009*
Task performance	13,481.0	*<0.001*

Source: Authors' own research

4.2.4 Hypothesis 4. Students that passed all exams have
a higher EI level than other students

The hypothesis is not verified for 4 components of EI (self-awareness, managing emotions, empathy, social skills). Using the Mann-Whitney test, statistical significance is obtained between the group with all passed exams and without all exams, for self-motivation ($p = 0.002$), for contextual performance ($p < 0.001$) and task performance ($p < 0.001$) (Table 8a, Table 8b; Table 9). Students with all passed exams have stronger motivation and have increased contextual and task performance compared to other students.

Table 8a

Descriptive statistics of EI components depending on "all passed exams"

	Self-awareness		Managing emotions		Self-motivation		Empathy		Social skills	
	YES	**NO**	**YES**	**NO**	**YES**	**NO**	**YES**	**NO**	**YES**	**NO**
N	72	228	72	228	72	228	72	228	72	228
Mean	39.93	39.14	31.16	31.56	32.40	34.92	38.09	38.23	35.59	35.89
SD	5.24	5.27	5.88	5.42	6.20	6.44	4.89	5.22	6.26	5.70
Min	27	21	17	16	19	15	27	22	22	22
Max	50	50	48	49	46	47	50	50	48	50

Source: Authors' own research

Table 8b

Descriptive statistics of academic performance depending on "all passed exams"

	Contextual performance		Task performance	
	YES	**NO**	**YES**	**NO**
N	72	228	72	228
Mean	19.03	20.82	23.52	28.33
SD	3.83	3.94	4.584	5.382
Min	10	8	10	11
Max	28	28	35	36

Source: Authors' own research

Table 9

Mann-Whitney test for EI components and performance depending on "all passed exams"

Variable	W	P
Self-awareness	8,902.0	0.279
Managing emotions	7,796.5	0.521
Self-motivation	6,258.5	*0.002*
Empathy	7,956.5	0.695
Social skills	8,065.5	0.825
Contextual performance	5,972.5	*<0.001*
Task performance	3,893.0	*<0.001*

Source: Authors' own research

4.2.5 Hypothesis 5. Female students have higher EI than male students

The hypothesis is not confirmed. For 4 out of 5 components of IE, there are no statistically significant differences depending on gender. In the case of the variable "managing emotions" depending on "gender", statistical significance is obtained in the Mann-Whitney test ($p < 0.05$) (Table 11). Comparing the average values of the "managing emotions" variable, a value of 30.85 ± 5.65 is observed for female students compared to 32.73 ± 5.05 for male students (Table 10a). Also, there are no statistically significant differences in the contextual performance and the task performance according to gender (Table 10b; Table 11). Thus, contrary to the myth that women have higher EI than men, our study demonstrates that there are no such differences, and in the case of managing emotions, male students obtained higher scores.

Table 10a

Descriptive statistics of EI components depending on "gender"

	Self-awareness		Managing emotions		Self-motivation		Empathy		Social skills	
	F	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**
N	201	99	201	99	201	99	201	99	201	99
Mean	39.53	38.92	30.85	32.73	34.50	33.94	38.42	37.74	35.99	35.46
SD	5.29	5.19	5.65	5.05	6.69	5.98	5.21	4.98	5.92	5.66
Min	21	27	16	21	15	18	22	26	22	22
Max	50	50	48	49	47	47	50	50	50	47

Source: Authors' own research

Descriptive statistics of academic performance depending on "gender"

	Contextual performance		Task performance	
	F	**M**	**F**	**M**
N	201	99	201	99
Mean	20.54	20.10	27.54	26.42
SD	3.98	4.00	5.66	5.39
Min	8	8	10	11
Max	28	28	36	36

Source: Authors' own research

Mann-Whitney test for EI components and performance depending on "gender"

Variable	W	P
Self-awareness	10,833.5	0.210
Managing emotions	8,136.5	*0.010*
Self-motivation	10,668.5	0.309
Empathy	10,976.	0.146
Social skills	10,482.0	0.451
Contextual performance	10,561.5	0.385
Task performance	11,247.5	0.066

Source: Authors' own research

4.2.6 Hypothesis 6. Students from the socio-economic field have higher EI compared to those from the technical or biomedical field

The socio-economic profile (SE) includes students from the faculties of management, international relations, marketing, accounting, cybernetics, administration and business, psychology and educational sciences, history, art theory, journalism, law. The biomedical profile (BM) includes students from the faculties of medicine, dentistry, physical therapy and biology. The technical profile (T) includes students from the faculties of automatics and computers, robotics, installation engineering, medical engineering, physics, chemistry, geography.

The hypothesis is not confirmed. All 5 variables of EI do not have statistically significant differences depending on the "field of study". Regarding the task performance, there are no statistically significant differences depending on the "field of study". The Kruskal-Wallis test for task performance shows statistically significant differences depending on the "field of study" ($p = 0.005$) (Table 12c; Table 13). Dunn's *post-hoc* analysis for task performance shows statistically significant differences between the socio-economic field and the technical field ($p = 0.004$) (Table 14).

Descriptive statistics of EI components depending on the "field of study"

	Self-awareness			Managing emotions			Self-motivation		
	SE	**BM**	**T**	**SE**	**BM**	**T**	**SE**	**BM**	**T**
N	93	96	111	93	96	111	93	96	111
Mean	39.63	39.74	38.72	32.13	30.76	31.52	35.20	34.47	33.43
SD	4.76	5.41	5.51	5.44	5.70	5.42	5.67	6.81	6.71
Min	28	21	25	19	16	17	17	17	15
Max	50	50	50	48	42	49	45	47	47

Source: Authors' own research

Descriptive statistics of EI components depending on the "field of study"

	Empathy			Social skills		
	SE	**BM**	**T**	**SE**	**BM**	**T**
N	93	96	111	93	96	111
Mean	38.30	38.36	37.96	36.48	36.09	35.02
SD	4.81	5.51	5.10	5.90	5.93	5.64
Min	24	22	27	22	22	22
Max	48	50	50	48	50	46

Source: Authors' own research

Descriptive statistics of academic performance depending on the "field of study"

	Contextual performance			Task performance		
	SE	**BM**	**T**	**SE**	**BM**	**T**
N	93	96	111	93	96	111
Mean	20.74	20.51	20.00	28.44	27.32	25.98
SD	4.24	3.79	3.92	5.28	5.73	5.51
Min	8	11	8	14	12	10
Max	28	28	28	36	36	36

Source: Authors' own research

Kruskal-Wallis test regarding EI dependence on the „field of study"

Variable	Factor	Statistics	Df	P
Self-awareness		2.459	2	0.292
Managing emotions		3.359	2	0.187
Self motivation		3.550	2	0.169
Empathy	Study cycle	0.603	2	0.740
Social skills		3.248	2	0.197
Contextual performance		1.803	2	0.406
Task performance		10.743	2	*0.005*

Source: Authors' own research

Dunn *Post Hoc* comparisons regarding differences in "task performance" between the „field of study"

Comparisons	z	W_i	W_j	P	p_{bonf}	p_{holm}
Socio-economic vs Biomedical	1.303	170.360	153.948	0.193	0.578	0.193
Socio-economic vs Technical	3.243	170.360	130.878	0.001	0.004	*0.004*
Biomedical vs Technical	1.911	153.948	130.878	0.056	0.168	0.112

Source: Authors' own research

5. Discussion

Our study provides additional evidence regarding the impact of EI on academic performance. In agreement with previous studies (Chang & Tsai, 2022), we observed the importance of the components of "self-awareness" and "self-motivation" in academic success, and with statistically significant differences between groups of students enrolled in various study cycles (bachelor's, master's and doctorate). Our study confirmed hypothesis 1 demonstrating that the more advanced the study cycle, the stronger the students' self- awareness and self-motivation, which leads to increased academic performance. However, this finding may be biased by the fact that the age of students increases with the cycle of study, and consequently "self-awareness" is correlated with the age.

In addition, we formulated hypothesis 6 and we analyzed the impact of EI on AP in all three fields of biomedical, economic, technical study, previously addressed by other groups of researchers (Romanelli, Cain & Smith, 2006), and demonstrated the absence of differences in EI components between groups, but also an increased level of task performance in the field of socio-economic study compared to the technical field. This difference could be explained by the fact that an important percentage of the study participants in the socio-economic field are students at the Bucharest Academy of Economic Studies who benefit from an education based on objectives and project organization, which creates an advantage for them in the assessment of performance in the task.

By understanding and controlling emotions, students are better able to face academic challenges with confidence and resilience, which helps improve their overall performance in university. As we face an ever-changing world, emotional adaptability and the ability to navigate the complexities of interpersonal relationships are becoming key competencies, not just for academic success, but for long-term achievement in any career. Recognizing and managing one's

own emotions, along with empathy for others, facilitates effective communication and informed decision-making, vital elements in today's collaborative work environments. Furthermore, it is imperative that educational programs incorporate active and experiential learning methods that promote the development of EI, such as group projects, simulations, role-plays, and constructive and personalized feedback. Such approaches not only improve EI, but also engage students in a deeper learning process, preparing them for the complex challenges of the real world. Integrating such pedagogical strategies is an essential step toward cultivating a growth mindset, encouraging students to see challenges not as obstacles, but as opportunities for personal and professional development. This not only improves resilience in the face of failure, but also fosters a culture of curiosity and innovation, essential for long-term success.

6. Conclusions

The new educational strategies that include the EI component must diminish/eliminate stereotypes related to gender or the field of study. An approach to university education based on the development of EI, regardless of the study cycle, is beneficial in the long term and develops essential life skills for a successful future career regardless of the field of activity. In this context, the correlations between EI, AP and various other predictors must be extended to the medium and long-term impact of these analyzes from the perspective of career success.

It should be noted that the present study has several limitations. Among these, it is worth mentioning that the analysis of contextual and task performance is based exclusively on the self-evaluation of the study participants and does not include an analysis based on the answers of their colleagues/teachers. Another limitation is given by the fact that the study is carried out cross-sectionally and not a longitudinal component, and emotional intelligence, as is known, has a positive evolution with age and with the transition to a higher study cycle. Moreover, a limitation of this study is the absence of testing the IQ of participants that would further enable to establish correlations between IQ, EQ and AP. These aspects can be achieved by continuing and expanding the present study.

Our future research could address the following questions: (i) is there any correlation between IQ and EQ with a relevant impact on academic performance; (ii) if other participants will join the study from the artistic field of study, what kind information regarding the EI impact on AP could bring this new group of students; (iii) if we will add new participants from the socio-economic field of study, and further divide these students into social sciences and economic groups, which kind of information will provide regarding the EI impact on AP. Additionally, this study could be extended to several Romanian university centers to obtain more information that will be relevant for educational purposes and will provide open new perspectives concerning the relevance of developing the EI skills in universities regardless of the field of study. In conclusion, by adopting a holistic view on education, which includes the development of EI alongside academic knowledge, Romanian universities can prepare students not only to excel in their field of study, but also to become innovative leaders in society.

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