

# Emotional Intelligence Mediates the Relationship Between Personality Traits and Academic Performance

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## Abstract

Academic success has traditionally been attributed to cognitive intelligence (IQ), with emphasis on reasoning, memory, and problem-solving skills. However, recent scholarship highlights the crucial role of non-cognitive factors, particularly Emotional Intelligence (EI) and personality traits, in influencing academic outcomes. This study investigates the mediating role of EI in the relationship between personality traits and academic performance among students enrolled in professional courses in Gujarat. A quantitative research design was employed, using a structured questionnaire administered to a sample of 400 students across engineering, business administration, and pharmacy programs. Statistical analysis, including mediation modeling, revealed that EI significantly mediates the relationship between personality traits and academic performance, accounting for 62.1% of the total effect.

The findings suggest that a combination of strong personality traits and well-developed emotional intelligence skills enhances students' academic performance and prepares them to effectively manage interpersonal and professional challenges. These results underscore the importance of integrating EI training and personality development strategies into higher education curricula to promote holistic student success.

**Keywords:** Emotional intelligence, personality traits, academic performance, mediation, professional courses

## Introduction

Academic achievement has long been explained through cognitive intelligence (IQ), focusing on memory, reasoning, and analytical abilities. However, growing evidence highlights that intellectual capacity alone does not guarantee success, particularly in higher education where students face complex academic, social, and emotional demands. Emotional Intelligence (EI)—the ability to perceive, understand, regulate, and use emotions effectively—has emerged as a crucial factor that complements personality traits in shaping students' academic behavior and outcomes. The Big Five personality framework (openness, conscientiousness, extraversion, agreeableness, and neuroticism) further provides a theoretical basis to understand individual differences in learning approaches, motivation, and coping strategies. Together, EI and personality traits present a broader psychological perspective on student performance that extends beyond IQ.

In the Indian higher education context, especially in Gujarat, the role of EI and personality traits is still underexplored despite rapid growth in professional education. Students pursuing degrees in Master of Business Administration (MBA), Master of Pharmacy (M. Pharm), and

Master of Engineering (M. Eng.) encounter unique academic pressures: MBA students are expected to demonstrate leadership and teamwork, pharmacy students must balance scientific knowledge with ethical responsibility, and engineering students face rigorous problem-solving demands.

These courses not only require technical expertise but also resilience, adaptability, and interpersonal competence—qualities closely tied to EI and personality. Yet, most educational frameworks in Gujarat emphasize cognitive excellence through examinations while giving limited attention to emotional and personality development. This gap underscores the need to investigate how EI and personality traits influence academic outcomes in professional courses, and whether EI acts as a mediator between personality and performance.

### **Definition of key terms**

**1) Emotional Intelligence** referees to the capability of a person to manage and control his or her emotions and possess the ability to the emotions of other as well.

**2) Personality** is defined as the characteristics set of behaviors, cognitions, and emotional patterns that evolve from biological and environment factors.

**3) Academics performance** means the knowledge and skills that students have mastered in a subject. It's basically a measure of how well students have performed in the various assessment set for them based on some educational criteria determined by educators.

### **Significance of research**

1) Study the measurement of personality traits and its impact on academic performance in present research will benefit the principals, teachers, parents and students will be benefited by uplifting the academic performance of the students.

2) Teachers have to deal with the heterogeneous group of students, having different educational, economic, social and cultural background. even in an adverse situation teacher should control their temper and treat students in a humanistic way.

3) Help to improve self-awareness, manage stress, and build empathy, decision making power.

### **Statement of the problem**

The results of different researches indicated that, emotions being the most significant component of personality, play an extremely important role in one's life. These emotions help students to take important decisions in their lives. Emotions facilitate their attitude and behavior towards the achievement of their goals. Therefore, it can be said that healthy emotions give clarity in understanding, thinking and analyzing everyday life situation. Thus, an attempt will be made to examine and coordinate the relationship between emotional intelligence, personality traits and its effect on academic performance.

### **Review Of Literature**

**Nieto Carracedo et al., (2024)** The study aimed to examine the relationship between emotional intelligence and academic achievement. A quantitative approach was used, including surveys

and statistical modeling to assess these mediating factors. The results demonstrated that emotional well-being and motivation significantly mediated the relationship between emotional intelligence and academic performance. The conclusion suggested that developing emotional intelligence could enhance students' academic success, particularly through improving their emotional well-being and motivation, which are key drivers of effective learning strategies.

**Amponsah et al., (2024)** The study focused on understanding the relationship between emotional intelligence and academic performance among pre-service teachers in Ghana. A survey methodology was employed to assess emotional intelligence levels and academic performance of pre-service teachers. The findings showed that emotional intelligence positively influenced academic performance. The conclusion emphasized that emotional intelligence training should be integrated into teacher education programs to foster better learning outcomes and personal development among teachers.

**Pranata et al., (2023)** The study explored the relationship between students' emotional intelligence and academic achievement in science. The researchers conducted a quantitative analysis using surveys to assess emotional intelligence levels and academic performance in science subjects. The results revealed that students with higher emotional intelligence tended to perform better in science subjects. The conclusion indicated that integrating emotional intelligence development into science curricula could enhance students' academic performance, particularly in complex and analytical subjects like science.

**Maamari & Salloum, (2023)** This study explored the effect of emotionally intelligent teachers on their teaching effectiveness at universities, with a focus on the moderating effect of personality traits. A survey methodology was used to assess the emotional intelligence, personality traits, and teaching effectiveness of university faculty members. The findings showed that emotionally intelligent teachers were more effective in engaging students, and this effect was strengthened by certain personality traits, such as agreeableness. The study concluded that enhancing emotional intelligence in teachers, alongside fostering key personality traits, could improve teaching effectiveness and student outcomes.

**Jaise et al., (2023)** This study aimed to explore the relationship between emotional intelligence and personality among undergraduate students in a rural district of South India. The researchers used a survey-based methodology to assess emotional intelligence and personality traits. The findings showed that emotional intelligence was positively related to personality traits such as extraversion and agreeableness. The study concluded that developing emotional intelligence could enhance positive personality traits, improving students' academic performance and interpersonal relationships.

**Murmu & Neelam, (2022)** This study aimed to explore the impact of emotional intelligence and personality traits on managing team performance in a virtual interface. The authors used a survey methodology to assess emotional intelligence, personality traits, and team performance in virtual settings. The findings revealed that both emotional intelligence and certain personality traits, such as openness and conscientiousness, played a significant role in enhancing team performance in virtual environments. The study concluded that improving

emotional intelligence in team members, along with fostering desirable personality traits, can effectively manage and enhance virtual team performance.

**Topino et al., (2021)** This study aimed to explore the relationship between personality traits, workers’ age, and job satisfaction, with a particular focus on the moderated effect of conscientiousness. A survey methodology was used to assess personality traits, job satisfaction, and age among employees. The findings revealed that conscientiousness moderated the relationship between personality traits and job satisfaction, with higher conscientiousness enhancing job satisfaction. The study concluded that conscientiousness plays a crucial role in enhancing job satisfaction, especially among older workers.

**Akhter et al., (2021)** This research examined the impact of emotional intelligence, employee empowerment, and cultural intelligence on job satisfaction in commercial bank employees. The study used surveys to assess emotional intelligence, employee empowerment, cultural intelligence, and job satisfaction. The findings showed that emotional intelligence and cultural intelligence significantly influenced job satisfaction, with employee empowerment further enhancing this effect. The study concluded that developing emotional intelligence and cultural intelligence can lead to improved job satisfaction and employee engagement.

**Objectives of the study**

- 1) To study the level of emotional intelligence of students.
- 2) To study the level of personality traits of students.
- 3) To study the relationship between E.I. and academic performance of students.
- 4) To study the relationship between personality traits and academic performance of students.
- 5) To suggest strategies to enhance emotional intelligence of students.

**Research Design**

This study employed a quantitative research design to explore the impact of emotional intelligence and personality traits on academic performance among students in professional courses. The research was designed to assess relationships between the variables using existing scales with slight alterations for context appropriateness. The study involved surveys as the primary method for data collection, using structured questionnaires to gather data related to emotional intelligence, personality traits, and academic performance.

**Population and Sample Size**

The population for this study comprised college and university students from a selected area who were pursuing bachelor’s and master’s degrees. The total sample size consisted of 400 students. These students were enrolled in various professional courses across different institutions in the selected area, and the sample was designed to be representative of both genders, multiple academic disciplines, and institutions of varied types.

		COUNTS	% OF TOTAL
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<b>Gender</b>	Male	177	44.30%
	Female	223	55.80%
<b>Course Name</b>	Master of Engineering	130	32.50%
	Master of Business Administration	140	35%
	Master of Pharmacy	130	32.50%
<b>Institutions Type</b>	Govt. Institution	189	47.20%
	Private Institution	211	52.80%

### Data Collection Process

The study followed a carefully structured data collection process to ensure reliability and validity. It began with the development of a detailed survey questionnaire designed to collect information on participants' demographics, emotional intelligence, and academic performance. The emotional intelligence scale was adapted from George and Rapport's academic performance scale with slight modifications for relevance.

Participants were selected using stratified random sampling to ensure representation across academic programs, gender, and institution types. The survey was then distributed either electronically or in paper format, depending on participants' accessibility and institutional preferences. Clear instructions accompanied the survey to facilitate understanding and accurate responses.

Data collection took place over a set period to minimize academic disruption. Once responses were received, they were digitized, reviewed for completeness and consistency, and then entered into analysis tools like SPSS or Excel, ensuring data accuracy before analysis began.

### Data Collection Techniques

The primary data collection technique used in this study was the survey method. Surveys are widely used in research because they are effective in gathering data from a large sample in a relatively short amount of time. Surveys, particularly when structured and standardized, can help assess relationships between multiple variables in a consistent manner. In this study, surveys were chosen for their efficiency and ability to collect quantitative data on emotional intelligence, personality traits, and academic performance.

Additionally, the self-administered questionnaire technique was employed. This allowed participants to complete the survey independently, reducing the possibility of researcher bias

in the responses. By using self-administered questionnaires, the study ensured that participants could answer at their convenience, promoting a more accurate and thoughtful response. This method also facilitated the collection of data from a large sample, which is crucial in ensuring the generalizability of the study's findings.

The data collected in this study was cross-sectional, meaning that it was gathered at a single point in time. This type of data collection is often used when the goal is to examine relationships between variables in a specific population at a given moment. A cross-sectional design is advantageous because it allows for the efficient collection of data from a wide range of participants in a short period of time.

### **Data Collection Tool**

The main data collection tool used in this study was a structured questionnaire. This tool was designed to include several sections: one for demographic details (such as gender, academic program, and institution type), another for assessing emotional intelligence, personality traits and a third for gauging academic performance.

To measure emotional intelligence, an adapted version of George and Rapport's academic performance scale was used. This scale was chosen because it has been widely used in similar studies and has proven reliability and validity. However, to make it more applicable to the context of this study, minor adjustments were made to the scale to better align with the specific student population and academic environment being studied.

Academic performance was assessed using self-reported data, with students indicating their grades and overall academic standing. This self-report method allowed for efficient data collection, although it was supplemented by institutional records where possible to verify the accuracy of the students' academic claims.

The reliability and validity of the questionnaire were tested through a pilot study conducted with a small subset of the target population. The pilot study helped identify any issues with the questionnaire's design and allowed for adjustments to improve the clarity of the questions. The tool was further validated through reliability analysis, such as Cronbach's alpha, to assess the consistency of the responses and ensure the survey's ability to yield reliable data.

### **Data Collection Sources**

The study primarily relied on data collected directly from students enrolled in professional courses at various colleges and universities. Participants completed surveys that assessed their emotional intelligence, personality traits, and academic performance, which were all key variables in the study's hypotheses. Academic performance data were initially self-reported by students. To ensure accuracy, these self-reports were cross-verified with official institutional records, where available.

This added a layer of credibility and reliability to the academic data. The use of both primary data (from surveys) and secondary data (from records) allowed for a more comprehensive understanding of the factors influencing academic performance and emotional intelligence.

This dual-source method helped minimize bias associated with self-reported data and enhanced the overall robustness of the study.

### Types Of Data

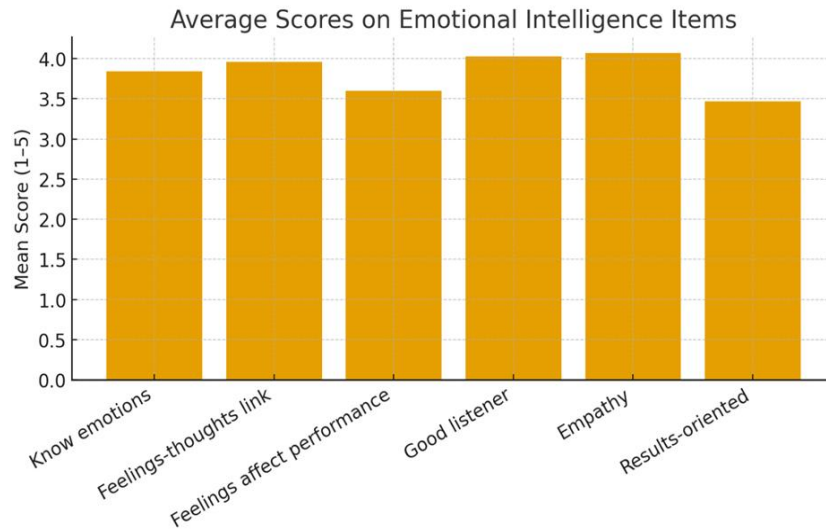
The quantitative data primarily consisted of numerical information gathered through closed-ended questions. This data included demographic information such as gender and course type (e.g., Master of Engineering, Master of Business Administration, Master of Pharmacy), as well as responses to the emotional intelligence scale and self-reported academic performance. The emotional intelligence data, measured on a Likert scale, was ordinal in nature, while the academic performance data, based on course grades, was also ordinal, allowing for statistical analysis such as regression to examine the relationships between these variables.

### Findings and Analysis of Data

#### Emotional Intelligence

##### Descriptive - Emotional Intelligence

	N	Mean	SD
I always know which emotions I am feeling and why	400	3.84	0.829
I realize the links between my feelings and what I think, do and say	400	3.96	0.81
I recognize how my feelings affect my performance	400	3.6	1.001
I have a guiding awareness of my values and goals	400	3.54	0.941
I am attentive to emotional cues and am a good listener	400	4.03	0.916
I show sensitivity and understand others' perspectives	400	4.07	0.915
I help out based on understanding other people's needs and feel	400	4.08	0.724
I am results-oriented, with a high drive to meet objectives and	400	3.47	1.092
I set challenging goals and take calculated risks	400	3.82	1.013
The larger mission gives me a sense of purpose	400	3.74	0.909



**Personality Traits**

**Descriptive - Personality Traits**

	N	Mean	SD
I am outgoing and sociable.	400	3.58	0.988
I enjoy meeting new people.	400	3.77	1.068
I am energized by being around others.	400	3.35	1.226
I am comfortable being the center of attention.	400	3.33	1.289
I am talkative and enjoy conversations with others.	400	3.88	1.039
I am easily upset or emotional.	400	3.54	1.188
I often feel anxious or worried.	400	3.34	1.101
I tend to dwell on things that have gone wrong.	400	3.24	0.868
I am prone to experiencing negative emotions	400	3.29	0.876

**Academics Performance**

**Descriptive – Academics Performance**

	N	Mean	SD
I made myself ready in all my subjects	400	3.8	0.849

I pay attention and listen during every discussion	400	3.86	0.926
I get good grades in every subject	400	4.01	0.85
I actively participate in every discussion	400	3.81	0.842
I gain focus when I see technical problems	400	3.78	0.916
I enjoy homework and activities because they help me improve my	400	3.93	1.022
I exert more effort when I do difficult assignments	400	3.84	0.803
Solving problems is a useful hobby for me	400	3.98	0.934

**Mediation Estimates**

Effect	Estimate	SE	Z	p	% Mediation
Indirect	0.507	0.0612	8.29	< .001	62.1
Direct	0.31	0.0781	3.96	< .001	37.9
Total	0.817	0.0598	13.66	< .001	100

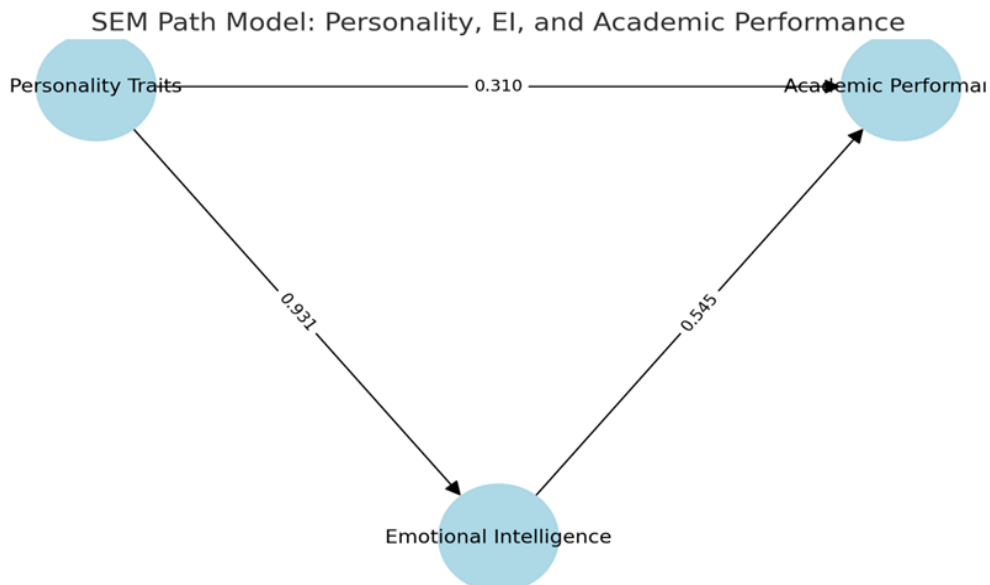
Table presents the mediation estimates for the relationship between variables. The total effect of the relationship is 0.817, with a standard error of 0.0598 and a z-value of 13.66, all of which are statistically significant ( $p < 0.001$ ). The table breaks down this total effect into two components: the indirect effect and the direct effect. The indirect effect is 0.507 (SE = 0.0612,  $z = 8.29$ ,  $p < 0.001$ ), accounting for 62.1% of the total effect, while the direct effect is 0.31 (SE = 0.0781,  $z = 3.96$ ,  $p < 0.001$ ), contributing 37.9% of the total effect. These findings indicate that the majority of the effect is mediated indirectly, with a substantial portion also being explained directly.

**Path Estimates**

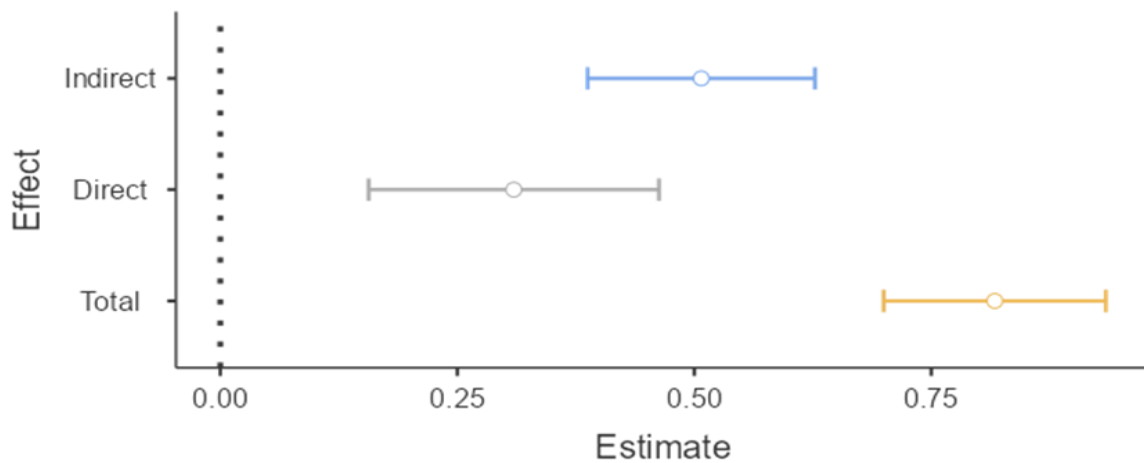
			Estimate	SE	Z	P
Personality Trait	→	Emotional Intelligence	0.931	0.0453	20.56	< .001
Emotional Intelligence	→	Academic Performance	0.545	0.0601	9.06	< .001

Personality Trait	→	Academic Performance	0.31	0.0781	3.96	< .001
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Table displays the path estimates for the relationships between personality traits, emotional intelligence, and academic performance. The first path, from personality traits to emotional intelligence, has an estimate of 0.931 (SE = 0.0453, z = 20.56, p < 0.001), indicating a strong and statistically significant effect. The second path, from emotional intelligence to academic performance, shows an estimate of 0.545 (SE = 0.0601, z = 9.06, p < 0.001), also demonstrating a significant positive relationship. Lastly, the direct path from personality traits to academic performance has an estimate of 0.31 (SE = 0.0781, z = 3.96, p < 0.001), suggesting a moderate and significant direct effect. All relationships are highly significant, emphasizing the role of both emotional intelligence and personality traits in influencing academic performance.



**Estimate Effect**



## Discussion

This study confirmed that Emotional Intelligence (EI) mediates the relationship between personality traits and academic performance, with over 60% of the effect explained indirectly through EI. The findings are consistent with MacCann et al. (2020), who showed EI predicts academic outcomes beyond IQ, and Poropat (2009), who emphasized personality's role in achievement. They also align with Amponsah et al. (2024), highlighting EI's positive influence on student performance, and extend prior work by quantifying its mediating role.

Practically, the results suggest that professional education should not rely solely on cognitive skills but also foster EI development. Teachers can encourage reflective learning and group activities that build empathy and stress management. Universities may integrate EI modules into MBA, Pharmacy, and Engineering curricula, while policymakers can support such initiatives by including EI in accreditation standards. By focusing on both personality strengths and emotional skills, institutions can enhance academic performance and prepare students for professional and interpersonal challenges.

## Limitations of the Study

This study is limited by its cross-sectional design, which prevents establishing clear causal relationships between personality traits, emotional intelligence, and academic performance. The use of self-reported measures may have introduced bias, despite partial verification with institutional records. Moreover, the sample was restricted to students from selected institutions in Gujarat, limiting the generalizability of the findings. Finally, the exclusive reliance on quantitative methods did not capture the deeper qualitative aspects of students' experiences with emotional intelligence.

## Conclusion

This study demonstrates that Emotional Intelligence (EI) plays a pivotal mediating role between personality traits and academic performance among students in professional courses in Gujarat. The findings reveal that while personality traits influence outcomes directly, their strongest impact occurs through EI, which accounted for more than half of the total effect. This underscores the importance of cultivating emotional skills alongside cognitive and technical abilities. For professional programs such as MBA, Pharmacy, and Engineering, success extends beyond subject knowledge to include adaptability, empathy, and stress management.

Institutions and policymakers should therefore integrate EI training into curricula to promote holistic student development. By fostering both personality strengths and emotional competencies, higher education can enhance academic performance while preparing students for the complex interpersonal demands of professional life.

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