

## Intrinsic Motivation Mediated Between Emotional Intelligence And Academic Performance Of Secondary School Students

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### Abstract

*Academic achievement of students at the high school level is very important, not just for students or schools but also for future generations and the overall development of our nation. Scholars are working hard to assess the essence of intrinsic motivation, which influences the relationship between emotional intelligence and academic performance. Keeping this in view, the present study is a step toward ascertaining the mediating effect of intrinsic motivation between emotional intelligence and academic performance. This study was conducted on a sample of 173 students studying in classes X to XII at different public schools in Darbhanga town. Schutte's Emotional Intelligence Scale and Tremblay et al.'s (2009) Motivation Scale were used for data collection. Data obtained on these measures were statistically analysed using SPSS 20 software. Academic performance was correlated with all components of emotional intelligence, such as perception of emotion, managing own and other emotions, utilisation of emotion, etc. Similarly, intrinsic motivation was also correlated with academic performance. Mediation analysis reveals the fact that the mediating effect of intrinsic motivation on academic performance is higher than that of emotional intelligence on academic performance. The findings were discussed in the light of previous research.*

**Keywords:** *Academic Performance, Emotional Intelligence, Intrinsic Motivation.*

### Introduction

Over the years, the importance of academic achievement has increased enormously. Academic achievement of students at the high school level is very important, not just for students or schools but also for future generations and our nation's overall development. That is why scholars are working hard to solve the untangled obstacles that militate against good academic achievement (Adenike et al., 2010). Dev (2016) stressed that the goal of the school is to focus on the attainment of educational excellence by students. More specifically, academic achievement is said to be the outcome of a student's learning in one academic session. It refers to the percentage of marks or learning outcomes obtained by students and whether learning meets or exceeds their grade-level standards. More broadly, academic achievement is the performance outcomes at intellectual levels at their school,

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college, and university levels. It indicates the educational and intellectual standard of an individual, a group, or an entire nation.

The importance of academic achievement may be explained from different perspectives. It may be different from individual, societal, psychological, and educational research perspectives. From an individual perspective, academic achievement is an important predictor of academic careers and individual success. There is unanimity among researchers that academic achievement plays a vital role in student life (Kell, Lubinski, & Benbow, 2013), such as well-being and psychological development (Chernyshenko et al., 2018; Frydenberg et al., 2017).

### **Emotional Intelligence and Academic Achievement**

Emotional intelligence (EI) has emerged as an important concept in psychology in the last decade of the 20th century. It was proposed that it explains the variation in an individual's ability and emotional regulation. Emotional intelligence provides a scientific outline for the idea that individuals differ in perceiving, regulating, and managing affect-laden information, whether it is of an intrapersonal or interpersonal nature (Petrides & Furnham, 2003).

Salovey and Mayer (1990) were the first to advance a model of emotional intelligence. They proposed an ability model of emotional intelligence consisting of four types of ability: (a) perception and expression of emotion; (b) utilisation of emotion to facilitate thought; (c) understanding the reasoning of emotion; and (d) regulation of self and other's emotions. Mayer and Salovey's model are different from other mixed models of emotional intelligence. The mixed model defines emotional intelligence in terms of a set of self-perceived skills, competencies, and personality traits (Bar-On, 1997; Goleman, 1995). In 1983, Howard Gardner, in his book "Frames of Mind: The Theory of Multiple Intelligences," advocated that traditional intelligence, for example, IQ, does not explain much about cognitive ability. Therefore, they presented the idea of multiple intelligences, which comprised both interpersonal and intrapersonal intelligence (Smith, 2002).

According to Turner (2004), emotional intelligence is the softer aspect of total intelligence and has benefits for both personal and professional lives. The ability to learn, comprehend, and reason is considered traditional IQ. It is now believed that it explains only 20% of an individual's achievement, while emotional quotient (EQ), or the capacity to comprehend and relate to others, accounts for 80%. In their meta-analysis, MacCann et al. (2020) looked at the relationship between students' emotional intelligence and their academic performance and discovered that emotional intelligence had an overall positive impact on academic attainment. When comparing ability emotional intelligence to self-rated or mixed emotional intelligence, the correlation is noticeably stronger. Additionally, there is considerable evidence linking academic success to emotional intelligence. Van Rooy and Viswesvaran (2004) also found a correlation between emotional intelligence and academic performance. Perera and DiGiacomo (2013), on the other hand, found a 0.20 correlation with academic performance. Richardson et al. (2012), in their review of 42 non-cognitive associates of academic performance, reported little association between emotional intelligence and academic performance.

### **Intrinsic Motivation and Academic Performance**

Motivation is the inner drive that triggers an individual to engage in goal-directed behaviour. It is believed that motivation is a force that elucidates why individuals start, maintain, or stop an explicit behaviour at a certain point in time. It is a multifaceted phenomenon, and that is why there is disagreement over its meaning. Some components of motivation guide and sustain goal-directed behaviour. These motivations are rarely observable but readily apparent. That is why we frequently conclude people's motivations from their visible behaviours. From childhood through adolescence, motivation is crucial for academic learning and accomplishment (Elliot & Dweck, 2005). Uguuroglu & Walbert (1979) assert that motivation has a significant role in a student's academic success.

According to Uguroglu & Walbert (1979), motivation is an important contributing factor to student achievement. Ryan & Deci (2000) advanced a self-determination theory that states that there are two forms of motivation: a. extrinsic motivation and b. intrinsic motivation.

Extrinsic motivation is defined as a variety of behaviours that are used as a means as well as an end. Intrinsic motivation, however, refers to an action for itself. It gives pleasure and satisfaction while doing work (Deci, 1975). It plays a remarkable role in academic learning, achievement, and competency. Deci and Ryan (1985) suggest that intrinsic motivation originates from inborn psychological needs like competence and self-determination. Several studies revealed that, right from childhood, those with higher academic intrinsic motivation are more knowledgeable in school. It is generally found that greater academic achievement is correlated with a more positive and higher level of academic competency, a lower level of academic anxiety, and a higher level of intrinsic motivation (Gottfried et al., 2005).

This study was conducted to analyse a. the correlation between emotional intelligence and academic performance, b. the relationship between intrinsic motivation and academic achievement; and c. to measure the moderating effect of emotional intelligence and intrinsic motivation on academic achievement.

## Methods

### Sample

This study was undertaken on a sample of 173 students studying in classes X to XII at different public schools in Darbhanga town. To make the sample more representative, students of various schools of both sexes (101 male and 72 female students) were selected. Their mean was 15.086 years ranges from 13 to 19 years.

## Measures

### 1. Emotional Intelligence Scale

This scale was developed by Schutte in 1998. This is commonly known as the "Schutte Self-Report Emotional Intelligence Test." It measures four components of emotional intelligence: a. emotional perception; b. utilising emotion; c. managing emotion; and d. regulating others' emotions. The SSEIT is a 33-item self-reported scale. Each item is evaluated on a 5-point scale ranging from strongly agree (1) to strongly disagree (5).

### 2. Extrinsic and Intrinsic Motivation Scale

A modified version of the Tremblay et al. (2009) scale, popularly known as the Work Extrinsic and Intrinsic Motivation Scale (WEIMS), was used in the present study. It is an 18-item scale that assesses work motivation based on self-determination theory (Deci & Ryan, 2000). The WEIMS is divided into six subscales; each subscale contains three items. Components are intrinsic motivation, identified, integrated, introjected and external regulations, and amotivation. It is a 5-point Likert-type scale. The responses range from 1 (which does not correspond at all) to 5 (which corresponds exactly).

### 3. Academic Performance

It was measured by marks obtained by a student during one academic session provided by the school on the report card.

## Results and Discussion

The data obtained on the above-mentioned measures was statistically analysed. For the statistical analysis, SPSS 20 software was used. Pearson's r was used to measure the relationship between emotional intelligence and academic achievement, as well as between intrinsic motivation and academic achievement. Further, multiple regression was computed

to measure the predictive effect of emotional intelligence and intrinsic motivation on academic achievement scores.

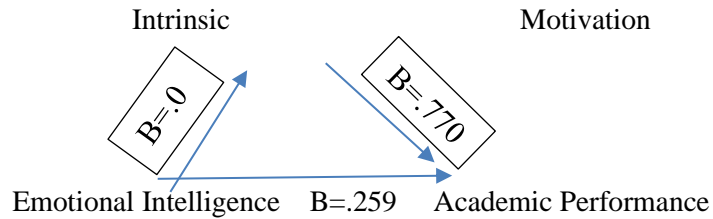
The obtained correlations among emotional intelligence, intelligence, and marks as indicators of performance are given in Table 1. It states that dimensions of emotional intelligence are correlated with academic performance. For instance, academic performance was correlated with dimensions of emotional intelligence like the perception of emotion ( $r = .357, p < .000$ ), managing own emotion ( $r = .393, p < .000$ ), managing other emotions ( $r = .354, p < .000$ ), utilisation of emotion ( $r = .312, p < .000$ ), uncategorised ( $r = .329, p < .000$ ), and also with overall emotional intelligence ( $r = .503, p < .000$ ). Similarly, intrinsic motivation was also correlated with academic performance ( $r = .284, p < .000$ ). These correlations clearly state that both emotional intelligence and intrinsic motivation influence students' academic performance. In other words, emphasis should be given to enhancing emotional intelligence as well as intrinsic motivation among students to improve their academic performance. It reveals the fact that emotional intelligence improves academic performance in class. Similarly, intrinsic motivation and important parameters of motivation also trigger students to perform well in their classes.

**Table-1 Correlations among dimensions of emotional intelligence, intrinsic motivation and academic performance**

	Perception of Emotion	Managing Own Emotion	Managing Other Emotion	Utilisation of Emotion	Uncategorised	Overall Emotional Intelligence	Intrinsic Motivation	Academic Marks
Perception of Emotion	1	.451**	.274**	.408**	.348**	.751**	.088	.357**
Managing Own Emotion	.451**	1	.413**	.463**	.285**	.781**	.163*	.393**
Managing Other Emotion	.274**	.413**	1	.287**	.328**	.635**	.170*	.354**
Utilisation of Emotion	.408**	.463**	.287**	1	.224**	.679**	.006	.312**
Uncategorised	.348**	.285**	.328**	.224**	1	.604**	.111	.329**
Overall Emotional Intelligence	.751**	.781**	.635**	.679**	.604**	1	.156*	.503**
Intrinsic Motivation	.088	.163*	.170*	.006	.111	.156*	1	.284**
Academic Marks	.357**	.393**	.354**	.312**	.329**	.503**	.284**	1

\*Correlations significant at the .05 level \*\*Correlation is significant at the 0.01 level

**Table-2 The mediating effect of intrinsic motivation between emotional intelligence and academic performance**



To test the mediating effect of intrinsic motivation between emotional intelligence and academic performance, multiple regressions were computed in three stages to ascertain the mediating effect. The unstandardised B coefficients are given in Table 2. It shows that the direct effect of emotional intelligence on academic performance is  $B=.259$ . It reveals the fact that the mediating effect of intrinsic motivation on academic performance is higher than that of emotional intelligence on academic performance. In other words, we can say that intrinsic motivation plays an important role in performing better in the examination than simply what emotional intelligence contributes to obtaining good marks independently.

Intrinsic motivation and emotional intelligence are very important factors in student's academic performance. These two constructs have not been studied vigorously in our culture. However, these constructs not only improve student's academic performance but also address several emotional, psychological and behavioural problems. The findings of the present study throw light on the importance of emotional intelligence and intrinsic motivation and its significant role in the academic achievement of higher secondary students. The findings of this research comply with several earlier research conducted in other cultures (Chang & Tsai, 2022; Quilez-Robres, 2023). According to Mayer et al. (2008), emotional intelligence helps an individual to manage, understand, and use their emotion-laden traits and cognitive abilities to solve problems. It enables students to identify and distinguish their own and others' emotions, so that they may make appropriate and meaningful decisions (Alhebaishi, 2019). It is beneficial for reading comprehension (Motallebzadeh et al., 2009), speaking (Asadollahfam et al., 2012), and writing performance (Shao et al., 2013). Similarly, intrinsic motivation is an individual's desire to master skills (Hulleman et al., 2008), to make the task meaningful (Harackiewicz et al., 2002; Hulleman et al., 2008), and to make the task more thought-provoking than present-level of capability (Green & Bavelier, 2008).

### Conclusion

The good academic performance of sons and daughters is the dream of every parent. The mission of school administration and the government mission is to improve the academic performance of students for institutional and societal development. This study has pointed out with empirical evidence that there is an urgent need to improve emotional intelligence and intrinsic motivation which in turn will improve the academic performance of students. Therefore, proper mechanisms should be developed to enhance emotional intelligence and intrinsic motivation toward the betterment of academic performance and reduce the dropout rate of students.

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