

# Emotional Intelligence as a Predictor of Academic Achievement of Open and Distance Learning Students

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## Abstract

*Emotional intelligence is one of the key concepts in determining academic success, as academic achievement is important in the field of education. The purpose of the present research was to explore the effect of emotional intelligence on academic achievement. The effect of gender on emotional intelligence and academic achievement was also investigated in the present study. A sample comprising 420 students of Allama Iqbal Open University Islamabad enrolled in Bachelor of Education (1.5 years) programme was selected through the random sampling technique. Data were collected via the administration of the 'Assessing Emotions Scale' questionnaire. Academic achievement was measured in terms of the students' previous results. Findings of the study indicated that emotional intelligence and gender were significantly associated with academic achievement among Open Distance Learning students. The study helps us to predict the probable future specialties based on emotional intelligence.*

**Keywords:** *emotional intelligence, academic achievement, open and distance learning*

## Introduction

In today's modern era of technology, educational opportunities are constantly increasing. Access to information via the internet is now easily available. Technology changes the way of obtaining, utilizing and representing knowledge, with such alterations reshaping the delivery and content of education (Hall, 2002; Setaro, 2000; Wernet, Olliges, & Delicath, 2000). Learning functions as an individual's emotional response to the learning environment (Flood, 2003). Open and Distance learning is one of the methods of getting education without attending school, connecting students and teachers throughout geographical barriers using different audio-video aids or other technologies (Ahern & Repman, 1994). These days students can learn at home or offices easily. Open and Distance learning gives more opportunities and facilities by providing learning environment and libraries. By such means of education, students can perform well in their academic education (Marachelvi & Rajan, 2013).

The human mind is influenced by three elements including level of motivation, emotions and mental processes. Various studies have been conducted by psychologists to find out the factors contributing to academic performance among students in different learning institutions. Results indicated that there are various factors contributing to the achievement of students, such as Intelligent Quotient of students, socio economic status, relationship with teachers, family and peer group, personality and parental attachment (Sharma, 2012).

Recent studies have indicated that Intelligence Quotient (IQ) alone is not a reliable and valid predictor of academic achievement of students (Craggs, 2005). In his famous book called *Emotional Intelligence: Why It Can Matter More Than IQ*, Goleman (1998) claimed that IQ contributed only 20% in the success of an individual. There are a number of factors that influences student's academic achievement. Other than IQ, Emotional Intelligence (EI) plays an equally important role in the academic achievement of an individual, whether in his career or academic success. EI enables students to recognise emotional information and appreciate its values in his/her life. Salovey and Mayer (1990) defined EI as "the subset of social intelligence that involves 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". Later, they redefined the term as the ability of an individual to perceive precisely, evaluate and articulate the individual emotions. This in turn requires the ability to access and generate feelings, and positive thinking; and the ability to understand the emotions of the self and others, which leads to the gaining of emotional knowledge and the ability to modify behaviours accordingly. This leads to a balanced approach, where in the relationships of the individuals are not affected (Mayer, Salovey, Salovey, & Sluyter, 1997).

In many countries, college students face serious health related issues, become involved in substance abuse and suffer from anxiety and depression. Academic performance is very important in predicting and understanding the reasons behind these situations (Jaeger & Eagan, 2007). Perceived stress refers to how much a student is stressed within a given time period. There is high level of impact of perceived stress on academic performance due to a lack of EI among college students. Perceived stress also depends upon the courses and mode of learning through which students get information and knowledge. Research indicates that females have greater levels of stress due to a lower level of EI and face more health problems, which affects their academic performance (Varghese, Norman, & Thavaraj, 2015).

The term EI refers to understanding, knowing, recognising and managing one's own emotions and those of others (Goleman, 1996). According to Goleman, it is a constructive array of positive attributes including self-confidence, self and political awareness, motives of achieving success, managing emotions and feelings and conscientiousness, rather than focusing only on an intelligence that could help individuals solve problems effectively (Brackett, Rivers, & Salovey, 2011). Academic achievement referring to the average marks obtained by individuals in their final examinations (Ramesh, Thavaraj, & Ramkumar, 2016). It has long been recognised as one of the important goals of education. It is hardly surprising that there seems to be a lack of consensus among researchers regarding the similarities and differences among the following constructs:

- Academic performance;
- Academic achievements; and
- Learning outcomes.

Students who gain knowledge through reading different online sources can obtain high grades in their exams, if they are able to understand and manage their emotions

(Craggs, 2005). Success in online learning and educational technology is related to elements such as persistence, internal locus control and self-efficacy, which have been found to reflect high level of EI (Colojoară & Viscu, 2017).

## Literature Review

There are many statements regarding distance learning. Bernard et al., (2004, p. 388) integrated recent definitions and describe distance learning as a semi-permanent dissociation of (place and/or time) of learner and instructor during planned learning events. Students are supported with services and course work provided by the educational organisation so that they can learn from the learning material, and finally achieve course completion. The instructor and students can deliberate among themselves with assistance of two-way media to facilitate dialogue.

Wijekoon et al. (2017) conducted a study on EI and its association with academic achievement among MBBS final year students in Sri Lanka. Results indicated that in 61.5% of the population, both EI and academic performance were higher among females. Mohzan, Hassan, and Halil (2013) found that higher levels of EI indicated high academic performance among students of the Education Faculty, at Universiti Teknologi Mara (UiTM). Goleman (1996) and Bar-On (2006) conceive EI as a set of emotional and social capabilities that affect behaviours and performances of students over all in the world. The Mayer-Salovey sample, on the other hand, illustrates EI related to learning as a person's ability to interpret, understand, manage and use emotions to enable thinking and decisions making in learning (Mayer, Salovey, & Caruso, 2004).

Edvardsson and Oskarsson (2008) focused on academic performance in open-learning in Business administration at the University of Akureyri (UNAK), Iceland. The first aim of the study was to develop insight about distance learning, second, detailed analysis of the distance learning practices at University campuses and third was to analysis academic achievement and attitude of students towards online courses among distance and campus students in Business administration. The results indicated that distance students take up year in completing their online programme and courses than campus students. The findings revealed that distance education has increased significantly in recent years in Iceland. Nearly half the students at UNAK are enrolled in distance education in Business administration at. They suggested that academic achievement can be enhanced by fully understand the factors behind the different achievements of distance and campus students.

EI is an efficient way of managing and understanding emotions; it is an important element in educational or learning environment. Results indicated that open and distance learning also has great impact on EI and link with students' academic outcome (Colojoară & Viscu, 2017). Distance learning offers learners a sense of freedom. They can manage their time at their own convenience. Students do not feel over-burdened or frustrated and pressurized as in regular learning. It is way of informal learning. The objectives of the courses are well-defined and schedule is predetermined. Students have to follow the schedule and activate the milestones as specified by the institute. There is no age limit for learning. This gives a sense of empowerment to the students as they choose how to allocate time to the assignments and exams and other schedule sat their ease (Chu, 2002).

### Characteristics of distance learners

- They are task oriented or problem focused.

- They have good insight into their potential.
- They have good management skills.
- They are efficient in learning.
- They put maximum effort in order to achieve the set objectives.
- They have freedom and choice in terms of selection.
- They are free of any admission criterion, which develops a high sense of self-efficacy (competent-self).
- They are fulfilling their achievement need at any age level which helps in developing high self-esteem and confidence building.

However, it may also give rise to:

**Procrastination.** Students may keep delaying the assignments and studies as there is no solid deadline.

**Boredom.** Except for workshops, there is no instructor. Students have to learn by themselves.

**Lack of motivation.** As there is no real push, students may feel de-motivated.

Zahed-Babelan and Moenikia (2010) found that EI plays an important role in academic achievement in the distance educational system. Nasir and Masrur (2010) investigated the correlational relationship between EI and academic achievement of students at International Islamic University Islamabad (IIUI). They used Bar-On Emotional Quotient Inventory (EQi) to measure EI whereas academic achievement was measured through their GPA. They found a significant correlation between EI and academic achievement. No significant correlation was found between age and EI.

Hanafi and Noor (2016) reviewed the relationship between EI and academic achievement in emerging adults (18-25 years old) by using five widely used EI measurements (EQ-I, ECI, TEIQue, MSCIT & WLEIS). A total of 786 articles were identified. Thirteen studies have reported a significant positive relationship between EI. Berenson, Boyles, and Weaver (2008) state that EI is a successful indicator of academic achievement among students attending community college. The addition of personality to EI significantly increases the amount of variance accounted for in GPA.

## Research Methods

### Research Objectives

The major objectives of the study were to:

1. Investigate the effect of EI on academic achievement among open and distance learners.
2. Explore the effect of gender on EI and academic achievement.

### Hypothesis

H<sub>1</sub>: EI will be significantly positively related with academic achievement among open and distant learning students.

H<sub>2</sub>: Gender differences will exist in EI, in that males seem to be more emotionally intelligent than females.

H<sub>3</sub>: Gender differences will exist in academic achievement, in that females seem to have higher academic achievement than males.

## Methodology

The research design used in this study was cross-sectional, in which data were analysed using quantitative methods. The Assessing Emotions Scale (AES) was used to assess EI. The AES was developed by Schutte, Malouff, and Bhullar (2009). It consists of 33 items measuring emotions and reactions associated with emotions of individuals. All the items were scored on a 5-point Likert scale from 1 (Strongly Agree) to 5 (Strongly Disagree). Scores were summed after reverse coding of items 5, 28, and 33. Higher scores indicated a higher level of EI. It was divided into the following three subscales: appraisal of emotions, regulation of emotions and utilization of emotions. Schutte et al. (2009) suggested using of the total of the Assessing Emotions scale (AES), rather than using subscale totals. The scale had good internal consistency, with  $\alpha = .90$  and test-retest reliability was  $\alpha = .87$ . On the other hand, academic achievement was measured through the percentage mark that each student acquired in the previous semester. Permission for using the measures was obtained from the respective authors. Prior to completing the questionnaire, the educational authorities were contacted and permission for data collection was taken. After approaching the participants, they were briefed about objectives of research. Anonymity of participants' responses was also ensured. They were told that their participation in the study was voluntary and that they had the right to withdraw from the study at any time if they wished to do so. Questionnaires were administered on the sample of 450 students enrolled in the Bachelor of Education (1.5 years) programme, with 420 questionnaires returned. The sample was selected using the random sampling technique. Students returned the completed questionnaires. In the end they were debriefed and thanked by the researcher. The questionnaires were then collected, and the data was analysed using SPSS.

## Findings and Discussions

Table 1 shows descriptive statistics for the two variables involved in the present study, i.e., the *EI* scale and academic achievements. Mean (M) indicates the average score of each instrument for the present sample (N=420) while Standard Deviation (SD) indicates the deviation in scores for each instrument. The *EI* scale was used to measure the control dimension of emotion. Academic achievement was measured through the students' percentage scores.

Table 1  
*Descriptive statistics for all variables (N=420)*

Scale	M	SD
EI	119.65	14.08
Academic achievements	2.36	.803

Table 2 shows the alpha co-efficient of the EI questionnaires. According to Nunnally (1978), scales having reliabilities of .7 or more are acceptable and are internally consistent. Therefore, Table 2 shows that the EI scale has a good reliability. This shows that the instrument has internal consistency.

Table 2  
*Alpha Co-Efficient of the EI questionnaires (N=420)*

Scale	No. of Items	A
EI	33	0.85

Table 3 shows the relationship between EI and the academic achievement of students. As indicated in the table, there is a significant positive correlation between the EI and academic achievement of the students. This supports the hypothesis 1, i.e. “*EI will be significantly positively related with academic achievement*”.

Table 3  
*Pearson Correlation between students’ EI and academic achievement, (N =420).*

	EI	Academic achievement
1.EI	-	.213**
2.Academic achievement	.213**	-

\*\* $p < .01$  and \* $p < .05$

Table 4 shows the predictive effect of EI on academic achievement. Values indicate that EI was the strongest predictor ( $\beta = .21$ , \* $p < .000$ ) of academic achievement among students.

Table 4  
*Linear Regression Analysis on academic achievement by EI (N = 420)*

EI	B	SE B	B	95% CI	
				L	L
EI	.01	.00	.21	.01	.02

$R = .21$ ,  $R^2 = .05$ ,  $\Delta R^2 = .04$  ( $F = 19.95^{***}$ )

Note: \*\*\* $p < .000$ , \*\* $p < .01$  and \* $p < .05$

### Association between Gender, EI and Academic Achievement

The effect of gender on EI and academic achievement was investigated using independent samples t-test. The results are presented in Table 5.

Table 5 shows that EI and academic achievement were found to be significantly linked with gender as  $p > 0.05$  and  $p > 0.00$ . However, this supports the second hypothesis, i.e., “*Males seem to be more emotionally intelligent than females*”, which reveals that males tend to be more emotionally intelligent than females. Whereas, academic achievement was higher in female than males, thereby supporting hypothesis 3, i.e. “*Females seem to have higher academic achievement than males*”.

Table 5  
*Gender differences, EI and academic achievement (N=420)*

	Male N=135		Females N=285		tp
	M	SD	M	SD	
EI	121.99	14.16	118.45	13.94	-4.58
Academic Achievement	2.10	.72	2.48	.82	2.41

Note: \*\*\* $p < .000$ , \*\* $p < .01$  and \* $p < .05$

## Discussion

The instruments used to achieve the objectives of the present study were: the Assessing Emotions Scale (AES) developed by Schutte et al. (2009), to measure EI, and the students' percentage scores from the previous semester, to measure academic achievement. To achieve the objectives of the present study, the first step was to analyse the psychometric characteristics of the measures to determine the alpha coefficient of reliability. The reliability of all the instruments was found to be appropriate for prediction. Pearson Product Moment Correlation and regression analyses were used to find the impact of EI on academic achievement. Finally, independent t-test was applied to identify whether age and gender differences existed in the sample, in terms of EI and academic achievement

The results of the present study indicated the effect of EI on academic achievement (Table 4). This supports the hypothesis of the present study which states, that *'EI will be significantly positively related with academic achievement'*. These results also favour the findings reported by Shipley, Jackson, and Segrest (2010), who claimed that EI predicts success at school. In their study, an attempt was made to identify the association between EI and academic performance of undergraduate business students.

We assumed that *"gender differences will exist, in that females seem to have higher academic achievement than males and males seem to be more emotionally intelligent than females"*. Table 5 shows that female (M= 2.48, SD=.82) experience higher levels of academic achievement compared to males (M= 2.10, SD= .72) and males (M=121.99, SD= 14.16) are more emotionally intelligent than females (M= 118.45, SD= 13.94). These findings appear to be consistent with the literature depicting that males are good at dealing with stress in various situations as suggested by Bar-On (2006), but males do not seem to function as such in terms of academic achievement. Chu (2002) revealed that males have high levels of EI compared to females.

This study extends the literature on the phenomenon of distance learning. The conclusion of this study may be helpful in exploring the concept of EI in light of culture theory, so that cultural aspects can be discovered along with the subjective perceptions of the lay people. This undoubtedly has some implications on the teachers' practices in preparing curricular design, emphasizing the need to develop these skills among the student teachers.

## Conclusion

The results of present study show that there is a certain constructive relationship between EI and academic achievement. EI is the best predictor of success among open and distance learners (Imel, 2003). The outcomes of the study therefore confirm the hypotheses. It may be said that the higher the level of EI among students, the better their academic performance will be. There are numerous implications of this study. First, as EI helps students to cope with the dynamic and competing academic learning environment, it is vital to merge EI training into the distance learning curriculum. It also helps students to acquire knowledge of thinking, understanding, social interaction, and emotional competencies but these abilities are not developed through traditional lecture and discussion methodology, which tend to emphasise theory-based knowledge. Often, students' academic achievement may be less than what they expected to accomplish. These negative feelings must be replaced by feelings of hope, courage and willing cooperation so that they can excel. The results may be carefully considered since the data has been collected from only one university. However, the results may be

generalized in the sense that similar procedures regarding academic and learning curriculum are being followed by most universities for higher academic achievement in Pakistan, as the Higher Education Commission of Pakistan provides guidelines for designing course outlines and teaching methodologies in all the HEC recognised universities.

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