

RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND ACADEMIC ACHIEVEMENT OF STUDENTS OF ALLAMA IQBAL OPEN UNIVERSITY

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Abstract

The purpose of the study was to assess the relationship between emotional intelligence and academic achievement of graduate level students (B.Ed Autumn, 2007) of Allama Iqbal Open University. A random sample of 469 B.Ed students (Autumn, 2007) enrolled at AIOU was selected. Emotional intelligence of students was analyzed by administering Bar-On Emotional Quotient Inventory. Students' overall result of third semester (Autumn 2007) was taken as the academic achievement. The instrument was administered on the participants during their B.Ed workshop. The data was analyzed in the form of mean, standard deviation, and correlation. The findings revealed a highly significant relationship between emotional intelligence and academic achievement of students. It was suggested that future researches may evaluate the relationship of emotional intelligence on other variables like gender, family background, socio economic status.

Keywords: Academic Achievements, Emotional Intelligence

Introduction

In the field of psychology, intelligence is a multifaceted phenomena and the term is used to define a number of cognitive abilities of human beings. The concept of intelligence testing and measurement was expanded by different psychologists, as a result, new concepts and theories of intelligence emerged (Gerow, 1996). Sir Francis Galton is very famous in the field of intelligence study, who termed intelligence as general mental ability. The concept of intelligence was enhanced by different psychologists and theory of multiple intelligences was introduced by Howard Gardner in 1983, in which he argued that

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a person's intelligence is composed of Linguistic intelligence, logical-mathematical intelligence, musical intelligence, spatial-visual intelligence, bodily-kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence and naturalistic intelligence (Gardner, 1983). In 1995 Daniel Goleman further enhanced Gardner's intelligence theory and introduced emotional intelligence (EI) theory in which he argues that a person who has the ability to know his/her own emotional state and effectively handle and communicates his relations with others is called intelligent. (Goleman, 1995). Hookey (2005) argues that people are greatly influenced by their emotions and thinking patterns mentioned by Daniel Goleman. Different psychologists enhanced the notion of EI. In this regard, Funder (2001) and Hammett (2005) described EI as a person's ability or collection of competencies which are complementary to intellectual capabilities or academic intelligence. Singh (2003) debates on EI that "a more formal academic definition refers to emotional awareness and emotional management skills which provide the ability to balance emotions and reason so as to maximize long-term happiness" (p. 47). Papalia, Olds, and Feldman (1998) argued that EI consists of some unique capabilities such as: emotional self-regulation which IQ tests cannot measure; rather it is measured as an Emotional Intelligence Quotient (EQ).

Mayer (1999) says that EI is not only influential, but in most of the cases it is more effective than intelligence quotient because it may best predict success in life and such predictions are not only useful in practical domain of life, but are also impressive theoretically. Nelson, Low and Vela (2003) indicate that students are measured in terms of their performance and grades. However, an important aspect of students is not usually measured, that is emotional intelligence, which is closely related to their academic success. Achievement is not measured only through the measurement of IQ, because when psychologists worked with intelligence, they focused on non-cognitive aspects and explored emotional intelligence as an important predictor in academic success (Cherniss, 2002). Eugene (2004) highlighted that a person's inner self constitutes his/her as emotionally intelligent which provides a basis for him to be an introvert or extrovert. Nelson and Low (2003) discussed that EI plays a pivotal role not only in mental and physical health but also encourages individual's happiness, improves educational accomplishment, and brings occupational brilliance.

Different researchers have recommended that education should make emotional intelligence a top priority. In this regard, psychologists have put great emphasis on development of performance based EI models (Fabio and Vanessa,

2005). In a study, Vishwanathan (2008) explored EI and its effects on students' academic achievement. The study sample consisted of more than two hundred students. A self-developed instrument was administered on the sample. The results of the study highlighted a significant linkage between students' emotional disposition and their exam scores. Overall, the results indicated significant evidence in support for the role of socio-emotional factors in students' grades. Mayer, Caruso, and Salovey (2000) also investigated whether EI can be assessed in terms of an individual's problem solving skills or not. They conducted two studies and in the first study it was assumed that EI foretells parental warmth, cultural pursuits, and empathy. EI was operationalized in terms of 12 emotional intelligence ability tests. A large group of adults were taken in the sample and EI ability tests were administered on them. The study results indicated that:

- EI can be spelled out in terms of sets of skills.
- In general, EI can be broken down into three subscales: Perception, Understanding, and Managing.
- Emotional intelligence is not only related to other intelligences but also predicts a person's empathic skills, life skills and parenting style skills.

In their second study, they hypothesized that on certain tasks adults do better than adolescents. For this purpose a sample of adolescent was taken. The results of the adolescents' group were compared with the results of the adults group from the first study. The sample consisted of young adolescents (age 12-16). The scales employed in the first study were used in the second study and adolescents' performance was compared with the performance of an adult sub sample of the first study. The findings of the study indicated that performance of the adults was higher than adolescents' performance. In addition, emotional intelligence in adolescents showed the same relations to verbal intelligence and empathy as with adults.

Different researchers have constantly investigated that positive ideas, confident communication, time managing skills, ambition accomplishment, dedication, and tension managing talents help in academic accomplishment (Nelson & Low 2003). EI helps to predict success by helping a person to apply knowledge according to his/her situation (Merkowitz & Garee. 2006). EI skills can be nurtured and it helps individuals to get emotional stability with experience and maturity (Papalia et al. 1998). In short, emotional intelligence has flourished and successfully applied in education, psychiatry and human resources (Ciarrochi, Forgas & Mayer, 2006).

Problem Statement

In our schools, emotional education of students is neglected. That's why many intelligent pupils tend to leave school. In Pakistan, only 63% children complete their primary education, and 35,000 high school students drop out every year (Interface, 2009). Dropout rate of urban vs. rural areas is 23.7% and 23.5% (Bilquees & Saqib, 2004). It is generally considered that academic education is hardly related with emotional education. But in most of the cases, students' natural abilities do not help them to solve complicated mathematical queries; rather they excel in perceiving and handling inherent emotional situation. This raises certain questions about the importance of emotions in academic life of students. Is there any relationship between emotional intelligence and academic achievement of students? To find out answers of such questions, this study was conducted to assess the relationship between emotional intelligence and academic achievement of graduate level students of Allama Iqbal Open University.

Objectives

Following were the objectives of study:

- To measure the level of emotional intelligence of B.Ed students.
- To investigate the relationship between emotional intelligence and academic achievement of B.Ed students.

Hypotheses

1. There is a significant relationship between emotional intelligence and academic achievement of the students.
2. The emotional intelligence level of high achievers is higher than the emotional intelligence level of low achievers.

Population

Population of the study consisted of B.Ed students of third semester (Autumn 2007) from Rawalpindi and Islamabad regions of Allama Iqbal Open University (AIOU).

Sample

Ten percent sample was drawn out randomly by using table of random numbers. The sample consisted of 469 students of B.Ed 3rd Semester, Autumn 2007, from Rawalpindi and Islamabad regions.

Instrument

Bar-On Emotional Intelligence Quotient Inventory (Bar-On EQ-i) was obtained from National Institute of Psychology, Islamabad. In the present study, Urdu version of Bar-On EQ-I was administered. The Bar-On EQ-i was developed by Reuven Bar-On in 1997. It consisted of 133 items and out of these 117 items were used in the present study because 117 items were culturally suitable for our society. The items were in the form of short sentences and employed a 5-point response scale with a textual response format ranging from "very seldom or not true of me" (1) to "very often true of me or true of me" (5). It took approximately 30 to 35 minutes to complete the scale. The individual's responses rendered a total EQ score and scores on five composite scales that comprised 15 subscale scores. These composite scales along with subscale are given in the following table:

Composite Scales and Subscales of Bar-On EQi

Composite Scale of EQi	Subscale
Interpersonal Scale	Self regard, Emotional self awareness, Assertiveness, Independence and Self-actualization
Intrapersonal Scale	Empathy, Social responsibility, and Interpersonal relationship
Stress Management Scale	Stress tolerance and Impulse control
Adaptability Scale	Reality-testing, Flexibility, and Problem-solving
General Mood Scale	Optimism and Happiness

The instrument contained the questions regarding demographic information of the respondents. These included questions regarding age, gender and monthly income of the respondents. In Bar-On EQ-i, 55 items were positive and 62 items were negative statements. Positively scored items scored 1 for the first choice, 2 for the second choice, 3 for the third choice, 4 for the fourth choice and 5 for the fifth choice. Negatively scored items got 5 for the first choice, 4 for the second choice and so on.

Pilot Testing

A matching sample of B.Ed students (50) was selected through random sampling technique and Bar-On EQi was sent to them through post. A self addressed envelope was also attached with each questionnaire for the convenience of the respondents to be able to respond quickly within the time period of 2 weeks. Out of 50 participants 32 responded. Their responses were analyzed and

computed on SPSS (12.0 for windows) and scale reliability was assessed. Alpha-coefficient reliability of the instrument is given in the following table:

Alpha-Coefficient Reliability of Bar-On EQi

Scale	No. of Items	Cronbach's Alpha
Bar-On EQi	117	.91

Validity of the Instrument

According to Akram (2004), Bar-On EQi is highly valid instrument, over the last 17 years, nine types of validity studies of Bar-On EQi have been carried out. These studies indicated high rates of content, face, factorial, construct, convergent, divergent, criterion-group, discriminant, and predictive validity of Bar-On EQi.

Data Collection

For the purpose of data collection, participants were approached in their practical teaching workshop (code-0655), which lasted for two weeks. The participants were handed over the instrument by the researcher and were asked to respond to each item by choosing one of the five response options of the scale. They were also instructed to fill the demographic information sheet which was attached with the instrument. Each participant took approximately 30-35 minutes to complete the scale individually. Data collection was completed in two weeks.

Data Analysis

Descriptive statistics was computed for demographic characteristics of the participants. Pearson correlation coefficient was computed to:

- Assess the overall relationship between emotional intelligence and academic achievement of the respondents.
- Analyze relationship among overall academic achievement and sub-scales of EQi.

Analysis and Interpretation of Emotional Intelligence and Academic Achievement of Students

Following tables give the analysis and interpretation of emotional intelligence and academic achievement of students.

Table - 1

Frequencies (f), Mean (M) and Standard Deviation (SD) of Emotional Quotient Inventory (EQi) and Academic Achievement of Students (N=469)

	F	Mean	SD
Academic Achievement	469	182	35
Bar-On EQi	469	360	62

The table indicates the Mean and SD of EQi and academic achievement of students. It shows that a total number of 469 students had Mean of 182 and SD of 35 in academic achievement. It also indicates that in Bar-On EQi, a total number of 469 students had Mean of 360 and SD of 62.

Table - 2

Pearson Correlation between Emotional Intelligence (Bar-On EQi) and Overall Academic Achievement of (B.Ed 3rd Semester) Students (N=469)

	Emotional Intelligence (Bar-On EQi)
Academic Achievement	.88*
N	469

* $p \leq 0.01$

Above table highlights an overall positive significant relationship between emotional intelligence and academic achievement of students. The correlation coefficient (.88*) reveals that academic achievement of students was strongly related with their emotional intelligence. The significance level (Sig) of .01 affirms that EI was correlated with academic achievement of students with a possible error ($p \leq 0.01$) to 1% of the cases.

Table - 3

Pearson Correlation between Sub-Scales of Bar-On EQi (Emotional Intelligence) and Overall Academic Achievement of (B.Ed 3rd Semester) Students (N=469)

	Subscales of Bar-On EQi (Emotional Intelligence)				
	Intrapersonal	Interpersonal	Stress Management	Adaptability	General Mood
Academic Achievement	.80*	.87*	.82*	.79*	.81*
N					469

* $p \leq 0.01$

The table illustrates an overall positive significant relationship between sub-scales (interpersonal, stress management, general mood, intrapersonal and adaptability) of Bar-On EQi (emotional intelligence) and academic achievement of students (N=469). The correlation coefficient in interpersonal (.87*), stress management (.82*), general mood (.81*), intrapersonal (.80*) and adaptability (.79*) subscales of Bar-On EQi predicted strong relationship with academic achievement. The significance level (Sig) of .01 indicates that sub-scales of EQi were correlated with academic achievement of students with a possible error ($p \leq 0.01$) to 1% of the cases.

Table - 4

Frequencies (f) and Percentage (%) of Emotional Intelligence level of High Achievers and Emotional Intelligence Level of Low Achievers

Emotional Intelligence (Bar-On EQi)	Academic Achievement				Total
	High achievers		Low achievers		
	F	(%)	F	(%)	
High EQi	255	82	28	18	310
Low EQi	55	18	131	82	159
N	310	100	159	100	469

Table 4 highlights the frequencies and percentages of emotional intelligence level of high and low achievers which was measured through Bar-On EQi. A total number of 255 (82%) high achievers had high EI and 55 (18%) high achievers had low EI. Whereas, a total number of 28 (18%) low achievers had high EI and 131 (82%) low achievers had low EI. It indicates that (out of 310 high achievers) a large number of high achievers exhibited high EI and (out of 159 low achievers) a large number of low achievers exhibited low EI.

Table - 5

Mean (M), Variance (V), and Z-Value of Emotional Intelligence level of High Achievers (N=310) and Emotional Intelligence Level of Low Achievers (N=159)

Groups	M	V	Z-Value	P
Emotional Intelligence of High Achievers	390	1.2	17.8	0.05
Emotional Intelligence of Low Achievers	299	3.9		

95% Confidence Level

Table 5 indicates the Mean, Variance and Z-value of emotional intelligence level of high and low achievers with 95 % confidence level. The mean of EI of high achievers was 390 and mean of EI of low achievers was 299 and variance of high achievers was 1.2 and variance of low achievers was 3.9. The calculated value of z (17.8) is greater than the tabulated value (1.645). It indicates that there was significant difference between EI level of high achievers and EI level of low achievers. Thus, the z -score showed that the high achievers had high EI than low achievers and the difference was significant ($z=17.8$, $v=27.9$, $p=0.05$, one tailed).

Discussion

In the present study it was hypothesized that there was a significant relationship between emotional intelligence and academic achievement of the students. The results revealed an overall positive significant relationship between emotional intelligence and academic achievement of students (Table 2), hence the hypothesis was accepted. Previous researches have also supported the findings of the current research. A study by Zins, Weissberg, and Wang (2004) explored the effects of emotional intelligence in improvement of students' achievement in mathematics. Their research findings showed that the EI improvement program resulted in significant improvement in students' math achievement scores.

In the current study, the scores on subscales of EQi (interpersonal, stress management, general mood, intrapersonal and adaptability) also indicated an overall positive significant relationship with academic achievement of students (Table 3). These findings are supported by the previous work of Fahim and Pishghadam (2007) on community sample (508 people 134 males and 374 females) between the age of 19 and 29) where they administered Bar-On EQi on the sample. Their research indicated that EI plays an important role in participant's academic achievement. They found that intrapersonal, stress management, and general mood competencies of EQi were crucial for academic achievement of the students.

In the present study, it was also hypothesized that the emotional intelligence level of high achievers was higher than emotional intelligence level of low achievers. The findings of the study indicated a significant difference between EI level of high achievers and EI level of low achievers (Table 5). This finding of the present research is also supported by Parker, Duffy, Wood, Band and M.J (2005). In their study they administered Bar-On EQi on 590 first year students and demonstrated that academically successful students had significantly higher level of EI.

Conclusions

Based on the findings of the study, following conclusions are drawn out:

1. There is a significant positive relationship between emotional intelligence and academic achievement of students.
2. The emotional intelligence level of high achievers is higher than the emotional intelligence level of low achievers.

Recommendations and Future Dimensions

1. Teachers may be trained to develop certain emotional intelligence improvement programs in different study areas i.e English, Mathematics, Science etc to motivate students for better learning.
2. The current research revealed significant relationship between emotional intelligence and academic achievement, it is therefore recommended that further causal comparative researches may be conducted in order to explore cause and affect relationship of emotional intelligence with academic achievement.
3. Further studies may be conducted for the whole session and assessment may be done several times and for longer period with a large sample size in order to have valid results.
4. Moreover, future researches may also be conducted in formal educational settings to find out the difference between the emotional intelligence level of students of formal system with the students of distance education system.
5. It is also recommended that certain variables such as, socioeconomic status, family system, illness/ fitness, aptitude towards studies, financial support, parent-child relation and personality type may be studied and assessed with emotional intelligence.

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