ROLE OF EMOTIONAL MATURITY IN THE ACADEMIC ACHIEVEMENT (ACTUALIZATION) OF THE GENERAL MENTAL ABILITY OF HIGH SCHOOL STUDENTS

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ABSTRACT

The present study has been designed to investigate the role of Emotional maturity in the actualization of the general mental ability of high school students, the relationship of general mental ability and emotional maturity with the academic achievement and also to see the significant differences between the mean scores of actualizers and par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers (Rural as well urban) on the basis of their Emotional Maturity. The study was conducted over a sample of 400 (200 rural and 200 urban) high school students studying in X class in 8 different schools (4 urban and 4 rural) of Punjab affiliated to C.B.S.E., New Delhi. Singh and Bhargava's Emotional maturity scale and Dr. Ahuja's group test of intelligence were employed to measure students' emotional maturity, general mental ability and the aggregate score of the selected students in the board examinations was taken to show their level of academic achievement. The results reported that emotional maturity played no significant role in the actualization of the general mental ability of high school students. Moreover, general mental ability showed a significant positive relationship with the academic achievement whereas emotional maturity showed a non-significant and negative relationship with the academic achievement of high school students. No significant differences were observed between actualizers and par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers (Rural as well Urban) on the basis of their Emotional Maturity.

INTRODUCTION

The concept "Actualization" of general mental ability seeks inspiration from the theory which pre-supposes that measures of difference in achievement and intelligence are not perfectly correlated. The history of psychological testing reveals that the theory regarding direct relationship between achievement and intelligence is very-very old. It was perhaps, Aristotle, who first of all, nearly 23 centuries ago, professed from the view of differences in functioning of intellect that some people are fit for the jobs involving abstract thinking, whereas according to him, others are destined to be wood -cutters, hewers and

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water-carriers. Actually, the two notions- one stressing that individuals are different from the view of functioning of their intellect and the other claiming that such differences are hereditary and inborn- have influenced man's thinking in almost all the societies since the times immemorial. Keeping these two facts in view, it may be realized that the question regarding relationship between achievement and intelligence fulfills the criteria of both antiquity and ubiquity.

However, the present study has nothing to say as to whether the ideology regarding natural slavery is valid or the notion which stresses that differences in environment make functioning of intellect different carries weight. Here, it will suffice to say that these two nations have stimulated researcher, the number of which runs into thousands, and that the issue regarding real cause of differences in functioning of man's intellect has not been answered in unequivocal terms.

Similarly, the question regarding the exact degree of relationship between achievement and intelligence has not been answered so far, though innumerable researches have been carried out for that purpose. Scientific investigations have reported the correlation between intelligence and academic achievement within the range of .01 to .90 (Stephens, 1960; Rao, 1963; Green and Farquahar, 1965; Passi, 1970;Barrett 2001; Behra 2002; Kaur 2002; Devi 2003; Kaur 2004; Begum and Phukan 2005; Chawla 2011; Asthana 2011; Dutta et.al 2016) etc. Significant positive correlations were also established between intelligence and achievement in English by Sandhu (1985), Balasubramaniam (1993), and Chopra (1994).

Obviously, the empirical evidence embodied in the researches quoted by above mentioned researchers fails to answer, as to what is the exact degree of relationship between achievement and intelligence. The truth is that for the present investigation, the question regarding exact degree of relationship between achievement and intelligence was as unequivocal as it was at the time of Aristotle. Here a bit of concentration will reveal that before the present investigator aspired to take up research in this specific area, the notion regarding relationship between achievement and intelligence had already covered the theoretical, the impressionistic and the psychometric (or the scientific) stages. Though in a different context, Brown has professed that before we are in a position to put up a scientifically sound explanation, every theoretical notion passes through three stages, namely logic, religion and science. The contention of the present investigator is that though the notion regarding relationship between achievement and intelligence seems to have covered all the three stages of development, the answer to the question as to what is the exact degree of relationship between the two variables was not available to the present investigator.

So far as the problem of genuine relationship between achievement and intelligence is concerned, some scientists (Kelley, 1927 quoted by Rammers et. al. 1967; Wellington and Wellington, 1963 profess that intelligence and achievement tests cover the same ground and it is due to jangle fallacy-a belief that by giving two names to a phenomenon, we are referring to two vertically different phenomena i.e. we regard intelligence tests and achievement tests as if they are different. Taking into consideration what stands, embodied in the assertion made by Kelley and his followers. It may be realized that valid and reliable measures of differences in intelligence and achievement should yield perfect correlation and if we fail empirically to reach perfect correlation between measures of the two variables then it may be due to so many sources of contamination, which remain uncontrolled.

If Kelley's theory is acceptable then indices of differences in academic attainment become indirect indicators of differences in intelligence. Some empirical researches (Dhaliwal, 1971, 1974) have also demonstrated that discrepancy between intelligence and achievement is explicable in terms of errors of measurement, contaminating the two situations of testing, meaning thereby that there is virtually no difference between the two types of measurements. Hence, there exists perfect correlation between the two variables which of course, may be empirically reached only when perfectly valid and reliable tools would be used in the two situations. Not only that, but for reaching perfect correlation between measures of two variables, it is also necessary to control the influences of chance or measurement errors.

The tradition which permits validation of difference in intelligence against performance on achievement test also supports that theory which presupposes that intelligence and achievement is related in a direct fashion. Psychologically, for purposes of validation & standardization, when indices of individual differences based on newly designed test of intelligence are correlated with the indices of differences based on an achievement test, it gets automatically presupposed that, somehow or the other, the scores obtained on an intelligence test are representing differences in the capacity for performance, whereas the scores based on an achievement test are representing differences in performance or learning.

Obviously, when Kelley and his followers contended that achievement and intelligence tests cover the same ground, then came to profess that presumption which regards one's score on intelligence test as a measure of one's capacity for performance and that based on achievement test as measure of performance. Whether such a presumption is verifiable or not is a different question? But in the present study, actualizer is the one who exceeds in aptitude-based expectancy of academic performance, par-actualizer is the one who achieves at par with his desired level of achievement and the non-actualizer is the one who does not

perform well as would be expected from known characteristic or abilities, particularly from measures of intellectual aptitude. Accordingly, an individual may be an actualizer, par-actualizer and non-actualizer.

A connotation was given by English and English (1958), when they defined over achievement as better performance than predicted from a measure of aptitude, specifically receiving high marks in school or making better scores on school achievement test, than predicted from a test of general intelligence or of academic course.

Unlike Kelley and his followers, Oats (1929, cited by Rao, 1963) observes that, "Discrepancy that prevents complete agreement between measures of scholastic achievement and intelligence does not arise entirely through errors in our measurement of these two qualities but is probably due to presence of factors other than intelligence/general mental ability in situation."

General mental ability, as far as a layman is concerned, manifests itself in terms of how an individual behaves in society. It is not a thing or object but the way of acting in a situation. Psychologists have disagreed to enlist the essential factors of behavior that can be labeled as 'intelligence'. Some have emphasized adaptability to new circumstances, some abstractness to complexity and to some facility in the use of symbols. To some intelligence seemed to represent one central uniform trait, to others, the sum of or average of a so many separate and diverse mental abilities.

It was perhaps Alfred Binet who first of all defined intelligence as the ability to judge well, to comprehend and to reason well. "Intelligence is the ability to use optimally limited resources–includingtimetoachievegoals"(Kurzweil,1999).

According to Stern (1914), "Intelligence is the general capacity of an individual to consciously adjust his thinking to new requirements. It is general mental adaptability to new problems and conditions of life."

Guilford (1959) while giving Structure of Intellect (SOI) suggests that mind is composed of 3 dimensions of intellectual abilities namely operations, contents and products. He states that each dimension of intellect is sufficiently distinct which may be detected by factor analysis. Every intellectual ability structure is characterized in terms of type of operations, the content and sort of product which results. However, these dimensions of intellect can be classified because of similarities among themselves.

Five major groups of operational dimensions of intellectual abilities are: 1) Cognition, 2) Memory, 3) Divergent thinking, 4) Convergent thinking and 5) Evaluation. The content may be 1) Figural, 2) Symbolic, 3) Semantic, 4) Behavioral. The six types of products are: 1) units, 2) classes, 3) relations, 4) systems, 5) transformations and 6) implications. The three kinds of classifications of factors can be represented by means of a single solid model, which is called structure of intellect. The view of Guilford

has been considered as the most comprehensive view of intellect, which has been presented so far. He takes into consideration all possible aspects of intellectual activity. This is the only theory, which has been presented in the form of a thre-dimensional model and comprises of 120 cells (5x4x6) representing independent abilities.

After discussing the views of certain psychologists regarding the nature of intelligence/general mental ability, we can say that high IQ is an advantage in life because virtually all activities require some reasoning and decision making, conversely, a low IQ is often a disadvantage (Arvey, 2004). In addition to this, individuals differ in intelligence due to differences in both their environment and genetic heritage (Duke, 2004). In fact, it is almost impossible to separate intelligence "in the genes" from intelligence "due to experience". Genes do not fix behavior. Rather they establish a range of possible reactions to the range of possible experiences that environment can provide.

Allword Dictionary (2006) stated that intelligence is the ability to use memory, knowledge, experience, understanding, reasoning, imagination and judgment in order to solve problems and adapt to new situations. Thus, intelligence is to see the right thing, at a right moment, in a right way. It is the general capacity to understand and meet with the situations successfully that life may present. An intelligent person has the ability to adjust himself with ease, efficiency and speed. He has the capacity to assimilate ideas very quickly and clearly.

Thus, the term general mental ability refers to a kind of ability that one can apply in all situations of life and this ability develops over time and is product of one's life experience. Psychologists have tried to define it over the years, but have not agreed on a single definition. Some of the ways it can be defined are:

- The ability to cope with environment through learning.
- The ability to understand and deal with people, objects and symbols.
- The ability to act purposefully, think rationally and deal effectively with environment.

Being an all-pervading phenomenon, general mental ability is involved and reflected in everything that a person does and academic achievement is no exception. Different psychologists gave a series of subject tests, administered under the same conditions and with all other factors influencing academic achievement of two individuals, identical in class and age but different in intellect. It is reasonable to believe that the more intellectual would prove high achiever. The assumption thus is that general mental ability plays a part in academic achievement. It is now clear that higher achievers are not dullards; they have surely above average IQ.

Academic achievement has great importance for both the student, and those around him/her. There can be no doubt that it is affected by two broad factors: subjective factors or individual factors and objective factors or environmental factors. The subjective factors are related to the individual himself and the objective factors pertain to the environment of the individual. Emotional maturity is the one of the individuals and non-cognitive factors that may affect the academic achievement of the students.

According to Walter D. Smitson (1974), Emotional maturity is a process in which the personality is continuously striving for greater sense of emotional health, both intra-psychically and intra-personally. Jersild(1963) says that Emotional maturity means the degree to which the person has realized his potential for richness of living and has developed his capacity to enjoy things, to relate himself to others, to love and to laugh, his capacity for whole hearted sorrow when an occasion for grief arises, his capacity to experience anger when faced with thwarting that is capable of raising the temper of any reasonably tolerant or sensible person and his capacity to show fear when there is occasion to be frightened without feeling a need to use a false mask of coverage, such as must be assumed by persons afraid to admit that they are afraid.

According to Elizabeth Perry (2022), "Emotional maturity means having the self-control to manage your emotions and work to understand them". Emotional Maturity is a state of balanced feelings and self-control. Only that person is said to be emotionally mature who has in his possession almost all kinds of emotions (positive as well as negative) and is able to express them justly, skillfully and timely in different situations of life.

Today most of the young students do not achieve according to the expectations of the parents as well as the teachers despite of the fact being intelligent. The previous research findings of Kaur, M. (2001), Gakhar (2003) who reported non-significant relationship between emotional maturity and academic achievement whereas Sarita (2017) and Rafaqi & Musheer (2019) found a significant positive relationship between emotional maturity and academic achievement of prospective teachers and secondary school students.

The present investigation carries findings reached in the research, which was stimulated by the observation made by Oats and its main purpose was to find out the relationship of academic achievement with general mental ability and with certain non-cognitive variable of personality such as emotional maturity and also to see its role in the actualization of the general mental ability as well as to see the significant of the differences between actualizers & par-actualizers, actualizers & non-actualizers, par-actualizers & non-actualizers (Rural as well as urban) on the basis of their emotional maturity.

OBJECTIVES OF THE STUDY

1. To find out the relationship between academic achievement and general mental ability of high school students.
2. To investigate the relationship between academic achievement and emotional maturity of high school students.
3. To see the difference between Actualizers & par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers on the basis of emotional maturity.
4. To know the differences between rural and urban actualizers & par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers on the basis of emotional maturity.

HYPOTHESES

1. There will be no significant relationship between academic achievement and general mental ability of high school students.
2. There will be no significant relationship between academic achievement and emotional maturity of high school students.
3. There will be no significant difference between Actualizers & par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers on the basis of emotional maturity.
4. No significant differences exist between rural and urban actualizers & par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers on the basis of emotional maturity.

METHOD

Normative survey method has been followed. The present study is based on correlation method where academic achievement is the dependent variable andemotional maturity & general mental ability are the independent variables.

SAMPLE

The sample consisted of 400 students of Xclass, selected from the different schools of Punjab state affiliated to C.B.S.E, New Delhi. Out of which 200 were rural (100 boys and 100 girls) and 200 were urban (100 boys and 100 girls). The sample was collected by using multistage random sampling technique.

TOOLS USED

In the present study Singh & Bhargava's Emotional Maturity Scale (EMS) (1999) and Ahuja's Group Test of Intelligence (1998) have been used. Marks obtained by the students in their annual C.B.S.E. Board matriculation examination has been taken as an index of their level of academic achievement.

ADMINISTERATION

The scales were administered to the subjects in groups in the regular classroom situation. The instructions were provided in the first page of the scale booklet which is self-explanatory. The answers of the subjects were recorded on the scales protocol. Scoring was done according to the instructions given in the different manuals. In order to analyze the data, raw scores obtained on the basis emotional maturity, general mental ability and academic achievement were converted into T-scores. Pearson's product moment correlation was used to find the correlation and contribution of emotional maturity in the academic achievement of high school students.

For the prediction of actualization, based on the data collected through intelligence test of 400 students from eight schools (25 students from each of the school, 4 urban and 4 rural), simple regression equation was used. This was necessitated for presenting the cross-validating evidence and to make the present study of a good prognostic value. The discrepancy between one's performance on tests of achievement and general mental ability were defined by working out differences in the levels of one's actual achievement and that for predicted achievement. If the measure of the two variables, that is academic achievement and general mental ability are imperfectly correlated and difference between one's actual achievement and one' predicted achievement, predicted with the help of the above-mentioned Regression Equation is worked out, then mathematically speaking, one of the three types of indices is likely to be reached:

1. It may be positive, meaning thereby that one's actual achievement is superior in comparison to what could be predicted on the basis of his potential for achievement; or using different words, such an index will be embodying actualization of general mental ability on the part of a particular individual and was termed as 'actualizer'.
2. The index may be zero, showing that the particular individual is neither 'actualizer' nor 'non-actualizer.' Obviously, such an index is representing the situation which may be designated as 'par-actualization'. More technically speaking, the index of par-actualization is indicative of perfect commensuration of one's achievement and the potential for achievement and was labeled as 'par-actualizer'.
3. The index may be negative demonstrating thereby that the particular individual has failed to achieve, what could be predicted on the basis of his performance on the test of intelligence and the individual may be dubbed as 'non- actualizer'.

Table 1

The number of students falling in the three categories Actualizers, Par-actualizers and Non-actualizers on the basis of the discrepancy scores (N=400)

Sr. No.	Category	Boys		Girls		Total
		Rural	Urban	Rural	Urban	
1	Actualizers	43	15	43	24	125
2	Par-actualizers	42	31	40	37	150
3	Non-actualizers	15	54	17	39	125

Through this method, out of 400 students, 125 were labeled as actualizers, 150 par-actualizers and 125 non-actualizers on the basis of their general mental ability as shown in table 1. After arranging the scores obtained by students in three categories mentioned above, the corresponding emotional maturity scores were written against their respective serial numbers. Means of the scores of the three categories of the subjects on their emotional maturity were computed along with the standard deviations of the said means. t-test was applied to see the significance of the differences between actualizers and par-actualizers, actualizers and non-actualizers, par-actualizers and non-actualizers on the basis of their emotional maturity scores and also on the different categories of the sample i.e. Rural and urban groups. The significance of the difference between the mean scores of actualizers and par- actualizers, between actualizers and non-actualizers, between non-actualizers and par-actualizers collectively and separately for rural and urban groups on the basis of emotional maturity were calculated and shown in table 3,4 and 5.

RESULTS AND DISCUSSION

The values of product moment coefficient of correlation between academic achievement& emotional maturity and between academic achievement and general mental ability were found to be of the order of r = -0.08& r = 0.53 respectively (df=398, N=400). The value of coefficient of correlation between academic achievement and emotional maturity r=-0.08 is not found to be significant at .05 level of confidence depicting that there is no significant and but negative correlation between academic achievement and emotional maturity. Whereas the value of coefficient of correlation between academic achievement and general mental ability r=0.53 is significant at .05 level of confidence showing that there is significant and positive correlation between academic achievement and general mental ability of high school students.

Table 2

Some measures of Accuracy of Prediction of Academic Achievement of Total Sample by Different Variables (N=400)

Test variable	Standard error of estimate SE(est.)	Coefficient of alienation k	Coefficient of forecasting efficiency E	Coefficient of determination d	Variance accounted for
General Mental Ability	8.48	0.848	15.20	0.2809	28.09
Emotional Maturity	9.97	0.997	0.30	0.0064	0.64

Table 2 reveals that the standard errors of the estimate for these two predictors (general mental ability and emotional maturity) are 8.48 and 9.97 respectively. The values of coefficient of forecasting efficiency are 15.20 percent and 0.30 percent respectively. The variance accounted for by general mental ability is 28.09 percent and that by emotional maturity, it is 0.64 percent. It means that general mental ability accounts for the major portion of the variance of academic achievement and emotional maturityaccounts merely for being 0.64 percent only.

General mental ability has emerged as an independent predictor of academic achievement and rightly so because students with high level of general mental ability and greater IQ can only perform well in the final examination and hence achieve more. The reasons for the above results may be that in both academic achievement as well as general mental ability, high school students are supposed to possess some degree of ability by way of thinking, reasoning, analysis, inferences etc.

The value of variance accounted for emotional maturity shows that emotional maturity does not play a significant role in the academic achievement of high school students and this may be due to the fact that high academic achievement may not act as an emotional tonic and any harm done to a child in the home or neighborhood may lead to poor achievement in school. It also reduces the confidence level of the students and leads to poor adjustment with other members of the society.

Thus, the findings yielded by the present investigation are in conformity with the previous research findings of Kaur, M. (2001), Gakhar (2003) who reported non-significant relationship between academic achievement and emotional maturity and Muley Patnam and Vasekar (2003) who also found non-significant relationship between slum children's academic performance and their emotional maturity. Whereas Dhami (1974), Bisht (1980), Sabapathy (1986), Lekhi (2005) depicted significant relationship

between these two variables.

Table 3

Comparison among Actualizers (N=125), Par-actualizers (N=150) and Non-actualizers (N=125) on the variable of Emotional Maturity

Sr. No.	Variable	Group	Mean	SD	SE_D	df	t-value
1	Emotional Maturity	Actualizers	49.656	9.904	1.137	273	0.347
		Par-actualizers	50.051	8.939			
		Actualizers	49.656	9.904	1.343	248	0.467
		Non-actualizers	50.283	11.290			
		Par-actualizers	50.051	8.939	1.22	273	0.191
		Non-actualizers	50.283	11.290			

Results as tabulated in Table 3 reveal that actualizers and par-actualizers, actualizers and non-actualizers, non-actualizers and par-actualizers do not differ significantly on the variable of emotional maturity as the calculated t-values are less than 1.96 to be significant value at .05 level of confidence. After comparing their means it was found that emotional maturity ofnon-actualizers (M=49.656) was higher than those of par-actualizers (M=50.051) and actualizers (M=50.283As per manual less the score more is the Emotional Maturity).

Table 4

Comparison among Actualizers (N=39), Par-actualizers (N=68), and Non-actualizers (N=93) Urban High School Students on the variable of Emotional Maturity

Sr. No.	Variable	Group	Mean	SD	SE_D	df	t-value
1	Emotional Maturity	Actualizers	50.650	11.105	2.063	105	0.701
		Par-actualizers	49.210	9.767			
		Actualizers	50.650	11.105	2.121	130	0.311
		Non-actualizers	51.310	11.120			
		Par-actualizers	49.210	9.767	1.687	159	1.248
		Non-actualizers	51.310	11.120			

Perusal of Table 4 shows that urban actualizers and non-actualizers, actualizers and par-actualizers and non-actualizers and par-actualizers do not differ significantly on the variable of emotional maturity as the calculated t-values are not significant at .05 level of confidence. After comparing their means it was found that emotional maturity of urban par-actualizers (M=49.210) was higher than those of urban actualizers (M=50.650) and urban non-actualizers (M=51.310).

Table 5

Comparison among Actualizers (N=86), Par-actualizers (N=82), and Non-actualizers (N=32) Rural High School Students on the variable of Emotional Maturity

Sr. No.	Variable	Group	Mean	SD	SE_D	df	t-value
1	Emotional Maturity	Actualizers	49.200	9.340	1.358	166	1.139
		Par-actualizers	50.750	8.180			
		Actualizers	49.200	9.340	2.058	116	0.927
		Non-actualizers	47.296	11.410			
		Par-actualizers	50.750	8.180	1.916	112	1.804
		Non-actualizers	47.296	11.410			

The results of Table 5 indicate that rural actualizers and par-actualizers, actualizers and non-actualizers and par-actualizers and non-actualizers do not differ significantly on the variable of emotional maturity as the calculated t-values are not significant. After comparing their means it was found thatemotional maturity of rural non-actualizers (M=47.296) was higher than those of rural actualizers (M=49.200) and rural par-actualizers (M=50.750). This may be due to the fact that par-actualizers have low level of emotional maturity than actualizers and non- actualizers and emotional maturity has neither contributed nor played any role in the academic achievement (Actualization) of high school students.

CONCLUSIONS

1. Emotional maturity contributed very low as compared to general mental ability in the academic achievement of high school students.
2. Par-actualizers of urban and non-actualizers of rural groups showed a significant high level of emotional maturity than their counterparts of actualizers & non-actualizers and actualizers and par-actualizers respectively.

3. Actualizers and par-actualizers, actualizers and non-actualizers, non-actualizers and par-actualizers as well as urban and the rural actualizers and par-actualizers, actualizers and non-actualizers, non-actualizers and par-actualizers did not differ significantly in their emotional maturity.

EDUCATIONAL IMPLICATIONS

1. The findings of the present study are applicable to the classroom practices, organizational management in schools and personality development. It may also help the parents, teachers, guidance workers and administrators to identify the non-actualizers, diagnose their problems and in providing assistance to improve their performance.

2. Parents, teachers and principals must be very particular in maintaining inter-personal relationship especially in less intelligent students studying in rural as well as urban schools in order to chanallize their energy in right direction. They should help the students in making them more emotionally mature by way of giving affection, security, counselling and freedom of decision making in order to make emotional adjustment in the society.

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