

RELATIONSHIP BETWEEN SCIENTIFIC ATTITUDE AND ACADEMIC ACHIEVEMENT OF ADOLESCENTS STUDYING IN CLASS XI

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The national curriculum for primary and secondary education emphasizes the need for inculcation of scientific temper among the students in the following words "Education should help the individual not only in acquiring Knowledge and its application but also in developing a scientific temper and rational world view". It means that it is the scientific temper that makes any one a scientist or a follower of science. From the dawn of our life this outlook and temperament is functioning as a dominant factor of development and continuous progress. Scientific attitude and its development among the school going children has become a necessity. At the same time, it has also been observed that for selection of science stream at intermediate level, the students who have passed the C.B.S.E. or U.P. Board Examination at High School Level are required to obtain a specific percentage of marks in aggregate as well as in science subject too. From these observations it was felt by the researcher that there may be some sort of relationship between these two variables.

Moreover, scientific attitude is a variable which is supposed to affect the scientific temperament and logical behaviour of a person. To be a rational human being one must possess a proper analytical outlook and power of systematic thinking and reasoning. These qualities are not only important for higher academic achievement but also in every walk of life. The ever increasing problem at national and international level which now has become a challenge for mankind, could be solved by those future citizens of India who have these abilities.

Thus efforts have been made in the present study to know the scientific attitude and academic achievement of the 10+2 level students (male and female) who belong to science stream and have been admitted in colleges after passing their higher secondary examinations from C.B.S.E. Board. Ramachari (1982) found that the scientific attitude correlated positively with achievement in science. Chandarani (1986) found that cognitive development is positively and significantly related with age points of female science students. These studies have been focused on investigating the correlation between scientific attitude and achievement. The present study attempts to find out the

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relationship between scientific attitude and academic achievement of adolescents studying in 11th class.

OBJECTIVES OF THE STUDY:-

1. To find out the relationship between scientific attitude and academic achievement of male students.
2. To find out the relationship between scientific attitude and academic achievement of female students.

METHODOLOGY:

Sample: In the present study descriptive survey method was employed to find out the relationship between scientific attitude and academic achievement. The sample of the study consisted of students studying in the XI class Government aided schools of Varanasi city which are affiliated to C.B.S.E. Board. A total number of 150 students (75 male and 75 female) constituted the sample of the study. The sample was drawn through "Accidental sampling." Thus students who were present on the day of data collection of data were taken into consideration as the Sample of the study.

Tools used:-

To measure the scientific attitude of XI class students, a questionnaire developed by K.S. Misra was used.

Academic Achievement of students in Physics subject was measured through the percentage of marks the student obtained in annual home examination of class XI.

RESULT AND DISCUSSION:

For the analysis of data the scores obtained by administering scientific attitude questionnaire and achievement of students in physics subject were taken. After that Karl Pearson's product moment method was used to find out relationship between the scientific attitude and academic achievement of students. In this way analysis of data was done. This analysis in tabular form is presented as follows:

Table-1 showing Correlation between Scientific attitude and Academic achievement of male students.

S. No.	Variables	Sex	N	Correlation Coefficient
1.	Scientific attitude	Male	75	0.7034*
2.	Academic achievement			

*Significant at 0.01 level

Observation of the above table shows that the value of correlation coefficient is 0.7034. It means that scientific attitude is significantly and positively correlated with academic achievement at 0.01 level of significance. It indicates that with increase in academic achievement, scientific attitude of male students also increases. The probable reason of this finding may lie in the fact that at the higher secondary level scientific attitude develops among the students in its optimum level and it seems that students having scientific attitude may be critical minded, give respect to evidence, honest, objective, ready to change opinion, open minded and possess questioning attitude which are essential for optimum academic achievement mainly in science subject among male students.

Table-2 showing Correlation between scientific attitude and academic achievement of female students.

S. No.	Variables	Sex	N	Correlation Coefficient
1.	Scientific attitude	Male	75	0.6761*
2.	Academic achievement			

*Significant at 0.01 level

Observation of the above table shows that the value of correlation coefficient between scientific attitude and academic achievement of female students is 0.6761. This is significant at 0.01 level. It means that scientific attitude is significantly and positively related with academic achievement among female students. This finding indicates that scientific attitude of female students increases with increase in achievement in science. These findings suggest that the correlation between scientific attitude and academic achievement is not affected by sex differences. The results obtained from table A and B are supported by the result of Ramachari (1982) who found that scientific attitude correlates positively with achievement in science. It is suggested that a well-structured programme be evolved to encounter the existing deep rooted obscurantism that women do not have positive scientific attitude. Teachers should attempt to inculcate scientific thinking and attitude in their students. Along with this some popular educational packages and models be developed to inculcate scientific attitude as this inturn may help in raising academic achievement among the students. Similarly, an integrated approach of curriculum development should be adopted strategically so that the scientific attitude may be inculcated at every stage of education.

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