



**RELATIONSHIP BETWEEN STUDENT'S PERSONALITY, ATTITUDE TOWARDS SCIENCE,  
MALE AND FEMALE TEACHERS TEACHING EFFECTIVENESS WITH  
ACADEMIC ACHIEVEMENT IN SCIENCE**

**Papannavar Y. N.**

Research Scholar, Dravidian University, Kuppam, Andhrapradesh.

**Dr. N. B. Kongawad**

Principal , Sana College of Education, Dharwad.

**ABSTRACT**

The purpose of the study was to “**RELATIONSHIP BETWEEN STUDENT'S PERSONALITY, ATTITUDE TOWARDS SCIENCE, MALE AND FEMALE TEACHERS TEACHING EFFECTIVENESS WITH ACADEMIC ACHIEVEMENT IN SCIENCE** “. The sample consists of 40 teachers and 120 students from Murarji Desai Residential Schools. Thus, stratified random sampling technique was used to select teachers and random sampling technique was used to select students. Ex Post Facto research design was used in the present study (Kerlinger, 1964, p. 379). Among the other things, the study revealed that; i)The student's personality types increasing the academic achievement in science when male teachers are concerned; ii)The student's attitude towards science increasing the academic achievement in science when male teachers are concerned; iii) The male teachers teaching effectiveness increasing the academic achievement in science. i)The student's personality types increasing the academic achievement in science with respect to female teachers; ii)The student's attitude towards science increasing the academic achievement in science with respect to female teachers; iii) The female teachers teaching effectiveness increasing the academic achievement in science.

**KEYWORDS:** Personality, Attitude towards Science, Academic Achievement

**INTRODUCTION**

The government of Karnataka has launched Murarji Desai Residential School (MRDS) scheme, which is essential residential in nature in the year 1993-1994 with a view to provide good quality modern education including strong component of culture, inculcation of values awareness of environment and physical education to the talented children predominantly from the rural areas with regard to their families socio-economic condition, free of cost, under this scheme.

***Aims of MDRSs***

*The broad aims for the establishment of MDRSs are:*

- *To serve the objective of excellence coupled with equity;*
- *To promote national integration;*
- *To provide opportunities to the talented children to develop their full potential; and*

- *To facilitate the process of school improvement.*
- *Within this broad framework, the specific objectives of this scheme are as follows:*
- *To provide good quality modern education including a strong component of culture, inculcation of values, awareness of the environment, adventure activities and physical education to the talented children pre-dominantly from the rural areas who are economically backward.*
- *To ensure that all students of MDRSs attain a reasonable level of competence in three languages as envisaged in Three Language Formula: and*
- *To serve in each Taluka as focal points for improvement in the quality of school education in general, through sharing of experiences and facilities.*

### TEACHING EFFECTIVENESS

Teacher effectiveness is an old concept to us. We have been listening that some teachers are the most effective ones. This means that those teachers have attained the needed competence in their roles and functions, such as the preparation and planning for teaching, classroom management, and mastery over the subject matter, teacher characteristics and their interpersonal relations. Also these teachers excel in their other personality characteristics. They are said to be the best teachers/effective teachers. Some teachers who are least effective are inferior in respect of their roles, functions and their personality characteristics. Most effective and least effective teachers being the ends of continuum, in between these two ends moderately effective teachers lie.

### PERSONALITY

"I'm really jealous of my sister. Here I am about to graduate, and I only made it into the Student Association this year. Sis's a freshman -- a frosh -- and she's already been elected."

"Wilma, I know what you mean. My older brother was the same way. You know what your sister and my brother have in common? They've both got a lot of personality. Your sister kind of just radiates charm -- even for a first-year student!

And Kirk's the same way: Everywhere he goes, people smile with him. He gushes at the right time, gets serious when he needs to, and always has a good word for everybody. He's just got a magnetic personality." *How is the term "personality" being used here?*

"I'll never forget that cookie jar. When we were real young, every time we visited my grandmother I used to scheme with my twin sister about how we could get into the jar and get those delicious cookies. Sure we got caught sometimes, but it was well worth it. They were delicious!

"And then all of a sudden one year it didn't seem quite so important to us to get into that jar without anybody knowing about it. Pretty soon we couldn't even bring ourselves to swipe those cookies at all." *How old would you say the twins were when this change in behavior took place? What would Freud say had to happen before it would occur?*

Most people use the term "personality" to identify the most obvious characteristic of a person, or to refer to that person's social skills. Psychologists are mainly interested in personality to (1) explain why people with similar heredity, experience, and motivation may react differently in the same situation; and (2) explain why people with different heredity, past experiences, and/or motivation may nevertheless react similarly in the same situation.

### NEED AND IMPORTANCE OF THE STUDY

Whether teaching is an Art or a Science, to be an effective teacher one must develop certain attitudes and qualities, which make teaching effective.

The role of teachers, particularly those of secondary schools in shaping the personality of younger generation, is becoming increasingly important. Whether teacher is viewed as a model, director, supervisor, guide, co-worker or leader, the teacher has a crucial role in moulding the behaviour of pupils. The secondary school teacher may be regarded as the builder of the nation. The task of a teacher today, is far more difficult than it was a few decades ago. The tremendous explosion of knowledge, development of teaching technology and availability of different channels of education, like TV, video and audio lessons have on the one hand provided opportunities which were not available for effective teaching, and on the other hand, increased the challenges and responsibilities of the teacher. In the past, when the teacher was the main source of knowledge he / she could not afford to be static and lethargic. Studies have been conducted to analyze and determine the special qualities of successful teachers. Although the studies have revealed different findings, there are certain basic qualities, which are common to most of the successful or effective teachers. These qualities are to be imbibed by all the teachers, if they are to be effective teachers. The dimension of effective teaching normally includes: human relations dimension, instruction dimension and evaluation dimension. Those teachers who are good on these dimensions can become good professionals in their fields. Teachers with commitment, interest and love for teaching can be more effective in their profession.

#### **OBJECTIVES OF THE STUDY**

1. Study the relationship between student's personality, attitude towards science and male teachers teaching effectiveness with academic achievement in science.
2. Study the relationship between student's personality, attitude towards science and female teachers teaching effectiveness of female teachers with academic achievement in science.

#### **Hypotheses**

1. There is no significant relationship between student's personality, attitude towards science and male teachers teaching effectiveness with academic achievement in science.
2. There is no significant relationship between student's personality, attitude towards science and female teachers teaching effectiveness of female teachers with academic achievement in science.

#### **METHODOLOGY**

Ex Post Facto research design was used for the present study (Kerlinger, 1964, [ 374). Ex Post Facto research is a systematic empirical inquiry in which the investigator does not have direct control of independent variable because their manifestations have already occurred because they are inherently not to manipulate. Inferences about relation among variables are made, without direct Inversion from concomitant variation of independent and dependent variables.

#### **Sample**

The sample for the study is usually drawn from the population related to the problem of the study. In the present case the Murarji Desai Residential school students and teachers are to be involved. Hence, the sample is drawn from this High Schools.

The investigator chosen randomly Murarji Desai Residential Schools in the Karnataka State.

#### SAMPLE OF TEACHERS AND STUDENTS

No. of Schools	Teachers			Students IXA, IXB		
	Male	Female	Total	Male	Female	Total
60	120	120	240	600	600	1200

The above schools are randomly chosen. Hence, there are 60 schools. 240 teachers and 1200 students studying in IX standard taught by the respective selected teachers who are involved in the present study. From each class three students (above average, average and below average) were also selected to rate each teacher. Thus stratified random sampling technique was used to select the teachers and random sampling technique was used to select the students.

#### TOOLS

The following tools were used in collecting the data:

- Kundu Introversion – Extraversion Inventory [ KIEI ]
- Ahluwalia Teacher Attitude Inventory [ ATAI ]
- Students Ratings of Teaching Effectiveness Scale [SROTES]
- Academic Achievement Test in Science, developed by the investigator

#### Statistical Techniques

- Correlation Analysis

#### ANALYSIS AND INTERPRETATION

**Correlation between student's personality, attitude towards science and teachers teaching effectiveness and academic achievement in science (Male teachers n=167).**

**Hypothesis:** There is no significant relationship between student's personality, attitude towards science and male teachers teaching effectiveness with academic achievement in science.

To achieve this hypothesis, the Karl Pearson's correlation coefficient technique has been applied and the results are presented in the following table:

**Table-1: Results of correlation coefficient between student's personality, attitude towards science and male teachers teaching effectiveness and academic achievement in science.**

Independent variables	Academic achievement in science			
	r(X,Y)	t-value	p-value	Signi.
Student's personality	0.2541	3.3747	<0.05	S
Attitude towards science	0.1978	2.5920	<0.05	S
Male Teachers teaching effectiveness	0.1990	2.6084	<0.05	S

From the above table, we clearly found the followings

- The relationship between student's personality types and academic achievement in science of students is found to be positive and significant ( $r=0.2541$ ,  $t=3.3747$ ,  $<0.05$ , S) at 0.05% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means

that, the student's personality types increasing the academic achievement in science when male teachers are concerned.

- The relationship between student's attitude towards science and academic achievement in science of students is found to be positive and significant ( $r=0.1978$ ,  $t=2.5920$ ,  $<0.05$ , S) at 0.05% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the student's attitude towards science increasing the academic achievement in science when male teachers are concerned.
- The relationship between male teachers teaching effectiveness and academic achievement in science of students is found to be positive and significant ( $r=0.1990$ ,  $t=2.6084$ ,  $<0.05$ , S) at 0.05% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the male teachers teaching effectiveness increasing the academic achievement in science.

#### **Correlation between student's personality, attitude towards science and teachers teaching effectiveness and academic achievement in science (Female teachers n=73)**

**Hypothesis:** There is no significant relationship between student's personality, attitude towards science and female teachers teaching effectiveness of female teachers with academic achievement in science.

To achieve this hypothesis, the Karl Pearson's correlation coefficient technique has been applied and the results are presented in the following table:

**Table-2 :Results of correlation coefficient between student's personality, attitude towards science and female teachers teaching effectiveness and academic achievement in science.**

Independent variables	Academic achievement in science			
	r(X,Y)	t-value	p-value	Signi.
Student's personality	0.1541	1.3142	$>0.05$	NS
Attitude towards science	0.2549	2.2212	$<0.05$	S
Teachers teaching effectiveness	0.3241	2.8867	$<0.05$	S

From the above table, we clearly found the followings

- The relationship between student's personality types and academic achievement in science of students is found to be positive and not significant ( $r=0.1541$ ,  $t=1.3142$ ,  $>0.05$ , NS) at 0.05% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the student's personality types increasing the academic achievement in science with respect to female teachers.
- The relationship between student's attitude towards science and academic achievement in science of students is found to be positive and significant ( $r=0.2549$ ,  $t=2.2212$ ,  $<0.05$ , S) at 0.05% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the student's attitude towards science increasing the academic achievement in science with respect to female teachers.
- The relationship between female teachers teaching effectiveness and academic achievement in science of students is found to be positive and significant ( $r=0.3241$ ,  $t=2.8867$ ,  $<0.05$ , S) at 0.05% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the female teachers teaching effectiveness increasing the academic achievement in science.

## DISCUSSION AND CONCLUSION

In this study, the researcher aimed to **RELATIONSHIP BETWEEN STUDENT'S PERSONALITY, ATTITUDE TOWARDS SCIENCE AND HIGHER AND LOWER TEACHING EXPERIENCE OF TEACHERS TEACHING EFFECTIVENESS WITH ACADEMIC ACHIEVEMENT IN SCIENCE**. From the analysis report, it is concluded that; i)The student's personality types increasing the academic achievement in science when male teachers are concerned; ii)The student's attitude towards science increasing the academic achievement in science when male teachers are concerned; iii) The male teachers teaching effectiveness increasing the academic achievement in science. i)The student's personality types increasing the academic achievement in science with respect to female teachers; ii)The student's attitude towards science increasing the academic achievement in science with respect to female teachers; iii) The female teachers teaching effectiveness increasing the academic achievement in science.

## EDUCATIONAL IMPLICATIONS

### ***Students personality and Students achievement.***

Although the outcome of the learning is currently classified into three dominos-Cognitive, affective and psychomotor (Bloom, et.al., 1971). The primary goal of the school is acquisition of people of cognitive outcome, namely, academic skills. The extent to which this goal is attained reflects the effectiveness of the schools' endeavor. Therefore, it is not surprising that great attention has been paid to the school achievement of students.

School achievement is referred as academic achievement which is an outcome of instruction. It can be assessed by using an achievement test, either may teacher- made test or a standardized test. Such tests typically focus upon such topics as the understanding and application of specific and scientific principals, the interpretation of literature, or the appreciation of art school achievement may be expressed as an overall grade based upon combination of all the subjects taken or as a grade in a specific subject or course such as science, reading comprehension or mathematics. An achievement tests is usually constructed to measure knowledge in a specific subjects and the pupils' total grade can be obtained by combining the results of all the tests taken. The purpose of a study indicate what kind of achievement test is to be used.

### **Students' Attitude towards Science and Academic Achievement**

Attitudes are enduring dispositions to react in certain ways towards different objects. They are relatively stable. In other words, they represent the extent of positive or negative affect (feelings) associated with such object including person, places, institutions, systems, practices and ideas. As the feelings towards any of these may be Positive or Negative, the overall attitude may be said to be Favorable or Unfavorable. Attitudes are essentially affective but they have cognitive and effective domains as well. They have cognitive contain in terms of the knowledge and beliefs about the objects concerned. This may emerge from one's sustained experienced with the object over a period of time, or from an intense experience in a limited time. In fact, this is the base of the attitude, as the feeling emerges from this cognitive structure with internalized with the accompanying feelings. Attitudes also have a affective domains in the sense that, they urge one to behave or respond in certain particular way in the respect of subjects. In other words, they make for certain behavioral tendencies. A positive attitude or favorable entertains approach behavior in some form or degree(receive, respond, seek, participate, contribute , love, etc.), and a negative or unfavorable attitude makes for avoidance behavior(avoid, move away from, dislike, oppose, hate etc., ).

**BIBLIOGRAPHY**

1. Brookover, W.B.(1940). Person-person Interaction Between Teachers and Pupils and Teaching Effectiveness. *Journal of Educational Research*, 34, pp. 272-87.
2. Budhdev (1990). *Academic Achievement among Children of Working and Non-working Mothers*. Indian Psychological Review, 52(2), pp. 69-73.
3. Dixit Santosh Kumar, C. (1980), *The Effect of Personality Factors and Self-concept of Educational Achievement*. Ph.D., Agra University.
4. Downey, D.B. (1995). When Bigger is not Better: Family Size, Parental Researches and Children's Educational Performance. *American Sociological Review*, 60(5), pp. 746-761.
5. Gupta, R.C. (1976). *Prediction of Teacher Effectiveness through Personality Test*. Ph.D., Banaras Hindu University.
6. Gupta, V.P. (1977). *Personality Characteristics, Adjustment Level, Academic Achievement and Professional Attitude of Successful Teacher*. Ph.D., Punjab University.
7. PETERSON, P.L. (1977). Interactive Effects of Student Anxiety, Achievement Orientation and Teacher Behaviour on Student Achievement and Attitude. *American Journal of Educational Psychology*. V(52): 779-792.
8. SAMPH, T. (1974). Teacher Behaviour and the Reading Performance of Below Average Achievers. *Journals of Educational Research*. 6(6): 193-198.