RELATION BETWEEN CLASSROOM CLIMATE AND ACHIEVEMENT IN PHYSICAL SCIENCE OF SECONDARY SCHOOL PUPILS

SMITHA . R

Asst Professor of Physical Science
N.S.S. Training College
Ottapalam
and

Dr. K. S. SAJAN
Asst Professor of Education
N S S training college
Ottapalam

Publication Date: 10th June 2010

ABSTRACTS

This study estimates the extent of relationship between 'Achievement in Physical Science' and 'Classroom Climate' for the total sample and Sub sample based on gender. The tools used for collecting the data are scale of classroom climate and achievement test in physical science. The study reveals that boys shows indifferent or negligible but significant correlation between 'Achievement in Physical Science' and 'classroom climate' but for girls the relationship was found to be insignificant. The study also shows that less than one percent of the variance of Achievement in Physical Science for total sample is to be attributed to 'classroom climate'

INTRODUCTION

In the present century, modern society is completely drawn, into scientific environment arid science has become an integral part of our life and living. The wonderful products of science and technology have glorified the modern world, in-fact; science now has an all pervading influence on every sphere of human activity.

The quality of science education is an important concern in the progress, welfare and security of a developing nation like India. It is a continuing process of seeking new knowledge, new explanations and deeper understanding about the environment. So it is an intellectual activity which arises from personal experience and takes place in the minds of scientifically literate persons.

In modern society of science and technology if a person has to function effectively, scientific knowledge, skills and attitudes must be acquired. So a sound science education can have a profound effect upon the development of rationality and in addition may influence the total development of the pupils. This has been envisaged through the National Policy of Education (1986) as "strengthening science education so as to develop in the

child well defined abilities and values such as the spirit of enquiry, creativity, objectivity, the courage to question and an aesthetic sensibility." So among the various subjects included in the school curriculum, science has greater importance. Science as a school subject should be far more than description and history. Science is a way of thinking and action in school and out.

In academic discussion it is often heard that the teachers teaching science have to face numerous problems. It is true that a large number of pupils appear to be unable to study subject properly, either because of an inadequate background or lack of motivation. The acquisition of product of Science is something higher degree of abstraction and it requires not only the innate motives but also corresponding class situations. The present study aims to explore how far class room climate affect the academic achievement in Science.

OBJECTIVE OF THE STUDY

To estimate the extent of relationship between 'Achievement in Physical Science' and 'Classroom Climate' for i) the total sample and ii) Sub sample based on gender.

HYPOTHESIS

There exists significant relationship between classroom climate and achievement in physical science for the total sample

and sub sample based on gender

METHODOLOGY

Sample

The study was conducted on a representative sample of 154 pupils of Std. IX of N.S.S.K.P.T High School. The sample was selected by the random sampling technique giving due representation to gender.

Tools

The tools used for collecting the data are the following

1. Scale of classroom climate
2. Achievement test in Physical Science for pupil of Standard IX.

STATISTICAL TECHINQUES USED

Coefficient of correlation, its significance and shared variance

These techniques are used to find out the degree and significance of correlation between the marks obtained in achievement test in Physical Science and the total score of the classroom climate scale and the percentage variance that is common to the two variables correlated.

FINDINGS

Estimation of the extent of relationship between Achievement

in Physical Science and the select independent variable for the total sample and sub samples.

The major findings of the present investigation are summarised and are presented below.

a. Boys

For boys in the sample 'Achievement in Physical Science' and 'classroom climate' was found to have indifferent or negligible but significant correlation.

The correlation is given below

Classroom climate (r = 0.189)

Shared Variance r^2 X 100 is 3.568

This shows that nearly four percent of the variance of 'Achievement in Physical Science' for boys is to be attributed to 'classroom climate'.

b. Girls

The relationship between 'Achievement in Physical Science' and the independent variable under study was found to be insignificant for the sample of girls.

Classroom climate (r = 0.03)

Shared Variance r^2 x 100 is 0.09

This shows less than 1% of variance of 'Achievement in Physical Science' for girls is to be attributed to 'classroom

climate'.

c. Total sample

The relationship between Achievement in Physical Science and the select independent variable for the total sample was studied and the result is given below.

Insignificant correlation

Classroom climate (r = 0.076)

Shared Variance r^2 x 100 is 0.58

This shows that less than one percent of the variance of Achievement in Physical Science for total sample is to be attributed to 'classroom climate'.

This result reveals that the select independent variable has no significance in achievement in physical science. The correlations for classroom climate were found to lie within the range of 0.03 to 0.189 which indicate either negligible or low relationship. The result is consistent with studies reported by Talton (1983) and Panikkar (1996).

SUGGESTIONS FOR IMPROVING EDUCATIONAL PRACTICE

Based on the results obtained from the present study, some of

the practical suggestions are offered and it will be helpful for teachers and parents for the academic improvement of their children. The results point to the need for reorganizing certain aspects of the present day educational practice like creating interactional atmosphere. Science teachers should provide a classroom climate satisfying all the levels of learners by creating different levels/types of learning activities. Teachers should become democratic leaders of the class. Provide opportunities for student involved activities.

REFERENCES

1. Beina. K. P (1989). “The relative efficiency of science learning environment and science learning approach in predicting Biology Achievement”. M. Ed. Disserttation University of Calicut, Calicut
2. Buch M.B & Santhanam M.R (1970) Communication in Classroom, Baroda, M.S. University of Baroda
3. Davidoff, Linda L. (1976). Introduction to Psychology, New York : Me Graw Hill Book Company.
4. Mohammed Basheer.K(1995).”Effect of home practice and science learning environment on achievement in chemeistry of standard X pupils.” M.Ed Dissertation, university of Calicut, Calicut