



A STUDY ON SCIENTIFIC ATTITUDE OF ELEVENTH STANDARD STUDENTS IN RELATION TO THEIR ACHIEVEMENT IN SCIENCE IN THIRUVALLUR DISTRICT

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ABSTRACT

This study examined the relationship between scientific attitude and achievement in science in Thiruvallur District. This study adopted survey method of research. Participants were 240 eleventh standard students random only selected from various higher Secondary Schools in Thiruvallur District. The research Instrument used for data collection was scientific attitude scale prepared by investigator tested at 0.05 and 0.01 level of significance. The findings indicated that there is a positive relationship between scientific attitude and achievement in science of eleventh standard students. The overall eleventh students have average level of scientific attitude, the Female eleventh standard Students posses better scientific attitude then male students. There exists significant impact with respect to locality of the school, Father's occupation, Mother's occupation of eleventh standard students.

Keywords: Scientific Attitude, Achievement Science, Survey, Gender, Hypothesis.

Introduction

The modern society is basically rooted in science. It is an inherent obligation of a great country like India, with its traditions of scholarship and original thinking and its great cultural heritage, to participate fully in the much of science which is probably mankind's greatest enterprise today. According to national policy, "with a view to accelerating the growth of the national economy, science education and research should receive high priority".

Scientific Attitude

Scientific attitude is really a composite of a number of mental habits or of tendencies to react consistently in certain ways to a novel or problematic situation. These habits or tendencies include accuracy, intellectual honesty, open-mindedness, suspended judgment, criticalness, and a habit of looking for true cause and effect relationships. It is a cognitive concept; scientific attitudes are normally associated with the mental processes of scientists.

An attitude is a more or less stable predisposition to react in either a positive or negative manner to given categories of persons or objects.

Attitude is a condition of readiness for a certain type of activity. It is a mental motor set of the individual which is characterised by predisposition towards objects, persons or events and a tendency to act. Attitudes vary with individuals and time. It may be simple or complex, stable or unstable, temporary or permanent and superficial or fundamental.

Achievement in Science

The field of science education continues with life. The view promotes as well the inherent value system of science on a very large scale. It is precisely to that research in science is needed and if so, needs to be produced for relevance at any

early hour.

Statement of the problem

Formally the problem can be stated as follow.

A study on scientific attitude of eleventh standard students in relation to their Achievement in science in Thiruvallur District.

Objectives of the Study

The following the objective were frame systematically to carry out this research.

1. To analyse the scientific attitude of eleventh standard students.
2. To study the difference in scientific attitude between male and female eleventh standard students.
3. To study the difference in scientific attitude between eleventh standard students with age 15 above 16.
4. To study the difference in scientific attitude between Tamil and English medium eleventh standard students.
5. To study the difference in scientific attitude between Govt, Govt. Aided & Private eleventh standard students.
6. To study the difference in scientific attitude between rural and urban eleventh standard students.
7. To study the difference in scientific attitude of eleventh standard students belonging to five levels of father education.
8. To study the difference in scientific attitude of eleventh standard students belonging to five levels of mother education.
9. To study the difference in scientific attitude of eleventh standard students belonging to five levels of father occupation.

10. To study the difference in scientific attitude of eleventh standard students belonging to five levels of mother occupation.

11. To study the difference in scientific attitude of eleventh standard students belonging to five levels of family income.

12. To study the correlation between scientific attitude and achievement is science of eleventh standard students.

Hypotheses of the study:

1. There is no significant difference in scientific attitude between male and female eleventh standard students.

2. There is no significant difference in scientific attitude between eleventh standard students with age 15 above 16.

3. There is no significant difference in scientific attitude between Tamil and English medium eleventh standard students.

4. There is no significant difference in scientific attitude between Govt, Govt. Aided & Private eleventh standard students.

5. There is no significant difference in scientific attitude between rural and urban eleventh standard students.

6. There is no significant difference in scientific attitude of eleventh standard students belonging to five levels of father education.

7. There is no significant difference in scientific attitude of eleventh standard students belonging to five levels of mother education.

8. There is no significant difference in scientific attitude of eleventh standard students belonging to five levels of father occupation.

9. There is no significant difference in scientific attitude of eleventh standard students belonging to five levels of mother occupation.

10. There is no significant difference in scientific attitude of eleventh standard students belonging to five levels of family income.

11. There is no significant correlation between scientific attitude and achievement is science of eleventh standard students.

Research Design:

Methodology

The study was conducted through survey method of research and it is most suitable the present study.

Sample:

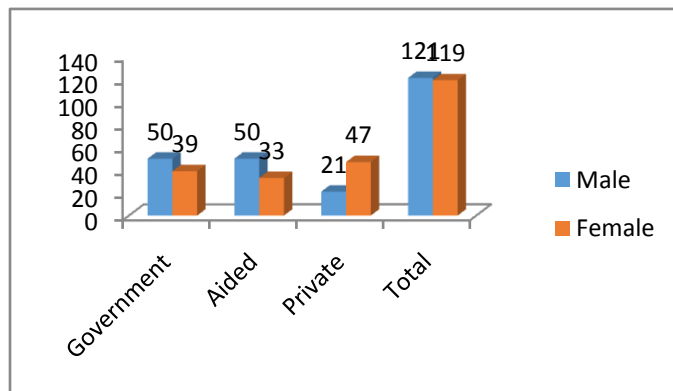
A random sampling technique was adopted for the selection of sample 240 eleventh standard students were taken for the study.

TABLE-1

Type of school and Sex Wise Distribution of High school Students.

Type of school	Male	Female	Total
Government	50	39	89
Aided	50	33	83
Private	21	47	68
Total	121	119	240

Graph I



Research Tool:

To verify the hypothesis formulated in the study the following tools have been used.

- a) Scientific attitude scale prepared by **investigator**.

Statistical technique

Suitable descriptive and international statistical technique were used in the interpretation of the data to draw more meaningful picture of results from the collated data. In the present study the following statistical techniques were used.

- ❖ Mean
- ❖ SD
- ❖ T-test
- ❖ ANOVA

Major findings

1. The overall eleventh standard students have average level of scientific attitude.
2. Female eleventh standard students possess better scientific attitude than male students.
3. The scientific attitude of students with age group 15 above 16 of eleventh standard students are not differing significantly.
4. English medium eleventh standard students possess better scientific attitude than Tamil medium students.
5. Private school students possess better

scientific attitude then other schools.

6. The scientific attitude of rural and urban students is not differing significantly.
7. Father with higher education influence the students scientific attitude.
8. Mother with higher education influence the students scientific attitude.
9. Eleventh standard school students belonging service class father is possessing significantly higher scientific attitude then students belonging to self-employed father.
10. The eleventh standard students belonging to the house wife mother is significantly possess higher scientific attitude then students belonging to mother with other occupation level.
11. Higher family income eleventh standard students possessing high scientific attitude then the low income groups eleventh students.
12. Scientific attitude and achievement in science are positively correlated.

Table-II

Sex wise N, M, SD, df, and t-value of scientific attitude

Sex	N	M	SD	df	t-value	Level of Significance
Male	121	49.36	9.43	238	4.698	Significant at
Female	119	55.74	11.53			0.01 level

Graph II

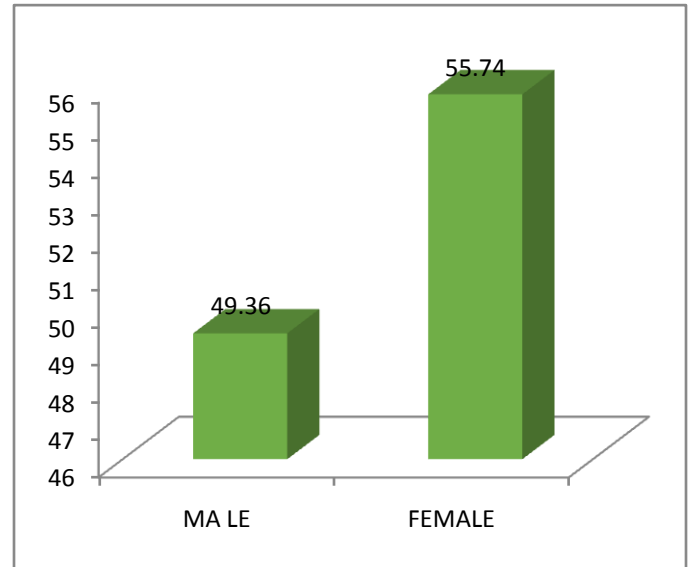


Table-III

Medium wise N, M, SD, df, and t-value of scientific attitude

Medium	N	M	SD	df	t-value	Level of Significance
Tamil	132	48.95	10.05	238	5.908	Significant at
English	109	56.81	10.53			0.01 level

Graph III

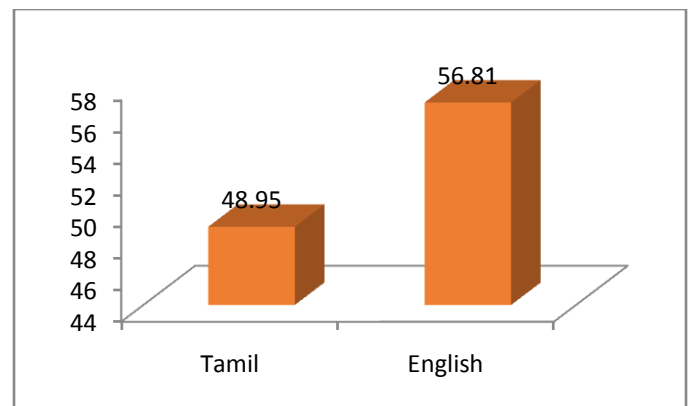


Table-IV

Analysis of variance of inter correlation between the scientific attitude and achievement in science

Variable	Scientific Attitude	Achievement in Science
Scientific attitude	-	0.589**
Achievement in Science	0.598**	-

Educational Implications

At the Higher secondary School stage the students normally find it difficult to adjust with science achievement. In the educational scenario it is found that Higher Secondary School phase of education is very significant milestone for the student. This is due to some psychological aspect like scientific attitude. The science attitude is highly correlated with the science achievement. So the teacher should analysis. The school should provide the proper infra structure to develop the skills.

Conclusion

The study examined the scientific attitude among eleventh standard student in Thiruvallur District. The influence of background variables like gender, Type of Management, Type of School, Rural/Urban, Medium of instruction were studied. The Study is sure to find some usefulness in the field of Education and findings of the study can serve as a data base for further research.

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