A STUDY OF SCIENTIFIC ATTITUDE IN RELATION TO ACADEMIC ACHIEVEMENT OF SCIENCE STUDENTS STUDYING IN IX STANDARD OF MYSORE

Abstract

In our national perception education is essentially for all this is fundamental to our all-round development material and Spiritual. Education has an acculturating role which refines sensitivities and perceptions that Contribute and independence of mind and spirit thus furthering the goals of socialism secularism and democracy enshrined in our constitution. Education develops manpower for different levels of the economy. It also the substrate on which research and development flourish, being the ultimate guarantee of national self-reliance. The rapid advancement of science and technology and increasing need for scientist and technologists have made it all the more important to provide for science based education in school. The scientific attitude is very essential in solving numerous problems such as population explosion poverty, diseases, environmental pollution and its effects on society depletion of natural resources. As new discoveries continue to be made, even many recent scientific theories will become out dated and will have to be updated facts. In this way scientific Knowledge is always growing and improving. This study focus on the scientific attitude among the students of IX standard of Mysore. This research also highpoint whether Gender of the students has carried influence with respect to scientific attitude and academic achievement of students in science. 160 students are selected as sampling for this study & the whole work has been restricted to analysis and studies in scientific attitude.
I. INTRODUCTION

Scientific Attitude is a process that starts right from the very beginning in the immediate environment provided by the Parents, Friends, neighborhood, School and Society at large. Attitude is a Condition of readiness for a certain type of activity; Attitudes held by the individuals may be simple or complex. Stable or unstable, temporary or permanent and superficial or fundamental, Judgments based upon insufficient facts are likely to yield wrong results and there by develop based attitudes. Finding answers to problems through direct observation, adequate experimentation, and argumentation on Facts. Verification and testing of Knowledge are some of the initial manifestations of scientific attitude. Especially, for young children these manifestations need further to be concretized in terms of well planned teaching situations and meaningful activities. In the present and dynamic state of society education will have to be co-related to needs of life and aspirations of students were infusing Knowledge and price of information to the students will not help them either in their present student career or later in their life as citizens of the country., Academic Achievements are the important aspects to build the nation on the area of science and Technological development. To sum up, Education is a unique investment for the present and for the future this Cardinal Principle is the Key to the National Policy on Education.

II. NEED FOR THE STUDY

We tend to observe all the happenings around us, we come across numerous things which exist senses. After observing a natural event or phenomenon we feel curious to find an answer or an explanation for the how what and why of things happening Some further investigation and later we find the truth.

III. LIMITATIONS OF THE STUDY

The study has certain Limitations which are as follows:
1. Only 160 students are selected as sampling for this study.
2. The project has been restricted to analysis and studies in scientific attitude.
3. The study is restricted to the students studying in few high schools of Mysore by using only one tool.

IV. STATEMENT OF THE PROBLEM

“A Study of Scientific Attitude in Relation to Academic Achievement of Science Students Studying in IX standard of Mysore”.

V. OBJECTIVES OF THE STUDY

1. To assess the scientific attitude among the students of IX standard.
2. To find out the Academic achievements in science of students studying in IX standard.
3. To find out the relationship between scientific attitude and academic achievement of students in science.
4. To find out whether Gender of the students has carried influence with respect to scientific attitude and academic achievement of students in science.
VI. HYPOTHESES OF THE STUDY

H1: There is no significant relationship between scientific attitude and Academic Achievement of Boys studying in Aided school.

H2: There is no significant relationship between scientific attitude and Academic Achievement of Girls studying in Aided school.

VII. RESEARCH DESIGN

1) Variables:
   There are 3 type of Variables in this study namely independent Variable, dependent and moderator Variable.
   
   A. **Dependent Variable:**
      Academic Achievement
   
   B. **Independent Variable:**
      Scientific Attitude
   
   C. **Moderator Variable:**
      In this study Gender of the student and nature of the schools are considered as Moderator Variables.

2) **Method Of Research:**
   In this study the researcher has adopted survey method.

3) **Sampling Procedure And Size:**
   The present study includes purposive random sampling of 160 students taken from 3 different co-education schools like Government school Aided schools and unaided schools of Mysore. The population for the present investigation was the students studying in English medium section of IX standard of different high schools of Mysore sample is the representation of the population or whole group. The process of sampling makes it possible to draw valid influence or generalization on the basis of careful observation of variables of variables.

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Name of School</th>
<th>Type of Management</th>
<th>No of students</th>
<th>Total number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Govt. High School</td>
<td>Government</td>
<td>19 Boys, 33 Girls</td>
<td>52</td>
</tr>
<tr>
<td>02</td>
<td>Deepa High School</td>
<td>Unaided</td>
<td>30 Boys, 22 Girls</td>
<td>52</td>
</tr>
<tr>
<td>03</td>
<td>JSS High School</td>
<td>Aided</td>
<td>31 Boys, 25 Girls</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong> 80 Boys, 80 Girls</td>
<td><strong>160</strong></td>
</tr>
</tbody>
</table>

   Table 1: The details about the number of students drown from each school

   Affords penetrating insight into the nature of what one is dealing with it provides the background ideas and laboratory or controlled studies of casual relations are made.

4) **Tools Used For Collection The Data Questions:**
   In general the word questionnaire refers to a device for securing answers to questions by using from which the respondents fill in them Bar Davis and Johnson define questionnaire as “A Systematic competition of questions that are submitted to a Sampling of population from which information is derived”.

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Good and Hart (1952) State that in general the word questionnaire refers to a device for securing answers to a series of questions by using a from which the respondent fills in himself.

5) Procedure For Collection The Data
The researcher selects a purposive random sampling of 160 students studying in Govt. school; Aided school and unaid school of Mysore from IX standard students were selected from English medium co-education schools. Getting permission from principal and administering scientific attitude tool test prepared and standardized by vardhini in the year 1983 to the students studying in 9th standard English medium co-educated Govt school Aided school and Unaided school of Mysore and collecting the date along with the students achievement in science.

6) Design Of The Tool:
The questionnaire standardized and prepared by vardhini was administered in Govt Aided and Unaided schools which has information about scientific attitude. Analysis was done for the scientific attitude in relation to academic achievements in science of IX standard students and results were interpreted. For Analysis the hypotheses formulated in this study were tested for different group using co-relation technique and percentage Analysis to compare the scientific attitude and Academic Achievements in science of (1) male and female (2) Govt Aided and Unaided school. The raw scores were converted into percentage and later on correlation technique. Correlation is the relationship between two or more paired variables or two or more sets of data the degree of relationship may be measured and represented by the efficient of correlation, this coefficient may be identified by either the letter or the Greek letter rho (P).

VIII. ANALYSIS AND INTERPRETATION OF DATA

H1: There is no significant relationship between scientific attitude and Academic Achievement of Boys Studying in Aided school

Table – 2: Indicating the group, number of students, sum and square of scientific attitude and academic achievement of students along with R-Value

<table>
<thead>
<tr>
<th>GROUP</th>
<th>ΣN</th>
<th>ΣX</th>
<th>ΣY</th>
<th>ΣX²</th>
<th>ΣY²</th>
<th>ΣXY</th>
<th>r-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOYS</td>
<td>31</td>
<td>1735</td>
<td>1358</td>
<td>102833</td>
<td>61828</td>
<td>76040</td>
<td>0.09</td>
</tr>
</tbody>
</table>

The above table indicates that the Correlation value between scientific attitude and academic achievement of boys studying in aided school is negligible. This means there is no significant correlation between scientific attitude and academic achievement of students.

H2: There is no significant relationship between scientific attitude and Academic Achievement of Girls Studying in Aided school.

Table – 3: Indicating the group, number of students, sum and square of scientific attitude and academic achievement of students along with r-value.

<table>
<thead>
<tr>
<th>GROUP</th>
<th>ΣN</th>
<th>ΣX</th>
<th>ΣY</th>
<th>ΣX²</th>
<th>ΣY²</th>
<th>ΣXY</th>
<th>r-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIRLS</td>
<td>25</td>
<td>1409</td>
<td>1186</td>
<td>82871</td>
<td>59772</td>
<td>67510</td>
<td>0.1</td>
</tr>
</tbody>
</table>
The above table indicates that the Correlation value between scientific attitude and academic achievement of Girls studying in aided school is negligible. This means there is no significant correlation between scientific attitude and academic achievement of students.

**IX. FINDINGS OF THE STUDY**

In the light of above findings the conclusions drawn were as follows:

1. The surrey method makes the students think more before answering.
2. Students observe a lot and think a lot before answering.
3. Concepts become very clear.
4. Students understand how differently we can think about a particular concept or example.
5. Students find it very curious to answer to questions as the illustrations are given from their day-to-day life.
6. The correlation between scientific and academic achievement is positive.
7. The Correlation between Scientific and Academic Achievement is low.
8. However with respect to gender correlation between scientific attitude and academic achievement of Govt, Aided and Unaided School is negligible.

**X. EDUCATION IMPLICATIONS**

The major role played by conducting survey in science is as among students and teachers by manipulating various situations that infuse among the pupils certain characteristics of scientific attitudes. Students would certainly become better achiever in science teacher can make the students understand better and in increasing interest and motivate students It also helps in developing keen observation ability among the students. Since there is correlation between scientific attitude and academic achievement the teacher should make a special effort to develop scientific attitude. Academic achievement also depends upon many factors such as intelligence motivation Socio-economic status interest and heredity of the students.

**XI. LIMITATIONS OF THE STUDY**

The study has certain limitation which is as follows:

1. Only 160 students are selected as sampling for this study.
2. The project has been restricted to analysis and studies in scientific attitude.
3. The study is restricted to the students studying in 9th std of few high schools of Mysore.

**XII. SUGGESTIONS FOR FURTHER STUDIES**

1. A similar study can be conducted for dissertation by taking more no of concepts and more students.
2. The study can be extended to other classes.
3. The study can be conducted to Kannada medium and English medium children.
XIII. REFERENCES


To Cite This Article