



A Study of Scientific Attitude of IX Class Students with Gender and Management

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ABSTRACT

The success of science has more to do with an attitude common to scientists than with a particular method. This attitude is one of inquiry, experimentation and humility before the facts. The main objective of the present study is to study the influence of gender and management on the scientific attitude of IX class students. The scientific attitude questionnaire developed by Banal Hari Babu (2014) was adopted for the present study. A sample of 320 IX class students representing all categories of secondary schools in Y.S.R. Kadapa District by following the standardized procedures. 't' test was employed for analysis of the data. There is significant influence of gender and management at 0.01 level of significance on the scientific attitude of IX class students.

KEYWORDS : Scientific Attitude, gender, management and IX class students.

INTRODUCTION

Science education has generally involved teaching not only a body of knowledge but also the processes and activities of scientific work. This view has linked the scientific uses of technology with hands-on experiences. Science teachers have important role in popularizing science among the younger generation. It is the science teacher who inculcates motivation and values. In order to achieve the desired goals one has to start from grass-root level. Once a child acquires the gift of creativity, the chief aim of science education is achieved. Therefore, the role of secondary level teacher is more important to develop scientific attitude among secondary school children.

A well-educated, flexible, creative and self-confident population is a key to achieving economic prosperity and social development and civic enlightenment. Developing greater scientific awareness in the general population, inspiring more young people to take up careers that depend on excellence in science, technology and mathematics and building a culture of innovation in schools are of the utmost importance.

Science education mainly concerns with attitude formation - that is to say develop in a person the quality of scientific temper and scientific attitude rather than loading him with scientific information and knowledge only. It provides opportunities to a person for creating something new, whether for an individual or for the whole civilization. Although, Creativity is not restricted to any particular subject area but there is no doubt that science education has much wider scope of nurturing and encouraging divergent thinking and Creativity.

REVIEW OF LITERATURE

Nagarjuna (2002), Padma Latha (2002), Prasanth (2003), Vali (2005), Venugopal Dasari (2011), Shabbeer Hussain, S. (2012) and Husna Banu, SK. (2013) reported that gender of individuals do have significant difference on scientific attitude. However, Banal Hari Babu (2014) reported that gender of individuals do not have significant difference on scientific attitude.

Nagarjuna (2002), Prasanth (2003), Vali (2005), Venugopal Dasari (2011), Shabbeer Hussain, S. (2012) and Banal Hari Babu (2014) reported that management of individuals do have significant difference on scientific attitude. Padma Latha (2002) and Husna Banu, SK. (2013) reported that management of individuals do not have significant difference on scientific attitude.

Scope of the Study: The main intention of the present study is to find the relation of scientific attitude of IX class students with gender and management.

Objective of the Study: To study the impact of gender and management on the scientific attitude of IX class students.

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Hypotheses of the study

1. There would be no significant impact of 'gender' on the scientific attitude of IX class students.
2. There would be no significant impact of 'management' on the scientific attitude of IX class students.

Tools for the Study

1. The scientific attitude test was adopted from **Banal Hari Babu (2014)**. The tool was highly reliable for the investigation. The total items of scientific attitude questionnaire have 48 items in that 24 items are negative remaining 24 items are positive. For the purpose of scoring numerical values (weightages) were assigned to each of the five categories namely Strongly Agree (S.A.), Agree (A.), Doubtful (D.), Disagree (D.A.) and Strongly Disagree (S.D.A.) based on the **Likert (1932)** method. Each students score are marked on the right top corner of the sheet.
2. Personal data regarding the student – 1. Name, 2. Gender, 3. Management.

Data Collection

The sample for the investigation consisted of 320 IX class students in Y.S.R. Kadapa district. The stratified random sampling was applied in three stages. The first stage is management i.e. Government and Private and second stage is locality i.e. rural and urban and third stage gender i.e. boys and girls. It is a 2X2X2 factorial design with 320 sample subjects. The investigator personally visited schools with the permission of the head masters of the schools. The IX class students who attended to the school on the day of collection of data are considered for the purpose of the investigation. It was provided to the concerned IX class students of the schools. The IX class students were given necessary instructions about the instruments and motivated to respond genuinely to all the items. The scientific attitude questionnaire and personal data sheet were administered. The data on each variable in the investigation is properly coded to suit for computer analysis. The analysis was carried out on the basis of objectives of the investigation and hypotheses formulated by employing appropriate statistical techniques. The inferential statistical technique 't' test was employed to test hypotheses.

RESULTS AND DISCUSSION

1. Gender

The relationship of scientific attitude of IX class students with their gender is studied in the present investigation. On the basis of gender, the IX class students divided into two groups. The male students form with the Group – I and Group – II forms with the female students. The scientific attitude of IX class students of the two groups were analyzed accordingly. The scientific attitude of IX class students for the two groups were tested for significance by employing 't' - test.

The following hypothesis is framed.

Hypothesis – 1

There would be no significant impact of 'gender' on the scientific attitude of IX class students.

The above hypothesis is tested by employing 't' - test. The results are presented in **Table – 1**.

Table – 1: Influence of gender on the scientific attitude of IX class students

S. No.	Gender	N	Mean	S.D.	't' - Test
1.	Male	160	151.59	20.48	3.527**
2.	Female	160	160.89	22.53	

** Indicates significant at 0.01 level

It is found from the **Table – 1** that the computed value of 't' (3.527) is greater than the critical value of 't' (2.58) for 1 and 318 df at 0.01 level of significance. Hence the **Hypothesis – 1 is rejected** at 0.01 level. Therefore it is concluded that the gender has significant influence on the scientific attitude of IX class students.

2. Management

The relationship of scientific attitude of IX class students with their management is studied in the present investigation. On the basis of management, the IX class students divided into two groups. The Government students form with the Group – I and Group – II forms with the Private students. The scientific attitude of IX class students of the two groups were analyzed accordingly. The scientific attitude of IX class students for the two groups were tested for significance by employing 't' - test. The following hypothesis is framed.

Hypothesis – 2

There would be no significant impact of 'management' on the scientific attitude of IX class students.

The above hypothesis is tested by employing 't' - test. The results are presented in **Table – 2**.

Table – 2: Influence of management on the scientific attitude of IX class students

S. No.	Management	N	Mean	S.D.	't' - Test
1.	Government	160	158.63	21.37	3.049**
2.	Private	160	151.11	21.25	

** Indicates significant at 0.01 level

It is found from the **Table – 2** that the computed value of 't' (3.049) is greater than the critical value of 't' (2.58) for 1 and 318 df at 0.01 level of significance. Hence the **Hypothesis – 2 is rejected** at 0.01 level. Therefore it is concluded that the management has significant influence on the scientific attitude of IX class students.

Findings: There is significant influence of gender and management at 0.01 level of significance on the scientific attitude of IX class students.

Conclusions: In the light of the findings, the following conclusions are drawn. Gender, management have significant influence on the scientific attitude of IX class students.

EDUCATIONAL IMPLICATIONS

The findings of the present research have raised some important questions related to the educational needs of the students with special reference to their scientific attitude of IX class students.

1. Gender is the highly influenced in scientific attitude of IX class students. Girls have positive attitude than the Boys. The administrators to provide facilities for Boys.
2. Management is highly influenced in scientific attitude of IX class students. Government school students have positive attitude than the Private school students. The administrators to provide facilities for the Private school students.

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