



## A STUDY OF ACADEMIC ACHIEVEMENT IN SCIENCE OF SECONDARY SCHOOL STUDENTS WITH MANAGEMENT AND LOCALITY

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**ABSTRACT** Science is a systematized store of human knowledge gained after generalizing and interrelating the various isolated facts and opinions which are supported by formal proofs or by observational evidence through systematic approach. The main objective of the present study is to study the influence of management and locality on the academic achievement in science of secondary school students. The annual examination marks in science of IX standard students from the records of the schools were taken as the indices of academic achievement. A sample of 320 Secondary school students representing different management and locality in Chittoor District is taken for the data analysis following stratified sampling technique. 't' test was employed for analysis of the data. There is significant influence of management and locality at 0.01 level of significance on the academic achievement in science of secondary school students.

**KEYWORDS :** Achievement, Science, Management, Locality And Secondary School Students.

### INTRODUCTION

Humans are always curious about the world around them. The inquiring and imaginative human mind has responded to the wonder and awe of nature in different ways. One kind of response from the earliest times has been to observe the physical and biological environment carefully, look for any meaningful patterns and relations, make and use new tools to interact with nature, and build conceptual models to understand the world. The methodology of science and its demarcation from other fields continue to be a matter of philosophical debate. Its professed value neutrality and objectivity have been subject to critical sociological analysis. Moreover, while science is at its best in understanding simple linear systems of nature, its predictive or explanatory power is limited when it comes to dealing with non-linear complex systems of nature. Yet, with all its limitations and failings, Science is unquestionably the most reliable and powerful knowledge system about the physical world known to humans. But Science is ultimately a social Endeavour. Science is knowledge and knowledge is power. Power usually produce wisdom and liberation but unfortunately sometimes may lead to arrogance and tyranny. Science has the Potential to be beneficial or harmful, emancipative or oppressive. History, particularly of the twentieth century, is full of examples of this dual role of science. How do we ensure that science plays an emancipative role in the world? The key to this lies in a consensual approach to the issues threatening human survival today. This is possible only through information, transparency and a tolerance for multiple viewpoints. In a progressive forward-looking society, Science can play a truly liberating role, helping people out of the vicious circle of poverty, ignorance and superstition. In a democratic political framework, the possible aberrations and misuse of Science can be checked by the people themselves. Science, tempered with wisdom, is the surest and the only way to human welfare. This conviction provides the basic rationale for Science education.

Academic achievement refers to 'identifiable operations' a student is expected to perform on the materials of a course and refers to the difference between the number and kinds of operations the students can and does perform at the beginning or at the end of the course. It is incorrect to consider high and low achievement, synonymous with over and under achievement. Under achievement is a fact, not simply an artifact of psychological and educational measurement. An under achiever is one who performs significantly less well in school/ college, than could be predicted from his performance on the measures of learning ability or intelligence. An over achiever is one who tries too hard and worries too much about his success or failure than by the hope of success. The distinction between the concepts of high and low, over and under achievement is that high and low achievement are defined in terms of an absolute standard of performance while over or under achievement involve the discrepancy between predicted and actual achievement.

### REVIEW OF LITERATURE

Srinivasan and Arivudayappan (2004), Krishna Reddy, D (2008), Padmini (2010), Sujatha (2011), Sekhar, K (2012), Ravi, S (2014), Shaik Khadar Valli (2015), Madhusudhana Reddy, P (2016), Sana Hemavathi and Dayakara Reddy, V (2016) and Sana Hemavathi (2020) reported that management of individuals do have significant difference on academic achievement. However, Gnanasundarathara su and Vincent De Paul (2002) reported that management of individuals do not have significant difference on academic achievement.

Suneel Kumar Singh and Shaheen Malik, Singh, A. K (2003), Anice James and Marice (2004), Krishna Reddy, D (2008), Padmini (2010), Sekhar, K (2012), Sana Hemavathi and Dayakara Reddy, V (2016), Geethadevi, Y (2020) and Sana Hemavathi (2020) reported that locality of individuals do have significant difference on achievement. However, Panchalingappa (2004) and Manpreet Kaur, Ram Niwas and Rai, V.K (2015) reported that locality of individuals do not have significant difference on achievement.

**Objective of the Study:** To study the impact of management and locality on the academic achievement in science of secondary school students.

### Hypotheses of the study

- There would be no significant difference of 'management' on the academic achievement in science of secondary school students.
- There would be no significant difference of 'locality' on the academic achievement in science of secondary school students.

### Tools for the Study

Academic achievement in science of secondary school students, the annual examination marks of IX standard students in sciences from the records of the secondary schools were taken as the indices of the academic achievement for the study. Personal data regarding the student – 1. Name, 2. Management, 3. Locality.

### Data Collection

The sample for the investigation consisted of 320 Secondary school students in Chittoor district. The stratified random sampling technique was applied in two stages. The first stage is management i.e. Government and Private and second stage is locality i.e. rural and urban. It is a 2X2 factorial design with 320 sample subjects. The investigator personally visited schools with the permission of the headmasters of the schools. The Secondary school students who attended to the school on the day of collection of data are considered for the purpose of the study. The annual examination marks of IX standard students in science were taken as the indices of the academic achievement in science of the students from the records of the schools.

The data on each variable in the study is properly coded to suit for computer analysis. The analysis was carried out on the basis of objectives of the study and hypotheses formulated by employing appropriate statistical techniques. The inferential statistical technique 't' test was employed to test hypotheses.

## RESULTS AND DISCUSSION

### 1. Management

The relationship of academic achievement in science of secondary school students with their management is studied. On the basis of management, the Secondary school students are divided into two groups. The Government school students form with the Group – I and Group – II forms with the Private school students. The corresponding academic achievement in science of secondary school students of the two groups were analyzed accordingly. The mean values of academic achievement in science of secondary school students for the two groups were tested for significance by employing 't' - test.

#### Hypothesis – 1

There would be no significant difference of 'management' on the academic achievement in science of secondary school students.

The obtain results are presented in **Table – 1**.

**Table – 1: Influence of management on the academic achievement in science of secondary school students**

Management	N	Mean	S.D.	't' – Test
Government	160	76.58	13.58	4.697**
Private	160	81.29	16.39	

\*\* Indicates significant at 0.01 level

It is found from the **Table – 1** that the obtained value of 't' 4.697 is greater than the critical value of 't' 2.59 at 0.01 level of significance. Hence the formulated Hypothesis is **rejected**. Therefore, it is concluded that significant difference exists in the academic achievement of secondary school students in science in relation to management.

### 2. Locality

The relationship of academic achievement in science of secondary school students with their locality is studied. On the basis of locality, the Secondary school students are divided into two groups. The rural students form with the Group – I and Group – II forms with the urban students. The academic achievement in science of secondary school students of the two groups were analyzed accordingly. The academic achievement in science of secondary school students for the two groups were tested for significance by employing 't' - test.

#### Hypothesis – 2

There would be no significant difference of 'locality' on the academic achievement in science of secondary school students.

The obtain results are presented in **Table – 2**.

**Table – 2: Influence of locality on the academic achievement in science of secondary school students**

Locality	N	Mean	S.D.	't' - Test
Rural	160	74.35	13.17	5.246**
Urban	160	79.86	17.25	

\*\* Indicates significant at 0.01 level

It is found from the **Table – 2** that the obtained value of 't' 5.246 is greater than the critical value of 't' 2.59 at 0.01 level of significance. Hence the formulated Hypothesis is **rejected** at 0.01 level. Therefore, it is concluded that significant difference exists in the academic achievement of secondary school students in science in relation to locality.

**CONCLUSIONS:** In the light of the findings, the following conclusions are drawn. Management and locality have significant influence on the academic achievement in science of secondary school 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 academic achievement in science of secondary school students.

1. Management has influence on the academic achievement in science of Secondary school students. Private school students performed better than the Government school students. Government should take necessary steps to establish sophisticated facilities at Government schools as well as intellectual infrastructure. Heads of the Government schools must take initiative steps to improve their teaching staff and teaching learning experiences. Parents must involve in monitoring their children while learning with frequent visits with the teachers to find updates of the children progress besides that they have to contribute monitors matters.
2. Locality has influence on the academic achievement in science of Secondary school students. It is observed that performance of urban students is better than rural students. The government must collect data about urban and rural schools and identify the reasons behind variations in between two and conduct special orientation programme among the rural teachers. The government should facilitate with sophisticated logistics to the rural area schools. The administrators of the rural schools must identify the requirement both physical and intellectual infrastructure in comparing with urban schools. The parents who belong to rural area are normally lacking behind competencies in comparing with urban so they have to utilize the possible sources such as school teachers and well educated personalities of rural area and so on.

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