



A STUDY OF SCIENCE INTEREST OF SECONDARY SCHOOL STUDENTS IN LOWER SUBANSIRI DISTRICT, ARUNACHAL PRADESH

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ABSTRACT

Science interest is a complex of interacting hereditary and environmental determinants producing predispositions or abilities in science. It is a potentiality for future accomplishment in science without regard to past training and achievement. Contents that stimulate interest involve science as-(a) a means to promote practical competence; (b) a social-economic enterprise; (c) an intellectually challenging endeavour; and (d) a vehicle to qualify for professional life. The present study examines interest issue among 313 school students at secondary level in Lower Subansiri District of Arunachal Pradesh. A qualitative survey method was adopted wherein 8 schools from 2 blocks (randomly) of Lower Subansiri district were selected as sample. Questionnaire and interview schedule were used to examine the interest level and factors affecting Interest in science. The study found that Interest level on science is very low as per compared to other stream. A qualitative analysis of interview data revealed that major factors associated with interest in science are poor library condition, lack of equipment and conducive learning environment in laboratory, insufficient number of teachers and low aspiration.



KEYWORDS: Science interest, interacting hereditary, qualitative survey, factors associated.

INTRODUCTION

Science is a way of knowing and thinking about the natural and physical world. Science covers the broad field of knowledge that deals with observed facts and the relationship among those facts. Observing, measuring, inferring, classifying, predicting, and communicating are some of the skills fundamental to science. They are not only integral to science investigations, solving problems, and making decisions; but also they contribute to science as a body of knowledge and a way of knowing. In addition, science inculcates intellectual, cultural, aesthetic, moral, utilitarian as well as vocational values peculiar to it. Interest is meant "any aim or object which stimulates activity towards its attainment" (Young, Kimbal). It refers to certain regularities of an individual's feelings, thoughts and predispositions to act towards some aspects of his/her environment.

Interest is a great motivating force that persuades an individual to engage in a cognitive, conative or affective behaviour. When the student develops science interest, he/she will always be curious and eager to undertake some science projects, visit places of scientific interest, read scientific literature and also try to meet and interact with some reputed persons of science, etc. They also actively participate in science fairs, exhibitions, debates, contests related to science. Science interest differs from each individual and they are unstable too. Interests are actually acquired dispositions and the result of

constant interaction between instinctive behaviour of the organism and the environmental forces. High intelligence and interest is essential for scientific achievement. Additional mental factors that appear to be associated with success in science are intellectual curiosity, ability to apply knowledge to new situations, retentive memory and insight into abstractions. These attributes are similar to those found generally in creative and gifted individuals. Factors such as physical development, social and emotional maturity, moral character, attitudes, aptitudes and skills may also be the facets of science interest.

Science interest implies or shows individuals interest in science subject and how much is individual succeeded in scientific endeavour with his/her interest in science. Thus, the characteristics of able scientists suggest some of the criteria for locating individuals with interest in science. These characteristics include creative abilities, mental abilities, and capacity for critical thinking, ability to see relationships and also in more complex things which are related to their future. Interest in specified areas is an important determinant of school attainment and, therefore, is potential predictor of success in all forms of performance in school subject. Interest has close similarity on the ground that both represent mental readiness or preparation for a particular behaviour pattern. The individual usually likes the things in which he is interested and the thing that interests also, activity sought. The science interest is very essential for a successful person. It is also clear that the science interest predicts achievement of students in science and allied subjects. Hence, we can safely say that the study on science interest of secondary school students will trace out the problems concerned with its possession and ultimately helps in the development of such an important psychological trait. Objectives proposed for science education always include the development of interests, values, attitudes, aptitudes and appreciation. Science lessons are provided with logical, factual and generally rational explanation of the world around us. It also helps in inculcating scientific temper and spirit in children by removing many superstitious and blind beliefs. Science interest is major outcome of science education. Science interest is concerned with the ability to pursue science. If an individual is endowed with better science interest, he will be in a position to pursue science education with which he can climb the ladder of science with ease and effect. Hence, it is decided to study the level of science interest possessed by the secondary school students. The present work, "A Study of Science Interest of Secondary School Students in Lower Subansiri District, Arunachal Pradesh" was intended to measure their science interest.

OBJECTIVES:

1. To find out the level of Science Interest possessed by the secondary school students.
2. To find out the influence of facility on Science Interest of secondary school Students.

Statement of the problem

In the present study investigators try to make an attempt to examine the Interest on science in secondary school level and the problem has been stated as, "**A Study of Science Interest of Secondary School Students in Lower Subansiri District, Arunachal Pradesh.**"

Research question

- 1) What is the level of Science Interest possessed by the secondary school students?
- 2) What are the influences of facility on Science Interest of secondary school Students?

Delimitation of the study

This study is delimited to secondary school in Lower Subansiri district, Arunachal Pradesh.

Definition of terms

To avoid ambiguity and misconception, certain terms that are used in the study are explained below.

Science interest- this refers to the interest in science subjects.

School facility- this refers to all provision which include physical materials or equipment within the environment of the school, which help to facilitate effective teaching-learning process and educational goals.

Influence- this is the power to have an important effect on someone or something.

DESIGN AND METHODOLOGY:

A qualitative research approach was followed wherein descriptive survey method was adopted for the present study. The population of the study was secondary level school students. Multistage sampling strategy was adopted in which out of 8 blocks in the district 2 blocks (Yazali and Ziro) have been selected randomly. From each block respectively, 5 and 3 secondary schools have been selected randomly. 313 students of class IX & X constituted the sample. Sample was collected from government, and private schools consisting of boys and girls of rural and urban students.

Questionnaire and interview schedule were used to examine about the influence of variables on Science Interest of secondary school Students. Data has been collected by the investigators after visiting the schools under investigation personally for taking prior permission from the principal of the schools. Descriptive statistical tools were also applied in data analysis.

Data Analysis:

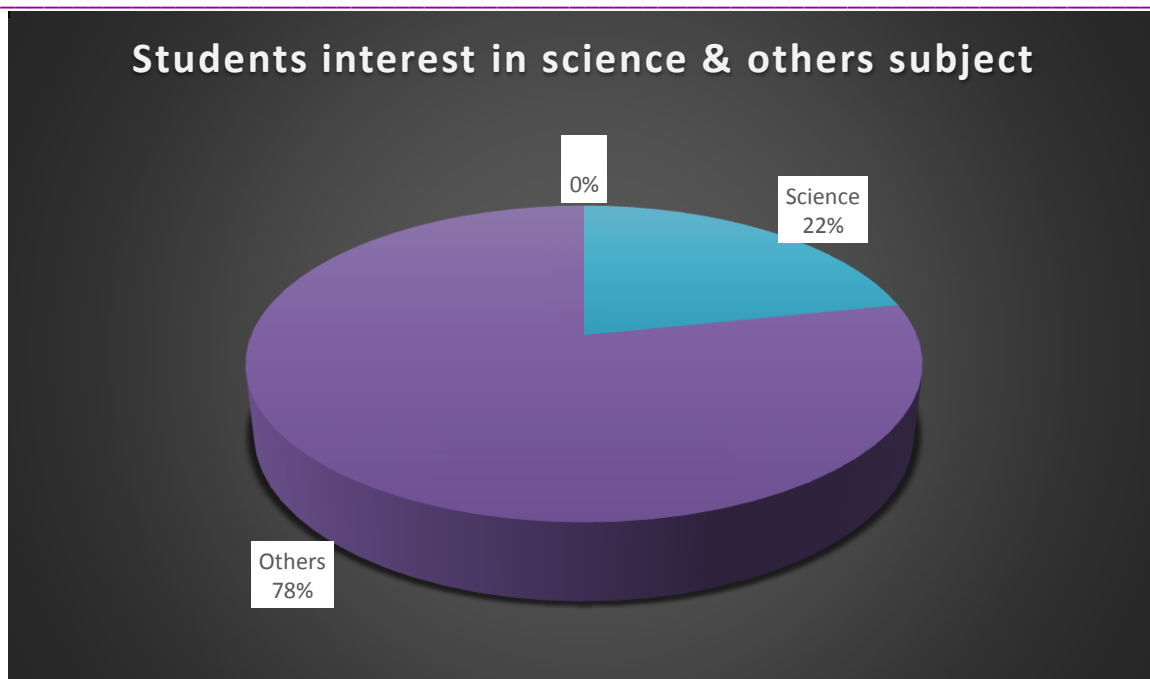
Objectives:

1. To find out the level of Science Interest possessed by the secondary school students.

Table no. 1

Name of Block	Name of the School	Total Students in Secondary Level (IX & X)	No. of Students interested in Science
Yazali	Govt. Secondary School, Pitapool	41	7
	Abotani Academy, Peni Village	17	4
	Govt. Higher Secondary School, Yazali	46	7
	Bengia Takam Memorial School, Yazali	14	3
	5. VKV, Yazali	56	12
Ziro	Govt. Higher Secondary, Hapoli	62	11
	6. Padi Lailang Residential School, Hapoli	35	13
	7. Frontier Residential School, Hapoli	42	11
	8.		
Grand Total		313 (100%)	68 (21.73%)

Above table 1 indicates that out of 313 students of 8 secondary schools of two blocks, number of students interested in science subject exclusively is 21.73% which is comparatively less than the other subject as score mentioned 78.27% (including Social Science, Languages etc.). Therefore, the level of science interest possessed by the secondary school students are below average and need more improvement to inculcate scientific taste among the learners.

**OBJECTIVES:**

2. To find out the influence of facility on Science Interest of secondary school Students

Influences of facility on Science Interest**School facilities**

Writing on the role of school facilities in enhancing science interest,

Balogun (2004) submitted that no effective science education programme cannot exist without facilities for teaching. This is because facilities enable learners or student to develop scientific attitudes and problem solving skills. **Akinfolarin(2006)** identified facilities as a major contributing factor to academic performance in the school system. Different studies conducted by **Ayodele (2000)** and **vandiver (2004)** showed that a positive relationship exist between availability and student performance in science. **Bandeale (2003)** noted that the importance of school facilities cannot be relegated. Facilities like modern laboratories, libraries and class rooms are to be put in place in all school. Adesola (2008) found out the level of available resources is indeed a plus to the teachers and goes a long way to show the level of ingenuity and commitment of the teacher towards effective delivery of lesson.

Table no. 2

	Name of the School	Library	Laboratory	No. of Science Teacher	Qualification of Teachers
Yazali	Govt. Secondary School, Pitapool	1	0	1	B.Sc., B.Ed.
	Abotani Academy, Peni Village	0	0	2	B.Sc.,
	Govt. Higher Secondary School, Yazali	1	1	2	B.Sc.,
	Bengia Takam Memorial School, Yazali	0	0	1	B.Sc.
	5. VKV, Yazali	1	1	4	M.Sc., B.Ed.
Ziro	6. Govt. Higher Secondary, Hapoli	1	0	2	B.Sc.
	7. Padi Lailang Residential School, Hapoli	1	1	1	B.Sc., B.Ed.
	8. Frontier Residential School, Hapoli	1	1	2	M.Sc., B.Ed.

Table no. 2 from above represents the facilities and equipment to inculcate the scientific interest among the secondary school students and it has found that many of the selected 8 schools of both government and private sector seems to have poor facilities in concern area like library, laboratory equipment, even the number of science teachers are not satisfactory. Despite, possessing requisite qualification as a science teacher somehow, the interest level of the secondary school students limited up to 21.73% exclusively (as indicated in table 1) yet the finding shows there is poor facility among the selected school has brought low influence in science interest in the secondary school students in Lower Subansiri district of Arunachal Pradesh.

Some elements that constitutes these facilities and their impact on academic achievement of students.

They are:

Library

Library is an organized collection of sources of information and similar resources, made available to a defined community for reference or borrowing. It provides a physical or digital access material and maybe a physical building or room or virtual space or both. It was found that in most of the schools haven't any library facility. While in some schools library is available but books were not sufficient, and there were no other schools where journal, magazines are available.

Laboratory

Many of the educational facilities are not available at school. It is also observed that no sufficient lab facilities, equipment are available at school. Thus school authorities also find difficulty to retain interest because of less facilities at school.

Teacher & their qualification

Student-Teacher ratio has not been maintained in most of the schools, while only one teacher is available for science while students are more than 80 and many of the teachers are not fulfilled the CBSE norms, while most of them are un-trained.

Major findings of the study

1. 21.73 Percentage of students are interested in science while 78.27 percentage students are interested in other subject like language and Social science.
2. The major factors associated with lack of interest in science are poor library condition, lack of equipment and conducive learning environment in laboratory, insufficient number of teachers and low aspiration.

Discussion

In the present study first objective has been found the students are more interested in other subject like language and Social science than science which is supported by **Dan Azumi (1998)** reiterated that one of the most repeatedly mentioned problems causing poor performance in science subjects, biology inclusive since the introduction of SSCE is lack of equipment and materials to conduct practical. From the foregoing discussion, there is a strong indication that academic achievement of science students correlates with school facilities available at their disposal in the school. Some elements that constitutes these facilities and their impact on academic achievement of students are: Library, Laboratory, number of teachers and their qualification.

In the second objective the study found that lack of interest in science are poor library condition, lack of equipment and conducive learning environment in laboratory, insufficient number of teachers and low aspiration, the relationship between school facilities and student achievement in science has been investigated for instance, which is supported by **Aderounmu, aworant and Kasali (2001)** investigated "the impact of the school facility in science, mathematics education on student performance at the National Technical Certificate (NTC) examination in five government technical colleges in Oyo state from 2000-2005 and found that facilities has a significant influence on student performance. **Ivowi (2000) and Cifat and Zumyil (2000)** observed that lack of science equipment and laboratories are major causes of poor performance in science subjects in secondary schools in Nigeria.

Suggestions for further research

Based on the present study, a good number of new areas can be studied by the future researchers. The areas and variables which are not covered in this study may be put to test to enlighten the factors associated with inculcation and development of science interest and other factors associated with scientific attitude and achievement in science. Studies may be conducted to find out the effect of digital classrooms, to identify the impact of peers on science interest and achievement of the students. Critical observations can also be taken up at different levels, to identify the factors that influence science interest, students studying in state and central schools, to identify the influence of educated and uneducated parents on the science interest etc.

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