



A STUDY OF SCIENCE INTEREST OF SECONDARY SCHOOL STUDENTS IN WEST TRIPURA DISTRICT

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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) a vehicle to enhance emotional experience; (d) an intellectually challenging endeavour; and (e) a vehicle to qualify for professional life. 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. In this context "A Study of Science Interest of Secondary School Students in West Tripura District" was conducted to measure Science Interest. For this purpose Descriptive survey method of research was used. A sample of 110 secondary school students were selected randomly from seven schools located in West Tripura district. The methodology includes 't' test.

KEYWORDS

Science Interest, Practical Competence, Intellectual Curiosity, Retentive Memory, Social and Emotional maturity.

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 West Tripura District" was intended to measure their science interest.

Objectives:

- To find out the level of Science Interest possessed by the secondary school students.
- To find out the influence of following variables on Science Interest of secondary school Students.
 - Gender
 - Type of school
 - Residence
 - Medium of instruction

Hypothesis:

- There is no significant difference in science interest of boys and girls of secondary schools.
- There is no significant difference in science interest of private and government secondary school students.

3. There is no significant difference in science interest of urban and rural secondary school students.
4. There is no significant difference in science interest of Bengali medium and English medium secondary school students.

DESIGN AND METHODOLOGY:

Descriptive survey method of research is been employed for the present study. A sample of 110 students of IX standard was selected randomly from seven schools of West Tripura District. Sample was collected from government, and private schools consisting of boys and girls of rural and urban students.

SAMPLE DESIGN:

Sl No:	Name of the School	No: of Students	
		Boys	Girls
1	Berimura Higher Secondary School	7	7
2	Lembucherra High School	8	6
3	Fatikcherra High School	8	7
4	Mohanpur High School	9	8
5	Sri Krishna Mission School	9	8
6	Bhavans Tripura Vidya Mandir	8	9
7	Pranavananda Vidya Mandir	8	8

TOOLS:

Science Interest Test standardized by L.N. Dubey and Archana Dubey was employed to measure the Science Interest of secondary school students. There are 64 statements in the test. 32 statements show liking for science subject while 32 statements indicate disliking for the subject.

Statement showing liking for the science subject				Statement showing disliking for the science subject			
1	21	39	53	3	15	30	43
2	22	42		5	17	31	45
4	25	44	56	7		32	51
6	27	46	57	9	20	34	52
8	29	47	58	10	23	35	54
							55
14	33	48	60	11	24	37	59
16	36	49	61	12	26	40	62
18	38	50	64	13	28	41	63
19							
Yes - 1		No - 0		Yes - 0		No - 1	

Statistical Analysis

The data was analyzed using 't' test.

ANALYSIS AND INTERPRETATION:

To study science interest possessed by the Secondary school students.

Table-1: Level of Scientific Interest possessed by the Whole Sample

Sample size	Mean	Standard deviation
110	46.35	8.09

It is evident from the above table-1, that the students of secondary schools hold average level of science interest.

Hypothesis-1

There is no significant difference in science interest of boys and girls of secondary schools.

Table -2: Comparison of Science Interest in Boys and Girls

S.No	Category	N	Mean	S.D	't' Value
1.	Boys	57	45.84	8.82	0.68 ^{NS}
2.	Girls	53	46.89	7.27	

P at 0.01 level is 2.58

Not significant at 0.01 level

From the above table-2, it can be seen that there is no significant difference between the level of science interest possessed by both boys and girls. The difference is not significant as the obtained 't' value (0.68) is less than 't' table value (2.58) at 0.01 level of significance. Both the boys and girls are with average scientific attitude. The science interest is average in both the groups.

Hypothesis-2:

There is no significant difference in science interest of private and government secondary school students.

Table -3: Comparison of Science Interest in the Students of Private and Government Schools

S.No	Category	N	Mean	S.D	't'Value
1.	Private	50	48.58	8.35	2.66 [§]
2.	Govt	60	44.48	7.43	

§ Significant at 0.01 level

According to table-3, there is a significant difference in the level of science interest possessed by the students studying in private and government schools. The students studying in private schools are found better in holding science interest than those of government schools, but both of the sub-samples are with average science interest.

Hypothesis-3 :

There is no significant difference in science interest of rural and urban secondary school students.

Table- 4 Comparison of Science Interest in the Students of Rural and Urban Schools

S.No	Category	N	Mean	S.D	't'Value
1.	Rural	43	45.79	7.34	0.59 ^{NS}
2.	Urban	67	46.7	8.57	

From the above table, it can be seen that there is no significant difference between the level of science interest possessed by both rural and urban school students. It can be seen that urban students are relatively better in holding science interest than rural students. And the science interest is average in both the groups.

Hypothesis- 4:

There is no significant difference in science interest of Bengali medium and English medium secondary school students.

Table -5: Comparison of Science Interest in the Students of the Bengali Medium and English Medium Schools

S.No	Category	N	Mean	S.D	't'Value
1.	Bengali	60	44.48	7.43	2.66 [§]
2.	English	50	48.58	8.35	

§ Significant at 0.01 level

According to the above table-5, there is a significant difference between the level of science interest possessed by the students studying in Bengali medium and English medium schools. The difference is significant as the obtained 't' value (2.66) is more than 't' table value (2.58) at 0.01 level of significance. The students studying in English medium schools are found relatively better in holding science interest than those of Bengali medium schools.

FINDINGS:

From the present study it is observed that the students studying in secondary schools hold an average level of science interest. No significant difference is found between the levels of science interest possessed by Gender and Residence. The study which has

shown no gender difference may be due to the parents have similar thinking and expectations towards their sons or daughters. Same thinking must be sprouted in parents residing in different parts of the country to equalize boys and girls. Teachers should try to develop science interest among students without worrying about gender of the student. But the variables- Medium of Instruction and Type of school had significant difference in the level of Science Interest, and thus hypothesis was rejected. It can be seen that the students of urban secondary schools and English medium schools hold slightly high science interest than those of rural secondary schools and Bengali medium schools.

SUGGESTIONS:

Based on the findings of the study some suggestions are worth mentioning. Interests are actually the result of constant interaction between instinctive behaviour of the organism and the environmental forces. Science interest is involved with many hereditary and environmental factors which are very essential for a successful person. There are different factors like creative abilities, mental abilities, capacity for critical thinking, persistence in learning and motivations, socio-economic factors, skill acquisitions, satisfaction derived from learning a subject that help in development of science interest in students. And, there is a need to arrange activities in teaching that develop science interest. Teachers and parents must try to focus on establishing and promoting the relationship between ability of thinking and learning, but not just on scoring in examinations. This may be helpful in developing science interest among students. Science teachers must try to develop the science interest in the students through some procedures like exposure to science events, bringing out the creative mental abilities, binding up with their skills, etc along with the medium of instruction.

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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