Scholarly Research Journal for Humanity Science & English Language,
Online ISSN 2348-3083, SJ IMPACT FACTOR 2017: 5.068, www.srjis.com
PEER REVIEWED & REFERRED JOURNAL, JUNE-JULY, 2019, VOL- 7/34

INTEREST IN SCIENCE OF SECONDARY SCHOOL STUDENTS IN RELATION TO PARENTAL EDUCATION

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Abstract

Science education is crucial for the understanding of our environment and it is an essential tool for technological development in any society. Developing positive attitude and interest in the subject is essential for effective science learning. Thus developing student's interest in science is one of the important aims of science teaching. Hence the present paper aims at studying the science interest of secondary school students. The paper also attempts to compare the science interest of the students on the basis of their parent's education. The sample of the study consists of 560 IX th grade students studying in secondary schools of Patna district, Bihar, India. Survey method has been employed for the study. The findings reveal that there is significant difference in the science interest of the secondary school students on the basis of their parent's education. The students whose parent's educational level is high have higher level of interest in science than those whose parent's educational level is low.

Keywords: *Interest, Science, Parental Education*

Introduction

The development of student's interest in science has long been accepted as an objective for science teaching by science educators and teachers. The term "interest in science" has been employed to denote a range meaning that extends from positive feeling towards science to complete absorption in scientific inquiry.

Interest may be referred to as the key factor and a driving force that helps us in paying attention as well as remaining engaged in our attended activities. It is the central force that drives the whole machinery of the teaching-learning process. Thus developing students'interest in science has been a prime objective of teaching science.

Both internal or personal factors and external or environmental factors affect the interest patterns of an individual in the course of his growth and development. Personal factors include our physical, mental, social health and development as well as our age, gender,

wishes, motives and attitudes. External or environmental factors include the socio-economic status, socio-cultural environment and the type of education and training received by us.

Sethi (2015) conducted a study to investigate the attitude of the students towards science in relation to certain non school factors. The findings of the study reveal that there is no significant difference between the attitude of students in relation to gender and socio-economic status. However significant difference was found between the attitude of urban and rural students. Urban students have more favourable attitude towards science in comparison to rural students.

Chandrasekaran (2014) conducted a study to find the development of scientific interest, scientific attitude, critical thinking and creative intelligence in teaching and learning biology through synectics techniques at higher secondary level to students of experimental group and control group. The analysis revealed that the application of synectics techniques as supplementary strategy in teaching biology was more developmental because the use of synectics techniques increased interest and enhanced motivation levels of the students.

Narmadha and Chamundeswari (2013) aimed to investigate attitude towards learning of science and academic achievement in science among students at the secondary level. Results showed that the students belonging to the central board schools have a higher level of attitude towards learning of science compared to students in state board but did not differ with students in matriculation board schools at the secondary level. The girls are significantly better in their attitude toward learning of science when compared to the boys in all categories of schools. A positive correlation was found to exist between attitude towards learning science and academic achievement in science among the students.

Christidou (2011) studied student's science-related interests, attitudes, and images of science and scientists, and their differentiations according to gender, culture, and socio-economic status by a multitude of research studies. These aspects of students seem to be interrelated and also affect students' achievement in science and their relevant study and career aspirations. This study attempted a mapping of relevant literature in order to highlight crucial outcomes and draw educational and research implications. It is suggested that a comprehensive and integrated investigation of the voices of students, of school science and teachers and of popular science is required in order to make informed, research-based decisions on designing school science curricula and teaching.

Bulunuz and Jarrett (2010) attempted to explore the connections between pre-service elementary teachers of science method course background science experiences and interest in science. Analysis of data revealed that Students with low and high initial interest in science were significantly different on remembering about their elementary school science and involvement in non-school science activities including science related field trips, play and exploration.

Objectives of the Study

1. To find the level of interest in science of the secondary school students.
2. To find the significant difference in interest in science of students with respect to father's education.
3. To find the significant difference in interest in science of students with respect to mother's education.

Hypotheses of the Study

1. There is no significant difference in interest in science of students with respect to father's education.
2. There is no significant difference in interest in science of students with respect to mother's education.

Methodology

Method - In the present study survey method has been used.

Population – Population of the study consists of all the secondary school students of Patna district studying in class IX .

Sample – A sample of 560 students studying in class IX of twelve schools of Patna district was selected by purposive sampling technique.

Tool – Self constructed Science Interest Test containing 30 items was used by the investigator to collect data regarding the science interest of the students. Out of 30 items 15 are positive statements and 15 are negative statements towards interest in science. Test-retest method was used to establish reliability. The reliability coefficient was found to be 0.82 which shows that the test is quiet reliable.

Statistical Analysis – Statistical techniques like mean, standard deviation and t-test were used to analyse the data.

Results and Discussion

Table 1 : Percentage level of Interest in Science of the Secondary School Students

Sample		**N**	**High**	**Moderate**	**Low**
Entire Sample	**Types**	**560**	**75 (15.18)**	**400 (71.43)**	**85 (13.39)**
Father's Education	Up to Class X	142	24 (16.9)	101 (71.13)	17 (11.97)
	Up to Graduation	352	38 (10.8)	261 (74.15)	53 (15.05)
	Above Graduation	66	13 (19.7)	44 (66.66)	9 (13.64)
Mother's Education	Up to Class X	299	44 (14.72)	221 (73.91)	34 (11.37)
	Up to Graduation	222	35 (15.76)	151 (68.02)	36 (16.22)
	Above Graduation	39	8 (20.51)	26 (66.67)	5 (12.82)

(Number in parenthesis indicates percentage)

Table 1 shows the level of interest in science of the entire sample. It is seen from the table that the majority of the secondary school students have moderate level of interest in science.

Null Hypothesis 1 : There is no significant difference in interest in science of students with respect to father's education.

Table 2 : Significant difference in interest in science of students with respect to father's education.

Demographic Variable	**Types**	**N**	**Mean**	**S.D.**	**t-ratio**	**Remarks**
Father's Education	Up to class X	142	19.38	3.15	5.84	Significant
	Up to Graduation	352	21.26	3.45		
	Up to Class X	142	19.38	3.15	9.12	Significant
	Above graduation	66	23.5	2.97		
	Up to Graduation	352	21.26	3.45	5.45	Significant
	Above graduation	66	23.5	2.97		

(The table value of 't' at 1% level of significance is 2.58)

It is inferred from table 2 that there is significant difference between the secondary school students whose father's education is up to class X, up to graduation and above graduation in their interest in science.

Null Hypothesis 2 : There is no significant difference in interest in science of students with respect to mother's education.

Table 3 : Significant difference in interest in science of students with respect to mother's education.

Demographic Variable	Types	N	Mean	S.D.	t-ratio	Remarks
Mother's Education	Up to class X	299	19.71	3.32	9.20	Significant
	Up to Graduation	222	22.32	3.10		
	Up to Class X	299	19.71	3.32	9.24	Significant
	Above graduation	39	24.10	2.71		
	Up to Graduation	222	22.32	3.10	3.70	Significant
	Above graduation	39	24.10	2.71		

(The table value of 't' at 1% level of significance is 2.58)

It is inferred from table 3 that there is significant difference between the secondary school students whose mother's education is up to class X, up to graduation and above graduation in their interest in science.

Findings of the Study

1. Majority of the secondary school students have moderate level of interest in science.
2. There is no significant difference in interest in science of secondary school students with respect to father's education. The mean score shows that students whose father's educational level is high have more interest in science than those whose father's educational level is low.
3. There is no significant difference in interest in science of secondary school students with respect to mother's education. The mean score shows that students whose mother's educational level is high have more interest in science than those whose mother's educational level is low.

Recommendations

- Parents should encourage and guide their wards in developing interest in science by taking small steps like refuting superstition, blind faith and believes and explaining the cause and effect relationship behind natural phenomenon etc.

- Parental support and care for their wards may be ensured by motivating the parents in the parent – teacher meetings organized by schools
- School and teachers should involve students in science based activities like science club, science exhibition, field trips so as to develop their scientific attitude and interest in science.
- Film shows, debate and guest lectures on scientific topics should be organized in schools from time to time to make the students aware and sensitize them towards the importance of science in the development of the country.

Conclusion

Parents play a vital role in the learning and nurturing of right attitude among their wards. Parents should provide a more conducive environment to their wards that will stimulate the development of scientific attitude and interest in science of their wards. Learning of science could be made more joyful activity for students in schools so that they become more interested in science and develop a positive attitude for the subject.

References

Bulunuz, M. and Jarrett, S.O.(2010). Developing an interest in science: background experiences of pre-service elementary teachers. International Journal of Environmental & Science Education. 5(1), 65-84.

Candrasekaran, S. (2014). Developing Scientific Attitude, Critical Thinking and Creative Intelligence of Higher Secondary School Biology Students by Applying Synectics Techniques. International Journal of Humanities and Social Science Invention. 3(6), 1-8. Retrieved from www.ijhssi.org on 10/11/2016

Christidou, V. (2011). Interest, attitudes and images related to science: Combining students' voices with the voices of school Science, teachers, and popular science International Journal of Environmental & Science Education. 6(2), 141 – 159.

Position Paper National Focus Group on Teaching of Science (2006) National Council of Educational Research and Training NCERT, New Delhi.

Narmadha , U. and Chamundeswari, S. (2013). Attitude towards Learning of Science and Academic Achievement in Science among Students at the Secondary Level. Macrothink Institute – Journal of Social Research. 4(2), 114 – 124.

National Curriculum Framework (2005). National Council of Educational Research and Training NCERT, New Delhi.

Sethi, U. (2015). Study Of Attitude of the Students towards Science in relation to Certain Non-School Factors . International Journal of Education and Information Studies. 5 (1), 75-80. Retrieved from http://www.ripublication.com on 22/12/2016