

## An Analysis of Secondary school students' opinion on learning Science as a subject of Study

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### **Abstract:**

*Learning is mind illuminating activity learner has to be initiated to this learning. Learning not only depends on intelligence but also on the level of interest and attitude of the learner. So also the sincere efforts made by the teacher to teach the subject in an interesting manner. This study is made to collect student's opinion on their learning of the subject science. Here is an attempt to study students' opinion on learning Science.*

### **Keywords:**

**Secondary school:** – where they study 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> classes in Hassan, Karnataka state.

**Learning science:** - acquisition scientific process and product components as a discipline of knowledge.

## I. INTRODUCTION

Learning science is an integral part of human civilization and culture. Scientific knowledge has expanded and refined due to unquenched curiosity in the human endeavour. Scientific knowledge is useful to the development of knowledge which seeks proof of experimentation.

There is always scope for modification of knowledge as there are additions to the present knowledge. There are abundant values developed due to the learning of science like intellectual, utilitarian, cultural, disciplinary, recreational aesthetic. . . . They not only provide basis for human thinking and development but also to improve our individual and social life through economic development.

Hence it evident that science has to be taught to the student at an early age to the children as they are curious to know and experience. Their urge to grow intellectually can be satisfied through the concrete experiences which help in the development of cognitive aspects as they grow.

Here is the major role of parents and teachers to initiate inclination towards science teaching. It need not be restricted to chalk and talk only. Ample varied experiences help in the development scientific knowledge with proper basis of science. Children develop interest in science as a subject. It seeks logical thinking based on cause and effect relationships. Observation, measurement, tabulation, analysis and interpretation are some of the process skills. In order to be interested in science learning one has to discipline himself academically. So schools are to play an important role in promoting learning science.

To observe the present condition of science learning in schools and also the opinion of 14 to 15 years students on learning science, a survey is conducted to the students from 3 different secondary schools of Hassan City including 250 students.

## II. REVIEW

Awasthi (1989) Developed a fruitful strategy for science teaching. Using th concept attainment model. Awasthi further said that thinking can be taught if appropriate teaching strategies are used.

Malviya (1991) examined attitude towards science and interests in science. The study showed that high scorers on attitudes towards science favour higher scientific interest. Age, sex, professions and socio- economic status have no effect on attitudes towards science.

Sood (1992) and his students have studied attitude towards science and scientist among students and teachers for years. His study revealed significant relationships between the public understanding of science and attitudes towards science.

## III. OBJECTIVES

- To study the interest of secondary school students in learning science.
- To study whether science is being learnt through experiments and activities
- To identify whether students find cause effect relationships.
- To study whether students know the contribution of scientists to day-to-day events.
- To study whether students are interested to pursue science as a subject.
- To study whether students know the uses and problems of science.

## IV. SAMPLE

The sample consisted of 250 students from 3 secondary school of Hassan, who are studying IX standard 232 boys and 118 girls.

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**V. TOOL**

Tool used is a questionnaire constructed by the author for the purpose of survey which consisted of 8 questions having reply by indicating yes, No and Don't know and 2 having open ended which require students to respond by giving in writing their opinion.

This tool prepared is administered by the author to collect opinion from students. There 132 boys and 118 girls. Each sheet of response was tabulated by 1 for 'Yes' response, 1 for 'No' response and 1 for 'don't know' response. The total for each item is made and the percentages of all three ratings are calculated. The following table gives the number of 'yes' 'no' and 'don't know' and there percentages. Some students have not responded to the items. (They have not given responses).

**VI. TABULATION AND ANALYSIS**

Out of the 10 questions in the questionnaire 8 were closed questions and 2 were open ended. The following table gives the tabulation of the score of 8 closed questions response with the percentages for 132 boys and 118 girls.

Table showing the responses of the students "yes", "no" and "don't know" with percentages

Sl No	Items	Ratings											
		Yes				No				Don't Know			
		B	%	G	%	B	%	G	%	B	%	G	%
1	Do you find the learning of science interesting?	100	75	91	77	26	19	30	16	6	4	7	5
2	Do you find that learning science is useful?	120	90	100	84	2	1	8	6	10	7	10	8
3	Will there be learning of science through experiments?	110	83	42	35	30	22	65	55	2	1	9	0
4	Do you conduct activities while learning science?	102	77	72	61	30	22	39	33	0	0	7	5
5	Will teachers conduct activities in the class?	80	60	71	60	50	37	46	38	2	1	1	0
6	Do you observe cause-effect relation in science learning?	110	83	84	71	22	16	20	16	0	0	14	11
7	Have the contributions of scientists useful to us?	100	75	100	84	12	9	15	12	20	15	3	2
8	Do you wish to select science as your future option?	60	45	50	42	60	45	66	50	12	9	2	1

For the question (1) do you find science learning interesting? 75% of boys, 77% girls says yes and 19% Boys 16% girls as No. Only 4% boys and 5% of girls indicated as do not know

For the question (2) do you find that science learning is useful to you? 90% of boys, 84% girls says yes and 1% Boys 6% girls as No. But 7% boys and 8% of girls indicated as do not know

For the question (3) will the science learning of is through experiments? 83% of boys, 35% girls says yes and 22% Boys 55% girls as No. Only 1% boys and 0% of girls indicated as do not know

For the question (4) do you conduct activities while learning science? 77% of boys, 61% of girls says yes and 22% Boys 33% girls as No. No boy indicated it do not know but 5% of girls.

For the question (5) will teachers conduct activities in the class? 60% of both boys and girls have said yes and 37% of boys and 38% of girls said no. Negligible percentage boys (1%) say do not know

For the question (6) do you observe cause-effect relation in science? 83% of boys, 71% girls said yes and 16% each of Boys and girls said no while 11% of girls said do not know

For the question (7) have the contributions of scientist useful to us? 75% of boys, 84% girls said yes and 9% Boys 12% girls as No. but 15% boys and 1% of girls said do not know

For the question (8) do you wish to select science as a subject in future? 45% of boys, 42% girls says yes and 45% Boys 50% girls as No. While only 9% boys and 1% of girls said they do not know

After analysis of 8 questions, the remaining 2 questions were carried. They are open ended questions. Students have responses.

For the question (9) will learning of science bring prosperity in our life's? The student responses as below

**Table showing the responses of boys and girls about uses of science with percentages**

9	Will the learning of science bring prosperity in our life? Write 4 of them	B	%	G	%
a	Help communication	130	98.4	118	100
b	Converting nature for human use	128	96.6	116	98.3
c	Work is easy with inventions of machines	126	95.4	115	97.4
d	Helpful for transportation	132	100	116	98.3
e	Improvement of medical facility	129	97.7	114	96.6
f	Helpful for entertainment	132	100	118	100
g	Helpful for Industries	126	95.4	110	93.2
h	Use of technical equipment and electronic gadgets	130	98.4	116	98.3
i	Easy to carry out domestic work	128	96.9	118	100
j	Progress of the Nation	130	98.4	114	96.6
k	Improvement / Modernisation of Society	130	98.4	115	97.4
l	Enhancing agricultural products.	128	96.9	114	96.6
m	Generation of Electricity	130	98.4	112	94.9

Students of 14.15 years have given 13 users of science in our life. It has brought prosperity in our life. Some of the major uses of science are listed by them. The list may not be very exhaustive. Depending on their maturity level and exposure they have responded. It is clearly evident that. They are aware of the uses of sciences.

For the question (10), Are there problem due to science? The students both boys and girls have responded. Number of responses and percentages are listed in the following table

**Table showing the items indicating problems of science shown by students with number and percentages**

Sl. No	Item	Rating with percentages			
		Boys (N=132)		Girls (N=118)	
		Number	%	Number	%
1.	Problems of science				
2.	Environmental pollution	128	96.8	102	86.4
3.	Effects of chemicals	120	90.9	115	97.4
4.	Using nuclear weapons	126	96.3	98	83
5.	Industrial waste	128	96.8	110	93.2
6.	Health problems	130	98.4	114	96.6
7.	Death of species due to radiations	100	75.7	110	93.2
8.	Electric shocks	110	83.3	102	86.4
9.	Lack of concentration due to electronic gadgets	128	96.8	110	93.2

The above table indicates the 9 problems of science. Their age is 14-15 years. Some of the major problems of using science are referred by them. This is appreciated. Because students know the significant problem of science

## VII. INTERPRETATION

This attempt to study the interest of students in learning science has revealed that through the responses of 250 (132 boys and 118 girls) has some of the meaningful details. Science has to be learnt through activities and experiments. Teachers have to help student to find the cause and effect relationship in the scientific process which have resulted to the products of science. Student have realised the uses of science. But it implied by responses of the students for the question (8) that many of the boys (60) and girls (66) have indicated that they do not pursue science as a subject in future. This may be due to logical thinking expected of the subject. When the concrete concept may not be developed. The difficulty of the subject also poses problems. Hence less number of takers for science as a subject an later stage / higher stages of education.

## VIII. CONCLUSION

Here is an attempt to seek the responses of 250 secondary school students of 3 schools of Hassan, Karnataka State. Effective learning is possible only when curriculum, teaching learning of students go together smoothly. Otherwise, gaps / difficulties may be faced by students. Hence, the responses favourable as well as unfavourable. Their age is with maturity not up to date. So, there is this finding. This is an important study to be considered as the author was interested to make this attempt as a teacher of science.

## IX. REFERENCES

1. Barba H.R. (1999) Science in multicultural classroom: A guide to teaching and learning. USA: Allyn and bacon
2. Dr.S.Geetha;(2010) Cognitive Reasoning and science education; published by Dharani Publishers, Bangalore.
3. R.C.Sharma – Methods of Teaching Science (2000) Dhanpath raj publication
4. Authors experience as a science teacher as teacher educator