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Research Paper Education

Attitudes of Pupils of Secondary Schools Towards Science as School Subjects in the District of Burdwan, West Bengal

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ABSTRACT

This paper aimed to provide an understanding and to study the attitude towards Science as School subjects of the Secondary Schools. In this connection 100 boys and 100 girls student of Burdwan district were selected as sample to estimate their attitude. Data were analyzed by adopting appropriate methods. It was observed from the findings that (i) maximum students expressed their favourable attitude towards science as school subjects (ii) Major percentage of students having average degree of attitude towards science as school subjects (iii) The findings also indicate the positive relation between Socio-Economic status and attitude towards science as school subjects. (iv) Attitude towards science as school subjects was independent of sex variation of the students.

KEYWORDS : Attitude, science subjects and secondary school

Introduction:

The importance of science and technology has been realised by all developing countries like India. In India attempts are being made by different agencies such as the department of Science Education, UGC, NUEPA, NCERT, SCERT, State Department of Science Education and so on to improve the standard of science education. The improvement of standards depends upon many factors such as methods of teaching, instructional material, laboratory equipments, text-books, teacher's ability etc. Of all the different factors which influence the quality of education and teaching and its contribution to national development, the quality, competence and character of teachers are undoubtedly the most significant. Attitude as a concept is concerned with an individual way of thinking acting and behaving. It has very serious implications for the learner, the teacher and the immediate social group with which the individual learner relates and the entire school system. Besides these, the right type of attitudes of the students towards the subject is the basic requirement of learning it. It also plays a permanent role in learning a subject successfully. Without the right type of attitudes, all attempts may result in mere wastage. Therefore, to build up a sound programme of science education, it is first and foremost necessary to know the attitudes of students towards science. The knowledge of the positive attitudes of the students towards science will definitely help teachers to plan and execution there any type of science programme for school. It is through such developmental programmes that the science teachers will be able to inculcate the right type of attitudes in students for science.

Objectives of the study:

1) to estimate the levels of attitude of students towards Science as School subjects.
2) to estimate the degree of attitude towards Science as School subjects.
3) to study the attitudes of the students coming from different socio-economic status.
4) to study the attitudes of the students of rural and urban areas.
5) To estimate the level of attitude of boys and girls towards science as school subjects.

Methods and procedure:

With a view to collect data concerning different objectives of the study, a standardized Attitude scale was used.

Sampling:

Purposing Random sampling technique was used for selection of sample. Twenty four Secondary schools(Class-VIII, IX and X)were selected randomly in the district of Burdwan, West Bengal belongs to rural and urban areas. From the list of schools (boys and girls) 100 boys and 100 girls students were selected at random.

Analysis of data and findings:

Relevant data were collected from the 200 students selected as the sample. Measures of Central tendency, percentage calculations, Chi-squire test and 't' test were used for analysis of data.

* Level of attitude towards Science as School subjects

Table No. 1 Showing the mean attitude scores of boys and girls

Category	N	Mean
Boys	100	64.54
Girls	100	66.53

Cutting point score is 60, between two levels of attitude i.e. favourable or unfavourable

Table 1 indicates that the mean attitude scores of both boys and girls are higher than the cutting point score (60). Hence it may be said from the results that school going children of both boys and girls having favourable attitude towards Science as School subjects.

* Degree of attitude towards science as school subjects

Table No. 2 Distribution of boys and girls on the basis of degree of attitude i.e. high, average and low degree of attitude

Attitude/ Category	High degree		Average degree		Low degree		Total
	N	%	N	%	N	%	
Boys	18	18%	82	82%	0	0	100
Girls	14	14%	86	86%	0	0	100

Above table No. 2, indicates the percentage of boys and girls student belongs to degree of attitudes. It has been found that no students of both boy and girl group belong to low degree in the level of attitude. Results indicate that 18% of boys show high degree of attitude but in case of girls it is 14%. It may be inferred that maximum students of both boys and girls show average degree of attitude. It may be due to the lack of proper motivation towards science as school subjects.

Table No. 3 *Showing the mean attitude scores of boys and girls on the basis of rural and urban areas

Category	N	M
Rural pupils	100	60.02
Urban pupils	100	68.54

Cutting point score is 60, between two levels of attitude i.e. favourable or unfavourable

Table 3 indicates that the mean attitude scores of both Rural and Urban pupils are higher than the cutting point score (60). Hence it may be said from the results that school going children of both boys and girls having favourable attitude towards Science as School subjects. It is also indicates that Urban pupils show more favourable attitude than rural pupils towards science as school subjects.

Table No. 4 *Showing the mean attitude scores of boys and girls on the basis of Socio-economic status(SES)

Category	N	attitude scores(M)	Socio-economic status scores(M)
Boys	100	64.54	67.70
Girls	100	66.53	68.45

Table No. 4 shows that the mean attitude scores of all the boys and girls are higher than the cutting point score(60) and it is also indicates that the mean attitude scores of both boys and girls are increased with the increase of Socio-economic status scores.

Table – 5 *Showing the χ2 distribution of boys and girls on the basis of their SES scores and on the attitude scores. [χ2 design]

Category	Above average	Below average	χ2 - values	Significant or not
SES(N)	108	92	0.321	NS
Attitude score(N)	104	96		

Table No. 5, It has been found from the results that the values of χ2 for two distributions (i.e. socio-economic status and dimension of attitude) are not significant at .05 level. It may be mentioned from the results that socio-economic status has a clear impact on attitude towards Science as School subjects of boys and girls.

* Levels of attitude among the boys and girls

Table No. 6 Distribution of boys and girls on the basis of attitude scores (χ2 design)

Category	Above cutting point	Below cutting point	Total(N)	χ2
Boys	73	27	100	1.36
Girls	80	20	100	
Total	153	47	200	

for 1 df, χ2 at .01 level=6.635 & at .05 level =3.841

The value of χ2 is not significant at .05 level. The result indicates that two groups of students do not differ significantly on the basis of their attitude towards science as school subjects.

*'t' test was adopted for final decision

Table No. 7 Showing the Mean, SD, and 't' between the boys and girls

Category	N	M	SD	SED	't'
Boys	100	64.54	8.10	1.15	1.73
Girls	100	66.53	8.11		

The value of 't' is not significant at .05 level, meaning there by two groups of students(boys and girls) do not differ significantly on the basis of attitude towards science as school subjects.

Concluding remarks:

The findings of the study highlight a trend about the attitudes of the students towards Science as School subjects. It was found from the results that most of the students having favorable but average attitude towards Science as School subjects. The findings also indicate the positive relation between Socio-Economic status and attitude towards science as school subjects and attitude towards science as school subjects was independent of sex variation of the students. Several measures have been taken by the Government to grow positive attitude towards science as school, but it was found from the findings of the study that the output of measures was not up to the expected goal. So we should take the effective measures to develop positive attitude towards science as school subjects in the students. It is fact that favorable attitude is very important as a determinant to perform any assignment effectively and accurately. In the field of education, attitude towards science as school subjects is an important construct to understand the educational theory and to foster the all-round growth and development of the child. Thus intensive study is required to find out the gaps in the system of our Secondary Education. So that necessary measures may be adopted to improve the degree of attitudes of the students towards Science as School subjects.

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