A STUDY ON SCIENTIFIC APTITUDE AND LEARNING ENVIRONMENT AMONG HIGHER SECONDARY STUDENTS IN PONDICHERRY

Dr.S.Anuruba

Principal, MASS College of Education, V. Parangani, Vilupuram

Abstract

The present study is an attempt to find out the Scientific Aptitude and Learning Environment among higher secondary students in Pondicherry. Simple random sampling technique has been used in the selection of the sample. As many as 600 higher secondary students were selected for this purpose, Scientific Aptitude test battery and Learning Environment scale were distributed to them and their responses were collected and computed according to the objectives framed. Results found that majority of the higher secondary students showed positive and significant relationship of Scientific Aptitude and Learning Environment and the same trend has been seen in respect of the sub-samples too.

Keywords: *Scientific aptitude, Learning environment, Higher secondary students.*

Introduction

Scientific Aptitude is a potentiality of future accomplishment in Science without regard to past training and experience. Dwivedi, R. D. (2005) defines Learning Environment, "students from schools of enriched environment has better academic environment". Learning Environment is influenced by a number of factors. It is obvious that the Higher Secondary students' Learning Environment is a major determinant of Scientific Aptitude that is related to their future career.

Objectives of the Study

- To find out the significant relationship between Scientific Aptitude and Learning Environment among Higher Secondary Students.
- To find out the significant difference between Scientific Aptitude and Learning Environment among Higher Secondary Students with respect to their sub-samples.

Hypotheses of the Study

1. There is no significant difference between Scientific Aptitude and Learning Environment among Higher Secondary Students.
2. There is no significant difference between the Scientific Aptitude and Learning Environment among Higher Secondary Students with respect to their sub-samples.

Methodology

In the present study Normative Survey Method has been used, since it deals with present condition.

Sampling Technique used in this Study

Simple Random Sampling Technique has been used in this study. Among the various regions in the Union Territory of Pondicherry, only Pondicherry region has been fixed as the field for this study.

Tool

1. Scientific Aptitude test battery by K. K.Agarwal Bareilly and Saroj Aurora.
2. Learning Environment Scale by S. Rajasekar.

Statistical Techniques used in this Study

In the present study Correlation Analysis has been used.

Data Analysis and Findings

Table 1 Correlation Co-efficient between the Scores of Scientific Aptitude and Learning Environment of Higher Secondary Students

Variables	N	Correlation Co-efficient ('r')	Level of Significance
Scientific Aptitude	600	0.071*	Significant
Learning Environment	600		

The correlation coefficient is 0.071 found between Scientific Aptitude and Learning Environment among Higher Secondary students, which is significant at 0.05 level for 599 df. It is concluded that there is a positive and significant relationship between Scientific Aptitude and Learning Environment among Higher Secondary students.

Table 2 Coefficient of Correlation between Scientific Aptitude and Learning Environment of Students with Regard to Sub - Samples

S. No.	Sub Sample	Number	r	Table value	level of significance
1	**Gender**				
	Male	291	0.103	10.29	Significant at 0.01 level
	Female	309	0.031	1.98	Significant at 0.01 level
2	**Type of Management**				
	Government	301	0.122	8.29	Significant at 0.01 level
	Private	299	0.083	0. 26	Not Significant at 0.05 level
3	**Nature of school**				
	Boys School	90	0.079	12.69	Significant at 0.01 level
	Girls School	90	0.127	8.19	Significant at 0.01 level
	Co-Education School	420	0.182	1.99	Significant at 0.05 level
4	**Location of School**				
	Urban	302	0.044	9.89	Significant at 0.01 level

	Rural	298	0.099	7.59	Significant at 0.01 level
5	**Type of Family**				
	Nuclear	335	0.069	4.99	Significant at 0.01 level
	Joint	265	0.050	2.09	Significant at 0.01 level
6	**Father's Education**				
	Illiterate	215	0.044	12.39	Significant at 0.01 level
	Matriculate	216	0.124	2.99	Significant at 0.01 level
	Degree	118	0.030	2.19	Significant at 0.01 level
	Professional Degree	51	0.022	0.69	Not Significant at 0.05 level
7	**Mother's Education**				
	Illiterate	285	0.033	8.89	Significant at 0.01 level
	Matriculate	212	0.089	14.59	Significant at 0.01 level
	Degree	82	0.146	0.04	Not Significant at 0.05 level
	Professional Degree	21	0.221	0.81	Not Significant at 0.05 level
8	**Community**				
	FC	59	0.091	9.29	Significant at 0.01 level
	BC	205	0.093	5.69	Significant at 0.01 level
	MBC	210	0.057	0.02	Not Significant at 0.05 level
	SC	108	0.076	1.03	Not Significant at 0.05 level
	ST	18	0.096	3.29	Significant at 0.01 level
9	**Religion**				
	Hindu	519	0.054	8.69	Significant at 0.01 level
	Muslim	44	0.087	7.49	Significant at 0.01 level
	Christian	37	0.075	0.23	Not Significant at 0.05 level

By using the Spearman Brown Prophecy formula, the Zero order Correlation has been computed and the values are given in Table No. 2. It may be inferred from the above table No.2 that there is a positive significant relationship between Scientific Aptitude and Learning Environment among Higher Secondary students. It is also observed from the obtained results that the following sub samples: Gender (Male/Female), Type of management (Government), Nature of school (Boys/Girls/ Co-Education School), Location of the school (Urban/Rural), Type of Family (Nuclear/ Joint), Father Education (Illiterate/ Matriculate/ Degree), Mother Education (Illiterate/ Matriculate), Community (FC/BC/ST), Religion (Hindu/Muslim) are significantly correlated. But the sub samples: Type of management (Private), Fathers Educational Qualification (Professional Degree), Mothers Educational Qualification (Degree/ Professional Degree), Community (/MBC/SC), Religion (Christian) are not significantly correlated.

Therefore it may be concluded that there is a significant relationship between Scientific Aptitude and Learning Environment among sub samples, Gender (Male/Female), Type of management (Government), Nature of school (Boys/Girls/ Co-Education School), Location of the college (Urban/Rural), Type of Family (Nuclear/ Joint), Father s Educational

Qualification (Illiterate/ Matriculate/ Degree), Mothers Educational Qualification (Illiterate/ Matriculate), Community (FC/BC/ST), Religion (Hindu/Muslim) are significantly correlated. But the sub samples Type of management (Private), Fathers Educational Qualification (Professional Degree), Mothers Educational Qualification (Degree/ Professional Degree), Community (/MBC/SC), Religion (Christian) are not significantly correlated.

Conclusion

From the above analysis, it is concluded that there is a positive and significant relationship between Scientific Aptitude and Learning Environment among Higher Secondary students and the same trend has been seen in respect of the sub-samples too.

References

1. Adolph, Frasa and Aldridge,(2003), A Cross National study in Investigating Learning Environment and Attitude towards Science". International Journal of Science and Mathematics Education.
2. Afif Zeidan (2010), "A study on relation between Grade II Palestinian students' Attitude towards Biology and their perception of Biology Learning Environment". International Journal of Science and Mathematics Education, 2010, p.783-800.
3. Duran and Ozdemir(2008), "Investigate the effect of Scientific process skills (Aptitudes and Attitudes) based Learning Approach,U.S. China Educational review USA March-2010, Vol.07.
4. Henry E. Garret (1961). Statistics in Psychology and Education. New Delhi: Paragon International Publishers.
5. Monika davar, (2012), Teaching of Science, New Delhi, PHI Learning Pvt, Ltd.,
6. Scientific Aptitude of VIII standard students in relation to their Achievement in Science. Nallusamy. May-2008.