

Research Article

Attitude towards Smart Board and Learning Style in Relation to Academic Performance among High School Students

Selvi Anita Mary. G,

MPhil Scholar, Stella Matutina College of Education, Chennai, Tamil Nadu, India.

Abstract

This paper reports on Attitude towards Smart Board and Learning Style in Relation to Academic Performance among high school Students. The sample constituted of 456 high school Students. The tools used for the study was – The Perceptual Learning Style inventory prepared and standardized by J.M. Reid (1987). Attitude towards smart board tool. Critical ratio, One way analysis of Variance, Two tailed test, Correlational analysis and Regression analysis were used to analyse the data. There exists a negative correlation between student's attitude towards smart board and academic performance. There exists a positive correlation between dimensions of learning style namely, visual, individual learning and dimensions of attitude towards smart board.

Keywords: Smart board usage, learning style, academic performance, technology integration, student attitude, digital learning

Introduction

Education is the first stepping stone for building a great nation. It has been recognized as a fundamental right and it viewed as a process of human resource development, where the knowledge, skills and capabilities are sharpened to achieve a wide range of objective. According to the great Greek Philosopher Aristotle, "Education is the creation of a sound mind in a sound body". It is the process by which an individual is able to function according to the experience of the society as well as according to his / her capabilities.

"Education is that process of development which consist the passage of human being from infancy to maturity, the process whereby he/she adapts him/herself gradually in various ways to his/her spiritual environment". In addition to this, the world outside academic media is also attracted towards new learning experiences with this kind of new technology. Education according to Will Matt is the apprenticeship of life.

Statement of the Problem

Attitude towards Smart Board and Learning Style in Relation to Academic Performance among high school Students

Objectives of the Study

- To examine the differences in Attitude towards Smart Board and Academic Performance with respect to Gender, Region, Type of Management
- To explore the differences in dimensions of learning styles with respect to Gender, Region, Type of Management
- To examine the relationship, if any, in the attitude towards SMART Board, Learning Styles and Academic Performance among High School Students.

Hypotheses

1. There is no significant difference in the Attitude toward Smart Board and Learning Style dimensions owing to the differences in, Gender, Medium of instruction, Type of School
2. There is no significant difference in Academic Performance owing to the differences in, Gender, Medium of instruction, Type of School
3. There is no significant relationship between Attitude toward Smart Board, Learning Style and Academic Performance.
4. Linear combination of Attitude towards Smart Board, Learning style and Academic Performance.

Method Adopted for the Study

A Survey method of research was adopted for the study.

Sample

The sample for the study was selected randomly. And it consists of 456 students drawn from 6 schools (two government, two government-aided, two private schools).

Statistical Tools Employed for the Study

The Perceptual Learning Style inventory by J.M. Reid (1987), Attitude towards smart board tool was prepared by the investigator, half yearly examination marks was taken as the Academic Performance.

Analysis of the Data

Descriptive Analysis, Differential Analysis, Correlation Analysis and Regression Analysis.

‘T’ Ratios for Dimension of Attitude towards Smart Board Owing to Differences in Selected Personal Variable

Table-1

Table showing the ‘t’ ratios for differences in presentation owing to differences in selected personal variables

Variables	Category	N	Mean	SD	t ratio	df	Sig
Gender	Male	228	27.42	1.993	1.831	454	0.068
	Female	228	27.73	1.619			
Region	Rural	228	27.46	1.972	0.771	454	0.441
	Urban	228	27.69	1.651			
Medium	English	304	27.63	1.678	1.313	454	0.190
	Tamil	152	27.47	2.078			
Family type	Joint	145	27.61	1.853	0.241	454	0.809
	Nuclear	311	27.56	1.807			

The obtained value is greater than ‘p’ value at 95% confidence level (0.05). Thus, there is no significant difference between presentation owing to Gender, Region, family type and medium. Hence, the hypothesis is accepted.

‘t’ Ratios for Dimension of Learning Style Owing to Differences in Selected Personal Variables

Table-2

Table showing the ‘t’ ratios for differences in Auditory Learning style owing to differences in selected personal variables

Variables	Category	N	Mean	SD	t ratio	df	Sig
Gender	Male	228	20.02	3.105	0.418	454	0.676
	Female	228	20.15	3.382			
Region	Rural	228	20.01	3.29	0.476	454	0.634
	Urban	228	20.16	3.19			
Medium	English	304	20.04	3.37	0.459	454	0.646
	Tamil	152	20.18	3.00			
Family type	Joint	145	20.20	3.05	0.514	454	0.607
	Nuclear	311	20.03	3.33			

***P<0.05**

The obtained value is greater than 'p' value at 95% confidence level (0.05). Hence the hypothesis is accepted. Thus, there is no significant difference between male and female students, rural and urban students, English and Tamil medium students. And also, joint and nuclear family does not differ significantly in Auditory learning style.

Multiple Comparison of Academic Performance of the Students within Various Sub Groups Classified on The Basis of Type of School Management

Table-3

Table showing the multiple comparison of Academic Performance of the students within various sub groups classified on the basis of Type of School Management

Variables	Sub groups	Mean difference	Significant Level
Type of School Management	Government Vs Govt Aided	0.803	0.716
	Government Vs Private	0.316	0.209

Govt aided Vs Private

1.789

0.209

***P<0.05**

- Govt. school vs. Govt aided school favouring to government aided schools
- Private schools vs. Govt aided school favouring to government schools.

Hence, it shows that Government school students are found to have better attitude towards smart board than those studying in government aided and private schools

Attitude towards Smart Board and Dimensions of Learning Style for the Whole Sample

Table-4

Pearson's Product Moment Correlation Coefficient between dimensions of Attitude towards Smart Board and dimensions of Learning Style for the whole sample

Dimensions	Auditory		visual		kinaesthetic		Individual Learning		Group Learning	
	R	Sig	R	Sig	R	Sig	R	Sig	R	Sig
Resource	0.376	0.000	0.604	0.001	0.416	0.000	0.404	0.000	0.217	0.000
Environment	0.441	0.001	0.502	0.000	0.265	0.000	0.205	0.000	0.166	0.001
Enhancement	0.323	0.002	0.301	0.002	0.121	0.001	0.103	0.001	0.022	0.002
Management	0.146	0.003	0.453	0.000	0.164	0.000	0.354	0.000	0.165	0.003
Presentation	0.269	0.008	0.598	0.000	0.321	0.002	0.596	0.002	0.222	0.008

The above table shows that there is a significant positive correlation between dimensions of learning style namely, visual, individual learning and dimensions of attitude towards smart board at 0.01 level. A significant negative correlation between dimensions of

learning style namely, Auditory, kinaesthetic, group learning styles and dimensions of attitude towards smart board at 0.01 level

Summary of Regression Analysis on the Effect of Selected Variables on Academic Performance of the Students

Table-5

Model summary of Regression Analysis on the effect of selected variables on Academic Performance of the students

Model	R	R square	Adjusted R Square	Standard Error of the Estimate
1	0.566	0.321	0.300	5.855

ANOVA

Model	Sum of Squares	DF	Mean Square	F value	sig
Regression	6736.20	8	518.17		
Residual	14259.51	421	34.28	15.12	0.000
Total	20995.71	429			

Discussion of the Results

Present study is confirmed to the findings of **Sharma (2017)** who revealed that there is a significant relationship on the impact of learning styles on academic achievement of secondary school male and female students. The present study confirms with the study of **Neetu (2012)** have explored that a positive and significant relationship between learning and thinking styles and academic achievement. And also confirms with **Brecler et al (2011)** that the result had revealed that significant relationship between academic performance and learning styles. This study reveals with the study of **Hemalatha (2013)** that there is no significant difference in their learning on the academic achievement and it contradicts with the study of **Sharma**

(2017) showed that there is a significant relationship on the impact of learning styles on academic achievement of the secondary school male and female students.

Conclusion

The purpose of the present investigation was to study the relation between Attitude towards Smart Board and Learning Style in relation to Academic Performance to some selected variables. The results strongly suggest that recognizing this association between attitude towards smart board, learning styles and academic performance will necessarily lead to both more perceptive teaching and also more responsive learning. Also, the findings are an original contribution to the existing knowledge as it may be found to be useful in the field of education which may also serve as a data base for future research.

References

- Awang. (2017). Relationship Between the Learning Styles Preferences and Academic Achievement. *IOP Conference Series: Materials Science and Engineering*, 226.
- Davidovitch. (2017). The Effect of Smart Boards on The Cognition and Motivation of Students. *Higher Education Studies*, 7(1).
- Eda Ustunel. (2014). A Study on The Influence of Smart Board Technology on Student Engagement in and Perception of Classroom Activities. *Retrieved From academicjournals.org*
- Hemalatha. (2013). A Study on Learning Styles and Their Influences on Academic Achievement. *Journal on Edu track*, 12(5).
- Marcellus. (2017). The Effect of Smart Classroom on Learning and Teaching Effectiveness. *Retrieved From www.researchgate.com*
- Pamela. (2016). *Strategies And Techniques for Research in Education*, 1st Ed. New Delhi: Neelkmal Publication Pvt.Ltd