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Attitude of Secondary School Students Towards Learning Science Through Smart Board

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Abstract

Education is very important tool for everyone to succeed in life and get something different. To providing this education, technology plays a vital role in the present day scenario. ICT brings up the concept of transforming the traditional classroom from black board to Smart Interactive White board, Notebooks to Smart notebook, from pen to pen-drive, and chalk to stylus or finger. The role of Smart Interactive White Board in education has developed over a period of time. I firmly believe that Smart IWB contributes the enhancement of quality of teaching learning process. For this reason the Smart IWB classroom is the future of young India or Skills India. This study intends to find out the attitudes of 100 IX and X Classes Secondary School Students. Objectives, Hypothesis, Variables, Tool, Sample, Method, Data Analysis, and Educational Implications are discussed as follows.

Keywords: Education, Technology, Smart IWB Classroom.

Introduction

We all want to see our kids going towards success which is only possible through the good and proper education. Better education is very necessary for all to go ahead in the life and get success. It develops confidence and helps building personality of a person. School education plays a great role in everyone's life. Education plays a paramount role in the modern technological world. Now-a-days, there are many ways to enhance the education level. The whole criteria of education have been changed now. We are in the 21st century, which is reaping the benefits of the scientific and technological advancements of the late 20th century. We are witnessing the revolutionary breakthroughs in the field of space science and nuclear energy, marvels of the chip technology, information technology and multimedia communications. Science and Technology are two sides of a coin. It have been linked new discovered in science have helped to lead advancements in new technologies and improvements in existing technologies in turn aid in new developments in science.

How does the Smart Interactive Whiteboard work?

The Smart Interactive Whiteboard is touching sensitive and works as part of a system that includes a computer and a projector.

- The computer sends an image of an application to the projector
- The projector casts the image onto the Interactive Whiteboard
- The Interactive Whiteboard acts as both the monitor and input device, allowing us to control an application by simply touching the Interactive Whiteboard.

It may help to think of Interactive Whiteboard the same way think of mouse or keyboard

- It is an input device that enables to control applications on computer.
- A click with our finger on a Smart Interactive Whiteboard is the same as a click with mouse. An application the same way to do on desktop computer, but instead of using mouse to select and open files, just click or double-click the application icon with finger.

Need and Importance of the Study

One of the reasons Interactive whiteboards are such powerful classrooms tools is their ability to go beyond simply being a tool for writing. Each board, no matter the manufacturer, has the ability to show the projected computer screen and allow for annotations on those screens. Some instructors use this feature exclusively, using the power of these annotations for emphasis and highlighting. There is greater emphasis on using Smart classroom as a learning support device. This is especially powerful in that whiteboard "pages" can be added repeatedly without the need for constant erasing. Another especially useful advantage this tool has over conventional whiteboards is the ability to go back to previous pages and to add images, video clips and multimedia exercises to the written pages. Many other

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features are available also. They will be covered in future lessons.

Interactive whiteboards are an effective way to interact with digital content and multimedia in a multi-person learning environment. Learning activities with an interactive whiteboard may include, but are not limited to the following:

- Manipulating text and images
- Making notes in digital ink
- Saving notes for later review by using e-mail, the Web or print
- Demonstrating or using software at the front of a room without being tied to a computer
- Creating digital lesson activities with templates, images and multimedia
- Writing notes over educational video clips
- Using presentation tools that are included with the white boarding software to enhance learning materials
- Showcasing student presentations

Title of the Study: "ATTITUDE OF SECONDARY SCHOOL STUDENTS TOWARDS LEARNING SCIENCE THROUGH SMART BOARD"

Strategy and Policy

- Importance on thinking skills.
- Teaching values and language through education.
- Provide teaching-learning surroundings.
- Provide a variety of training methods for different talents.
- Sharpener the thinking skills.
- Creates an environment for learning in different spheres through our talent.
- Awareness to parents about what is happened in the school.
- Provide opportunities for association with the school.
- Components of the Smart School.
- Teaching – learning environment.

Objectives of the Study

The objectives of the study are

i) To find out the attitudes of secondary school students towards learning science through smart board.

ii) To find out the attitudes of secondary school students towards learning science through smart board w.r.t the following variables:

a. Gender (Male/Female)
b. Curriculum (AP STATE/CBSE)
c. Class (IX and X)

Hypothesis of the Study

- There would be no significant difference between the attitudes of boys and girls towards learning science through smart board.
- There would be no significant difference between the attitudes of State and CBSE students towards learning science through smart board.
- There would be no significant difference between the attitudes of IX and X Classes students towards learning science through smart board.

Methodology

Survey Method was adopted for this study.

Tool, Sample and Data Collection

For this research 100 IX and X Classes Secondary School Students in Krishna District, Andhra Pradesh, India were taken and collected their attitudes through questionnaire. The questionnaire was prepared with five point scale by the investigator with 100 statements asking of Strongly Disagree (S.D.A), Disagree (D.A), Neutral (N), Agree (A) and Strongly Agree (S.A). We distributed the questionnaire to all Smart Board following Secondary School students and collected after 30 minutes. The collected data was scored as 1 of SDA, 2 of DA, 3 of N, 4 of A and 5 of S.A and then interpreted with Mean, S.D. and 't' test through Statistical Package for social sciences (SPSS ver. 20.0) and it explained in the following tables.

Data Analysis

Table 1

Classification of students according to their attitudes towards learning science through smart board

S.No	Scores of the Attitude	Level	No. of Teachers	% of Attitude
1	1-169	Low	4	4
2	170-339	Moderate	96	96
3	340-500	High	0	0

From the above taxonomy of students, we define their attitudes on the basis of above analysis. 4 students are found in lower level category in between 1-169 marks, 96 students found in moderate level category in between 170-339 marks and none of the students found in higher level category in between 340-500. Hence we conclude that the smart board classes are improving their learning levels.

Table 2
Attitude of Secondary School Students Learning Science towards Smart Board

ATTITUDE	MEAN	% of MEAN	S.D
STUDENTS	196.70	39.34	12.28

From the above table, the attitude of students learning science towards smart board mean is 196.70. Henceforth we conclude that the attitude of the students learning through smart board is high.

Table 3
Attitude of secondary school Male and Female students Learning Science towards Smart Board

GENDER	MEAN	% of MEAN	S.D	't' Value
MALE	196.98	39.40	10.49	0.287 N.S
FEMALE	196.26	39.25	14.30	

*** Not Significant at 0.05 Level**

The Table 3, explains the attitudes of secondary school students according to their gender wise. The calculated 't' value (0.287) is less than the tabulated 't' value (1.985 at 0.05 levels) and the calculated 't' value is not significant. Hence the attitudes of secondary school male and female students are not significant differ each other. Therefore the hypothesis is accepted.

Table 4
Attitude of secondary school AP STATE and CBSE students Learning Science towards Smart Board

CURRICULUM	MEAN	% of MEAN	S.D	't' Value
AP STATE	197.74	39.55	5.58	0.578 N.S
CBSE	196.19	39.24	14.28	

*** Not Significant at 0.05 Level**

The Table 4, explains the attitudes of secondary school students according to curriculum wise. The calculated 't' value (0.578) is less than the tabulated 't' value (1.985 at 0.05 levels) and the calculated 't' value is not significant. Hence the attitudes of secondary school AP State and CBSE students are not significant differ each other. Therefore the hypothesis is accepted.

Table 5
Attitude of secondary school IX and X students Learning Science towards Smart Board

CLASS	MEAN	% of MEAN	S.D	't' Value
IX Class	195.35	39.07	15.91	-1.166 N.S
X Class	198.22	39.64	5.13	

*** Not Significant at 0.05 Level**

The Table 5, explains the attitudes of secondary school students according to their class wise. The calculated 't' value (-1.166) is less than the tabulated 't' value (1.985 at 0.05 level) and the calculated 't' value is not significant. Hence the attitudes of secondary school IX and X students are not significant differ each other. Therefore the hypothesis is accepted.

Findings

On the basis of analysis and interpretation of data, the following can be drawn:

- Maximum number of students are having highly favorable attitude towards learning science through smart board.
- The attitude of secondary school students learning science through smart board mean is high.

- There is no significant difference between boys and girls students towards learning science through smart board.
- There is no significant difference between AP STATE and CBSE Students towards learning science through smart board.
- There is no significant difference between IX and X Class Students towards learning science through smart board.

Suggestions for Further Research

- The sample size can be enlarged to more concrete results.
- The same study can be conducted w.r.t the other subject's also.
- Comparative study can be conducted by the attitudes in different subjects.
- Similar type of study can be conducted with large sample of students.
- The similar type of study can be calculated at different levels of students.
- Similar study can be conducted on the parents attitudes towards the learning of their children.

Educational Implications

Smart IWB plays very vital role in academic achievement in all subjects of students due to the following reasons:

1. Smart IWB classroom help students to a great extent. Students can interact, understand and remember things very easily as these are innovative where visuals have more impact than just reading. So, smart class technology must be enhanced.
2. Smart board help to saving notes for later review by using e-mail, the Web or print
3. It Improves teacher usefulness and productivity and it brings abstract and difficult curriculum concepts to life
4. Smart Board classroom makes learning a pleasant experience for students. It will review and revise at the ending of the day or unit.
5. Students can be involved in active full-class activities and images and multimedia can be easily incorporated
6. Teachers can do more with their full-class lessons using less preparation time on Smart IWB.

Conclusion

Yesterday's education is not sufficient for todays or future learner and technological environment in order to fully prepare students to thrive in the technological age. Technologies are raising the bar on the competencies needed to succeed in the 21st century. Today we are living in the age of information technology. The 21st century is striving for the development of highest technological and informative skills in order to convert the entire world into a global village. So, we have to mould as per the present day society and we too develop and stand for the modern society.

For this we are using Smart IWB's in the classrooms for better understand. Smart classes use all interactive modules like videos and presentations and these visually interesting methods of teaching become appealing to students who are already struggling with the traditional method of teaching in a classroom. In fact, smart classes are almost like watching movies as sometimes, animated visuals are used to teach a point. This kind of visual is both eye-catching and young students can easily relate with them. This is because the audio-visual senses of students are targeted and it assists the students store the information quick and more effectively. And then, there is the advantage of utilizing most of the time misused earlier in drawing or preparing diagrams on board. Smart boards have all these information in memory and can be presented during the time of class lectures and thus, the time saved can be used in more important things.

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