

A Study on Attitude Towards Smart Classroom in Teaching Science among 9th Standard Students of South Bangalore

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Abstract

The present study aims to investigate the attitude of 9th standard students towards smart classroom teaching in science subjects in South Bangalore. Smart classrooms have become an important part of modern education due to the integration of digital technology, multimedia tools, and interactive teaching methods. The study adopted a descriptive survey method. A sample of 100 students studying in 9th standard from selected secondary schools in South Bangalore was chosen through random sampling technique. A self-constructed attitude scale was used for data collection. Statistical techniques such as mean, standard deviation, percentage, and t-test were used for data analysis. The findings revealed that students generally possess a positive attitude towards smart classroom teaching in science. The study also found differences in attitude based on gender and type of school. Smart classroom teaching was found to enhance students' interest, understanding, and participation in science learning.

Introduction

Education in the 21st century has undergone remarkable changes due to technological advancement. Traditional classroom teaching methods are gradually being replaced by digital teaching-learning processes. Smart classrooms use technologies such as projectors, interactive boards, animations, videos, and internet resources to make learning more effective and interesting.

Science is considered one of the most important subjects at the secondary school level. Many scientific concepts are abstract and difficult to understand through traditional teaching methods. Smart classroom technology helps students visualize scientific concepts clearly through simulations, videos, and multimedia presentations. Studies indicate that digital technology improves classroom engagement, motivation, and achievement in science education.

South Bangalore has many government and private schools equipped with smart classroom facilities. Therefore, it becomes necessary to study students' attitudes towards smart classroom teaching in science subjects.

Need and Significance of the Study

Smart classroom teaching has transformed the educational process by making classrooms more interactive and student-centered. Students' attitudes towards such technology play a

major role in determining the effectiveness of smart classroom teaching. Positive attitudes can improve participation, understanding, and academic achievement.

The present study is significant because it helps:

Understand students' perceptions about smart classroom teaching.

Identify the effectiveness of smart classrooms in science education.

Assist teachers and school administrators in improving digital teaching practices.

Provide suggestions for enhancing science learning through technology.

Research shows that smart classrooms positively influence students' learning attitudes and classroom participation.

Statement of the Problem

“A Study on Attitude Towards Smart Classroom in Teaching Science among 9th Standard Students of South Bangalore.”

Objectives of the Study

To study the attitude of 9th standard students towards smart classroom teaching in science.

To compare the attitude of boys and girls towards smart classroom teaching.

To compare the attitude of students studying in government and private schools.

To identify the effectiveness of smart classrooms in enhancing science learning.

Hypotheses of the Study

There is no significant difference between boys and girls in their attitude towards smart classroom teaching in science.

There is no significant difference between government and private school students in their attitude towards smart classroom teaching.

Students have a favourable attitude towards smart classroom teaching in science.

Variables of the Study

Independent Variable

Smart classroom teaching

Dependent Variable

Attitude towards learning science

Delimitations of the Study

The study is limited to South Bangalore.

The study is confined to 9th standard students only.

The study focuses only on science teaching through smart classrooms.

Review of Related Literature

Science Education Studies on smart classroom teaching indicate that technology-integrated classrooms improve students' academic achievement and learning attitudes.

A study on smart classroom teaching among secondary school students revealed improved science achievement and better classroom participation.

Research on digital technology in science classrooms found that students became more engaged and motivated in learning science concepts through technology-based teaching.

An exploratory study in West Bengal reported that smart classrooms help students understand concepts effectively and enhance cognitive skills.

Research on smart classroom systems showed positive effects on students' learning attitudes and classroom interaction.

The review indicates that smart classroom teaching has a positive influence on science education.

Methodology

Research Method

The descriptive survey method was used for the study.

Population

All 9th standard students studying in secondary schools of South Bangalore constituted the population.

Sample

A sample of 100 students was selected from government and private schools through simple random sampling.

Tool Used

A self-developed questionnaire consisting of attitude statements related to smart classroom teaching in science was used.

Statistical Techniques Used

Mean

Standard Deviation

Percentage

t-test

Analysis and Interpretation

Table 1: Overall Attitude Towards Smart Classroom Teaching

Level of Attitude	Number of Students	Percentage
Positive	72	72%
Neutral	18	18%
Negative	10	10%

Interpretation

The majority of students showed a positive attitude towards smart classroom teaching in science.

Table 2: Gender-wise Comparison

Gender	Mean Score	SD	t-value
Boys	72.4	8.2	
Girls	74.8	7.5	1.96

Interpretation

The calculated t-value indicates no significant difference between boys and girls regarding attitude towards smart classroom teaching.

Major Findings of the Study

Most students showed a positive attitude towards smart classroom teaching in science.

Smart classrooms increased students' interest and participation in science learning.

Multimedia presentations helped students understand difficult scientific concepts easily.

There was no significant difference between boys and girls in attitude towards smart classroom teaching.

Students from private schools showed slightly higher positive attitudes compared to government school students.

Educational Implications

Schools should provide more smart classroom facilities for science teaching.

Teachers should be trained in the effective use of digital teaching tools.

Smart classroom teaching should be integrated regularly into science education.

Government schools should receive adequate technological support.

Suggestions for Further Study

Similar studies can be conducted at higher secondary levels.

Comparative studies may be conducted between urban and rural schools.

The effect of smart classrooms on academic achievement can also be studied.

Conclusion

Smart classroom teaching plays a significant role in improving science education among secondary school students. The present study concludes that 9th standard students of South Bangalore possess a favourable attitude towards smart classroom teaching in science subjects. The use of multimedia, digital content, and interactive teaching methods makes science learning more effective, interesting, and understandable. Therefore, schools should encourage the use of smart classroom technologies for better educational outcomes.

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