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65

Study of the Opinion of the Teachers of Upper primary Schools of Anand Taluka with Regard to the Use of Smart Classroom

Soniyaben D. Punjabi

Assistant Teacher

Primary Boys' School Ajarpura, Anand – 388001

Abstract

India is moving ahead on the path of progress through the use of science and technology since the beginning of the 21st century. On the same path, efforts are being made by the entire education department of the Gujarat government for the all-round development of education. Along with computer education, schools are also becoming smart schools. Special attention is being paid to primary level education in the developed countries of the world. As smart work is being done by school teachers, now classes and schools are also becoming smart. Along with appreciating the efforts of the government, it is also necessary to know how the smart class works by becoming an assistant in this entire process. Under the study about the usefulness of smart classes by the teachers of Anand taluka, the impact of the use of smart classes on the teaching-learning process, the help received by the students in learning, the experiences of interaction between teachers and students during the teaching-learning process, and what the students learn and how they learn in the classroom, researcher studied the opinion of 270 teachers, working in rural and urban areas, responded in the three components of the opinion poll - agree, neutral and disagree. This had affected the teaching-learning process. The research also found out what students learn and how they learn in the classroom through the interaction between teachers and students during the teaching learning process.



Keywords: Smart classrooms, teaching-learning process, interaction between teachers and students

Introduction:

Combining Due to the rapidly changing field of Educational technology, the physical ability and skills of the students can be developed. Due to the use of educational software used in smart classes, children from remote areas to students with disabilities will get encouragement in the field of education. Digital technology such as Smart Class gives students the opportunity to focus in different languages. As digital smart boards are used, parents and students will become more aware of current education and students will be able to find solutions to problematic questions in classroom work on their own. The Smart Board will also provide an opportunity to define new directions for research and innovation. In view of the growing need to bridge the digital divide and create awareness among the future generation about the changing technology, there has been a demand for changes in various aspects of the integrated delivery mechanism of ICT.

knowledge with experience, discarding the rote learning, presenting each unit with fun and experience, the teacher using different types of learning materials at the time of unit teaching, teaching and revising each unit in the class itself to the children through the computer, making the children work on the computer themselves, is an effort to provide the same educational experience to the students through the smart classroom. Students can participate to learn more effectively. One of the advantages of a smart classroom is that it provides easy access to online resources. Information needed for an assignment or project can be obtained quickly and easily. Online lesson plans for any subject can be found through Smart Classroom, and many online tools can help teachers deliver lessons more effectively. Time saving technology through smart classrooms can also save time by making formative assessment faster and easier and classrooms can also be managed more efficiently.



Objectives of the Research:

1. To study the usefulness of smart classes by teachers according to the gender and area of Anand taluka.
2. To study the impact of the use of smart classes on the teaching-learning process.
3. To study the learning support provided to the students through the use of smart classes.
4. To study the experiences of interaction between teachers and students during the teaching learning process.

Definition of key words:

Smart Classroom

- Educational Definition - The schools which have been provided with smart classes equipped with educational equipment by the Education Department of the government.
- Operational definition - teaching school children through smart TV.

Teachers

- Educational Definition - Government recruited Std. Teachers working in grades 6 to 8.
- Operational definition - teachers working in an upper primary school with a smart classroom.

Variables:

- Independent Variables:
 - Gender: Male and Female
 - Area: Rural and urban
- Dependent variables:
 - Teachers using smart class in upper primary school

Hypotheses:

H₀₁: There will be no significant difference between male and female teachers of upper primary schools of Anand taluka in terms of the use of smart classrooms.



H₀₂: There will be no significant difference in the use of smart classrooms between teachers in rural areas and teachers in urban areas of upper primary schools in Anand taluka.

The Importance of Research:

Given the explosive pace of technological development associated with the creativity of tech-savvy educators and entrepreneurs, including student entrepreneurs, it is certain that technology will impact education in many ways. Some of them can be predicted at the present time. New technology areas such as artificial intelligence AI machine learning, block chain, smart board, hand held, computing devices adaptive computer testing for student development and other types of software will not only transform what students learn in the classroom, but will also transform how they learn. (National Education Policy Chapter 23 Issue No. 23.2)

As suggested in the NEP 2020, the present research seeks to understand the impact of smart classes on the teaching-learning process, the learning support provided to students, and how interactions between teachers and students can be made more conducive with the help of teacher feedback.

Research Method:

The survey research method has been used by the researcher. In this survey, 270 upper primary school teachers from 120 different primary schools with smart classes of upper primary school in Anand taluka of Anand district were selected randomly as a sample. Teachers teaching by using smart classes in upper primary schools were given a questionnaire by preparing a Google form. The responses in questionnaire were divided into three options: agree, neutral and disagree.

- Population: All the teachers of the primary schools having smart classes of upper primary schools in Anand taluka of Anand district were considered as a population for this research.
- Sample:



Area	Male	Female	Total
Rural	135	104	239
Urban	13	18	31
Total	148	122	270

In the present research, 270 teachers of 120 primary schools having smart classes of upper primary school in Anand taluka of Anand district were selected randomly as a sample.

Research Tools:

A questionnaire on the use of smart classrooms was prepared for this research. The tool comprised of 20 statements took into account the impact on the teaching process, the help students receive in learning, and the interaction between teachers and students. Through this opinion poll, opinions were obtained from the teachers through three types of response options - agree, neutral and disagree. The score was 3,2,1 for positive and 1,2,3 for negative.

Efforts have also been made to see that difficult issues are easily solved in the classroom through technology. With the use of smart classrooms, in addition to increased activity, concentration and creativity in students, an effort was made to know the opinions of teachers by putting clauses such as ease of understanding difficult issues.

Data Collection:

The data using the questionnaire was collected from 270 teachers of 120 different primary schools having smart classes of upper primary school in Anand taluka of Anand district in the form of Google form. In which information was also collected about male and female teachers from rural and urban areas. Information about the internet connection available in the smart class and its utility was collected and the opinion of the teachers was obtained by dividing the 20 statements into three different sections with agree, neutral and disagree response options.



Data Analysis:

The responses received by the teachers on the smart class-based opinion sheet under all three options - Agree, Disagree and Neutral - were calculated in percentage. This is shown in the table below.

Table 1

Sr. No.	Statement	Responses		
		Agree	Neutral	Disagree
Impact on the teaching-learning process				
1	Smart Classroom has simplified the teaching-learning content.	94.90%	4.80%	0%
2	Smart classroom keeps the students active in learning.	89%	8%	3%
3	Smart classrooms increase the concentration of students in learning.	84%	13%	3%
4	Students can also learn on their own from smart classrooms.	83%	8%	9%
5	Children can find content on their own using Smart classrooms.	84.50%	10.50%	5%
6	Use of smart classroom makes learning interesting.	97%	2.30%	0.70%
7	Introduction to content can be done better with smart classrooms.	91.60%	5.10%	2.30%



8	The learning achieved through smart classrooms will be remembered for a long time.	82%	14.80%	3.20%
9	More time is needed to prepare teaching learning material for smart classroom.	39%	23.5%	37.5%
Students get help in Learning				
10	Students can also learn extracurricular knowledge with smart classrooms	93%	4.80%	2.20%
11	Smart classrooms do not develop creativity in the students during the teaching work	18.80%	16.20%	65%
12	Smart classrooms create curiosity in students to learn more while studying.	91.40%	4.8%	3.80%
13	smart classrooms make it easier for students to repeat.	97.50%	1.80%	0.70%
14	In smart classrooms, students are ready to learn something new.	91.80%	6%	2.20%
Interaction between Teachers and Students				
15	Students often become inactive in some units in a smart classroom.	24.50%	29%	46.50%
16	Smart classroom can explain the topic issues in a better in-depth manner.	93.50%	5.20%	1.30%
17	A teacher needs to have a positive attitude towards the use of smart classrooms.	97.50%	1.80%	0.70%



18	Difficult topics can be easily explained with a smart classroom.	94.40%	4.90%	0.70%
19	If the teacher is lukewarm to technology, learning cannot be organized through a smart classroom.	82.20%	12.70%	5.10%
20	The relationship between teachers and students is not maintained due to use of smart classroom in teaching.	13.70%	11.50%	74.80%

Testing of Hypotheses:

Hypotheses testing was done using t-test. Results shown in below tables.

Table 2

H₀₁: There will be no significant difference between male and female teachers of upper primary schools of Anand taluka in terms of the use of smart classrooms.

Group	N	Mean	SD	df	t - Value	Sig.
Male	148	52.76	4.58	269	0.36	Not significant at 0.05 level
Female	122	52.58	3.37			
Total	270	-	-			



Table 3

H₀₂: There will be no significant difference in the use of smart classrooms between teachers in rural areas and teachers in urban areas of upper primary schools in Anand taluka.

Group	N	Mean	SD	df	t - Value	Sig.
Male	238	52.77	4.09	269	1.05	Not significant at 0.05 level
Female	32	51.96	3.91			
Total	270	-	-			

Interpretation:

94% of teachers found the use of smart classrooms made teaching work more effective. 89% of teachers believe that smart classrooms can keep students active and focused in teaching. 80% of teachers believe that a course from a smart classroom was able to be completed well within the time frame. 93% of teachers believe that students gain extra-curricular knowledge in a smart classroom.

With Smart Classroom, students were able to learn on their own and also find content which was agreed by the highest 84.5% of teachers. Most of the teachers were found to be positive about the use of smart classrooms. 94% of teachers were able to explain difficult topics easily. More than 91% of the teachers said that students were ready to learn new things from the smart classroom.

46.5 % of teachers disagreed that students often become inactive in the smart classroom. 65% of the teachers disagreed with the fact that students do not develop creativity during smart classroom teaching. As many as 74.8 % of the teachers disagreed that smart classroom teaching does not help in maintaining the bond between the teachers and the students.



Interpretation based on Hypotheses testing :

1. There was no significant difference in the use of smart classrooms between male and female teachers of upper primary schools in Anand taluka. That is, both the male and female teachers have the same opinions equally regarding the use of smart classrooms.

2. There was no significant difference in the use of smart classrooms between teachers in rural areas and teachers in urban areas of upper primary schools in Anand taluka. That is, the opinion of both teachers in rural areas and teachers in urban areas regarding the use of smart classrooms is the same.

Conclusion:

Based on the findings of this study, the following conclusions were drawn:

The teachers of upper primary schools were found to be able to teach the content of the subject easily and more quickly with the help of the technology. Teachers were able to increase the awareness among students by making the learning process more interactive. Empowerment of teachers should be aimed at imparting knowledge about innovative technologies. So that with the changing world itself will be able to develop technological capabilities and the students will also be able to know more about it. With the help of tailor-made smart classes including multimedia content, virtual experiments and educational videos, students are able to learn more efficiently and relatively faster. The quality of education has also improved.

With the help of technology and visual content through smart class content, students can easily understand difficult concepts especially in science and mathematics. The multimedia content of the smart class has increased the interest of the students towards studies. Both the male and female teachers of the upper primary schools in Anand taluka were equally of the same opinion regarding the use of smart classes. Teachers from rural areas and teachers from urban areas of upper primary schools in Anand taluka were equally opinionated regarding smart classes.



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The results show the attitude of students, parents, teachers and headmasters towards the new method. According to which, if the facility is provided to non-beneficiary students, they prefer to learn through smart classes. At the end of this study, it has been concluded that most of the teachers believe that students can easily understand the units taught in the subject through smart classes and also like to learn through audio-visual.



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