Educational system is old as mankind. Gurukul system was the earliest form of elementary education in India, which started from vedic period and continued to the end of medieval period. It begins with the upanayan sanskar at the age of 8, 11, and 12 for children of Brahmin, Kshatriya, and Vaishyas respectively. The subjects of the study at that age were Ved, Vedang, Literature, Grammar, Nirukti, Kalp, Jyotish and mathematics. Guru Dakshina was paid at the end of education in the form of ornaments or gold coins to Guru (Teacher). In gurukul learning was done through route memory. Takhti was also used for writing practice in the beginning. Attention was derived to religious education during medieval period and education of Quran, Hadis and Fiqh was specially emphasized. Education of child started with Bismillah ceremony at the age of 4 years, 4 months and 4 days. Primary education was given in Maktabs and higher education in Madresahs. Medium of education were Arabic, Persian and urdu. Education was completely free and its cost was borne by the local people and the community.

By the passing of time the forms and methods got changed. As education is very much necessary for human, in the same way, learning styles and methods are also an important to provide quality education. In past there was 'Guru Shishya' system. A learner use to live with Guru Ashram for education. With the change in time, Indian education system has changed. During British period, Indian Education System was modified and it was similar to British Education System. Today also Indian Education System is having similar structure of education as in British Education System. There are many similarities in both education systems present Indian education is Government controlled and private education both go hand in hand, medium of instruction is Hindi or English or a regional language, curriculum for education is prepared by the state board and other boards by following NCERT guidelines. In past, there were limited sources for education by the passing of time the scenario has changed. Few years' back there was hardly use of any technology in the classroom. Only text book was the source for teaching and learning, but in 21st century, there are many tools which are useful for teaching and learning process such as Computer, Internet, Smart Class and for that knowledge of technology is essential for teacher.

The word technology comes from the Greek "techne" which means craft or art. Another word, "technique," with the same origin, also may be used when considering the field Educational Technology. *Technology is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, improve a*

preexisting solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function. It can also refer to the collection of such tools, including machinery, modifications, arrangements and procedures. Technologies significantly affect human as well as other animal species' ability to control and adapt to their natural environments. The term can either be applied generally or to specific areas such as *Construction Technology*, Medical Technology, and Information Technology. This indicates that technology has its application to various fields such as Science, Commerce and Education, Medicine etc.

The application of technology in the field of education is known as Educational technology, sometimes termed Ed Tech. It is the study and ethical practice of facilitating e-learning, managing appropriate technological processes and resources. Educational Technology is defined by various authors. Educational Technology relies on a broad definition of the word "technology." Technology can refer to material objects of use to humanity, such as machines or hardware, but it can also encompass broader themes, including systems, methods of organization, and techniques. Some modern tools included but not limited to overhead projectors, laptop computers, and calculators. Newer tools such as smart phones and games (both online and offline) began to draw serious attention for their learning potential.

The use of interactive whiteboards in the classrooms is becoming more prevalent throughout the world. Research and studies dedicated to investigating the influence of the use of this tool in the classroom are also increasing. The nature of teaching and learning is complex as 21st century students are more techno savvy Teacher has to emphasis on increasing student engagement and on interactive learning facilitated by the use of technology. The academic literature suggested it is an interactive environment that will best suit the needs of today's learners. The effective use of interactive whiteboards and their impact on pedagogy may lead to an interactive classroom environment. Accordingly, interactive whiteboard pedagogy was considered within this conceptual framework, drawing on the latest learning literature to identify goals and characteristics of effective use.

The British Educational Communications and Technology Agency (BECTA) suggested, "The effective use of interactive whiteboard technology can radically transform the interaction between teachers and learners and allows for discussing and analyzing in a visual, auditory and

kinesthetic medium". The effective use of Interactive Whiteboards in the classroom creates the active participation of learners for the co-construction of knowledge. This can be facilitated through classroom discussion and collaboration. Jewitt, Moss and Cardini, (2007) cautioned, "The effective use of IWB technology, and indeed all technology, has to be embedded in curriculum knowledge, pedagogy and learning". The academic literature suggested the effective use of an interactive whiteboard was dependent upon how it is used in the classroom.

Studies have been done to identify the characteristics of individual teacher's pedagogy when using interactive whiteboards to determine "stages of use" (Beauchamp, 2004; Kennewell, Tanner, Jones, & Beauchamp, 2007; Miller, et al., 2005; Sweeney, 2010) Some of these characteristics included mastering the basic skills of the software and coping with basic technical troubleshooting, the inclusion of students in lessons either by allowing them to use the board or by incorporating the Active Classroom, and the utilization of flipcharts that would promote discussion and inquiry to engage students. Beauchamp emphasized that although lessons may be student directed the teacher maintained control of the curricular concepts. In describing this stage Beauchamp stated: Teachers are able not only to see how the technology works on a functional level, but are also able to see how this can be used to facilitate a synergy of learning in which pupils and teacher [sic] combine joint technical skills and teachers' pedagogic vision to create a new learning praxis. It is the realization that the IWB can create a new freedom in pedagogy and is not an end in itself, or a means to deliver existing practice in another format Similarly Miller et al. (2005) determined teachers had reached the enhanced interactive stage when they "seek to use the technology as an integral part of most lessons, and look to integrate concept and cognitive development in a way that exploits the interactive capacity of the technology". Many of the characteristics of this stage are similar to those of the ***Synergistic user*** and Miller et al. stressed the importance of using the technology to foster discussion and critical thinking.

STATEMENT OF THE PROBLEM

A Study of Teachers' Attitude towards Use of Smart Class

OPERATIONALISATION OF TERMS

Smart Class: For the present study, Smart Class refers to audio-video, hand outs and PPTs prepared by the Educomp Company for secondary school subjects of CBSE board.

Attitude of Secondary School Teacher: Attitude of Secondary Teacher means the willingness and to make use of Smart Class for teaching. The willingness to use Smart Class in terms of few components of Smart Class such as Effectiveness, Feasibility, Availability, Facilitator, Interest

RESEARCH QUESTIONS

- Is use of Smart Class makes student active learner?
- Are teachers being motivated to make use of Smart Class for teaching their subjects?
- Is there any difference between the attitude of male and female secondary teachers towards the use of Smart class?

OBJECTIVES OF THE STUDY

For the present study the following objectives were decided by the researcher.

- To study the attitude of secondary school teachers towards the use of Smart Class.
- To study attitude of female secondary teachers and male secondary teachers towards the use of Smart Class.
- To find out the attitude of secondary school teachers towards the use of Smart Class with respect to their teaching experience.

HYPOTHESES

H_{o1}: There is no significance difference between mean score of attitude of male and female teachers.

H_{o2}: There is no significance difference between and within the mean score of attitude of male and female teachers.

DELIMITATION OF THE STUDY

The present study was delimited to secondary teachers of CBSE schools of Anand city. The study was also delimited to few components of Smart Class. And the study was also delimited to Educomp Smart Class.

RATIONALE OF THE STUDY

The knowledge of technology will keep everyone update with the different trends of the world. Technology reduces the efforts of teachers and the concept of Smart Class will help them. Technology is transforming classroom practice. It facilitates students to learn better by providing a learning environment that is, interactive, collaborative, learner-controlled, and inquiry-based (Prensky (2007), Fawcett(2000). Time to practice and experience in using the IWB may lead to effective use of the interactive whiteboard, thus, fostering a pedagogical evolution. Beauchamp (2004) suggested pupils and students who were *Synergistic users,* "should regard the IWB as a liberating and enabling tool which allows them to co-construct new understanding of both subject content and pedagogy in the primary classroom". Beauchamp's findings indicated that ***Synergistic users*** had high levels of technical competence. Both teachers and students interacted with the technology at a physical and cognitive level. At this stage the IWB facilitated a smooth flow to lessons and an interaction with the technology which allowed users to construct meaning and dictate the direction, momentum and scale of the next step in the lesson" (Beauchamp, 2004). In the present scenario, every secondary teachers needs to understand the importance of Smart Class as an important teaching learning process. Most of the teachers are unaware about the technology and Smart Class. As secondary teachers play an important role in the development of child and for that Technology is very much essential in the modern world. There has been considerable research conducted in the United Kingdom, much of it by the British Educational Communications & Technology Agency (BECTA) or its agents, monitoring the integration and effectiveness of Interactive Whiteboard use in British schools since their widespread adoption across that country. Studies conducted in the United States were far fewer in number and were limited in applicability to the investigation undertaken in this research. Consequently, the relevant issues of constructivism and social cognitive learning theories, interactive learning, learning styles, middle school student needs, and student motivation related

to the use of the Interactive White Board were also reviewed as integral components related to the concept of student engagement. The highest level of interactivity on the continuum developed by Tanner et al. (2005) focused on evaluation and reflection. This level was called "collective reflection" and "usually occurs when teachers deliberately generate a reflective discourse after activities to encourage self-evaluation and reflection on process" (Tanner et al., 2005). Collective reflection had a high level of pupil control and included reflective scaffolding and full interaction (Tanner et al., 2005).

Although the literature on instructional use of technology in general is an extensive, there are a limited number of research studies conducted specifically to investigate Smart Class use in the classroom. The current research aimed at knowing the attitude of secondary teachers who are using Smart Class. Knowledge about the Smart Class is an important for secondary teachers who are working in a CBSE schools in Anand city.

RESEARCH DESIGN

The present study is descriptive in nature. The survey method is adopted by the researcher for the present study.

POPULATION

There are four CBSE schools in Anand city using Educomp Smart Class. The population of the study comprised of secondary teachers of CBSE schools. For the present study, 35 secondary teachers of these four CBSE schools for the academic year 2013-2014 are constituted population for the study.

SAMPLE

For the study, four schools were taken as sample. All secondary school teachers were selected as sample for the study. Sample comprised of secondary teachers of CBSE School's using Educomp Smart Class. Few secondary teachers did not respond. So, for the study, 34 secondary teachers are constituted sample for the study.

TOOLS AND TECHNIQUE

Tools help the researcher to interact with the subjects and get their responses. In the present study, the researcher used an Attitude scale and Interview technique to collect the data.

i. **Attitude Scale:** 5 point Likert's scale was used to construct attitude scale for secondary teachers. The attitude scale comprised of five points that were strongly agree, Agree, Neutral, Disagree, Strongly disagree. There were statements related to various components of Smart Class.

ii. **Semi Structured Interview:** The technique used by the researcher was interview. The researcher took the teachers interview for collecting the data.

RESEARCH QUESTIONS

(i) Did you find the Smart Class effective for making Teaching process easy?

(ii) Did you face any difficulty in using Smart Class?

(iii) Do you think that the Use of Smart Class will increase the learning ability of the student's?

(iv) What are your views regarding the use of Smart Class?

(v) Did management provide facilities to use Smart Class?

PROCEDURE FOR CONSTUCTION OF TOOL

The procedure followed for preparing tool is mentioned below.

Preparation of Attitude Scale

The researcher constructed using likert's 5 point rating scale attitude scale to know the attitude of secondary school teachers. It consisted of rating type statements. The statements were related to components of Smart Class such as Effectiveness, Feasibility, Availability, Facilitator and Interest. Prepared tool was given to the experts in the field of education as per the suggestions of experts in the field of education attitude scale was modified and finalized for the purpose of implementation of Smart Class.

DATA COLLECTION PROCEDURE

Stage- 1: Based on various components selected researcher constructed an attitude scale.

Stage-2: In the second stage, the researcher approached four CBSE schools for the permission of data collection from their schools and the researcher also approached the teachers and took interview of secondary teachers. In the third stage, the researcher administered the attitude scale to find out attitude of secondary teachers towards the use of smart class.

DATA ANALYSES

The data collected through attitude scale were analysed by employed t-test and ANOVA and percentage analysis for achieving second and third objectives. For the first objective percentage was calculated for data analysis. Objective wise procedure of data analysis is given below:

Objective	Data analysis Techniques
1	Percentage analysis
2	t-test and percentage analysis
3	ANOVA and percentage analysis

MAJOR FINDINGS

Based on the analysis of the data, the major findings were drawn. The major findings of the study are as follow.

- More than 90 % commented on effectiveness of smart class with respect to provide more practical information and making teaching more enjoyable.
- More than 94% of teachers agreed that smart class was good for learning new concepts and it made teaching more enjoyable.
- 97% of teachers agreed that the content presented for each slide was relevant to the topic.
- 94% teachers agreed that smart classes helped in comprehending the topics more clearly and increased student's interest in study.

- 94% teachers accepted that student's interest level increased with the help of smart class.
- Around 90% teachers were interested in using the smart class.
- There was no significant difference between male secondary teacher and female secondary teacher in using Smart Class in school.
- Most of teachers whether female or male teachers agreed with the effectiveness of smart class. 95% male teachers and 83% female teachers agreed that smart class provided more practical information then text books.
- 90% male teachers and 92% female teachers were enjoying teaching with smart class. 91% female teachers and 77% male teachers provided appreciation for using smart class.
- 75% female teachers and 77% male teachers agreed that smart class helped in removing misconception related to different subjects.
- 86% male teachers and 75% female teachers agreed that the language used in smart class was as per the level of students.
- 76% Male teachers and 100% female teachers agreed that the combination of graphics and videos were appropriate in smart class.
- With respect to the material available, 95% male teachers and 100% female teachers agreed that Handouts, PPTs and videos presented for each slide was relevant to the topic.
- 81% male teachers and 67% female teachers disagreed that they were using smart class as it was instructed by the management.
- 91% male teachers and 92% female teachers agreed that period allocated in the time table were adequate to use smart class.
- 95% male teachers and 91% female teachers agreed that smart class helped in comprehending the topics more clearly.
- 95% male teachers and 91% female teachers agreed that smart class helped to increase student's knowledge.
- 82% male teachers and 100% female teachers agreed that student found learning each topic easier on smart class.
- 100% male teachers and 92% female teachers disagreed that they were avoiding using smart class because of lake of technology.
- 95% male teachers and 92% female teachers agreed that smart class helped in active involvement of students of the class.

- 90% male teachers and 83% female teachers agreed that they enjoyed teaching with smart class.
- 100% male and female teachers agreed that using smart class provided more opportunities to teach many new things.
- 82% male teachers and 100% female teachers agreed that they got sinking feeling when they thought of trying to use a smart class.
- There was no significant difference between the Mean Attitude Score of male and female secondary teachers for using smart class in school as per their teaching experience.
- 100% of the teachers agreed to the effectiveness of smart class as the teacher's who has experience of 7 years and above give the importance to smart class. 83% of the teachers who have experience up to 3 years were agreed that it helped to increase student concentration in the study as well as they became more confident in class when they used a smart class.
- 83% of teachers having experience of 1-3 years and 88% of the teachers having experience of 4-6 years agreed that it helped in removing misconception related to different subjects. 67% of teachers having experience of 7-9 years was agree that it helped in removing misconception related to different subjects. 75% of the teachers having experience more than 10 years believed that it helped them in removing misconception related to different subjects.
- More than 90% of secondary teachers having experience between 1 to 9 years were agreed that the language used in smart class was according to the level of the students. Only 63% of teachers who are having the experience of more than 10 years agreed that the language used in smart class was according to the level of the students. More than 90% of secondary teachers having experience between 1 to 10 years and more than 10 years agreed that the combination of text, graphics and audio made students learning interesting.
- 88% of teachers having the experience of 7 to 9 years agreed that smart class helped in comprehending the topics. The secondary teachers who are having experience between 1 to 10 years and more than 10 years almost more than 90% teachers were agreed that smart class helped in integrating different materials related to the topic.

- Teachers who are having experience between 1 to 6 years and more than 10 years almost 75% teachers were disagree that smart class helped in remembering the concept for the longer time. 33% teachers having experience of 7 to 9 years were disagreed and 73% teachers agreed that smart class helped in remembering the concept for the longer time. The secondary teachers having experience between 1 to 10 years and more than 10 years almost more than 95% teacher agreed that smart class helped in active involvement of all the students of the class.

IMPLICATIONS OF THE STUDY

Based on finding of the study suggestions were derived. Suggestions are for teachers as well as for administration. These suggestions are presented as follows.

FOR TEACHERS

Teachers are the base of education system therefore teachers should be well equipped with the knowledge of technology and that will be much more beneficial to the teachers.
Some suggestions for the teachers are as follow:

- Teachers should take training programs related to technology.
- Teachers should try to use more and more technology in the classroom.
- Teachers should be well versed in technology and if not then they should join some training courses.

FOR ADMINISTRATION

Without a proper coordination of administration the teaching staff cannot work well. So suggestions for Administration are as follow:

- School should provide more technological infrastructural facilities to teachers so that, they can teach more effectively.
- School should encourage teachers to use technology in the classroom.
- School should allot extra classes to the teachers so that they can use technology in the classroom for better understanding of the students.
- School should encourage teacher to make more and more use of technology.

- Schools should provide different opportunities to use technology in the classroom so that students should be beneficial.

SUGGESTIONS FOR FURTHER STUDIES

During this study, the researcher realized the significance and need for more work in this area. The researcher would like to suggest the following topics for future studies.

- A survey on effectiveness of Smart Class for primary as well as secondary teachers of government schools
- A study on use of technology in teaching learning process
- A study on effective ways of teaching in primary schools of government
- A study on development of learning package which can be uploaded in Smart Class.
- A study on student's attitude towards learning through Smart Class.
- A study on problem faced by teachers by teachers while using Smart Class.

Conclusion

The researcher found that Smart Class was very effective from the view of all secondary male and secondary female teachers. It can be concluded that the using Smart Class in the classroom is very effective for teaching learning process. The researcher found that the use of technology is increasing in the modern schools and without technology the smooth working of any institute is quite difficult. Technology has decreased the hard work of the people who are connected with the institute. With the help of technology the economic growth increased and human efforts are reduced. The researcher found that Smart Class is very effective tool of teaching as proved by all secondary teachers. Smart Class is a good facilitator and most of the secondary teachers agreed that it helped them in removing misconception related to different subjects. Smart Class also helped in active involvement of all the students of the class. Most of the experienced Teachers agreed that the combination of text, graphics and audio made students learning interesting. So, overall result of the study shows that Smart Class is more useful and effective tool for teaching learning process.