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A Study on Smart Classes Education

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Abstract:

In today's scenario, every individual country is thinking about intensifying the quality of education system. Globalization has allowed technical progress in the world of communication field so why the education system lack with this advancement. As it be known fact that traditional method of learning has lost its effectiveness which increase the responsibility of the education system to introduce smart education system for gaining student interest and increasing their academic growth. Smart classes is a concept introduced by David many year back but helped the student in making learning more effective and interesting. "Change is the law of nature", so traditional method of teaching is also changed with new technology of teaching system. In this paper a study has been done on the effectiveness of smart classes in education system and how it help students in improving their reading skills and academic achievement.

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Introduction

Earlier teachers used to teach in rigid, formal and stereo-typed ways but in today's scenario education system has been modified day by day and maximising the learning capabilities of student. Don Knezek, the CEO of the International Society for Technology in Education, compares education without technology to the medical profession without tools. Therefore, advancement in education system is very necessary for improving student learning capabilities. Currently, numerous types of technologies are used, few of them are listed below:

- Computer in the Classroom
- Class Blogs and Wikipedia
- Wireless Classroom Microphones
- Mobile Devices
- Interactive Whiteboards
- Digital Video-On-Demand
- Online Media
- Online Study Tools
- Digital Games (Goswami, 2014)

Northwestern University defines smart classrooms as "technology enhanced classrooms that foster opportunities for teaching and learning by integrating learning technology, such as computers, specialized software, audience response technology, assistive listening devices, networking, and audio/visual capabilities" (https://www.unit5.org). Smart classrooms are basically electronically enhanced lecture theatres and classrooms originated back in 1986, David first described about a product idea he has been working with Nancy and a year later SMART was founded. In India EDUCOM was launched in 2004. Basically smart class is technological concept but helpful for contextual awareness, classroom layout and management. SMART stands for Showing, Manageable, Accessible, Real-time Interactive and Testing.

The objective of smart classes is to support different kind of formal learning, non-formal learning and informal learning activities. Smart class basically includes an interactive whiteboard, DVD's, PPT's and an instructor. These smart classes has not only changed the interest level of student but also enhanced their academic performances. Easy understanding, enjoyable learning, effective communication, improves academic performance, enhanced learning experience are major 5 reasons why smart classes are an essential part of our education system. EduComp, SMART, RTIVC and DIGIclass are few of the renowned merchants in market, who are provided basic setup to the school (Liu, *et al*. 2017; Chaudhary *et al.*, 2014; http://www.ssbinternationalschool.in).

In terms of arrangement and pedagogical configuration following are the basic principles which are supposed to be considered to transform any formal learning space into a smart classroom:

- Flexibility of physical arrangement
- Adaptability
- Comfort
- Multiplicity
- Connectivity
- Personalization
- Order/Organization
- Openness
- Safety/Security (Das, 2016)

Benefits from Smart Class

- Enhance teacher's efficiency and productivity.
- Difficult curriculum concepts are discussed inside the classrooms.
- Makes learning an easy going and enjoyable experience for students.
- Progresses can easily be seen in academic performance of students.
- Enables instant formative assessment of learning out comes.
- Enables teachers ability to evaluate the learning achieved by their students (Jena, 2013).

Figure 1: Smart Classroom

Review of Literature

Marcellus and Ghrayeb (2002), studied the effects of smart classrooms from students' point of view. According to the student's point of view, the blackboard teaching is helpful in problem solving whereas smart classroom is helpful in learning the basic facts and information. In their study, they concluded that the combination of blackboard and smart classroom technology should be used.

Manny-Ikan *et al.* (2011), describe about a research conducted in Israel in which different aspects of the Interactive White Board (IWB) technology were examined. The research was conducted on a pilot project of six schools which implemented the SMART project which includes electronic whiteboard that enables interaction, writing, and surfing the Internet using didactic software that accompanies the board. In this study, the teachers primarily use the new tools but still anchor them in a traditional work model.

Jena (2013), conducted an experimental study in Jalandhar, district of Punjab. In his study, he has taken 60 secondary school students from Royal Convent School by using simple random sampling technique. For examination he has used two group randomized pre-test and post-test design. After the thorough study, he concluded that smart class learning environment is better to teach both low achievers and high achievers than traditional class.

Chaudhary *et al.* (2014), discussed about much growing technology smart class and e-learning which was generated back in 1980s. Smart class and e-learning helps the students in learning and improving their academic performance. This new technology must be encouraged in the current education system.

Ashfaque *et al.* (2014), discussed the modern trends i.e. smart classes and e-learning in education system, these new technologies encouraged the education system and make the learning different and interesting.

Jo and Lim (2015), performed a study on 5th grade in an elementary school. In which teachers had taught the same class twice, once in the traditional teaching and learning method, and the second class was carried out with the smart devices and smart teaching and learning methods applied from the ITLA System. Teachers and students were analyzed based on Flanders's Interaction Analysis Category System. In their paper they concluded that the Teacher's indirection ratio and teacher's question ratio were shown higher in Smart Classroom in comparison to the traditional teaching system at the same time students' talk ratio was also same. Therefore, smart classrooms have more positive effects on education than traditional classroom.

Menon (2015), studied about the effectiveness of smart classroom teaching for achievements in chemistry of secondary school students. She conducted her study on 320 Class IX students from Amritsar city and concluded that the academic achievement in chemistry of secondary school students showed greater achievement, no gender difference when taught through smart class in comparison to traditional teaching methods. They also concluded that interaction of gender and teaching method do not significantly affect the academic achievement in chemistry of secondary school students.

Bano (2016), studied about the effect of smart classroom learning on the performance of first grade students in English subject in Srinagar district of Kashmir. For analysis, she has taken 30 first grade students from Govt. High school Bakshipora and conducted the experiment on the basis of pre-test and post-test. After her study, she concluded that the smart classroom learning positively helped the students in scoring better in comparison to the traditional teaching methods.

Takawale and Kulkarni (2016), focused the effectiveness of smart classroom over traditional classroom. For this study, two groups of students were managed and 20 students in each group. One group was taught through traditional method whereas another group was taught through smart board. After their study they concluded that there is significant difference between two groups in terms of academic achievement still they cannot conclude that smart class teaching is the best method of teaching and there can be some limitation on the execution and maintenance of Smart classrooms.

Bakken *et al.* (2016), presented a review on how the student might benefit from smart software and hardware systems, and smart technology. According to their study they concluded that the SMU and SmC can benefit students with disabilities even though they are not the focus, different technologies will actually impact the learning of students with disabilities, and some specialized technology will be provided to those who are very weak.

Siddiqui and Masud (2016), proposed a smart class model framework to manage and improve the entire educational activities and quality of education respectively. This model basically provides improved way of education in which teachers teach and students learn with advanced and significant use of technology for bright future of students.

Talesara (2016), studied about the effectiveness of Smart classroom teaching on the achievement in 'Accounts' of Higher Secondary School Students. She conducted her analysis on 30 students from Christian Eminent School Indore City. After execution of her studied, she found that students achieved higher when taught in Smart classes as compared to traditional

Davidovitch & Yavich (2017), focused on the smart board and evaluate its effect on the school education system. For the study they prepared a questionnaire,

which was completed by 130 students including both boys and girls of 5th and 6th grade in a schools in Jerusalem. Pearson correlations used for examining the differences between schools which shows that all the variables have a mutual effect. In their finding, they found the level of clarity rises with order and organization. A positive correlation is also found between interest and clarity, where the higher the level of interest, the higher the level of clarity will be there. At the end, they concluded that all the four variables derive from each other and each contributes to the student's success and achievement improvement.

Conclusion

According to the available review on smart class, it has been concluded smart classes increases the interest level of student in all subject and ultimately it help in developing the students learning ability and improving their academic performance. Smart class education system have more positive impact on students academic performace in comparison to traditional education system. The usage of this new technology must be encouraged in rural area as still there are many rural areas where smart classes are not introduced.

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