ORIGINAL RESEARCH PAPER

Education

THE NEXT -GENERATION CLASSROOM: SMART CLASSROOM

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ABSTRACT

In our fast-paced world with technology continuously progressing beyond the realms of science fiction, it is not surprising that some of this advanced technology is being utilised in our education sector. In recent years, the uses of distance education systems in all kinds of education have been increasing. One of the tools for distance education system is probably smart classrooms, simultaneous classroom environments. It is, therefore, important to increase the effectiveness of smart classroom to enhance the learning environment in distance education. A smart classroom is a classroom that has an instructor equipped with computer and audio-visual equipment, allowing the instructor to teach using a wide variety of media. These include smart interactive white board, DVD's, PPT's and more, all displayed through a data projector. With the help of school curriculum, smart classes bring in technology right next to the blackboard for teachers in the classroom. This makes learning an enjoyable experience for the students while improving their overall academic performance in school. Data for this paper were collected through research papers and internet.smart classroom is a new research area, that has become an emerging tool for our education system.

Introduction

The Smart class is an interactive classroom technology that has been around for approximately ten years. It is becoming increasingly popular in classroom today, but many people do not understand exactly what makes it different and more efficient than the standard white board or chalk board. By knowing its many creative features, the teacher can then decide for his or herself if it is the right technology to have in his or her classroom.

Smart classroom are revolutionizing classrooms across the Education system. Although it looks much like a white board, it is a touch screen version of a computer and much more. Connected to a computer and a projection unit, the SMART Board can display lessons that teachers have prepared on their computers. Embedded links to Web sites allow the teacher to tap on the icon and within seconds bring the full class to a Web site. Students and teachers a like can participate in interactive sessions in all curriculum areas. Special markers allow students and teachers to take notes, fill in the blanks, connect lines and more. Teachers can move from a lesson to a blank white board with a tap, and all of the day's lessons are saved for posting, emailing or printing.

General classrooms are outdated and need to be modernized to provide a comfortable and flexible learning environment. All classrooms need to be equipped as "smart" classrooms. All classrooms need a complete set of world and education system.

What is a Smart Classroom?

A Smart Classroom is a traditional lecture style teaching space that has available technological equipment that can be used to aid and enhance instruction of a course. Classrooms are categorized based on the equipment available:

- **Advanced Smart Technology:** Features a smart podium with a touch panel control system, PC and laptop connection, document camera, DVD/VCR Player, projector, and screen.
- **Intermediate Smart Technology:** Features a smart podium with a control panel, PC and laptop connection, projector, and screen. May also have an overheard transparency projector.
- **Basic Technology:** Includes a laptop connection, projector, DVD/VCR player, and screen. May also have an overhead transparency projector.

Need for a smart classroom

There is a growing concern that teachers need to provide educational opportunities that are geared toward preparing the students to succeed, in a technology rich society. It has become increasingly more evident that the teachers of this institution must "retool" for the benefit of the students' success. The chalk-and-talk method must be replaced by a more active and creative process, one in which teachers design and facilitate activities that are geared towards collaborative exercises. At present, the school

is staffed with one information technology teacher who has done a worthwhile job in making sure that the students are taught as effectively as possible but this is not adequate. No technology training programs are presently offered to the teachers. The reality is that, the resources at the school are not adequate to equip the teachers with the knowledge, skills and expertise needed to successfully integrate technology in the teaching learning process.

What are the equipments installed in a Smart Classroom?

The equipments installed in most of the smart classrooms are:

- **Computer or laptop:** A computer or laptop is a basic and necessary requirement of a smart classroom. Instead of writing on board with a chalk or marker, teaching process is done by presentation or images or multimedia in a smart class room.
- **Projector:** it is an optical device. It projects stationery or moving objects onto a screen. They create an image by shining light through a transparent less or by a laser.
- **Screen:** It is a surface used to display the images projected by a projector. The screens may be rigid wall mounted screens, pull down screens, fixed frame screens, electrical screens, switchable projection screens, or mobile screens.
- **Microphone:** it is generally called as mic or mike. It is a device which converts audio signals into electrical signals. These signals are then transmitted, amplified or recorded.
- **Amplifier and speaker:** These are the electronic devices which are used to increase the volume of a sound.
- **Podiums:** it is a platform usually made of wood which raises the person standing on it so that he becomes visual to all the audience.
- **Document camera:** They are also called as visual presenters, visualizers, digital overheads or docucams. They are used for displaying an object to a large audience. A document camera magnifies and projects the images of a two dimensional as well as a three dimensional object. The object is simply placed under the document camera. The camera takes its image and produces its live image by using a projector.
- **Smart Podiums:** They are also called smart boards or smart LCDs. It is an interactive pen display which can be connected to the computer or laptop externally via the USB port or RGB ports. It can be called as an external monitor with the facility of digital inking. With a smart podium, we can open documents, presentations, multimedia files and can write on them with a digital pen. We can also save our work.
- **DVD or VCD player:** There are a large amount of videos available on the internet but still there is a requirement of VCD or DVD player because there are some videos which have copyright and have to be purchased. These are often in the form of DVDs or Cds.
- **Overhead projector:** It is a device which is used to display enlarged images of a transparent acetate sheet placed on its base on a screen. This device was very famous a few years back, but now it is being replaced by computer based projectors.

How the smart board works?

The Smart Board contains several intriguing features that can be efficiently and effectively used in the classroom. For pre-learning exercises, teachers can allow students to brainstorm ideas. These ideas can then be recorded on to the Smart Board, where they can then be dragged and dropped to other areas on the screen for grouping. To review concepts that students have learned, the teacher can use click and drag activities that are sometimes called electronic worksheets. Interactive worksheets can also be created and recorded on to the Smart Board. It can also be used as a touch screen, so fun games such as Jeopardy can be played. Students simply touch the screen to choose the topic and dollar amount. The Smart Notebook software used for Smart Board includes templates of graphic organizers such as Venn Diagrams that are great for comparing and contrasting topics. In addition, the Smart Board includes interactive features such as the electronic word wall and digital storytelling, where students can use the highlighter tool to highlight nouns, verbs adjectives, etc. Teachers can create lesson plans with the Smart Board, as well as e-folios to store samples of students' work, and project calendars to keep track of lessons and assignments. The Smart Board even contains built in maps to teach continents, oceans, countries, or states and capitals.

What is the role of a teacher in a smart class?

We have discussed about smart school and smart class, so it will be easy to understand about smart class education. We have to realize the difference between the traditional teaching learning and the smart teaching learning methodologies. Traditional teaching learning system is something different than modern teaching learning system. In modern active and innovative learning system teacher's role is going to be as a facilitator. So in smart class, it is clear that teacher's role will be as a facilitator.

1. Teacher should be an expert of smart learning, e learning and online education
2. Teacher should be friendly with students
3. Teacher should have a great attitude to smart education
4. Teacher should be a facilitator in learning
5. Sharing Knowledge
6. Sharinng ability and Mediation

How to usefull smart classroom to stundents ? (Chachra, I.K. (2015)

1. Smart classes help students to a great extent. Students can interact, understand and remember things very easily as these are innovative and have more impact than just reading.
2. Smart classes provide better education through presentations and videos as well as all students may not understand the teaching methodology of a teacher but can understand by smart classes. So such an audio visual technology needs to be boosted in all kind of schools.
3. Smart classes create an attention in students which is known as interest. Inclusion of such a tool in schools ultimately enhances students' academic interest.
4. Smart classroom learning help to increase the learning abilities.
5. Smart class may use as a supplementary learning tool to teaching below average and above average students.

Advantages of Smart Classrooms

There are many advantages of a smart classroom.
1. Access to online resources
2. Digital medium for notes
3. Advantageous for the absentees
4. Ease of understanding:
5. Makes learning enjoyable
6. Improves the academic performance
7. Communication
8. Health friendly
9. Going Green
10. Broaden The Mind
11. Applicable Education
12. Technology Integration

Disadvantages of Smart Classrooms

With so many advantages of the smart classrooms, there are a few disadvantages also which makes the use of smart technology quite limited. They are:
1. Cost
2. Skilled faculty
3. Maintenance
4. Technical faults
5. A Disconnected Youth
6. nevitable Cheating
7. A Major Distraction
8. Passive Learning
9. Discourages Teacher Planning
10. Size Limitations
11. Projection Problems
12. Remote Access Issues

Conclusion

Smart classroom makes the merge and connection between technology and education possible the paper has discussed the background of smart class and how it can be used to enhance the whole learning system. The paper also provide highlights of the benefits and future challenges of smart class in our educational environment. Finaly, our learner, instructor, students and teachers should be prepared for the next generation of learning and traning.

The smart classroom can be used to solve the traditional learning system problems. The smart classroom is not to replace traditional classroom but they can be used to complement the learning process in our schools and universities.

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