

Need of Smart Classrooms for Learning: An Essential Approach

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ABSTRACT:-

In thousands of years, there have been numerous revolutions in education. The internet and computers have sparked a new revolution in schooling today. Information and communication technology is now fundamental to the teaching and learning process since it contributes to defining the experience's basic essence, which is impossible without it. There are therefore real and advantageous consequences on learning and teaching. With the always expanding world of technology, there are undoubtedly other enhancements that need to be examined for future enhancements to the learning environment. These requirements are met through a program called smart classrooms. These classrooms have a striking impact on how teachers instruct and how students learn. On the other hand, this idea does not involve understanding how to use technology. Using technology to learn is the topic. The use of smart classrooms to incorporate technology into the classroom is discussed in the paper. It covers the workings of smart classrooms, their components, and how they use technology. It discusses the various ways in which it differs from a regular classroom. The usage of the World Wide Web in "smart classrooms" can only mean that the "genie has escaped from the bottle," and the educational landscape will never be the same.

Keywords-Smart classrooms, Internet, www, learning and teaching etc

I. INTRODUCTION:

Technology is advancing education in our rapidly changing environment in ways that were once only possible in science fiction. In the sphere of education, better and more sophisticated learning materials are being produced with each passing year. Given that we are in the twenty-first century, shouldn't every classroom be a 21st-century learning space? Many instructors are still using outdated techniques, just as they were frequently accused of doing so in the 20th century. One of the major problems for some schools is figuring out what 21st century learning really entails. When this idea is accepted, technology starts to be used as a tool to increase achievement in all areas. People frequently discuss how lovely it would be to have the classroom of the future but that it is currently unachievable. Learning has undergone a full transformation as a result of the advancements in technology over the past few years. Teachers and students now have access to considerably more sophisticated technology facilities. The smart classroom is one application of this technology. These are classrooms that have been built up with a lot of technological advancements.

These classrooms have a striking impact on how teachers instruct and how students learn. The inventory of technological components that these classrooms actually contain will be constantly changing due to the industry's exponential growth. On the other hand, this idea does not involve understanding how to use technology. Using technology to learn is the topic.

SMART LEARNING ROOM:

An instructor station with computer and audio-visual equipment is found in a "smart classroom," which enables the teacher to educate utilising a range of media. In a broad sense, a smart classroom is a novel structure that combines electronic components, human interface, technology, and conventional teaching techniques to create a creative, cutting-edge, and adaptable learning environment. A "smart classroom" is a technologically advanced classroom that incorporates computers, specialised software, audience response technologies, networking, and audio/visual components to promote teaching and learning opportunities. This includes both the technology used to teach and learn as well as the technology that is taught and learned in the classroom. The smart classroom strategy has never made this more obvious. These college-level smart classrooms are equipped with technology to support learning for both teachers and students. Docking stations and connectors for laptops are part of this, as are connections to overhead projectors for presentations. The adoption of new generation technology in schools is quickly becoming necessary. Every class and innovative school in India will soon be affected.

INDIA'S SMART CLASSROOM SOLUTIONS:

- **Tata Class Edge** - For Indian schools, Tata Class Edge is a small classroom solution. Tata Interactive Services (TIS), a daughter business of the Tata Group, launched it. 2011 saw the launch of ClassEdge. (It was founded with the intention of using technology ingeniously in educational settings to enhance the teaching and learning process. In India, more than 1200 institutions and 70000 teachers use Class Edge's services.
- **Educomp Solutions**- India's largest education corporation, is known for its main brand, EducompSmartclass. In 2003, it was founded. This smart classroom system has been adopted by more than 14,500 schools.
- **In 2007, Teach Next** –It was established by Future Education Pvt. Ltd. It offers digital curriculum in 8 languages, including Hindi, that follows the curricula of 23 state boards, the ICSE, and the CBSE.
- **Extramarks Digital classrooms**—In a short period of time, Extramarks' digital classrooms have unquestionably emerged as the most widely used learning solutions. It has received recognition and praise at various forums for its creative methodology, layered structure, and education. There are already more than 8,000 schools using Extramarks in India.

WHY ARE CLASSROOMS MODIFIED?

The traditional classroom is giving way to what is described as a "smart classroom" in schools, colleges, and primary settings. Your first impression upon entering a smart classroom would be that nothing has changed at all. The equipment that comes with every smart classroom makes a standard classroom actually into a smart classroom, despite the fact that the aesthetic appearance of the space may appear to be the same.

Each classroom has a variety of cutting-edge technical additions that turn it into a smart classroom. The following list includes some of the varied technology that will turn a regular classroom into a smart classroom:

- Multimedia projector with a ceiling mount that can project images onto a large screen from a computer, VCR, DVD, and visual presenter.
- Ceiling-mounted speakers that can project audio from a computer, microphone, DVD player, or VCR.
- Pull-down screen - Used as a projection device display unit.
- Computer - Used to access the Internet and give software presentations or demonstrations. The VHS/DVD player should be utilised for presentations in the classroom, despite the fact that modern computers include DVD players. A cable will also be available for simple thumb drive connection.

Faculty can view projected images on a computer monitor without turning around to face the projection screen.

- DVD Player - This device enables professors and instructors to play educational DVDs or other materials to a class full of pupils. Many of these Videos help enhance student learning in the classroom.
 - VHS Players - Although VHS may have fallen out of favour a while ago, a wise classroom will still have VHS players since there are still some excellent videos for the classroom that have not been converted to DVDs.
- Smart whiteboards are the upcoming trend in educational technology. These whiteboards enable the projection of computer pictures onto a screen so that both students and teachers can interact with them.

ADVANTAGES OF SMART CLASSROOMS:-

The use of technology in the classroom has several benefits, including giving students access to opportunities and experiences they might not otherwise have. The students are better able to learn new technology as they progress through life when they have access to technology in their daily lives. When kids are connected to the world technologically, they may learn much more. The following are some benefits of smart classrooms:

1. Enable for connectivity in multiple locations: Interactive technology solutions enable connectivity in multiple locations, creating the best conditions for remote collaboration and education. Students demonstrate more collaboration between peers and greater overall participation in the course when employing technological tools.
2. A better understanding: It replaces the lecture-style learning atmosphere in the classroom with one that emphasises group collaboration. Students are becoming smarter as a result of classrooms becoming smarter! Pie charts, bar graphs, and graphics are taking the place of large sections of paragraphs, proving the adage "A picture is worth a thousand words" to be true.
3. Can automate a lot of a teacher's tiresome tasks: There are engagement programmes that can track student performance and automate grading for you. Similar to this, he can use tools to speed up the objectively difficult tasks of assessing writing projects, participation in conversations, and common student inquiries. The class has immediate access to data that can enhance their educational experience.
4. Ecologically sound: Interactive technology tools are also ecologically sound. There is no longer a need for writing, printing, or photocopying because they give teachers a completely new method of presenting knowledge to students. can assist in reducing waste from excessive paper and ink usage.
5. Improved teaching and learning experience: Technological tools give teachers and students new methods to communicate and learn. There are many different learning styles supported by these technologies. For instance, visual learners can observe while their instructors project visual elements using technology, while audio learners

can listen and participate in discussions. On the other side, the Boards' touch screens enable tactile learners to interact with the board through touch.

6. More exposure and access to information: Students who have internet connection are given tremendous exposure since it allows them to think and feel beyond the box. They accept what is happening in the world and perhaps even make an effort to right the mistake.

7. Increased student engagement: Because these tools are more relevant to them, students who don't often raise their hands in class or who typically doze off on the back benches suddenly look forward to learning something new. Technology also aids in strengthening the relationship between students and teachers by promoting dialogues and uncovering novel and unconventional ideas.

8. Provide rapid assessment: In addition, the technological solutions offer rapid evaluation so that students can get feedback right away. Instructors and students can pinpoint one other's strengths and shortcomings in a variety of academic areas and highlight areas or topics that require further attention or revision. Hence, a smart board encourages pupils to become more involved in their education.

9. Technology Integration: Using technology tools, different technologies can be integrated to enhance the learning process. For example, to help with education, it is feasible to attach equipment like microscopes, document cameras, cameras, or video cameras to a whiteboard. The interactive learning tools can also be integrated with a variety of software programmes.

10. Teachers can experiment with pedagogy more: As academic professionals, instructors gain more knowledge on how to successfully plan and carry out a class that uses technology. He will learn something new in contemporary academics, whether it's a significant change like flipped classroom instruction or just using one technology for a particular project or term! His trustworthiness with students and even his coworkers can be increased by having strong technological knowledge.

CONTRAINS TO SMART CLASSROOMS:

1. A Disconnected Youth: In the modern world, this negative influence of technology has already been identified. People are practically always glued to their devices, which is giving rise to a whole new set of social problems. But this has a slightly different impact on the educational system. A growing number of students struggle with social anxiety in person yet have no problems interacting with others online.

2. Continual Cheating: While having quick access to material may seem like a good thing, it can really cause issues when taking tests. Cheating is now simpler than ever thanks to cell phones. You can simply check up the answers rather than figuring out how to write them all down!

3. Improper information: Students are exposed to some websites and connections that are not appropriate for them because internet connectivity is available around-the-clock. Colleges may restrict access to certain websites on their network, but they have no control over the content that students look for. The process of creating a smart classroom environment is quite pricey. How simple it is to obtain and see pornographic, violent, and other unsuitable information is the main worry when it comes to the use of technology in schools. If the information is shared with other pupils in the classroom, this could result in serious issues.

4. Not all students have access to the same technical resources: Some students may not have iPads, cameras, or even the textbooks they need for class. It is up to the teacher to suggest the library or other local resources or to design tasks that let them collaborate in groups and share resources.

5. Providing pupils access to anonymous profiles and limitless contact options is a recipe for cyberbullying catastrophe. Cyberbullying among young people today has turned into a serious issue that cannot be ignored. There is no limit to this harassment, and it even occurs in the classroom. Furthermore, there is no means to keep an eye on or punish implicated students.

6. Technology can be a distraction: The distraction that comes along with using technology in the classroom is one of the biggest negatives. With so many enticing social media sites available, like Instagram, Facebook, Twitter, and Tumblr, it's easy for kids to lose focus and abuse the opportunity that has been provided to them. As students use their cell phones or other devices in class, their attention spans substantially decrease. Their teacher and lessons become less important as attention is diverted to what they are viewing, playing, or doing on their phones.

SMART CLASSROOM V/S TRADITIONAL CLASSROOM:-

Lectures are no longer enjoyable, engaging, or a useful learning tool for students. These kids while in class, doze off, and have even been known to chat and giggle in front of the entire class. Because they are a part of a "active classroom" that involves both the teacher and the students, "Smart Classrooms" are effective. The approach essentially merely adheres to the Seven Principles of Effective Teaching, which promote 1) contact between students and faculty 2) student cooperation 3) active learning 4) rapid feedback 5) stressing time on task 6) conveying high expectations and 7) recognising different learning styles. It offers an interactive

learning environment that encourages free discussion. Many educators must use technology in the classroom. This could entail creating PowerPoint slides or showcasing movies to augment the class. When teachers speak, kids want to see something visual, and it makes it easier for them to take better notes. Students who take better notes also ask better questions, which promotes greater learning in the classroom. The use of technology in the classroom can make lectures more engaging and enjoyable for all students. Instructors must realise that giving lectures is insufficient and that they must adapt their methods of instruction to meet the changing demands of their pupils.

II. CONCLUSION:

In the information age, where fundamental academic abilities are more crucial than they were in the past, smart classrooms offer fantastic opportunities for collaborative learning. The goal of the smart classroom is to make computers as user-friendly and straightforward as feasible. Do not mandate that all teachers utilise the smart classrooms immediately. While many teachers will welcome the shift, others may view it as a significant change that they do not want to implement. Teachers who want to switch over should be asked initially, and those who don't should be given time to do so gradually. Provide instructional programmes using smart classrooms. Provide training sessions for teachers on the benefits of smart classrooms. Many people are hesitant to make the switch because they are unsure of the precise capabilities of a smart classroom. The smart classroom initiative's adoption is a significant step in the right direction. It should also be obvious that the 21st century classroom is accessible right now. Yet in order to make it a reality, you need money, vision, and dedication. Finally, we may say that a smart classroom shouldn't replace a traditional classroom; rather, it should be used in conjunction with the latter.

Today's technology is not only widely accessible, but also reasonably priced. There is knowledge to you and all other potential readers and learners no matter where you go, from applications to e-textbooks to Wikipedia. Hence, there is a need for smart classrooms in the higher education system.

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