The Importance of Smart Classrooms for Education: A Crucial Method

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ABSTRACT:-
Thousands of years have seen several educational revolutions. Modern education has a fresh revolution driven by technology and the internet. Since it helps to define the core nature of the experience—which is impossible without it—information and communication technology is now basic for the teaching and learning process. Learning and teaching so have actual and positive results. Given the continually growing technological sphere, there surely are further improvements to be investigated for future use in the classroom. Smart classrooms allow one to meet these criteria. Teachers' instruction and students' learning in these classrooms really change. Conversely, this concept does not call for knowing how to apply technology. The issue is learning with technology. The study addresses the application of smart classrooms in including technology into the classroom. It addresses the operations of smart classrooms, their elements, and technological application. It talks on the several ways it is not like a conventional classroom. Using the World Wide Web in "smart classrooms" merely means that the "genie has escaped from the bottle," so the educational scene will never be the same.
Keywords- *Smart classrooms, Internet, www, learning and teaching etc*

I. INTRODUCTION:

In our fast changing environment, technology is expanding education in ways heretofore imagined feasible in science fiction. Within the field of education, more advanced and refined learning resources are generated annually. Given we live in the twenty-first century, should every classroom be a learning environment from that era? As they were routinely accused of in the 20th century, many teachers still apply antiquated methods. For some institutions, one of the main challenges is determining exactly what 21st century learning consists in. Acceptance of this concept marks the beginning of using technology as a tool to raise performance in all spheres. People often talk on how great it would be to have the classroom of the future but that it is not realistic right now. Thanks to technological developments over the past few years, learning has experienced a complete change. Students and teachers today have access to quite advanced technological tools. One uses of this technology in the smart classroom. These are classrooms designed with great technical advancement in mind.

Intelligent Learning Space:

A "smart classroom" is equipped with an instructor station that includes a computer and audio-visual equipment. This setup allows the teacher to effectively use various media for educational purposes. A smart classroom is a modern educational setting that integrates electrical components, human interface, technology, and traditional teaching methods to establish an innovative, advanced, and flexible learning environment. A "smart classroom" refers to a classroom that is equipped with advanced technology such as computers, specialized software, audience response technologies, networking, and audio/visual components. These technological features are used to enhance teaching and learning experiences. This encompasses both the pedagogical tools employed for teaching and learning, as well as the technological knowledge and skills acquired within the classroom. The efficacy of the smart classroom technique has never been more apparent.

The college-level smart classrooms are furnished with advanced technology that facilitates learning for both educators and students. These include docking stations and connectors for laptops, as well as the ability to connect to overhead projectors for presentations. The implementation of cutting-edge technology in educational institutions is rapidly becoming imperative. Every educational institution and progressive school in India will imminently experience the impact.

Smart classroom solutions in India:
Tata Class Edge- is a compact classroom system designed specifically for Indian schools. Tata Interactive Services (TIS), a subsidiary of the Tata Group, initiated its launch. ClassEdge was introduced in 2011. The organization was established with the purpose of employing technology in an innovative manner inside educational environments to improve the process of teaching and learning. Class Edge's services are utilized by over 1200 colleges and 70000 teachers in India.
• **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.

What is the reason for modifying classrooms?
The conventional classroom is being replaced by what is referred to as a "smart classroom" at educational institutions, including schools, colleges, and primary settings. Upon entering a smart classroom, your initial observation would be that there is no discernible change. The use of specialized equipment in every smart classroom transforms a conventional classroom into a smart classroom, even though the visual appearance of the space may remain unchanged.
Every classroom is equipped with a diverse range of state-of-the-art technological enhancements that transform it into a smart classroom. The subsequent enumeration comprises a range of diverse technologies that can transform an ordinary classroom into an intelligent 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 programes.

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 CLASROOMS:

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 kidstext while in class, doze off, and have even been known to chat and giggle in front of the entire classBecause 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 era of information, where essential academic skills are more important than ever before, smart classrooms provide excellent chances for collaborative learning. The objective of the smart classroom is to optimize the use and simplicity of computers. Do not enforce a need for all teachers to immediately utilize the smart classrooms. While a majority of instructors may embrace the transition, there may be a minority who perceive it as a substantial alteration that they are unwilling to adopt. Teachers who choose to transition should be consulted initially, while those who do not should be allowed a progressive period to do so. Deliver educational programs with smart classrooms. Conduct instructional seminars for educators on the advantages of utilizing intelligent classrooms. A significant number of individuals are reluctant to transition since they lack certainty regarding the exact functionalities of a smart classroom. The implementation of the smart classroom program is a notable advancement in the correct path. It is evident that the 21st century classroom is currently accessible. However, in order to actualize it, one requires financial resources, a clear perspective, and unwavering commitment. In conclusion, it is important to note that a smart classroom should not be seen as a substitute for a traditional classroom, but rather as a complementary tool to be utilized alongside it.

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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