

Smart Classroom: An Innovative concept of learning

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ABSTRACT

Integration of technology in the field of education has completely changed the traditional way of teaching and learning by modifying and making the enormous use of modern technology. Information and Communication Technologies (ICT), has changed from being a technology of information & communication to a curriculum creation and transmission system for learners. Integration of technologies into classroom, new strategies of teaching are being introduced in the curriculum, such transformation is known as “Smart Classroom”. It transforms the way of teaching and learning of the students in schools and colleges with innovative use of technology. This improves students’ overall academic performance in schools and colleges by making learning experience enjoyable. Students can build strong self-directed learning skills in a smart classroom. This paper explores the concept of the “smart classroom and its importance in education.

Keywords: Digital Learning, Technology, Smart Classroom, Learners, Education, Traditional

Introduction:

Smart classrooms are replacing traditional classrooms with chalk and a blackboard into a technological mediated modern classroom. Indian schools and colleges are not left untouched by the global adoption of technology, which offers improved outcomes, ease, and innovation. Many institutions including government and private school, colleges and universities are using digital learning for their instructional strategies. Use of smart technologies such as Laptop, computer, tablets, smart boards and digital content in place of conventional textbooks, white boards, blackboards, etc. have brought positive changes in our education system. The use of technology in education is one of the key developments that has been redefining the scope of learning. There has been discussion and debate for many years over the integration of technology in education for its advancement and making the learning process effective. Realizing its innumerable benefits, schools and colleges are building smart classrooms to provide a holistic learning experience to the students. Realizing the numerous advantages, educational institutions are creating smart classrooms into their premises to give students a holistic learning experience.

Use of technology in our day-to-day life, benefited us in various way. It has also modified the teaching-learning process and made it effective. With integration of smart technologies in the classroom, new methods of teaching learning process have been introduced which is known as smart class. It uses different type of technologies, audio-visual aids instructional material, and 3D animated modules and video. These days most of the schools are willing to use this concept into their classes. The concept of smart classroom has not only modified the traditional classroom structures but it also makes the learning more interesting and enjoyable. Now the students are very excited with this concept of innovation and interactive learning process.

Concept of Smart classroom:

The smart classroom is a modern concept of learning where teaching learning process becomes more effective with the help of modern and advance technologies. Smart classroom concept is a way of digital learning where learning is facilitated through digital technologies. This type of classroom has been equipped with technologies

which provide a huge variety of teaching methods. According to Timms (2016), A smart classroom is a physical classroom integrated with Artificial Intelligence technologies to support the students and the teacher in the teaching and learning process. Jaiswal et al. (2018) defined smart classroom as an enhanced classroom of technology that improves teaching and learning opportunities by group action learning technologies, like computers, special software, response technology audiences, helpful listening devices, networking, and audio / visual capabilities. In addition, Phoong et al., (2019) defined Smart classroom as a classroom equipped with a computer and audio-visual equipment that allows teachers to use a variety of media.

Need of Smart classroom:

In traditional classroom instruction, teachers are unable to maintain one-on-one interaction with students, but with the integration of smart classrooms, they are able to connect with their students more effectively. It also provides them modern technologies which makes their teaching work easy and save time for teachers because to write or draw on the board. Moreover, teachers are able to communicate with students effectively and able students to understand complex concepts in a easy way. It also encourages student-teacher interaction by increasing academic performance of learners. Learning is a cognitive process that involve thinking, reasoning, and making sense of what is being taught in classroom. Teachers can help students to visualize what they are learning through digital content in the form of videos and picture books. This will improve the student's conceptual clarity and make them to understand the concept easily. The smart classes are a modernized method of education which provides quality education to the learners by helping them in better concept formation, and increase academic achievement. Thus, there is a need of such modern concept of classroom in which teaching learning process is facilitated through smart technology.

Characteristics of Smart Classroom:

Adaptive Learning Environment:

A classroom will always have students of different backgrounds and learning abilities. Due to which it is difficult for teachers to make sure that all of the students present in the classroom have understand the concepts. Smart classroom is a modern concept of adaptive learning in which the learning is facilitated through technology. It gives students the freedom to learn at their own pace and capabilities. Thus, it provides adaptive learning environment.

Increase Learning Experience:

It is a universal reality that when we learn through pictures and videos, rather than merely staring at the black board and listening, we understand the things more quickly. In a Smart classroom, information and subject matter can be illustrated with the help of Images, maps, graphs, flowcharts and animated videos. This makes learning more, interesting, enjoyable, attractive and easy to understand of the subject matter. It enhances the ability of students to learn and memorize the topic for a prolonged period of time in an effective way.

Interactive Learning Experience:

The smart boards of the smart classroom help teachers to deliver lectures more effectively by using the different projections in their presentation to explain the topic with more clarity. Teachers can easily explain each and every part of the subject matter effectively with the help of special effects and graphic presentations. It helps to create interesting learning content which increase the interaction between teachers and learners that actually makes a wonderful learning environment in the classroom. This makes the teaching learning process more interactive between teachers and learners.

Time saving concept:

In contrast to the traditional learning method, where students had to make long written notes and have to listen boring lectures. Smart class technology allows students to make presentations on-line and get feedback from their teachers in less time and make the learning fun through various technology. Teachers who don't want to tell students to make rough notes

or write as it takes time, they can directly share notes with everyone. This saves a lot of time for teachers and learners.

Easy Access to On-line Resources:

The world of internet has a lot of information on the subjects which are being taught in class. Teachers can support their teachings with on-line resources to make the students easy to understand the topic. With the help of computer and internet connection it is easy to access the online resources for learners. They can have instant access to updated information and learning content which can enhance the performance of the learners.

Prepare students for the future:

Smart classrooms help students to build their future. Learning with smart technology emphasize on methods that are constructive, collaborative and drives the students' attention towards a real-world approach to learning. The skills which are developed while learning in a technology mediated environment ultimately contributes in building stronger skills and knowledge for future. It can help to develop many practical and technical skills like creating presentations, learning materials, animated videos which can foster their learning. Starting to develop these skills at a young age can help prepare students for future modern education.

Limitation of Smart classroom:

Costly: The technology which are used in the smart classrooms are very expensive. It is difficult for educational institutions to afford it. Even the schools or colleges that can afford it go over budget after purchasing it due to its regular maintenance. For construction of smart classroom some of the educational institution have to take loans.

Need skilled faculty:

Smart technology cannot be used in the classroom by all teachers. To teach in a smart classroom, teachers have to be trained first. They have to be trained to use the technology in an effective manner.

Regular Maintenance:

The technology used in smart classrooms requires regular maintenance, just like any other

electronic device. The rooms in which these devices are situated should be clear of dust and should not be exposed to direct sunlight, as doing so will cause the devices to malfunction. The classroom must be air-conditioned as the technological devices emits lots of heat that may increase the temperature of room.

Technical Faults:

Every technological equipment is susceptible to malfunctions. A day is wasted if the equipment does not work properly. They take a long time to recover and resume the work normally. There will be no instruction if malfunctioning of devices occurs. In this situation, the instructor should always be prepared to use the blackboard as an alternative form of instruction. Due to the malfunctioning of technological devices, the workload of the teachers will also increase as they have to change their teaching methods.

Conclusion:

From the invention of wheel to the internet, technology has played an important role in each and every aspect of our life. At present modern age, technology played a vital role in the field of education and with the integration of technology in classroom a new concept is evolved that is known as "smart classroom". It is a revolutionary innovation in the field of education. It is a well-known fact that every new thing seems to be difficult at first, until one gets familiar with it. In today's world technology has provided a wealth of knowledge available to students at every time. Information is present almost in every possible way that any type of learner, whether gifted or disabled can access and use the different tools to gain knowledge. We must ensure that the learner do not lose the interpersonal communication as they become technically oriented. Today all of us prefer smart work rather than hard work, so the new way of teaching and learning is the part of smart work in the smart classroom. Thus, smart classroom is an innovative concept of the learning and are a complete solution for modern-day learners and educators. We all must engage ourselves to do innovative work in education and effective utilization of smart classroom.

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