

Smart Class : An Innovative Tool for Improving Quality Education

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Quality education is an essential requisite in today's competitive environment. Technology has affected us in every aspect. The smart class is a modernized method of education in Indian education scenario which provides quality education to students by helping them in better concept formation, concept elaboration, improvement in reading skills and academic achievement.

The traditional approach of lecture and note taking has lost its effectiveness as the modern day around education grows. In efforts to grow academically it must be considered that differentiated modalities of teaching and learning are necessary to implement deeper levels of growth and conceptual development. Since every student is not interested in all subject matters. However, it is the responsibility of the education system to employ a variety of opportunities for the students to gain interests, orchestrating academic growth and progression throughout childhood and adolescence. ICT has turned from being a technology of communication and information to a curriculum creation and delivery system for teachers and learners.

Learning is not how much one can cram up. It's rather the knowledge that remains after one forgets what he/she learned in schools. Thus we emphasize on learning the concepts with the help of visuals and activities. To keep such a view the smart learning was introduced.

Technology benefited us in every aspect of our life right from communication to education. New methods of teaching have been introduced which is known as smart class. It uses instructional material. 3D animated modules and videos, and all the renowned schools and institute are using this concept. Now the students are thrilled at this concept of innovation and interactive learning process. The concept of smart classroom has not only made education interesting but a chance to students to enhance their performance.

Smart class is a smart concept for smart educators of smart schools. Smart class includes smart learning techniques, smart classroom management smart learning environment and smart learning materials, Internet, Projector and other multimedia devices are the main parts of smart as "while board classroom". Now Blackboard and chalk is replacing by white board, Projectors and the pointer. Really it is an amazing than traditional teaching learning system. Smart class is a class of modern age. There will be fully multimedia enabled audio-visual classrooms in a smart classroom. It will be quite different than traditional class. In a classroom the teacher works as a facilitator in learning.

Smart class is a very attractive concept in education. It is an innovative concept in education. Smart class needs smart teaching learning environment. In a smart school there may be innovative working system for teachers and in school management. An attractive classroom environment is needed for such type smart and innovative activities smart school class will be more attractive, innovative, student friendly healthy and more interesting class. In a smart class it may possible there to arrange "Online Classes" by internet smart class is a platform for e-smart class and online IT class.

It is a new vision in education. The use of educational technology can bring a huge change in education. Internet and a learning devices can make class room environment extremely amazing. Teaching through computer, internet and multimedia lesson are available. By using these multimedia lessons teachers may teach the students very easily.

Characteristics of a Smart Classroom

Adaptive Learning :-

Any classroom will always have students of different types of learning abilities in it which often makes it difficult for teacher to make sure that all of them understand the concepts. The modern approach of adaptive learning gives students the freedom to learn at their own pace and in the way they are most comfortable with.

Collaborative Learning :-

Learning through collaboration is one of the most effective forms of learning. Teaching and learning in isolation are very restrictive and hinder progress. Learning in group enhance the scope of learning and develops critical thinking. Collaborative learning activities include collaborative writing group projects, joint problem solving, debates and more. Collaborative learning redefines traditional student teacher relationship in the classroom.

Computing Devices :-

Computers are readily available in modern classrooms since they are essential tools for 21st century student and replace the utilities of pen and paper. They give teachers the opportunity to enhance their lesson and assist them.

Mutual Respect :-

Teacher and student should always have respect for each other. As now the role of teachers is no longer to be the sage on the stage, students should not forget their value as they will always receive guidance from them. Also teachers should encourage students to speak with confidence and value their opinions.

Performance Based Assessments :-

Regular performance assessments are carried out by teachers through various methods which are not restricted to tests. These can be by conducting quizzers and polls.

Student Centric :-

In smart classrooms teachers play the role of facilitators. They help students think critically. Students discover and master new concepts. Student centric classroom environment puts students' interest first and is focused on each student's needs, abilities and learning styles.

Student take responsibility of their learning :-

As students are encouraged to actively participate in their own learning, they become responsible for their learning.

Innovative working system for teacher and in school management :-

An attractive classroom environment is needed for such type of smart and innovative activities. A smart school class will be more attractive, innovative, student friendly, healthy and more interesting. In a smart class, it may be possible to arrange "Online Classes" by internet. A smart class is a platform for e-smart class and online IT class.

The upgraded kind of education :-

This upgraded kind of education is very interesting for children. It is an innovative idea to change our boring system into a smart and innovative system of teaching-learning activities. Smart school : Smart Class is a more fascinating model in the world. In a smart school teachers have to develop the skill of learning from experience.

Objective of Smart Class Room :-

The following are some objectives for a Smart Class Room Application

- To help teachers to meet new challenges and developing students abilities and performance.
- To enable teachers to access multimedia content and information that can be used for teaching students more effectively. Pedagogically sound and visually rich curriculum resource.
- To enables teachers to express their views and ensure that every child is understanding the undertaken concept which ultimately affects his achievement.
- To make possible for the concepts to be understood clearly. To make abstract concept real.
- To have interactive and live teaching to elaborate and compare different objects and perceptions towards the particular concepts.
- To designed a module of smart class which allows a student to visualize the concept much better than static images. Visuals and animation that students will never forget.

- To move a step towards development where students achievement is highlighted.

Why Smart Class ?

As per the ASER (2013) survey, 96.8% of all our students between age group of 6 to 14 years are now attending school so, we are now having most of the children into the school education system and for them, quality of the delivery of the content needs reforms through smart learning. Smart class creates a new form of collaborative learning environment. Teachers can have a watch on real time screen activity of the students and he or she can choose any of the students screen to share with the whole class. Hence the device itself becomes a collaborative tool at the operating system level and is not limited to application level only. In the Smart classroom, each student can work on a different application or document and perform activity in any approved website or platform. Teachers can also express their views and ensure that every student is understanding and learning the concepts. As a result, even abstract concepts which were difficult to teach otherwise, becomes an inspired joyful journey of discovering new concepts. Debi (2003) concluded that students performed better when exposed to program teaching learning material compared to traditional method of classroom teaching.

Principles Inherent in Smart Classroom :-

The following are the principles for smart classrooms in terms of arrangement and pedagogical configuration, which we have established as widely generalizable and which should be considered in order to transform any formal learning space in smart classroom.

Principle of Adaptability :-

(As per the needs, the concept of smart classrooms, includes the principle of adaptability to the type and needs of teacher and of each student)

- Principle of connectivity - (digital connectivity with the whole world)
- Principle of comfort - (In learning, reading, writing, playing and experimenting)
- Principle of Creativity - (as per learners needs, ability and learning style)
- Principle of organization - (in arranging space and resource so as to make adequate for learning activities)
- Principle of flexibility - (in work and work schedule)
- Principle of safety and security - (in terms of cyber crime)
- Principle of personalization - (as per ones like and needs so that learning is reinforced).

Advantages of smart classroom

Digital medium for notes :-

In a regular classroom the teacher writes on the board and the students note it down on their notebooks. In this methodology of teaching the students mind gets diverted in two directions, one is listening to the teacher and understanding and the other is writing or making notes for future reference. In this way the students do not understand the topic properly or gets confused or even sometimes, they do not listen anything and just make notes. This is a very dull approach in teaching process. But this is not the case in a smart classroom. In a smart classroom there is a digital approach for notes. the teacher, instead of writing on the board, teaches using power point presentation, word documents, images, videos and audios. These resources are given to the students in pen drives, CDs, or they are emailed to them. In this way, the students do not have

to write for making notes. Notes are provided to them and they can devote their full concentration to the lecture.

Ease of Understanding :-

There are many topics in the curriculum which are very difficult to understand. They cannot be just taught by using a chalk and a blackboard. They require an interactive teaching approach. With smart classes, the teacher can use multimedia to teach that topic to the students. The students learn more than from what they see rather than from what they listen. So the students understand easily and effectively all the difficult topic in a smart classroom.

Makes learning enjoyable :-

If we go and look in a regular classroom, the students are feeling very sleepy. Some of the students are not even listening to the teacher. They are busy in talking with their friends. In short, the class becomes very boring for them. But it is not so in a smart classroom. The use of smart technology in the class makes the classroom a fun room. The class becomes interesting and enjoyable for the students. No student feels sleepy. It makes learning a fun process. The students who do not like to go to schools also starts enjoying in the school.

Improves the academic performance :-

It is often seen that the students studying in a smart class get a better result than the students studying in the regular class. This is so because the understanding ability in the students studying in a smart classroom is way more than other students. The use of technology in the classroom for teaching increases the understanding of the students. The topic becomes clearer and the base of the subject becomes stronger. Obviously the students with better hold of the subject and with strong basic knowledge of the subject will score more in exams.

Communication :-

The technology used in a smart classroom makes video conferencing possible in the classroom itself. In this way, the students can communicate with the experts such as professor of IITS and IIMS or the people engaged in research work. This provides the students with extra information about their subjects which beyond the scope of the text books. The students get to know about the ongoing issues related to their subjects. They get acquainted with the upcoming technology and theory. This proves very beneficial for them in the near future.

Health Friendly :-

There are some teachers who are very sensitive towards the use of chalk or markers. Some of them experience skin allergies when they write with chalk and some are allergic to the chalk dust. Some teachers are not comfortable with the smell of the ink used in the markers. For these teachers smart classroom. The teaching is done by using digital or e-resources. So there is no chance of allergy.

Disadvantages of Smart Classroom :-

With so many advantages of the smart classroom, there are a few disadvantages also which makes the use of smart technology quite limited. They are :-

Cost :-

The technology used in the smart classroom is very expensive. All the schools cannot afford it. Even the schools which can afford some school often take loans to buy the smart technology. Consequently the fees of the schools are increased to meet the cost of the equipments. The admission fees of the schools with smart classrooms also like. All parents cannot afford such

expensive education for their children. Every child cannot get access to the smart classrooms.

Skilled faculty :-

All teachers cannot use smart technology for teaching. The teachers have to be trained before they can start teaching in a smart classroom. The teachers are trained to use the technology in an effective manner. They are also trained to handle faults in the gadgets. This training also cost much. If the teachers are not properly trained the technology would become a disturbing factor rather than becoming helpful.

Maintenance :-

Like all electronic gadgets, the gadgets used in smart classrooms, require proper maintenance. The rooms in which these gadgets are installed should be free from dust particles and should not face direct sunlight otherwise the gadgets will become faulty. Also these equipments release a lot of heat in the surrounding so the rooms should be air conditioned. Technical staff has to be appointed for the maintenance of devices. This further adds to the cost. The devices also need to be updated regularly which is a very time consuming process.

Technical faults :-

All the electronic devices are prone to faults. If the equipment do not work one day, the day is considered as a waste. They require a lot of time to come back to their proper functioning state. No teaching can be done on that day. In this case the teacher should always be ready for an alternative methodology for teaching that is, using the blackboard. But this would be very dull experience for the teachers as well as the students who are regularly participating in classrooms. The workload of the teachers is also increased as they have to prepare, the topic as per two different methodologies of teaching.

Conclusion :-

A smart classroom increase the interest of the students in studies. Students to learn more. With so many advantage and a few disadvantages smart classes can still be considered good for the students. Due to some disadvantages, we cannot ignore the advantages of smart classrooms. All the disadvantages of the cost involved. But in the coming few decades, the rise in technology would definitely decrease the cost of these devices to some extent. Moreover, the new inventions in the fields of computer science and technology would definitely make teaching and learning even much better. The government schools should also employ smart technology in their classes so that all the students can have access to smart classrooms.

The smart classroom provides the students as well as teachers to learn through new techniques and that too in a different and interesting manner. It is fair to say that now we all have become more and more technologically inclined now. The younger generation adapt quickly to new technology, just as they have to be smart enough in using these technology in their professional world in future. The smart classroom is one step resource for students weeding research, technology or writing help. Hence in the near future classrooms will have to adapt accordingly and upgrade themselves suitable to the needs of future generations.

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