

Smart Classes Teaching Using Advanced Techniques for Quality Education

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Abstract

Due to the fast advancement of technology, high-quality education is crucial in today's competitive economy. The notion of "Smart Classroom" exemplifies a modern teaching system that assists students in the development of higher-order ideas, academic accomplishments, enhanced reading abilities, etc. In contemporary education, the conventional technique of delivering lectures and collecting notes has lost its usefulness. Differentiated modes of teaching and learning are required for improved conceptual growth, which must be addressed in attempts to expand academics. It is the job of the school system to utilise these types of concepts to understand student interests and to plan educational growth throughout infancy and adolescence. Information and Communication Technologies (ICT) have evolved from an information and communication technology to curriculum development and delivery system for students. With the advancement of technology, the curriculum is incorporating new teaching methodologies, one of which is known as the "Smart Classroom." In the present day, every nation is contemplating enhancing the quality of its educational system. Globalization has led to advances in technology and digitalization, but this digitalization revolution has yet to reach education. As it is well recognised that the conventional technique of learning has lost its efficacy, it is the obligation of the education system to implement a smart education system in order to boost student engagement and academic advancement. David established the notion of smart class many years ago, and it has helped to make learning more effective and engaging for students. As "change is the rule of nature," the conventional way of teaching has been replaced by a technologically advanced system of education. In this research, the efficiency of smart courses in the educational system and how they assist students to improve their reading abilities and academic accomplishment are examined.

Keywords: Smart Classroom, Education, ICT, E-Learning, Smart Devices, Technologies.

INTRODUCTION

The Smart Learning strategy equips individuals of all ages with a framework and a collection of Smart Thinking Tools that promote greater levels of comprehension and new ideas. Structured discussions and evaluations as and for learning are meticulously woven throughout the technique in order to establish a deliberate framework for learning and enhance the thinking of all students. Teachers and students are collaborating on "Smart Education" initiatives to further the notion. The "Smart Classroom" idea is a remarkable innovation and one-stop resource for kids that need analysis and technology in the current educational system. Currently, both instructors and students are interested in technology, and pupils easily adapt to new technologies or ideas, which aids them in the professional world. Smart gadgets like cameras, projectors, and remote controls are technologies that result in a great deal of student engagement and flexibility for a variety of learning styles. Not only has the notion of a "Smart Classroom" made teaching more engaging, but it has also provided a fantastic platform for students to improve their performance. In addition, pupils are able to comprehend the topic more quickly than using verbal or written notes since visual notions assist them to comprehend the subject matter more simply and effortlessly. With the tremendous wave of digitization sweeping the globe, it was only a matter of time until education became fully digitalized. Everything, from digital payments to working from home, is now shown on displays and monitors. We are advised not to use cash or paper receipts; the school sector, which uses the most paper, should make the switch immediately. Intelligent classrooms are an improvement from conventional classrooms. They reimagine education by embracing the concepts and tenets of traditional classrooms all the way from Gurukuls to contemporary classrooms with enhanced features. Similar to smartphones, smart houses, smart automobiles, and smart cities, the notion of smart classrooms is novel, trendy, and technologically advanced. The digitally equipped classrooms include capabilities such as cloud storage, intelligent

data organisation, and monitoring of student ability levels, among others. With the use of technology, virtual experiments may be conducted via practical simulations in smart classrooms, which are not restricted to the addition of audiovisuals to instructional content. Globally integrated, real-time lectures from professionals may be made possible via video conferencing. On a smartboard, it is now feasible to get a level of exposure that was before impossible.

Literature Survey

The classroom is where students acquire information, and until five years ago, the traditional idea of books, copies, notes, etc. was used to sustain the teaching-learning process. With the advancement of science and technology, however, this traditional concept is being replaced by a new concept/process known as the "Smart Classroom," in which the teaching-learning process is more interactive and students are more engaged as a result of the use of videos, pictures, PowerPoint presentations, etc. In ancient times, "Gurukuls" were the locations where pupils were instructed by Gurus using this age-old method of books and copies. This approach, however, is being superseded by the innovative concepts of "E-learning" and "Smart Classroom." A "Smart Classroom" is a classroom in which the teacher has access to a computer, audiovisual equipment, 3D animated modules, etc. The notion of innovation and the interactive learning method also excite the pupils. Digitized Classroom has not only made education more engaging, but it has also enhanced student performance. The notion of "Smart Classroom" is a new generation educational product that assists students in readily acquiring more information and is a step towards the future of education procedures. Typically, a "Smart Classroom" is outfitted with a variety of multimedia components to enhance the teaching and learning process. There are digitalized and new media classrooms. The notions of "Smart Classroom" in terms of pedagogical setting and its layout for developing such a classroom to

turn learning spaces into contemporary smart classrooms. A smart classroom has seven fundamental concepts: flexibility, comfort, connectivity/IoT, multiplicity, openness, and personalisation.

Importance of Smart Classes

It is the goal of e-learning and smart classrooms to help students improve their grades by making the whole course more enjoyable to study. New educational products such as smart classrooms help students get better grades and are a step toward the future of education. The area of education has never seen

anything like e-learning. To help students of all ages and kinds of life reach greater levels of comprehension, the Smart classroom method offers a nine-step structure and several Smart Thinking Tools. The process helps students establish background knowledge, absorb information, create a product that demonstrates their understanding, and then reflect on their own growth as learners. A deliberate learning environment is created for all students by including structured discourse and evaluation as well as the learning process itself. A Smart Classroom is a virtual classroom that has all of the same features as a physical one.

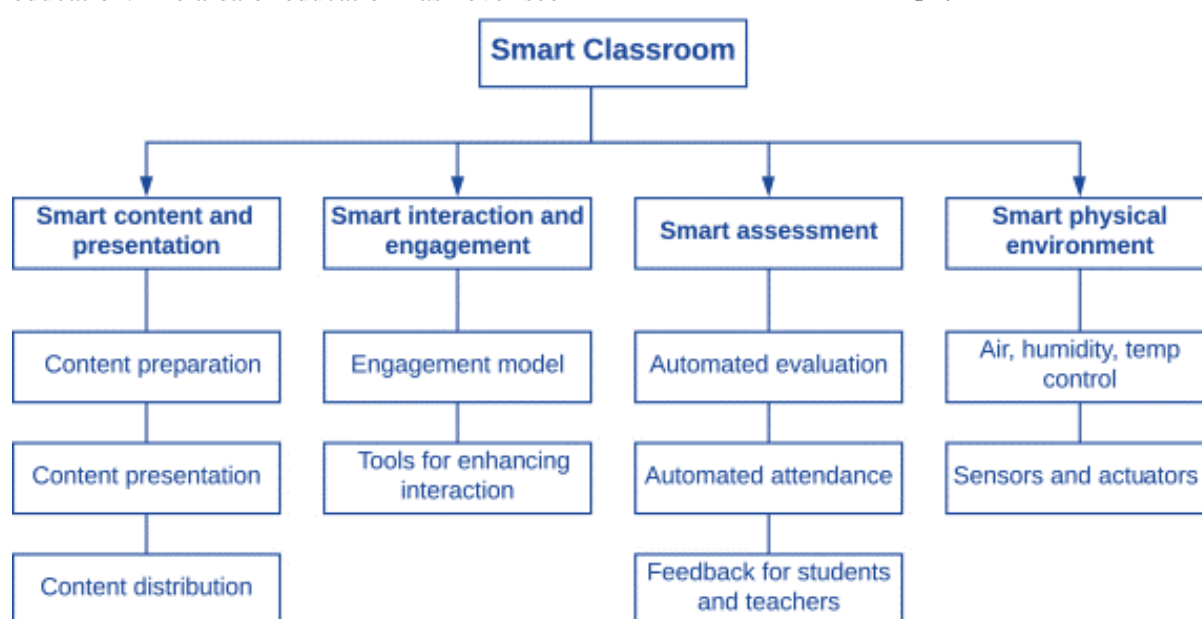


Fig.1: Representation of working of Smart Classroom Concept

Benefits of Smart Classrooms

A smart classroom has a variety of features that make education more accessible to everyone. In the past, only the wealthy could attend school. Quality education couldn't be spread to all corners of our society because of a variety of factors. With the help of technology, these difficulties can be overcome. With the support of remote lectures from the world's best colleges and institutions, smart classrooms may transcend geographical limitations. They improve the teacher's abilities and the classroom's ability to facilitate two-way learning.

Here are some benefits of smart classrooms:

Online Information Access

Students may search via a collection of online resources. The database may also be used by teachers to provide students with internet resources, such as movies, photos, and documentaries. Learning and teaching materials are available for each of them.

Improved Educational Outcomes

Students and instructors alike benefit from the use of smart classrooms. Students may study in a variety of ways thanks to the use of technology. Teachers may use technology to assist students better comprehend a subject by converting large paragraphs or texts into

visuals, graphs, flowcharts, and animated films. It aids long-term memory retention in pupils. It's a known truth that images are better at storing information in our memory than words.

Ease of Access

Smart classrooms' internet-connected technologies save a wealth of data. Students and teachers may use it at any moment throughout the process of teaching and learning. By using information from a variety of sources, teachers may make knowledge accessible for pupils to learn.

Interactive Learning Experiences

With projectors, presentations, films, and graphics, teachers are able to more effectively communicate their lessons to students. Students and instructors will be able to engage in collaborative sessions as a result of this technology. As a result, kids are more likely to be interested in what they are learning and to ask questions about it. Students and instructors will form deep bonds as a result of this.

Easy Access to Online Resources

Smart classrooms, as you may be aware, are linked to computers and the internet. When instructors want to demonstrate a concept in a more hands-on way, they may use computer technology to do it. Study materials may be downloaded and printed from the internet. From applications to platforms, e-textbooks, and more, there are a wealth of resources accessible. For the benefit of students and instructors alike, it facilitates communication and the exchange of knowledge.

Eco Friendly

Smart classrooms are equipped with environmentally-friendly technology. Since a result, there will be no need for students to write down or print out any material, as everything will be accessible online. As a result, we can save paper, ink, and pencils.

Time Saving

Students spend the majority of class time making notes rather than really learning anything. Teachers will now be able to share

their notes with students through a presentation, thanks to the use of smart classrooms. As a result, the amount of time spent on note-taking and other useful tasks will be reduced. It's also possible for instructors to use a variety of technologies to assist them evaluate their pupils depending on how well they do. In addition, they assist them in assigning tasks, encouraging conversation, and so forth. Everything students need to be more productive may be found within seconds in a classroom using a smart board.

Increased Productivity

Smart courses assist students become more engaged and interested in their studies. They have access to academic materials and learning opportunities, as well as the capacity to put those resources to good use. As a result, students and teachers have more time to engage. Students and instructors will benefit from this as they strive to achieve their academic goals.

Connectivity

In all areas, it's frequently used for lineage and collaborations, and it's also commonly used for distance learning. Students and instructors can work together more effectively and have a greater impact on the learning process when they have access to these technology resources.

Improves Skill

For pupils to think and behave rationally, a well-equipped and aesthetically attractive classroom is necessary. It aids in the development of abilities relevant to their chosen career path. Students are learning critical thinking and problem-solving abilities thanks to the internet. They are able to analyze the circumstances around them and change the wrong ones. Learning has never been easier than it is now, because to the low cost and wide availability of these tools.

Transferring Information

The usage of technology in the classroom has a favourable impact on the way students are taught. The teaching-learning process is made easier at the same time that teachers convey

information to their pupils. Smart classroom technology will keep students interested in their academics.

Use of Technology

In today's technologically advanced classrooms, information may be presented visually through graphics, graphs, flow charts, films, and more. Using technology to teach topics is something we know the learner will like. For students' benefit, professors may give lectures more efficiently with the use of the smart courses. Digital boards, LEDs, laptops, projectors, and internet access are all available to help students learn. Many educational websites and applications allow teachers to demonstrate real-world solutions to their pupils.

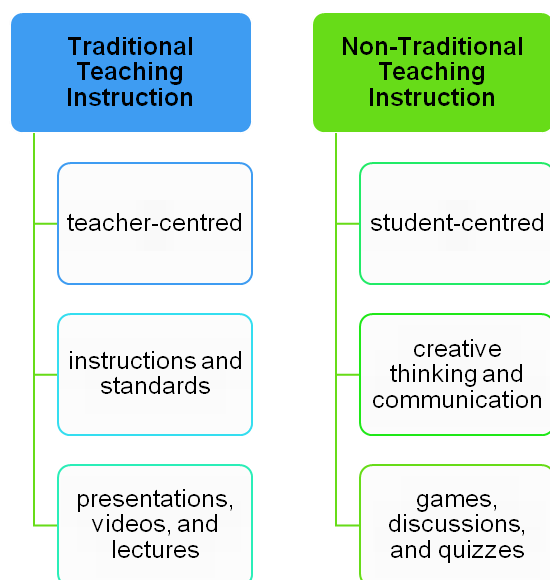


Fig. 2: *Traditional Classroom Vs. Smart Classroom*

Significance of Smart Classrooms: in Today's Time and Age

Almost every aspect of our lives is now dependent on technology. And why not? Technology improves our lives in every manner possible. Digital integration is the only path ahead. In today's world of rapid technological advancement, the traditional classroom model with books and a chalkboard no longer makes sense. A generation of children who have grown up playing with

smartphones and tablets need smart classrooms that can adapt to their requirements. Because Generation X was raised in an age of high-tech gadgetry, their educational institutions must also keep up. Smart classrooms allow for individualised learning. These reasons explain why today's students benefit from using smart classrooms. Young parents and their new generation of children anticipate cutting-edge features from them. Cloud storage, online surfing in the classroom, and audio-visual instruction are among the most recent innovations in the sector. They keep academics exciting, competitive, and at the forefront of technology.

Future of Education

Industries will become more automated in the years to come. It is inevitable that technologically savvy people would be in high demand in every business because of the widespread use of job automation. Educators of the future will be those who can create a favourable ecology of smart classrooms for the development of such professionals. Instead of just satisfying industrial needs, these classrooms aim to cultivate a new breed of learners who are well-rounded in all aspects of their lives. Digital classrooms have the potential to elevate education to a level previously unimaginable. There is a constant need for improvement and innovation in the future. The outdated idea of a classroom isn't being scrapped; rather, it's being improved. By combining elements from now and tomorrow, smart classrooms may better prepare students for their future careers. An understanding of how smart education may benefit the future generation is critical. As the internet has been more widely available over the world, its importance has increased significantly. Videos and presentations are being used to explain difficult subjects in a clear and concise manner. These courses are being taught by teachers who are getting prepared. Teachers are expected to be digitally savvy in order to use the full range of resources available in today's smart classrooms, and the effects are clear. In India, as well as other nations throughout the world, the educational environment will soon include paperless study and online evaluations. It is just

a matter of time until smart classrooms become the norm rather than an exception.

Conclusion

Time has been a boon to humanity since the dawn of civilization. Throughout our civilization's history, technology has played a significant role in its development. We came across the "Smart Classroom" idea at this time period, when technology played a significant part in education. The concept of "e-learning" is a game-changer in the realm of education. We all know that learning anything new is challenging at first, but once you get the hang of it, it becomes second nature. When both the teacher and the students get acclimated to new technology, it is the most pleasurable experience for everyone involved. Students in today's society have access to a vast amount of information thanks to modern technologies. Whether a student is brilliant or impaired, they can locate and apply the information they need to achieve knowledge in practically any method conceivable. It is imperative that teachers educate children for a technological environment that demands self-initiative and accuracy in learning, as well as the capacity to detect or evaluate information. Research is needed to guarantee that additional psychological and social aspects of child development are taken into account when new technology solutions are developed. If we don't keep an eye out for the subtleties of interpersonal communication as kids get more technically minded, we risk losing them completely. Smart work, in today's world, is preferred above hard effort, and a new approach to teaching and learning is an important component of that. In order to make education simpler and more engaging for students in the future, we all need to engage ourselves in the smart style of learning and do further study in this area.

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