

MULTI MEDIA BASED EDUCATION-SMART CLASS: AN OPTIMUM SOLUTION

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ABSTRACT

Rapid advances in technology have enabled a more social, dynamic, adaptive, and student-centered learning environment. One such learning environment that has recently attracted attention is the "smart classroom." The term "smart classroom" generally refers to the use of cutting-edge educational technology to enhance teachers' ability to support student learning and students' ability to engage in formal educational learning experiences outside of the traditional classroom. EDUCOM initially introduced the Smart class in year 2004. Currently, over 12,000 schools across 560 districts in India have implemented Smart Class. However, it is important to note that the effectiveness of smart classes ultimately depends on the quality of implementation, teacher training and support, and availability of resources and infrastructure. Technology integration must be accompanied by effective teaching practices and qualified teachers who can leverage smart classrooms to optimize student learning outcomes.



Keywords: EDUCOM, Smart-Class and Technology Integration.

Introduction

Our education system is now subject to a constant influx of new policies and revisions of outdated policies, and its procedures are subject to scrutiny. Therefore, to adapt to an ever-evolving world, the current education system needs to undergo major transformation. This means that the main goal of the new education system is to stimulate curiosity in learners and instill values such as critical thinking and other lasting skills needed in life. Education plays a key role in change The whole country is

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concerned about the digital society and information economy. Modern education systems play an important role in improving learning processes and outcomes. Therefore, there is a mutually reinforcing relationship between educational technologies. The Indian government is actively promoting innovative and advanced technologies to improve and improve technology in the education sector. Using technology in education makes it easier for teachers to present content in an effective way, making it easier and more meaningful for learners. Therefore, since independence, the government has developed policies to improve the use of modern technology in the school curriculum. In the information economy, modern education systems play an important role in improving learning processes and learning outcomes. Therefore, there is a mutually reinforcing relationship between educational technologies. The Indian government is actively promoting innovative and advanced technologies to improve and improve technology in the education sector. Using technology in education makes it easier for teachers to present content in an effective way, making it easier and more meaningful for learners. Therefore, since independence, the government has developed policies to improve the use of modern technology in the school curriculum. E-learning approaches are highly beneficial for teachers as they can increase student success rates and achieve better teaching performance. E-learning provides structured teaching strategies, methods, and techniques to convey content effectively. Since this is a native concept, it is difficult to create a lesson plan. It also helps teachers develop teaching strategies that take into account students' individual differences. Teachers can use highly tailored e-learning approaches in their teaching strategies to improve conceptual understanding. The more you understand the concepts, the better knowledge you will have.

Understanding how learning takes place is a prerequisite to comprehending how multimedia might be employed in training.



Three Types of Memory Exist in Humans

Long-term memory: For a little period of time, sensory memory may hold an unlimited quantity of information. Working memory: Working memory can hold a finite amount of data for a brief period of time. Sensory memory: The capacity of long-term memory to hold information indefinitely is unbounded.

Smart classrooms and student-centered pedagogy are interdependent (Koh et al., 2020; Malekigorji & Hatahet, 2020). For example, a classroom feedback system combined with group learning can facilitate students to participate actively in learning tasks and discuss collaboratively with peers to find optimal solutions to problem. Furthermore, without the support of student-centered pedagogical approaches, smart classrooms may not be able to fully accomplish their technology-enriched functions and become less fruitful once the makeshift effect of technology break fro (Zhan et al., 2021). Therefore, to provide a abiding student-centered environment, smart classrooms must incorporate student-centered pedagogical approaches. However, different student-centred pedagogical approaches (e.g., group learning, problem-based learning, and project-based learning) may have different impacts on outcomes. learning (Burgess et al., 2018; Kan and Zeki Saka, 2021). need to learn the most effective pedagogical

methods in smart classrooms. Furthermore, relevant studies have highlighted that smart classroom intervention timing combined with student-centered pedagogy (SC-SCP) can influence learning effectiveness (Ran et al., 2022; Wong et al. Kan, 2022).

- Debi (2003) determined that using Smart board coaching accelerated learner participation and engagement.
- Sally Bowman Alden (2003) located that generation utilization fosters scholar independence, an experience of accomplishment, and complements their vanity and learning abilities.
- Zittle (2004) cited that Interactive Whiteboard coaching had a nice effect on college students' fulfillment in geometry on the fundamental college stage.
- Armstrong and colleagues (2005) discovered that special needs college students also benefited from Interactive Whiteboard technology.

The Integration of smart classrooms in the conventional mode of teaching enhances the interaction of teachers and pupils, as they follow each other in the teaching-learning process and it provides ease to the teachers in keeping a track in track of student learning levels. To make the teaching-learning environment more effective teachers deliver their lessons through smart classes. It makes use of a mapped curriculum 2D and 3D digital content which the teacher could access right in the classroom and project on Whiteboard to elucidate and explain critical concepts, fundamentals and formulas easily. Using digital boards, LEDs, computers, e-textbooks, projectors, etc. develops an interest and avoids boredom in the pupils. The Internet is a treasure trove of indispensable information that students can access anytime. Since learning is facilitated with the use of flow charts, photos, images, maps and animated videos it can establish a strong connection. "Technology offers many benefits to enhance education, most importantly; technology integration has the potential to increase students' motivation." (Anderson, 2000).

In the new era of technology, teachers should have to acknowledge themselves with the new technology to enhance the quality of teaching. This study will help to understand the effectiveness of Smart class teaching in the three-domain based on learners' performance achievement and learning. It would also prove to be useful for future researchers or policymakers to build a curriculum based on modern education.

Smart Class and Academic Achievement

Smart Class

Smart classrooms have the potential to positively impact academic achievement across various subjects. Here are some ways in which smart classes can contribute to improved academic outcomes:

- **Enhanced Engagement:** Smart classrooms foster active engagement and participation among students through interactive and multimedia-rich learning experiences. Increased engagement promotes better retention of information and understanding of concepts, leading to improved academic achievement.
- **Personalized Learning:** Smart classrooms can cater to individual learning needs and preferences. Adaptive learning technologies and data analytics help identify students' strengths and weaknesses, allowing for customized instruction and targeted interventions. Personalized learning approaches support improved academic performance.
- **Visual and Interactive Learning:** Smart classrooms leverage visual aids, simulations, videos, and interactive activities to enhance understanding and retention of content. Visual and interactive learning experiences facilitate deeper comprehension, leading to improved academic achievement.
- **Immediate Feedback and Assessment:** Smart classrooms enable immediate feedback and assessment. Online quizzes, formative assessments, and student response systems provide instant feedback to students, allowing them to identify areas of weakness and make necessary adjustments for improved performance.
- **Collaboration and Peer Learning:** Smart classrooms foster collaboration and peer learning opportunities. Students can work together on projects, engage in discussions, and share knowledge using interactive whiteboards, online collaboration tools, and communication platforms. Collaborative learning promotes deeper understanding and higher academic achievement.

- **Access to Rich Educational Resources:** Smart classrooms provide access to a vast array of digital resources, online libraries, educational platforms, and multimedia content. Students can explore a variety of materials, conduct research, and access up-to-date information, supporting deeper learning and academic success.
- **Real-World Connections:** Smart classrooms facilitate the integration of real-world applications and examples into the curriculum. By connecting academic concepts to practical, real-life scenarios, students can see the relevance of their learning, which can enhance motivation and academic achievement.
- **Self-Paced and Individualized Learning:** Smart classrooms often offer self-paced and individualized learning options. Students can progress through the curriculum at their own pace, focusing on areas where they need additional support or challenging themselves with more advanced content, leading to better academic outcomes.
- **Data-Driven Instruction:** Smart classrooms enable data collection and analysis on student performance. Teachers can use this data to make informed instructional decisions, identify areas of improvement, and tailor their teaching approaches to maximize student achievement.
- **Remote Learning Opportunities:** Smart classrooms provide flexibility for remote learning, allowing students to access educational resources and continue their studies outside of the traditional classroom setting. This flexibility supports uninterrupted learning and can contribute to improved academic performance.

By leveraging the advantages of smart classrooms, schools can create a learning environment that promotes engagement, personalized instruction, collaboration, and access to rich educational resources. These factors, in turn, contribute to improved academic achievement and student success.

Academic Achievement

Academic achievement refers to the level of success or accomplishment attained by a student in their educational pursuits. It typically encompasses various aspects such as grades, test scores, class rank, and overall performance in academic subjects.

- **Effort and Study Habits:** The effort students put into their studies and the adoption of effective study habits can significantly impact their academic achievement. Regular study routines, time management skills, and active engagement with course materials contribute to better academic outcomes.
- **Teacher Quality and Instruction:** The quality of teaching and instruction provided by educators plays a crucial role in academic achievement. Skilled and knowledgeable teachers who employ effective instructional strategies can enhance student understanding, motivation, and performance.
- **Curriculum and Learning Materials:** Well-designed curricula and appropriate learning materials contribute to academic achievement. Clear learning objectives, relevant content, and engaging resources can support students in mastering concepts and skills.
- **Supportive Learning Environment:** A positive and supportive learning environment fosters academic achievement. Factors such as supportive teachers, peer collaboration, access to resources, and a safe and inclusive school culture all contribute to student success.
- **Parental Involvement:** Parental involvement and support have a significant impact on academic achievement. When parents are actively engaged in their child's education, providing guidance, encouragement, and a conducive home environment, students are more likely to excel academically.
- **Individual Factors:** Each student's unique characteristics, including their motivation, self-discipline, learning style, and prior knowledge, can influence their academic achievement. Students who are self-motivated, persistent, and possess a growth mindset tend to perform better academically.
- **Socioeconomic Factors:** Socioeconomic factors, such as family income, access to resources, and parental education levels, can influence academic achievement. Students from disadvantaged backgrounds may face additional challenges, but targeted support and interventions can help mitigate these disparities.

- **Emotional Well-being:** Students' emotional well-being plays a vital role in their academic achievement. Mental health, stress management, and a positive mindset contribute to improved focus, concentration, and overall academic performance.
- **Assessment and Feedback:** Effective assessment practices, including timely feedback, allow students to monitor their progress, identify areas of improvement, and make necessary adjustments to enhance their academic achievement.
- **Access to Technology and Resources:** Access to technology, digital resources, libraries, and educational materials can impact academic achievement. Students with access to appropriate tools and resources are better equipped to engage in self-directed learning and explore new avenues of knowledge.

It's important to note that academic achievement is a multifaceted concept, and various factors interact and influence one another. Creating a supportive and inclusive educational environment that addresses these factors can contribute to improved academic achievement for students.

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