



Role Of Smart Classes In Fostering Creativity Among Students

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Abstract

In today's fast-paced technological era quality education is essential. Smart classes promote collaboration and communication among students, fostering a collaborative learning environment. Interactive activities, group discussions, and collaborative projects encourage students to work together, share ideas, and solve problems collectively. Digital tools, such as interactive white-boards and collaborative software, enable students' to collaborate in real-time, regardless of their physical location, promoting teamwork and peer learning. Smart classroom are helpful to increase student's creativity. It is a unusual gift of nature, a highly valued human quality that has been known for a long time to have its influence on scientific, technological and artistic spheres of human activity. The rapidly changing demands and challenges existing in the world today have almost necessarily been accompanied by creative expression and contributions from talented persons. Smart classrooms are transforming education by using innovative technology to improve teaching and learning. By this new method, fostering creativity among students. This increase student's view of thinking.

Keywords: creativity, smart classroom, conventional approach, fostering creativity, divergent thinking, convergent thinking.

Introduction

The 'smart classroom' has been around the academic community ever since new forms of digital technology began to be, used for purpose of education. Until recently the form of technology used in the class room was an overhead projector, which was replaced by an image and text under a lens, then projected on a screen and the development of an interactive white board connected to a computer seemed like something from the future. Smart class concept has not only made education enchanting

but it created a great platform for students to enhance their presentation. The concept is helped to be understand faster than by verbal communication and written notation because visual concepts are used, which help learners to understand the thing more clearly and easily.

The latest teaching and learning technology in education has shifted towards smart classrooms, representing a new evolution in education. The smart learning approach equips learners of all ages with advanced cognitive tools and a technology-rich environment to enhance their educational experience. Incorporating diverse educational technologies into teaching methods also yields a smart effect, instruction through computers, the internet, and multimedia procedures is expected to become commonplace in the future.

The smart class concept introduces a novel vision designed to cultivate interest in studies. This innovative approach benefits both teachers and students by enhancing engagement and learning outcomes. Integrating computers, the internet, projectors, and whiteboards in a systematic, blended manner aligns with the principles of blended learning. Blended learning combines traditional face to face instruction with online educational materials and interactive activities, creating a cohesive and flexible learning environment. Conventional/traditional lecture methods, characterized by passive student roles, have been found less effective in fostering deep understanding and engagement in contemporary education settings. To enhance academic growth and conceptual development, it is essential to implement differentiated instruction strategies. This approach involves tailoring teaching methods to accommodate individual learning needs, preferences, and readiness levels, thereby promoting better comprehension and retention among diverse student populations. This interdisciplinary approach not only enriches learning but also mirrors real-world problem-solving, where addressing complex challenges often requires knowledge from multiple fields. Creativity measures a growth mind-set, encouraging students to believe in their ability to improve through dedication and effort. This perspective is essential for overcoming challenges, learning from setbacks, and persisting despite difficulties. Moreover, a creative learning environment promotes open-mindedness, allowing students to appreciate diverse perspectives.

The education system must actively implement innovative strategies to engage students and design challenging educational programs that promote comprehensive development throughout childhood and adolescence. By adopting diverse teaching modalities, educators can cater to individual learning styles, thereby enhancing conceptual understanding and academic growth. Educators are integrating technology- driven strategies such as smart classrooms, into curricula to enhance teaching methods. These environments leverage digital tools to create interactive and engaging learning experiences. By incorporating activities that stimulate imagination, curiosity, and critical thinking, students not only rekindle their enthusiasm for learning but also develop essential skills for their future careers. Engaging in creative endeavors has been linked to improved mental and physical health, offering benefits such as reduced stress and enhanced overall well-being.

Smart classes

A smart classroom is a learning environment enhanced with digital technology, designed to improve the overall learning experience. Since the invention of the internet, technology has played a crucial role in the advancement of civilization. Digital tools such as interactive whiteboards and collaborative software enable students to work together in real time, regardless of their physical location. This fosters teamwork, enhances peer learning, and makes education more interactive and engaging. In recent years, smart classrooms have gained popularity due to technological advancements and the increasing awareness of their educational benefits. Traditional teaching aids have been replaced with interactive whiteboards and display connected to computers. Educators utilize multimedia resources, including videos, animations, and interactive software, to present lessons in an engaging with digital content, solving problems, and collaborating with their peers, enhancing their learning experience. Teachers can enhance course delivery by integrating digital resources such as animated videos and interactive activities. These tools promote active learning and encourage creative thinking among students.

Innovative technology is transforming education in smart classrooms by enhancing creativity. Interactive technologies, such as multimedia information and interactive displays, engage students and create a dynamic learning environment. These tools adapt to different learning styles and individual needs, providing a more specialized learning experience. Visualization, simulation, and real world examples facilitate a deeper understanding of concepts in smart classrooms. Interactive activities and hands-on experiences encourage students to explore concepts in depth, apply their knowledge in practical scenarios, and develop critical thinking and problem-solving skills. Personalized learning experiences tailored to individual students needs and abilities are supported in smart classrooms. Teachers adapt the pace, content, and delivery of lessons to accommodate diverse learning styles, interest, and proficiency levels. Digital resources and adaptive software enable students to learn at their own pace, revisit concepts as needed, and receive immediate feedback on their progress. This approach fosters autonomy, self-directed learning, and academic growth among students.

Creativity

Creativity empowers students to express themselves respectfully. It provides space for self-discovery and expression while encouraging and recognizing their unique abilities. This process not only boosts their self-confidence but also encourages them to reflect on their own opinions and thoughts. Here are some characteristics of creativity as;

➤ Enhancing problem solving

Encouraging creative thinking helps students approach challenges from various perspectives and develop unique, innovative solutions. They learn to tackle real-life problems, which are often multidimensional, by applying their problem-solving skills effectively.

➤ **Fostering critical thinking**

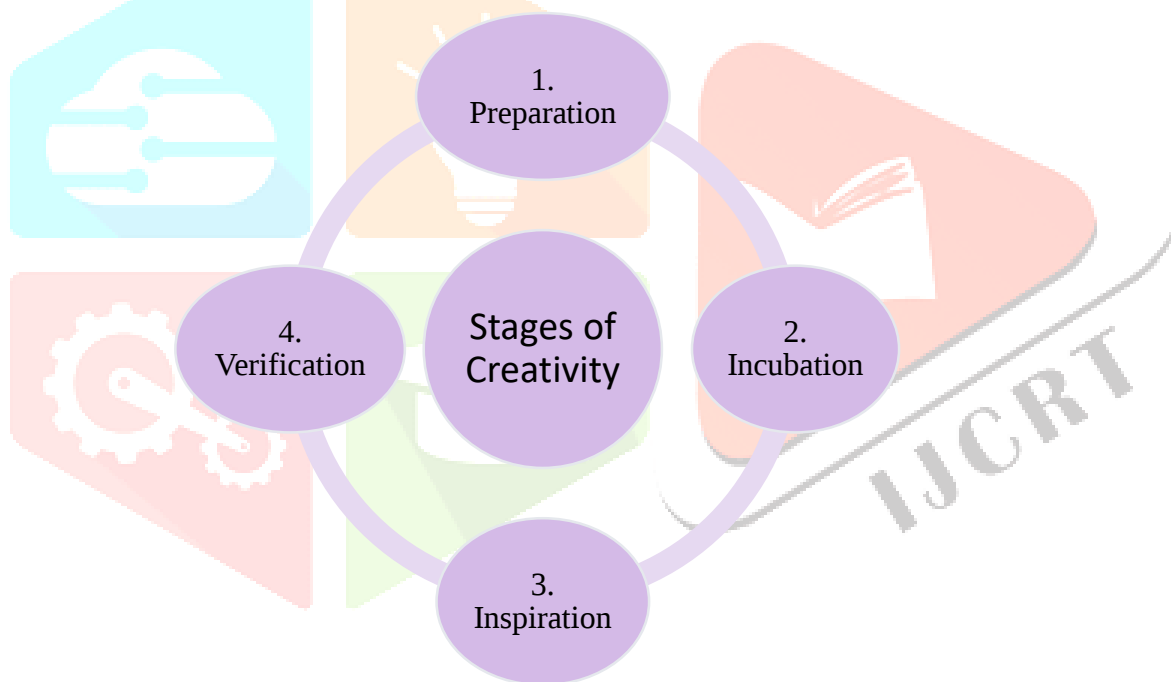
Creativity and critical thinking complement each other. Teachers fosters creativity to help students develop critical thinking skills. Through creative thinking, students evaluate situations, make connections, and weigh various opinions, leading to a more comprehensive and analytical mind-set.

➤ **Promoting self-expression**

Some designer professionals engage in creative work at their profession and gain acclaim. This distinction sets them apart from ordinary everyday creativity and weak creativity. Personal effectiveness, thinking in terms of possibilities, and facing and coping with daily challenges mark little creativity. A can-do attitude, along with a focus on finding solutions and overcoming challenges, defines this level of creativity.

Stages of Creativity

Creativity is a complex process. It does not come all of a sudden. According to 'Graham Walls' there are four main stages in creativity;



- **Preparation:** In this stage, a person tries to understand the problem. Einstein emphasized that formulating a problem is often more essential than solving it. Therefore, one must focus on understanding the problem in details.

In 1965, Macworth stated that finding the right problem is more important than solving it. Discovering the correct problem to address is crucial. To achieve this, one must gather all relevant information to identify, analyse, and understand the problem. Additionally, this process involves setting a goal and generating ideas to develop a solution.

- **Incubation:** During the timeout phase, the individual remains inactive and does not engage in any activity. Although no overt actions occur, the mind continues processing all the information gathered during the preparation stage. The person does not actively think about

the problem with motivation and creativity, but creative processes unconsciously take place within them.

- **Inspiration:** After the incubation stage, the person suddenly gains insight into the problem's solution. New ideas or possibilities emerge, making the individual more active and conscious. They may also reformulate the problem based on the illumination or inspiration gained.
- **Verification:** The person then evaluates and verifies the ideas and solutions within the systems. This process may lead to modifications in the solution. In some cases, they may need to return to the first stage to gather more information about the problem, requiring further preparation. Since the process is cyclical, the stages do not always follow a strict sequence. If the person has strong knowledge of the problem area, the later stages may appear in a different order, sometimes moving directly to incubation, inspiration, or even verification.

Approaches of Creativity

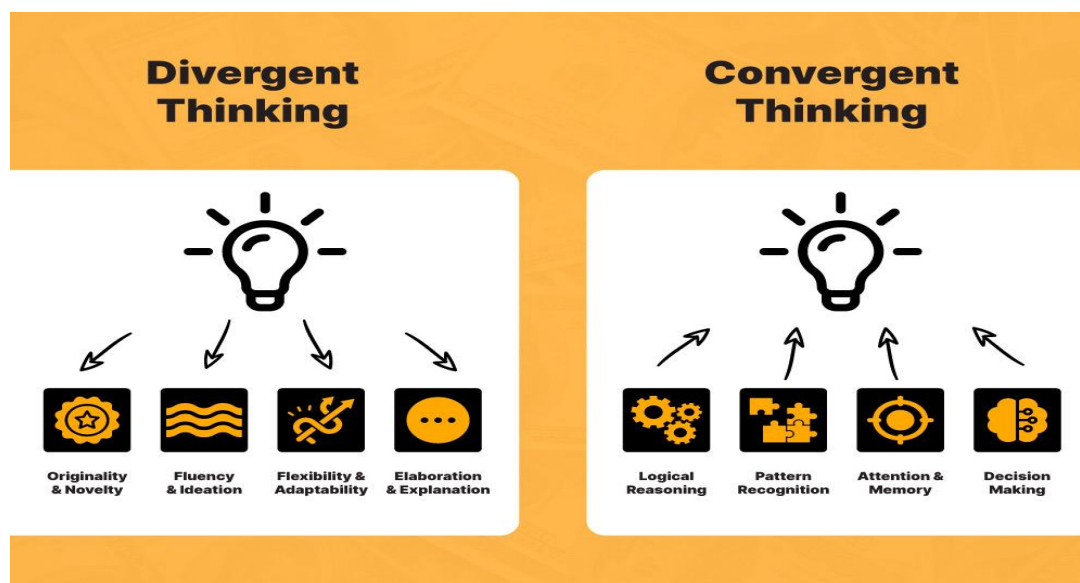
Various theoretical perspectives have approached creativity differently. Freud's psychoanalytic approach views creativity as the sublimation of drives fulfilment, discussing it in the context of daydreaming and paly. According to Freud, unconsciousness processes play a crucial role in the creativity. The behaviourist approach to creativity focuses on creating new or novel connections and associations between stimuli and responses. Insightful learning exemplifies creative thinking. Gaining insight in creative thinking occurs by learning new associations. Thus, creativity, according of behaviourist principles, consists of overt and observable behaviour. The cognitive approach emphasized cognitive processes such as attention, memory, and flexibility in learning, highlighting their important role in creativity. Wallach(1970) discovered that individuals with broader attention absorb a wider range of stimuli and memory traces than those with focused attention, thereby enhancing creativity.

The cognitive approach also emphasizes how divergent thinking generates creative ideas. Guilford explored the concept of divergent production in developing ideas and products. Divergent production involves abilities such as fluency, flexibility, originality and elaboration, which form four significant aspects of creativity. Technology played a crucial role in transforming education, leading to the concept of smart classes. Smart classes enhance collaboration and communication among students, fostering a creative environment.

Principles for fostering creativity:

An individual's creative potential can be enhanced through various techniques and approaches. However, fostering a supportive environment and a mind-set that encourages creativity is essential for its growth. A diverse range of instructional material should be utilized to support various forms of student expression. It is essential to cultivate a positive attitude towards creative achievement and

encourage innovative ideas and creative expression. Establishing a supportive environment at both school and home is crucial in fostering a creative personality characterized by self-confidence, sensitivity, independence, and originality. Below we explore effective techniques that can help enhance creativity.



Divergent thinking: Divergent thinking involves thinking and acting in diverse ways, fostering the ability to generate multiple ideas and enhance creativity. Additionally, children should be provided with opportunities for original expression through various forms such as written language, music, rhythms, and flexibility in ideas generation is essential for their development. In today's world, technology provides students with vast access to knowledge. Information is available in multiple formats, ensuring that all types of learners, including those who are gifted or have disabilities, can find and utilize relevant resources for learning.

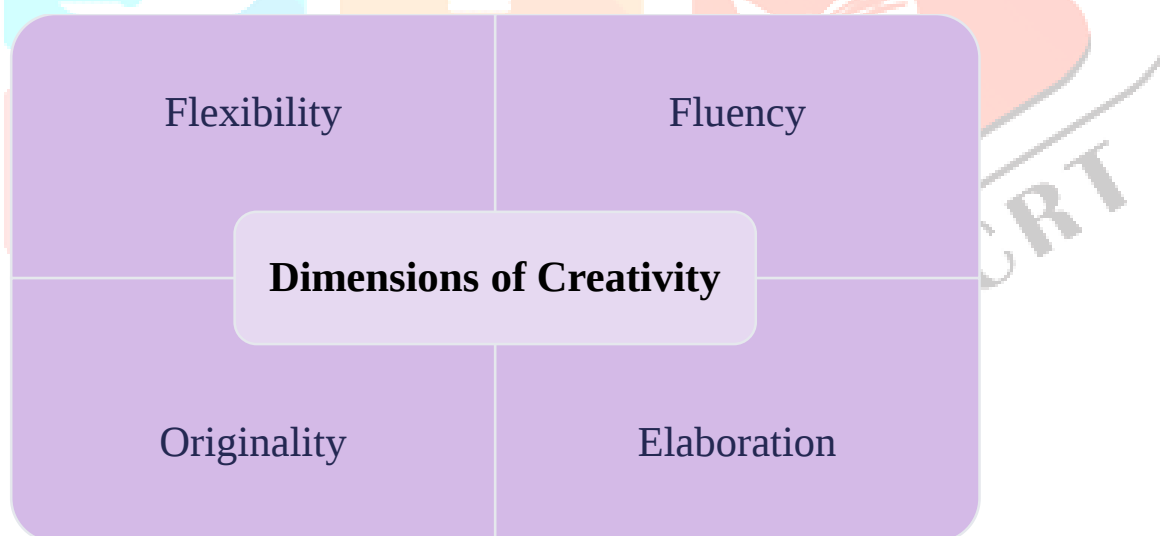
Brainstorming is a collaborative technique designed to foster creativity. In this method, individuals in a group setting as many ideas as possible without self-censorship or hesitation. Participants freely express their thoughts on a given topic or issue without overanalysing, delaying, or evaluating them prematurely. Smart classrooms create an engaging and dynamic learning environment. They also support adaptive teaching strategies, ensuring that instructional methods remain effective over time. Various features of smart classrooms enhance both teaching and learning by fostering engagement, personalized instruction, and collaboration. Technology fosters collaborative learning, enhancing both communication and teamwork skills. Utilizing digital tools for teaching improves efficiency by reducing time spent on administrative tasks. Smart platforms encourage creativity, critical thinking, and the application of technology to problem solving.

Convergent thinking: It occurs when the solution to a problem can be deduced by applying established rules and logical reasoning. Convergent thinking is a cognitive process that focuses on identifying a single, well-established solution to a problem. It is directed toward finding the most accurate or commonly accepted answers to a given question. This type of thinking prioritizes speed, accuracy, and logical reasoning, emphasizing the recognition of familiar concepts, the application of

known techniques, and the use of previously acquired knowledge. Convergent thinking is particularly effective in scenarios where a definitive answer already exists and can be determined through recall decision-making strategies. A key characteristic of convergent thinking is its focus on arriving at a single best answer, eliminating any ambiguity. It is often used alongside divergent thinking, which involves generating multiple creative ideas in a spontaneous and free flowing manner.

Role of smart classes in fostering creativity

Since the advent of technology, time has significantly contributed to the progress of the human race. From the invention of the wheel to the rise of the internet, technological advancements have played a crucial role in shaping civilization. One of the most impactful developments in this journey into education, leading to the concept of smart classrooms. E-learning has emerged as a groundbreaking innovation in the educational sector. By encouraging creativity, educators help students develop critical thinking skills, enabling them to analyze situations, establish connections, and assess diverse perspectives for a more in-depth and analytical approach to problem-solving. Divergent thinking involves thinking and acting in diverse ways, fostering the ability to generate multiple ideas and enhance creativity. Additionally, children should be provided with opportunities for original expression through various forms such as written language, music, rhythms, and flexibility in ideas generation is essential for their development.



- Fluency indicates to how rapidly the person comes up with ideas. It can be in respect of words, ideas, expression or associations, and write words similar in meaning (associational fluency).
- Flexibility specifies to the ability to produce a large variety of ideas such as thinking of varied uses of a particular object, and drawing specified objects using a set of given figures.
- Originality indicates to the uniqueness of ideas. It is the ability to produce ideas that are unusual, statistically infrequent and not obvious.

- Elaboration specifies to the ability to develop and describe an idea as, consequences of a hypothetical event. The exhibition of all these aspects of creativity in day-to-day life in various degrees.

Strategies for integrating creativity in education

Project based learning enables students to apply their knowledge in real-world contexts. Through such projects, they develop essential skills like creativity, problem-solving, and collaboration, which prepare them for future career challenges. Integrating arts and design into the curriculum is crucial for fostering creativity. Activities such as drawing, printmaking, and design-thinking exercises encourage students to think innovatively and view problems from multiple perspectives. Curiosity is fundamental aspect of creativity. When educators encourage students to explore their interests and conduct independent research, they nurture a love for learning and a natural drive for creativity. A supportive and open atmosphere, where students feel safe expressing ideas without fear of judgement, enhances their ability to think creatively.

Teachers serve as facilitators, guiding and inspiring students in their creative pursuits. To create a dynamic and innovative educational system, teachers must actively contribute to the advancement of knowledge and fulfil key roles.

Conclusion

Smart classrooms are most effective when students are actively engaged and utilize digital tools as part of a well-rounded education. When students participate enthusiastically, they engage in meaningful discussions and share diverse perspectives, making learning more enjoyable. A smart classroom fosters greater student interaction, driven by technology and digital resources, offering an alternative to the traditional lecture-based setting. With dynamic and interactive learning experiences, smart classrooms ensure that every lesson is engaging, making students eager to explore new topics in an innovative way. Understanding smart classes is essential because they play a crucial role in speaking students' interest in academics. This interactive learning approach enhances student engagement and makes lessons more effective. With numerous advantages and minimal disadvantages, smart classes have proven to be beneficial for students. The primary drawback is the high cost associated with implementing this technology in schools. However, as technology continues to advance, the cost of these devices is expected to decrease over time.

Additionally, ongoing innovations in science and technology will further enhance the teaching and learning experience. Advancing this concept will contribute to a more interactive and accessible education system. Smart classes enhance learning by promoting a deeper understanding of concepts through visualization, simulations, and real world applications. Divergent thinking allows for the exploration of numerous possible solution within a short time while identifying unexpected connections. Once this creative process is complete, the generated ideas and information are organized and structured. Convergent thinking then applies decision-making strategies to refine these ideas, ultimately leading to the most accurate solution. They simplify complex ideas, making them easier to

comprehend while helping students connect various topics. To cultivate creativity in educational settings, specific skills have been proposed to create a supportive learning environment. However, there is a lack of consistent discourse among these insights and strategies regarding different aspects of nurturing creativity. To address this gap, a three-element framework of creative pedagogy has been introduced. This framework aims to provide a more comprehensive approach to enhancing creativity in teaching, incorporate aspects of creative learning that were previously overlooked, and offer alternative perspectives on existing debates about teaching creativity.

Additionally, it serves as a foundation for further studies exploring teachers' and students' responses to creative pedagogy while also offering practical implications for its application in classrooms for contests. Finally, several potential directions for future research in creative pedagogy are proposed.

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