

Smart Classroom Technology in Artificial Intelligence: A Review Paper

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Abstract: This study identifies examples of technology development by which AI applied in a smart classroom. The visual medium such as smart classrooms, virtual reality applications, and has a high opportunity of teaching ideas in a student's mind than a literary medium. The new technologies' weaknesses were how to collaborate in Education using AI to provide a smart-classroom for enhancing student learning and develop achievements. The aim of that is to educate the student using pictures, charts, video, and pictorial substance comprehended and assimilated far superior to one that scholarly through content. The smart classroom decides how measurement results and classes of elegant class properties can add to and lead to applying the approaches of training for manageable improvement in the act of genuine instructing powerfully. . The method of this study works on giving a review point to the existing types of smart classroom technologies. The result reveals the significant impact and recommendation to enhance more technologies used within smart classroom. The Smart level reveals the utilization of 3D symbolism and strategies to learn and comprehend different ideas. This work provides a comprehensive study about the smart classroom and how it can contribute to putting in a significant way and practices for technology development use.

1 INTRODUCTION

Nowadays, we have to do everything we can to improve the nature of instruction; the universe of old classrooms with sheets loaded with chalk are long finished (Skinner, 2020). It is time that we comprehended the way that training has experienced a development of sorts since the days we ordered to clean the writing slate off and dust the dusters (Tawafak et al., 2019) (Ikedinachi, 2019). Fundamentally, study halls equipped with Laptops, and even projectors to facilitate students can gain admittance to better data through the visual medium. One of the innovations of artificial intelligence is the acceptance and usage of AI in the learning area as a smart classroom (Tawafak et al., 2019). It is the world of intelligent learning through the coordination of innovation and its crossing point with the educational plan to drive the message over.

(Weidong et al., 2011) mentioned in their study the improvement, it concentrated on the insight of classroom equipment, reflecting the more helpful

and regular human-PC interaction, its configuration reflects more thoughtfulness regarding the classroom (Weidong et al., 2011). However, smart classroom parameters include innovation, infrastructure, includes pervasive computing, technology manufactured consciousness technology, electronic intuitive whiteboard technology, distributed registering design and keen space serve technology (Tawafak et al., 2019). The practical module of future perceptive study hall comprises of figure presence, function module layer, and information administration layer (cebrián, G. et al., 2020). It gives the educator, and student a learning space with better customize and quick service, and makes a study hall with a full worry on freedom, development, and amicability relationship (Weidong et al., 2011).

(cebrián, G. et al., 2020) Instructive teach imagined by way of foremost operators aimed to attend to the existing maintainability experiment that culture is confronting with the AI application developments (AlFarsi et al., 2018). ESD involves

reconsidering the learning environment (physical and virtual) in line with maintainable advancement, which suggests classrooms' change towards learner engagement, developmental appraisals, and dynamic techniques (ALFarsi et al., 2018).

It is crucial to improve the resilient and sustainable smart education environs. The intelligent classroom includes producing education universes consent for productive usage of resources.

2 EXISTING SMART CLASSROOMS

2.1 Shrewd Classrooms

This paper reacts through investigating the relationship between Shrewd Classrooms and four broadly utilized ESD techniques. ESD includes a venture or problem-based learning, case consider, reenactment and agreeable request), distinguishing in what way the measurements besides groups of the features of smart classroom. , smart classroom jerry can provide and principal to the execution of technology strategies in genuine educating hone in a viable method (Kamane, S. et al., 2020). Furthermore, (Aguilar, J . et al., 2018) mentioned in their study, a smart classroom coordinating the diverse components in a conventional classroom, by utilizing distinctive innovations as manufactured insights, omnipresent, through others. Also, popular arrange toward progress the learning prepare using AI technologies (Huang, L. S, et al., 2019).

2.2 Savvy Smart Classroom Management

The logical education assignments are a set of apparatuses that can utilize to gather and analyze the information collected in a savvy classroom. The authors propose the meaning of the investigative education assignments as administrations, which can be conjured by the constituents of a smart classroom. We depict how to association the cloud and multi-agent ideal models in a smart classroom, in arrange to supply academic services to the brilliantly and non-intelligent operators within the savvy classroom, to adjust and react to the instructing and learning necessities of understudies. Moreover, we characterize a set of learning analytics assignments as administrations, which represents an information criticism circle for the smart classroom, in arrange to

move forward the learning prepare in it, and we clarify how (Bardach, L., and Klassen, R. M. 2020).

2.3 Visual Medium in Smart Classroom

The visual medium offers many imaginative procedures like the utilization of 3D strategy and recordings to instil an idea in the psyche of the understudies. The intelligence study hall additionally has a rundown of assets that can utilize with the end goal of test, amendment, schoolwork, and test; alongside tests and notes on genuine parts (MacLeod, J., Yang, H. H., Zhu, S., and Li, Y. 2018). A Smart class likewise hails the appearance of the utilization of tablets and advanced pens, rather than paper and ink, and so forth. In this manner, we are beholding in another period of green learning.

Allowed the data given could frequently gather from coursebooks; however utilizing the visual mechanism for the equivalent guarantee's better maintenance (Saini, M. K., and Goel, N. 2019). as shown in Figure 1. Figure 1, asks the question of how it's possible to convert a traditional classroom to new smart classroom using recent technologies and applications.

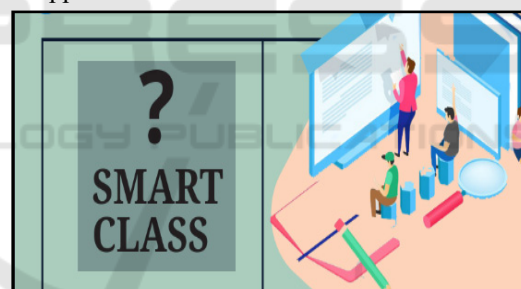


Figure 1: Traditional classroom.

There is no utilization of chalk or markers; instead, laser-based remotes or advanced pens utilized to stamp out and underline relevant focuses. The substance showed on the screen put away in the framework for referencing later on. The varying media methods for instructing and learning has demonstrated to be a help for youngsters, as the ingestion and maintenance of data are better when educated through the plans for the visual medium (Saini, M. K., and Goel, N. 2019). Smart class instruction is to produce as an intelligent and suitable solution for those understudies who experience issues in learning.

3 METHOD

The paper explains the technology of smart classroom by which AI applied in the instruction, which called Smart Classroom. Especially, Importance of smart classrooms, Features, and limitations and what is Smart Classroom.

Smart Classroom an intelligent method for learning and educating understudies. It includes the showcase of historical mixed media introductions on the screen through a projector (Courtad, C. A. 2019). Figure 2 shows the communication channel through cloud computing to be intermediate link between teachers of each classroom and the virtual meet with students at their home.

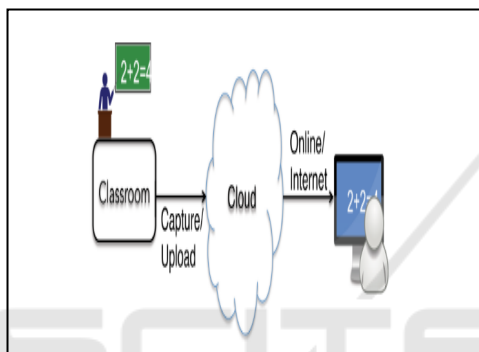


Figure 2: New communication technology interaction.

4 SMART CLASSROOM FACILITIES

Here is some importance of smart classrooms:

Online access: Smart study halls with online access can give understudies prepared entry to the point-by-point data on any subject. Instructors can utilize the equivalent to explore a specific topic inside and out, set tests dependent on the match, and even give understudies an illustrated talk on the game with the goal that they can comprehend the theme better (Skinner-Linnenberg, V. 2020).

Online component: Rather than rehashing a similar exercise will not help get the crosswise message students, particularly for those situated in the rear of a packed study classroom (MacLeod, J., Yang, H. H., Zhu, S., & Li, Y. 2018).

Online modules: There are different reasons why a student will most likely be unable to go to the class, which is the place online modules become an integral factor.

Interacting: Using the advanced format can help make the class progressively intelligent, as it should help fuel the student's advantage and get them to examine the different subjects on length. Instructors can help keep the student connected by conceiving intriguing difficulties that test their skills.

Low support cost: Other than the underlying investment, most smart classrooms are moderately simple to keep up. All they require is a periodical clear and support, and contrasted with the classical classrooms, are relatively cheap to keep up.

Imagination: Smart classrooms help students to perform better and even push others to be increasingly inventive.

All this is essential points online access, online components, online modules, interacting, low support cost, and imagination all are essential. Also, container stay used through those improving or else designing upon a strategy for learning continuousness, through right integrating and friendly to the students.

5 RESULT AND DISCUSSION

Related to the new communication technology interaction and the instruction of smart classrooms we found important features depending on the teachings such as time-efficient; smart class guarantees productivity as far as showing different themes and subjects. It is because it spares time as far as drawing and composing on the load up and in this way, considerably more acclimatized in a similar class (Tawafak, Ragad M., et al., 2018). Take care of all student's needs; a study hall has students with changed understanding and getting a control handle. Where a few students think that it is simple to educate the classical mode of learning, it is hard for others to do the same. Makes for an Interesting Class Environment; Quite a couple of students nowadays locate the conventional type of training through chalk and slate rather exhausting. Instead, they prefer visual-based types of realizing which keep them locked in. Simple Access; A smart class permits whenever to get to the learning process (cebrían, G. et al., 2020). In any event, during occasions, and on different occasions when one is not really in the class yet might want to get to and return to notes. Helps in covering up the missed out course; is very productive for truants and tenderfoots as the instructing material stays put away in the database for referencing later on.

This study provides different types of existing smart classrooms and its positive and cognitive

reliabilities with AI. This study highlights the powerful use of cognitive abilities for both teachers and students when they engaged with smart classroom included within Savvay classroom (Bardach, L., and Klassen, R. M. 2020). Another study used Shrewd classroom (Kamane, S. et al., 2020), which focus on the concepts of smart classroom as a time feedback on using smart classroom and the teaching method effectiveness during the AI environment of learning. On the other hand the visual medium classroom found by testing the validity of distributed survey of 40 constructs among undergraduate students that students prefer to convert their use to smart classroom facilities and the way of communicating among classroom mate (MacLeod, J., Yang, H. H., Zhu, S., and Li, Y. 2018). We find from this study some advantages of smart classroom and disadvantages such as not a secure method for Teaching: because of certain unavoidable constraints, a technical deficiency or glitch may prompt an abrupt interruption of a class, which may inevitably prompt exercise in futility, vitality, and assets (Skinner-Linnenberg, V. 2020).

Smart Class Can Never Replace a first-hand Teaching Experience. At the same time, a smart class may offer better and increasingly far-reaching methods for educating using innovation; there is no swap for an educator clarifying on the existing ideas through genuine models (Azmiy, N. 2013). Not very cost-effective as it is a general innovation, a smart class is typically a piece on the costlier side. Figure 3 shows the impact of using smart class to enhance student learning outcomes and improve their skills with communication programs. Also, Figure 3 shows the peer-to peer relationships among the students and the use of open source technologies to improve their confidence and achievements.



Figure 3: Smart class offers better and increasingly far teaching methods.

6 CONCLUSION

A smart class is one of the most dynamic and imaginative intends to learning. It is instilled and consumed by a significant number of schools and school the executive's frameworks the nation over. Subsequently, parents, instructors, teachers, and students over the range must get familiar with such an educating framework. Smart class innovations utilized to interactive content, efficient distribution, and comprehensive display. Models for e-learning and separation learning have developed to impart substance to countless understudies conveyed proficiently.

The main aim of this research was to disseminate previous works related to smart classroom and its advantages. The paper reviews a variety of smart classroom used in the recent studies and the level of student acceptance and use. We found that current smart classroom content strategies uncommonly intended for one kind of media. Over yonder, it is the need to make sight and good outline and create programmed changing techniques from Media type to another without losing data. The simple accessibility of smart classroom content isn't adequate; the instructor needs to receive an instructing style that keeps understudies need more technologies. Comparably, Measuring commitment level beforehand, familiar surveys give more exactness a proportion of understudy understanding in the study hall. Numerous stages have created to assess, consequently, various kinds of tests and schoolwork.

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