BONDING BETWEEN TEACHER AND TECHNOLOGY: A MODERN CLASSROOM

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Abstract

Modern era is the era of science and technology where we cannot even think of a single day without technology. Technology has entered into every sphere of life and education is also not an exclusion. It has entered in to classroom and transformed it into 'modern' classroom, a classroom equipped with innovative technological devices and support. The traditional use of chalk and board is replaced with audio-visual teaching aids making the teaching learning process interesting as well as lively. The present chapter tries to discuss the concept of modern classroom, how it is different from traditional classroom, recent trends of using technology in modern classroom, advantages and limitations of modern classroom in teaching learning process. With these, a crucial attempt has been made to give a comprehensible picture of modern classroom in the light of 21st century science and technological wonder.

Keywords: *Technology, Teacher, Modern Classroom, Traditional Classroom, Audio-visual Aids*

Introduction

In this 21st century, people are persisting in an era where technology is the most dominant driving force for the whole human civilization. "Being a social being, we have acclimatized ourselves with this new 'society' i.e. technology" (Gayen & Sen, 2021b). Human being is literally useless in the absence of technology and its support. In the field of education also, it has spread its clutch tightly. The concept of classroom has got a new shape with the advancement of technological wonder, thus, resulted in modern classroom. "Teachers are trying their best to integrate technology in the teaching-learning process to make the teaching-learning more effective" (Gayen & Sen, 2021). Modern day teachers are also very much familiarized with the use of technology in the teaching learning process. "When a teacher effectively unites technology into the subject areas, teachers sore into roles of consultant, content specialist, and coach" (Kaur & Gupta, 2018). Introducing technology into the classroom can have a significant impact on teachers' practises, especially when Information and Communication Technology (ICT) is viewed as a tool that promotes a genuine shift in pedagogical approach. This gives birth to machine learning. Machine learning is everywhere in different fields of media like Netflix, YouTube, Google, Baidu, Facebook, Twitter, Spotify, Alexa and so on (Gayen et al. 2021). The teacher must put effort into improving both themselves and their pupils by developing, introducing, and managing new learning arrangements in addition to changing their duties and how the class is organised.

In the syllabi of just over every grade level, using technology in the classroom is expected, whether in elementary or secondary schools (Baglari, 2015). Besides this, the modern classroom teachers are very

much accustomed to the technology-oriented teaching aids. An interactive audio-visual medium is provided by computers. Information can be presented interactively using PowerPoint presentations and animation tools. Students are more interested in this lesson because of the audio-visual aspects. Teachers can also benefit from the practise. A huge number of students can access information at once with the help of projectors and screens. Teachers can talk with more students immediately with the support of technological devices that use microphones and speakers for address. The use of these instructional tools has improved students' attention spans and attendance. Interactive media have been shown to help pupils focus more during class (Cheema, 2015). In modern days there are different types of research work done throughout the world. The scope and diversity of research work has loosened its boundaries in recent times. Lots of research work has been found on various fields such as, Adhikari and Sen (2023), Adhikari et al. (2023), Das, Gayen and Sen (2023), Gayen (2023a), Gayen (2023b), Gayen and Mahato (2023), Gayen and Sen (2021a), Gayen et al. (2021), Gayen, Sen and Adhikari (2023), Kar and Saha (2021), Mohanta et al. (2023a; 2023b; 2023c; 2023d), Mondal and Gayen (2021), Saha and Adhikari (2021), Sen et al. (2023a; 2023b; 2023c) etc.

What is Modern Classroom?

A lot is spoken about the "modern classroom", which is said to be essential for 21st century learning. While the classroom of today is completely different from that of 20 years ago, all too frequently, the only thing that has changed is the method of instruction i.e. chalkboard to interactive whiteboard. Technology is now firmly integrated into the educational setting, from mobile devices to cutting-edge teaching tools, cloud-based platforms, and mobile apps (ResourcEd, 2016). Differentiation is emphasised in modern classrooms. The reality that some students learn more quickly than others and that different students require various forms of support for success cannot be explained by even the best professor in the world. Modern Classrooms are data-driven, facilitate high-quality interactions and they are laboratories for innovation (Arnett, 2019).

Traditional Classroom vs Modern Classroom

A modern classroom broadly refers to any technologically assisted training, and is frequently associated with instruction provided via computer and the internet. Traditional classrooms are defined as spaces with neat, pastel-coloured walls and rows of desks and chairs facing a lectern (Li et al., 2014). Both traditional and modern education are related to and distinct from one another. In actuality, traditional schooling has influenced modern education. There were no schools or other institutions for kids in the past. Their gurus, who largely concentrate on rituals or customs, provided them with the education or information they received in Gurukulas. Modern education, in contrast, places a strong emphasis on reading, writing, mathematics, and religion. New technology has made it possible for modern education to take the role of traditional education (Budhwar, 2017).

Recent Trends of Using Technology in Modern Classroom

In the modern classroom, the teacher takes on the role of facilitator, giving individual students their due attention and encouraging deeper discussion on the subject. This causes the student interaction to intensify, leading to deeper learning. The students are more aware of their own worth. The recent trends of using technology in modern classroom in modern days are computer games, word processing, teacher websites, digital textbooks, videos, music, video conferencing, podcasts, wikis and blogs, social media, google maps etc. (Kaur & Gupta, 2018).

1. **Computer Games:** Children and adolescents heavily rely on computer games in their daily life and media consumption. However, this medium is rarely taken into account in modern classroom instruction. This might change as a result of the teachers of the future being trained in universities right now (University of Cologne, 2022). There are several computer games that provide context for pupils to learn critical abilities. Computer games are used in educational settings to promote active, critical, independent, and participatory learning processes. This motivates students to actively learn new information and develop new abilities (Jancheski, 2017).

2. **Word Processing:** Word Processing is one of the most significant aspects in modern classroom. Students can generate letters, reports, bulletins, tables, form letters, brochures, and web pages using the word processing application programme. A student can add images, tables, and charts to their documents by using this application programme. Grammar and spelling checks are available to students (Ryan, 2004). Aladwan (2021) in his study has found that word processing has significant effect in teaching writing skill among secondary students.

3. **Teacher Websites:** The discussion forums on which all students and teachers can collaborate to resolve issues relating to any topic or piece of content in the teaching and learning process. In order for students to learn more about a certain subject during the educational process, teachers may publish instructional material that either complements the lesson or is more in-depth. The use of technology in the teaching and learning process can foster healthy rivalry across classrooms (Kaur & Gupta, 2018).

4. **Digital Textbooks:** Due to the widespread accessibility of cell phones and the Internet, more students are using digital textbooks in their classes. Both students and teachers have been drawn to the interactive elements included in digital textbooks, giving the former a more immersive and engaging experience and giving the latter simple access to internet resources to support their teaching (Dani, 2019).

5. **Videos:** In modern classroom, teachers are often seen using videos during their teaching process. Video not only offers teachers a wide range of outstanding benefits but also children find video to be a pleasant experiment and undoubtedly like the entire experience right away. Videos are easier for the students to understand the topic. It engages learners to stimulate activities and gather more information and integrate them to the outsider world (Brown, 2022).

6. **Music:** Teachers may create fun and make the classroom environment musical. In the contemporary classroom, students can make their own music to engage with a variety of educational themes and instruct their peers. The musical format can be used to deliver challenging material and topics in an approachable way. Additionally, music fosters kids' creative thinking and intellectual curiosity (Kaur & Gupta, 2018).

7. **Video Conferencing:** With the development of technology, video conferencing imputed the classroom and became a widely used teaching method. The introduction of new technologies, including video conferencing, gave teachers new ways to interact with their pupils and fostered the creation of tactics that were more in line with the burgeoning technology. Synchronous two-way audio and compressed two-way video were used in video conferencing via the Internet (Paderanga, 2014).

8. **Podcasts:** In the contemporary classroom, teachers can produce outstanding podcasts to share with the students on their individual websites. To enhance learning in the modern classroom, premade podcasts can be downloaded and distributed to students to better educate them or to convey the same message to them in a variety of ways (Kaur & Gupta, 2018).

9. **Wikis and Blogs:** Wikis are online publications that anyone with access can update. The term 'blog' is an abbreviation for 'web log' which refers to an online Web diary with access to a variety of multimedia resources (Boulos, Maramba & Wheeler, 2006). Teachers can encourage their pupils to share their thoughts and stories with their friends and families as well as publish them on blogs (Kaur & Gupta, 2018).

10. **Social Media:** Social media is a technology for communication that enables users to engage with and add to online information. Along with newly emerging platforms, it includes well-known online

social networks like Facebook, Twitter, Instagram, Pinterest, and YouTube. In the words of Jain (2019), "Through social networks, it is easier and convenient to exchange information, communicate with each other and stay connected. Teachers and students can use social platforms to stay connected to each other and can use it for educational purpose".

Advantages of Modern Classroom

Use of technology in the teaching learning process has become a natural phenomenon in this modern era. The importance of technology in educational institutions especially in classroom has a wider connotation. "With the onset of computers in education, it has become easier for teachers to impart knowledge and for students to acquire it" (Raja & Nagasubramani, 2018). The advantages of modern classroom or technology-oriented classroom are stated below:

a. Modern classroom is devoid of physical boundaries. Students from different parts of the world can attend the class remaining to their own location.
b. In modern classroom the teachers can use different online and virtual educational resources to make the class lively and effective. It also helps the pupils to comprehend the topic better.
c. Different audio-visual aids in modern classroom motivate the students a lot and make them interested in the target lesson.
d. Technological support in the classroom helps the students to improve their reading and writing skills and also enriches their vocabulary a lot.
e. Technological wonder in classroom motivates the students in the self-learning. Thus, the students learn by themselves using technological devices and internet.
f. The teacher can make plans for each student based on their performance and learning capacities with the use of performance monitoring software and classroom evaluation tools.
g. Digital textbooks are available to students and are frequently more engaging, practical, innovative, and affordable than those old, bulky volumes. They are also updated frequently.
h. International students are welcome to congregate and exchange experiences. Geographical constraints are no longer an issue; technology is the only thing that has made it feasible.

Limitations of Modern Classroom

Besides so many advantages of modern classroom, there are so many limitations of it. Many specialists and seasoned individuals claim that the use of such technology in the classroom has a negative impact on pupils' imagination and cognitive abilities. The major limitations of modern classroom are as follows:

a. The main worry about technology use is how simple it is to get and view pornographic, violent, and other improper information.
b. When people are glued to their screens virtually constantly, it has a negative impact on society and is resulting in a brand-new set of social problems.
c. In today's youth, cyberbullying has become an issue. Access to anonymous accounts and limitless contact options for students can only result in problems.
d. Although having quick access to material may seem like a good thing, it might really cause issues when taking a test. Cheating is now simpler than ever thanks to cell phones.
e. When students use their cell phones or other devices in class, their attention spans substantially decrease. Their teacher and lessons become less important as attention is diverted to what they are viewing, playing, or doing on their phones.

Conclusion

So, to conclude it can be said that modern classroom is one of the most important gifts to the education system. It not only improves the quality of the teaching learning process but also make it interesting and jolly. Students can now learn lot of things joyfully and with little effort. It has given a new dimension to the education system. Though it has some shortcomings or limitations yet its advantages are really significant and revolutionary to the education process. Now it can be guaranteed that in near future all the traditional classroom will be replaced with modern classroom.

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