USE OF TECHNOLOGY IN CLASSROOMS: AN OVERVIEW

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ABSTRACT:

Learning and teaching methods have changed as a result of technological advancements. Many learning theories can be applied for integration of technology during post covid era. Learning takes place in contexts, whereas technology focuses on the settings and programs that encourage learners to participate. This paper aims at investigating the benefits of the incorporation of technology into the classroom, factors contributing to teachers 'use of technology, the application of learning theory by teachers to make technology more efficient, and the benefits of post-covid. Technology allows for rapid access to knowledge, that is why it is so important in the classroom. Smartphones, computers, and tablets are already an indisputable part of students' and teachers' daily lives. It's only natural that the usage of technology devices in the classroom be investigated in order to provide students of all ages with meaningful learning experiences. The Post Covid pandemic forced the teachers to quickly adopt new methods of online instruction and learn how to use technology in the classroom. The tools of online technology are Zoom, Google meets, Teachmint, Skype, Microsoft Team, etc.

A variety of learning methods are accommodated by technology. Technology gives instant access to knowledge. Students perceived the use of technology to be more engaging and to improve their capacity to accomplish learning goals, according to the findings of this study. Technology, according to the students in the survey, helps them finish work more thoroughly and efficiently. However, the students stated that, in addition to quickness and thoroughness, technology can be distracting. The field of Educational Technology provides educators with excellent chances to develop their careers. This study examines whether technology can help education advance more efficiently on its own or not and whether the existence of a full instructional theory for technology is vital for its good effect on the student.

Keywords: technology, learning theory, teachers, post-covid

The use of information and communication technology (ICT) in schools has increased dramatically in recent years

INTRODUCTION

Technology is the means by which students are engaged, as well as the environments in which they are engaged. The learning environments resemble environments in which knowledge-building tools are provided to produce and influence the art of understanding through which students collaborate and support one another as they search for learning goals and activities to solve problems using various tools and learning resources.

The researchers explain the advantages of incorporating technology into the classroom, elaborate on successful technology integration, explore factors influencing instructors' use of technology, state teachers' use of learning theories, and the benefits of post covid in this paper.

OBJECTIVES

1.   To study new educational dimensions of technology in the classroom.
2.   To study the factors contributing to teachers 'use of technology, and the application of learning theory by teachers to make technology more efficient,
3.   To examine the increase of technology during post covid era.

METHODOLOGY

This study is based on the descriptive method as well as secondary sources like books, journals, newspapers, magazines, etc.

BENEFITS OF THE INCORPORATION OF TECHNOLOGY INTO THE CLASSROOM

Several studies have been conducted to determine whether integrating technology into the classroom benefits pupils and, if so, what elements contribute to a positive outcome. Other research focuses on the overall influence of installing and using computer-based technology in schools, while others look at individual aspects such as the implications of specific software use with reading and mathematics curricula. The crucial thing to remember is that in recent years, researchers' interest in the effects of technology on education has grown, allowing teachers to explore these new waters and alter their teaching accordingly. There is enough diversity among recent authors to allow generalizations to be made that may be applied to any present educational setting. According to one of these generalizations, the introduction of technology into the educational environment alters the way pupils learn. Teachers interact with pupils in such a way that critical thinking abilities and the use of computers as a learning tool improve.

The increased collaboration between teachers and students is another beneficial and desirable outcome of integrating technology into the classroom. The regular trading of computer skills, sharing of technology suggestions, and the position of the student as a tutor all contribute to this increased contact. Allowing pupils to assist in the instruction process boosts their self-esteem and confidence. They are given the opportunity to review previously mastered concepts and skills. These are skills that aren't always shared solely among classmates. In fact, the student is frequently able to assist the teacher with technical suggestions that the student has had the opportunity to understand while the teacher focuses on overall instruction direction. This contributes to the learner's increased use of technology in a meaningful way and collaborative participation. The computer-based classroom described above is a realistic learning environment that promotes student responsibility. Teachers say that introducing tools like the Internet and e-mail helps students to take charge of their own learning and develop responsible behavior.

Students can decide the path to accomplishing the teacher's aim once they have received general guidelines for working on a specific assignment. Another advantage of the computer-based classroom is the increased motivation of students. Students in a classroom with laptops are happier about having the technology and view the learning environment to be more pleasurable than students who do not work with computers, according to research. These students frequently go above and above the standards for any given assignment, demonstrating enhanced academic engagement. Increased motivation leads to the development of more complex activities such as various sorts of written expressions, multimedia goods, and data analysis. The participants get a sense of pride and empowerment as a result of their participation.

The use of technology in the classroom was linked to improved test scores, but only in schools where the immersion program was executed with greater consistency. As a result, the test used the actual implementation of the program as a predictor. Schools that were the first to implement the curriculum saw their pupils get higher exam results. The writers admit that having a positive attitude regarding the use of technology in the classroom will provide the best benefit.

SUCCESSFUL TECHNOLOGY INTEGRATION INTO THE CLASSROOM

Gorder (2008) stated that successful technology integration is what makes a difference in reforming a classroom. Integrating technology is not easy, it is a three-step process that involves the teacher learning the technology and using the technology in teaching and learning so that student learning is enhanced.

Effective technology integration can be affected by certain factors. Hew (2007) identified six factors that affect successful technology integration. They are lack of resources, lack of specific knowledge and skills, institutional structures, teacher attitudes and beliefs toward technology, and types of assessment and subject culture. The changes in computer-based technologies over the last ten years have been incredible and it is difficult for schools and universities to stay in step with the current rangdustry norms. Computers that were top of the line five years ago are horribly outdated today. Updating computer resources is extremely expensive and combined with the budget constraints that schools and universities are now facing and it is no wonder that many institutions lack current technological resources.

According to Hew (2007), teachers need specific technological information and know-how for the purpose of using computer-based technologies in teaching? It is not enough for specialized

progress to stress on the method of operating a specific program but additionally, there needs to be guided in how to use the program to increase student learning. Emphasis also needs to be placed on classroom management as it relates to computer-based technologies. Additional rules and procedures need to be incorporated once computers, printers, and other electronics are added to the classroom mix.

Other elements on the way to successful technology integration include teacher attitudes and beliefs. Teachers should be exposed to research on the benefits of integrating technology. Teachers, on the other hand, who believe that integrating technology improves student learning will find methods to include it in their classes.

What can schools and universities do in order to integrate technology successfully? Hew (2007) has some suggestions. Institutions" administrators and teachers need to join together to implement a technology plan that considers integration strategies along with purchasing decisions. Professional development needs to be at the forefront in order to assure student learning and to change the attitudes and beliefs of teachers unfamiliar with the benefits that technology has to offer. And finally, the technology plan must be closely aligned with the curriculum standards. Teachers need to know what instructional approach is the most effective when integrating computer-based technologies in the classroom.

FACTORS CONTRIBUTING TO TEACHERS' USE OF TECHNOLOGY

The researchers examine the factors that influence teachers' usage of technology in the classroom in this section. They're also looking for a link between technology use and educational effectiveness. The use of technology in class design and curriculum is impressive, especially when considering the impact of computers and the internet on the new generation of students entering the educational system. According to Oblinger (2003), "the millennial generation' or the students who were born after 1982, is different from their former generation in noticeable features. The new ones incline to approach towards group activity and are interested in new technologies. They are actively fascinated by playing online video games and chatting. This is what is opposite to the traditional lecture style that the older generation of teachers believes in most classrooms. The method of learning for the new generation is centered on group work, empirical and multitasking activities, and using technology. For the new generation of learners, technology is regarded as an integral part of their daily lives in their environments. Younger learners are more apt to the higher extent of contact to technology and internet usage which leads to many differences between learners learning methods and the teachers' knowledge and aptitude to use technology.

Teachers who use technology in their classrooms are affected by a range of elements in their pre-service training program, personal lives, and while teaching as a career. One of the influencing elements in teacher technology utilization is taking technology classes in their undergraduate program. Teachers' effectiveness will increase, and they will be more inclined to use technology in the classrooms, if they are properly prepared to use technology before entering a real-world teaching context, such as a classroom. According to certain research, teachers who participated in pre-service training programs and educational technology courses with an emphasis on employing technology skills as part of their lesson plans improved their effectiveness and self-efficacy in their pre-service technology abilities.

There is a link between a teacher's computer self-efficacy and their ability to integrate technology into the classroom. In a study conducted by Hernandez-Ramos (2005) he notes that since technology is frequently used by youth these days, sometimes student knowledge of technology can trump teacher knowledge. In these cases, the teachers' roles as the skillful and students' as the amateur can often be exchanged and may cause some teachers to feel uncomfortable by this condition because most of the teachers tend to have mastery over the students in using technology in their classrooms. Based on a survey, 55% of teachers stated that they strongly agree with this statement that "A teacher's proficiency with computers will affect his or her willingness to integrate technology into the curriculum".

Other key aspects that aid instructors in using technology in the classroom include peer modeling, academic institution expectations, positive experiences with computers in the classroom, and teacher beliefs and attitudes towards technology in the classroom. Modeling has been found to be a major component in persuading instructors to start and maintain the usage of multimedia in the

classroom. Bullock (2004) discovered that a lack of modeling by the mentor teacher was a disabler, whereas modeling concrete uses of technology in specific subject areas and grade levels were found to be an enabler in research with high school teachers engaged in professional development for technology integration in the United States. Bullock discovered that clear expectations, easy access to technology and technical support, and positive experiences with computers in classroom settings, in addition to effective mentoring, encouragement, and modeling, facilitated the necessary skill development for teachers to use technology on a regular basis.

Adamy and Heinecke's research found that three important factors that need to be operational: (a) access to hardware, software, and technical support; (b) teacher educators' relationships with key technical players; and (c) positive institutional attitudes toward technology use emphasizing the institutional context in which technology novelty occurs Adamy and Heinecke (2005) suggest that technology integration is a social process that must be equipped with organizational institutional support to be successful. Another factor contributing to teachers'' use of multimedia is an attitude toward educational technology. Howland and Wedman (2004) surveyed pre-service secondary level teachers learning to use technology in their classrooms. Instead of viewing technology as a collection of skills to be acquired, the ideology of life-long learning emerged with pre-service teachers developing self-concepts of themselves as technology users. Bowman (2000) declares that most teachers who use multimedia understand that technology does not replace good teaching; instead, it opens new horizons for discovery and exploration. Furthermore, teachers should not attempt to use technology for technology's sake; for example, implementing computers in classroom settings for repetitive drills which are devoid of contextual grounding.

The usage of technology by teachers has also been linked to their expectations of success and understanding of the value of technology. Wozney, Venkatesh, and Abrami (2006) discovered that teachers who believed they are skillful enough to use computers successfully and who were worth the results related to their integration happened to be considered as high technology users' spectrum.

In a similar study done by Wozney, Venkatesh, and Abrami (2006) in the province of Quebec, Canada, 2213 teachers' were asked about their opinions about using technology in the classes. The findings of this study reported that teachers who more welcome student-oriented methods are more often expected to incorporate computer technologies and they consider it as a more complicated phase of incorporating computers in the classrooms. Unlike to these findings, several studies have suggested that there is a distinction between teachers' stated teaching methods and their use of technology in the classrooms. In a study on 47 teachers in the U.S, Dexter, Anderson, and Becker (1999) reported that teachers who used more student-centered progressive teaching activities did not view technology as a catalyst for change in their educational activities. Likewise, Chen (2004) discovered a high degree of harmony on student-centered concepts among the studied Taiwanese teachers, but subjects' teaching remained teacher-oriented and lecture-based and for them utilizing technology was to back such teaching. The opposing findings from different countries and contexts put forward more research is needed to investigate the relationship between teachers' educational thoughts, perspectives, and technology use.

BENEFITS OF POST COVID

The Covid-19 pandemic and the resulting socioeconomic divisions have impacted many aspects of life, including schooling. Educational institutions have had to quickly adapt to the situation in order to keep education running. As a result, there has been an extraordinary push for online learning. Many people, including commercial providers of digital learning platforms, have hurried to offer their help and 'solutions,' often for free. As a result of the Covid-19 epidemic, a sellers' market in education technology has emerged.

It shows how educational institutions and teachers all around the world are transferring their work from classrooms and lecture halls to digital platforms virtually instantly. This rapid transformation has shown flaws and inadequacies in how online learning has been implemented in educational institutions. Drop-in sessions, online webinars and blog posts, emergency policy documents (e.g. Doucet et al. 2020), and even lessons gained from previous university lockdowns have all been generated as a result of efforts to fill these gaps (Czerniewicz 2020). Perhaps more importantly, the scenario has opened up a new market for commercial providers of digital learning tools.

Online learning is frequently confused with content-driven self-study, in which the benefits are restricted to time and place independence. A digital learning environment that consists solely of textual files and lecture capture videos shared through a learning management system, on the other hand, is vastly different from one that employs a situated online learning design, such as the authentic learning framework, which focuses on collaborative knowledge construction and complex, authentic learning. Involving instructors and students in the creation, implementation, and usage of educational technology can also have an impact on how well technology can support meaningful teaching and learning.

The return to classroom learning brings new challenges. At the same time, the epidemic has heightened awareness of the importance of adaptability and resilience. Due to massive and unexpected closures, affected countries and communities have been forced to seek quick fixes in different digital learning platforms.

CONCLUSION

Adding a technology tool to a traditional teaching technique does not result in more effective training; rather, it makes the process more difficult and complex while giving few benefits. Teachers must ensure that technology is used as part of an approach that involves students in the activity in order for it to be effective in the classroom. As a result, technology may be used to provide information in multiple ways. The mechanism through which information is depicted and realized becomes technology. Technology is recognized as an integral aspect of a learning theory, and it is seen as more than just a tool; it has evolved into a methodical framework. Teachers become less hesitant to use technology since it assists them in planning their teaching materials in a way that supports their theoretical approach.

The COVID-19 epidemic caused a substantial movement in education from traditional to online, which was a new state for both teachers and students. As a result of the current scenario, technological integration in education is becoming more important, and teachers must upgrade their skills. The use of technology in teaching and learning during the COVID-19 pandemic played a crucial influence in the post-pandemic integration of technology in higher education.

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