Pedagogical Technology is the Most Modern Way of Learning the Language

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ABSTRACT

The phrase "technology-enhanced learning" is frequently used when talking about the position and use of technology in education. Yet, there are still a lot of pedagogical holes that need to be filled in order to lift the fascination that surrounds technology-enhanced learning and guarantee that its usage is deliberate. The several potential uses of the technology should be considered while planning. The pedagogical factors for a learning process aided by technology are outlined in this research. In fact, it is frequently believed that just integrating technology into the classroom will suffice, without particularly reformatting the pedagogical model. The possible objectives of utilizing technology in the educational process are examined in the study. It also examines the pedagogical elements—learning motivation, cognitive growth, cognitive load, and knowledge development—that contribute to the effectiveness of technology-enhanced learning

Keywords: Technology-enhanced learning · Pedagogical considerations · Smart pedagogy · Cognitive load · Cognitive development · Knowledge assessment

Introduction

As technologies advance, some will undoubtedly infiltrate the sphere of education. The educational system has a number of tasks to complete in order to properly absorb these technologies:

Gaining knowledge of how to utilize technology to enhance the process of learning, to complete certain tasks, and to increase the effectiveness of particular activities;

Learning the principles of developing new technologies and innovatively coming up with new solutions where technology is used as a tool for innovation;

Learning to use technology to access knowledge that is only available in certain places and at certain times due to distance or environmental barriers, language barriers, or barriers owing to special needs;

Main part

Technology opens up many new prospects, which is a topic that is frequently discussed. While this is going on, it is frequently asserted that technology by itself has not brought about any novel or unanticipated advancements in education and that learning still requires a planned process. As a result, educators arrange and plan technology-enhanced learning, but doing so involves both specific technological and digital learning tool usage abilities as well as a certain level of familiarity with the pedagogical norms of a technology-enhanced learning process. The same is true of students' technological knowledge, abilities, and proficiency with digital learning tools. The promise of technology is not completely realized in the absence of such information.

In the world of education, the phrase "technology-enhanced learning" is neither new nor unheard of. Its origins may be found in phrases like "computer-supported collaborative

learning" (Stahl 2006), "computer-assisted teaching," "computer-aided instruction," "computer-based learning," and "computer-mediated learning," all of which are considered synonyms (De Bruyckere and Kirschner 2019). (Usluel et al. 2008). The use of technology and whether it enhances learning results or, on the other hand, if it has a detrimental impact on learning outcomes were later discussed in relation to their influence on the learning process (Kirkwood and Price 2014).

For face-to-face learning, a variety of technologies are utilized as tools to expedite particular tasks, such as compiling and printing out course materials, creating presentations for screen display, and demonstrating technology to students.

Moreover, technology may be utilized to improve the accuracy and efficiency of specific activities, such as sketching. It can hasten the transfer of data through the Internet, Bluetooth, or other comparable information transmission networks.

Notwithstanding the diversity of technological options and educational objectives, there is one major issue that has to be addressed: technologies for inclusive education. In this area, it is important to assess the current technologies in terms of their suitability for students with special needs. For instance, can students with visual issues engage in robotics activities? If they have muscular weakness, can they grasp and connect little parts? If they are sensitive to bright colors, can they view brilliant videos on an interactive whiteboard? So, it is critical to be aware of each student's ability to prevent social exclusion if the goal is to make classroom technologies accessible for usage with and by all students. In these situations, the instructor may think about adopting assistive technology to provide all pupils an equal chance.

Technology-enhanced learning can take the following forms: (a) technology used as a support tool during in-person instruction (such as a computer, printer, 3D printer, etc.); (b) technology used as a learning tool for mastering a particular skill (such as educational robotics kits, computer simulations, etc.); and (c) technology that can offer learning opportunities anywhere, anytime (such as learning platforms, educational applications).

Pedagogical Considerations

Everyone participating in the learning process thinks about how to encourage cognitive growth. The regularities of human cognitive development, which have been discussed by various authors (Piaget and Cook 1952; Vygotsky 1978; Erikson, 1950), must be known in order to encourage the development of cognitive processes, such as perception, sensation, attention, thinking, imagination, memory, and creative thinking. The stages of learning are remembering, comprehending, applying, analyzing, evaluating, and producing, with remembering being the first step according to Bloom's taxonomy (Bloom et al. 1956; Anderson et al. 2001).

Pupils are able to retain more knowledge, build cognitive patterns, and use their thinking to come up with new ideas as they become older, which boosts their cognitive ability. Teachers encourage the gradual development of these cognitive processes as part of a generally rational learning process. As it becomes apparent to everyone that learning is a natural process in which a person's cognitive capacities steadily grow, what happens in technology-enhanced learning? Because she must be able to recall knowledge, apply it, evaluate it, and other things, one solution might be a person's capacity for concentration. It's frequently believed that kids will use their interest in technology to learn new things and come up with original ideas. Generally speaking, the idea of a "interesting learning process" may definitely motivate study, but curiosity can also influence one's capacity for concentration.

If a student works on a task with all of his attention and succeeds in solving it, feeling satisfied with his achievement, his enthusiasm to study and succeed increases even further. It might happen in one of several ways if the work given to the student is complicated enough to demand mental effort from him:

Because he has learned how to stay focused even when higher cognitive load is required, the student will ponder more carefully and seek out more information to complete the

assignment; In order to minimize cognitive burden, the learner will determine that it is too complex and will search for fresh engaging stimuli. This could have an impact on how much new knowledge is absorbed and how much of it can be used to thinking processes to produce fresh concepts. The student's prior knowledge, his drive to succeed, and the details of the suggested assignment will decide whether he attempts to relate this cognitive load to solving a more challenging task.

As a result, it is crucial to think about age-appropriate and goal-oriented activities, but it's also crucial to customize the design of technology-based projects to guarantee that the student applies this cognitive burden to completing them. Alternatively, he can decide to avoid the cognitive burden and utilize technology for other things instead, like playing games or scrolling through social media, which will not get him any closer to accomplishing the specified learning goal. By allowing users to view things differently, access information more quickly, and other features, technology can increase interest in new learning content. Technology, though, may be confusing. For instance, comprehending how to get information or the technology's architecture might incur a significant cognitive effort. Inadequate design decisions can occasionally add to the cognitive burden and interfere with learning processes. Students in a setting assisted by technology can quickly change the subject of their attention.

This implies that information architecture in a technologically enhanced learning environment is just as significant as the material that students must learn. There should not be any additional cognitive strain on the learner, allowing her to use her previous understanding of the subject matter to complete a task and discover new material. To encapsulate the data examined in this chapter, the following points are crucial for the structure of a technology-enhanced learning process:

- ✓ whether people believe technology is helpful for accessing knowledge or for learning knowledge;
- ✓ If instructors and pupils possess the necessary digital skills to use technology, which in turn influences how much the opportunities provided by technology will be utilized in the teaching and learning process;
- ✓ the design of digital learning resources, which should allow for the acquisition of new knowledge while without adding unnecessary cognitive burden, in order to provide an environment conducive to its acquisition;
- ✓ the degree to which pupils are motivated to study, which is influenced by past knowledge, curiosity, and feedback.

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