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IMPACTS OF DIGITAL CLASSROOMS IN EDUCATION

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Abstract. Information technology affects every aspect of human activity, and education is no exception, so its impact on education and learning is inevitable. A digitally literate citizen will be able to learn and take responsibility for their learning in this way, leading to an increased demand for education and a sense of need for more equipment and tools. In a digital environment, students can share their ideas and experiences and get help from other students and teachers. The digital classroom includes all forms electronically with support for learning and teaching.

Keywords. Educational technology, information technology, digital classroom, DLOs – Digital Learning Objects (digital learning objects).

Nowadays, the use of information technology has been improved in no time. Most people use the Internet and computer to exchange information, research, ideas and so on.

Since technology used properly has a significant impact on teaching and learning, if it is used improperly it will interfere with the learning and teaching process. Thus, integrating technology into the classroom is an approach to developing a better understanding of the core concepts provided for learning if it is applied appropriately.

While technology will never replace the human mind, it can enhance it and increase the pace of learning. Thus, teachers play an important role in this area – teaching students how to use technology as a tool to help rather than hinder their learning.

Students use information and communication technologies to construct knowledge and communicate with others. Hardware and software have improved so that more sophisticated technology such as the Internet and intranets can support the growth of distributed or asynchronous learning. Meanwhile, financial pressures have called for the development of a more cost-effective way of delivering education to a variety of clients.

Students still spent a lot of time listening to what teachers had to say. As in a traditional learning environment, the teacher is the center of the class and also serves as the lecturer. Education reform is doomed to fail if teachers experience what he calls productive teaching content. Such content reinforced the fact that both teacher and student must have logical control over what is happening in the classroom, and that mutual understanding of each other and context is an important part of the learning process.

“Teacher and student have different frames of reference that can range from no overlap to mutual understanding to productive mutual understanding.” Unfortunately, research on the teacher education program confirms that it is not productive to learn in the ways in which teacher candidates are trained while they are maintaining their training program [1]. When teachers themselves have no experience of productive learning, how can we expect them to create productive learning contexts in their classrooms. Once teacher candidates have experienced a pedagogy based on

productive rapport, we can envision them using similar pedagogies in their classrooms.

Integrating technology into the classroom begins with teachers preparing lessons that use technology in authentic and meaningful situations (as example Figure 1). Teachers must use technology in a way that supports the curriculum, rather than overwhelms it. Technology should help teachers create a cooperative learning environment and help teachers transition from being a facilitator to being a student and being taught by the teacher, as well as helping students learn. The main purpose of using integrated technology is to prepare a situation, students use technology, deal with real problems and manipulate them to find different aspects of the problem. This way, students can imagine possible consequences when variables change. Therefore, when teachers are trying to integrate technology into their classroom lessons, they can demonstrate basic concepts and then ask students to operate a computer or other technology. Finally, both teacher and student can reap the benefits of using technology if teachers know how to integrate it successfully into the curriculum. The belief that technology will hinder students’ learning has been reset as long as students are taught to use it as a tool in their learning. Now researchers have come to the conclusion that the use of desegregation technology is not only not harmful to learning and students, but it is beneficial for both the teacher and the student. The belief that technology will hinder students’ learning has been reset as long as students are taught to use it as a tool in their learning.

The promotion of various technologies and subsequent parallel developments in media organizations that attempt to apply the technologies commercially, such as film companies, radio and television stations and networks, computer software companies such as Microsoft and WebCT, and Internet service provider such as American Online .

So not only is technology becoming more complex in terms of hardware, software and networks, it is becoming even more complex in terms of organization. Educational technology is no exception. This requires a relatively complex organizational support structure, and we see that the lack of success of many educational institutions in addressing

organizational issues adequately is one of the major barriers to the effective use of technology in learning.

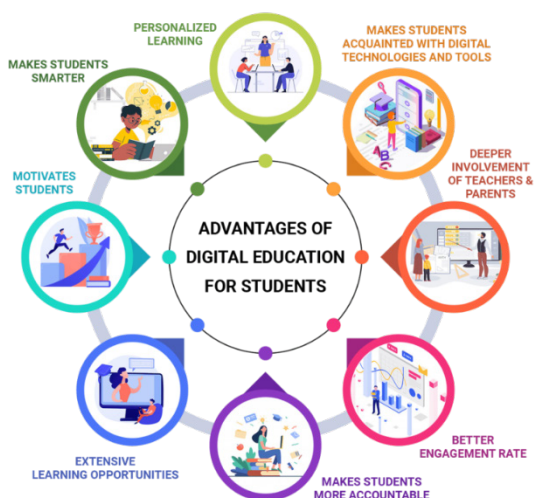


Figure 1 – Advantages of Digital Education For Students [6].

Educational technology provides any means of communication with students other than direct communication, face-to-face interaction, or personal contact. Educational technologies in our definition will consist of the following elements:

- Tools and equipment that are used for teaching support (including software, programs and networks, Internet, video player, video projector, overhead, computer, television monitors, etc.),
- Skills required to produce or effectively use tools and equipment. (For example, writing, designing, programming, and production)
- Understanding the teaching and learning process, and how to know educational tools and materials can be selected and used to support such processes.

The human resources needed to ensure the most effective use of the tools, including technicians, engineers, educational designers, web programmers, and so on, as well as experienced teachers.

It is the organization's role to apply tools and equipment that can be developed and used appropriately. Therefore, we define educational technology as all the components of a complex system necessary for the appropriate use of tools and equipment for educational purposes, which can be updated and changed.

The researchers concluded that technology integration involves educators and students seamlessly using technology as a tool to complete a task in disciplined inquiry that promotes higher order thinking skills. Integrating technology into the classroom is a process that involves a change in the education system and occurs over a period of time [3].

The combination of the Internet and multimedia allows digital classrooms to set up various forms of distance learning. Cabinets can also be considered as

a platform, and they are certainly no exception to the increase in research and the prevalence of multimedia. The digital classroom is spreading rapidly in many towns and cities and growing in visibility. Achieving this goal involves reform in the teacher's method for delivering learning to students.

Digital Educator creates a classroom learning environment that provides students with the opportunity to develop both academic and 21st century skills. The digital classroom is conducive to all students by expanding the classroom beyond the four walls into the community.

Students engage in authentic tasks that have a connection to the real world. In addition, the digital classroom includes all partners of the learning community, such as teachers, students, parents, business partners and higher education professionals.

We can distribute the digital classroom into two parts. First, the synchronous digital classroom is equipped with a computer for each student and online students, who can participate in the class via the Internet and the teacher using the computer to teach with advanced technology and manage the learning process. Secondly, an asynchronous digital class means that every student participates in the class via the Internet at any time and from anywhere. This type of learning is a student-centered method that uses online learning resources to facilitate the exchange of information beyond the constraints of time and place among a network of people learning. This learning is a combination of self-paced learning with asynchronous interactions to facilitate learning, and it can be used to facilitate the learning process in traditional on-campus education and distance education. Online learning resources used to support asynchronous learning include email, electronic mailing lists, threaded conferencing systems, Internet discussion boards, and blogs. In this article we will focus on the asynchronous digital classroom and demonstrate the impact of using technology on another part of the learning process.

Impact through digital learning objects. A digital learning object is a resource that can be used and reused for support training. Digital learning objects offer a new conceptualization of the learning process: instead of the traditional "multiple hour chunk", they provide smaller, self-contained, reusable units of learning. Teachers selected a range of DLOs to which students were given access. Teachers presented some examples of these DLOs to a whole class audience, causing students to select those that best supported their needs as they prepared for a science and technology fair presentation. If the variety of DLOs were increased, students would have a wider choice to choose from to study. By using this process, students' nutrition learning will be enhanced and they can use other DLOs too.

Benefits of asynchronous learning. The greatest benefit of asynchronous learning for students is the freedom it gives them access to the course and its



learning materials at any time they choose and from anywhere with an Internet connection. This allows accessibility to a variety of student populations, ranging from traditional, on-campus students, to working professionals, to international students in foreign countries.

Asynchronous learning environments provide a “high degree of interactivity” between participants who are separated geographically and temporally, and allow students many of the social benefits of face-to-face interaction [4]. Because students can express themselves without interruption, they have more time to reflect and respond to class materials and their classmates than in a traditional classroom. Another advantage is that most asynchronous courses have the potential to reach many more students than a traditional course and course – extensive updates and modifications can be distributed much more quickly and efficiently than traditional lecture models. Another advantage of asynchronous learning (and, as technology advances, many synchronous learning environments) is that there is a recording of almost everything that happens in that environment. All materials, correspondence and interactions can be archived electronically. Participants can return and review training materials, lectures and presentations, as well as correspondence between participants. This information is generally available to course participants at any time.

Digital classrooms are seen as an important element in promoting and improving traditional teaching and learning methods. So, all schools and universities are focusing on it, and trying to attract more virtual students. Thus, they apply the most user friendly software and technology with skilled teachers and engineers to complete this task. In fact, the digital classroom transforms the learning process, and the

cause of universal interactivity between teacher and students, as well as among students themselves, all over the world. This global interactivity causes mutual understanding between teacher and student, and among students. This also leads to greater adaptability of the materials and methods used in the teaching process. Therefore, various educational organizations are in a competitive situation to promote their materials and methods, and the result is an improvement in learning and the educational process.

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ВЛИЯНИЕ ЦИФРОВЫХ КЛАССОВ НА ОБРАЗОВАНИЕ

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Аннотация. Информационные технологии влияют на все аспекты человеческой деятельности, и образование не является исключением, поэтому их влияние на образование и обучение неизбежно. Таким образом, гражданин, грамотный в области цифровых технологий, сможет учиться и брать на себя ответственность за свое обучение, что приведет к увеличению спроса на образование и ощущению потребности в большем количестве оборудования и инструментов. В цифровой среде учащиеся могут делиться своими идеями и опытом и получать помощь от других учащихся и учителей. Цифровой класс включает в себя все формы в электронном виде с поддержкой обучения и преподавания.

Ключевые слова: Образовательные технологии, информационные технологии, цифровой класс, ДЛО – Digital Learning Objects (объекты цифрового обучения).