

# The Role of Digital Learning in Contemporary Education

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**Abstract---** *The objective of this paper is to briefly discuss the role of digital learning in contemporary education. In this paper I am going to describe the types of digital learning and overview its main components as well as the ways of integrating it with traditional academic methods. I am going to list some main advantages and disadvantages of digital learning and try to find the best solutions in the process of integrating digital technologies in academic learning.*

**Keywords---** *Digital Learning, Contemporary Education, Educational Technologies, Collaborative, Interactive Learning Method, Digital Education.*

## I. INTRODUCTION

We live in digital age that has affected in general all areas of our lives, it changed the nature of resources and information, transformed several basic social and economic initiatives and transformed contemporary society, our lifestyles have changed **dramatically**. Both the amount of information and access to it have grown exponentially.

It is no surprise that significant potential for using varied resources in numerous ways for instruction and learning has emerged. However, several issues related to the educational uses of varied resources (e.g., people, place, things, ideas) must be addressed if we are successfully to implement resource based learning environments.

## II. DEFINITION OF DIGITAL LEARNING

In order to overview some main aspects of digital learning, I would like to describe its main components and define the general terms: Educational technology is defined by the Association for Educational Communications and Technology as "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources. The theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning. Educational technology refers to all valid and reliable applied education sciences, such as equipment, as well as processes and procedures that are derived from scientific research, and in a given context may refer to theoretical, algorithmic or exploratory processes: it does not necessarily imply physical technology.

## III. COMPUTER-SUPPORTED COLLABORATIVE LEARNING (CSCL)

*Computer-supported collaborative learning (CSCL)* uses instructional methods designed to encourage or require students to work together on learning tasks. Learning takes place through conversations about content and grounded

interaction about problems and actions. This collaborative learning differs from instruction in which the instructor is the principal source of knowledge and skills.

CSCL uses social software such as blogs, social media, wikis, podcasts, cloud-based document portals (such as Google Docs and Dropbox), and discussion groups and virtual worlds such as Second Life. Social networks have been used to foster online learning communities around subjects as diverse as test preparation and language education.

Mobile-assisted language learning (MALL) is the use of handheld computers or cell phones to assist in language learning. Collaborative apps allow students and teachers to interact while studying (MathChat, Khan Academy). Other apps are designed after games, which provide a fun way to revise. When the experience is enjoyable the students become more engaged. *Virtual classroom* - A virtual learning environment (VLE) simulates a virtual classroom or meetings by simultaneously mixing several communication technologies.

For example, web conferencing software such as 'GoTo Training', 'WebEx Training' or 'Adobe Connect' enables students and instructors to communicate with each other via webcam, microphone, and real-time chatting in a group setting.

Participants can raise hands, answer polls or take tests. Students are able to whiteboard and screen cast when given rights by the instructor, who sets permission levels for text notes, microphone rights and mouse control. A virtual classroom provides the opportunity for students to receive direct instruction from a qualified teacher in an interactive environment.

Learners can have direct and immediate access to their instructor for instant feedback and direction. The virtual classroom provides a structured schedule of classes, which can be helpful for students who may find the freedom of asynchronous learning to be overwhelming. Each class is recorded and stored on a server, which allows for instant playback of any class over the course of the school year. This can be extremely useful for students to retrieve missed material or review concepts for an upcoming exam. Parents and auditors have the conceptual ability to monitor any classroom to ensure that they are satisfied with the education the learner is receiving.

### Online courses

Modern educational technology can improve access to education, including full degree programs.

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It enables better integration for non-full-time students, particularly in continuing education, and improved interactions between students and instructors. Learning material can be used for long distance learning and are accessible to a wider audience. Course materials are easy to access.

Massively open online courses (MOOCs), although quite popular in discussions of technology and education in developed countries (more so in US), are not a major concern in most developing or low-income countries. One of the stated goals of MOOCs is to provide less fortunate populations (i.e., in developing countries) an opportunity to experience courses with US-style content and structure. MOOCs also implies that certain curriculum and teaching methods are superior and this could eventually wash over (or possibly washing out) local educational institutions, cultural norms and educational traditions.

With the Internet and social media, using educational apps makes the students highly susceptible to distraction and sidetracking. Even though proper use has shown to increase student performances, being distracted would be detrimental. Another disadvantage is increased potential for cheating. Smartphones can be very easy to hide and use inconspicuously, especially if their use is normalized in the classroom. These disadvantages can be managed with strict rules and regulations on mobile phone use.

Distance learning is not a new phenomenon. With the development of the postal service in the 19<sup>th</sup> century, commercial correspondence colleges provided distance education to students across the country. This trend continued well into the 20th century with the advent of radio, television, and other media that allowed for learning at a distance. In the last decade, distance education has changed significantly with the use of computer-mediated learning, two-way interactive video, and a variety of other technologies.

Colleges and universities are forging ahead to provide learning at a distance, and many institutions are making substantial investments in new technologies for teaching. The amount of written material devoted to distance education is extensive, with few exceptions, the bulk of these writings suggests that the learning outcomes of students using technology at a distance are similar to the learning outcomes of students who participate in conventional classroom instruction. The attitudes and satisfaction of students using distance learning also are characterized as generally positive. (Phipps, Ronald; Merisotis, Jamie, 1999).

#### IV. THE ROLE OF DIGITAL MEDIA AND INTERNET IN TRANSFORMING EDUCATION

Achieving effective learning via digital media continues to be a major concern in contemporary education. Today's technologies relate to education in many ways instead of the historical pedagogies of a one-way discussion as an educational procedure. Today, individuals employ digital media and the Internet in naturally occurring ways, and education in this form is contemplated in the context of social change, which in turn, is fully integrated with digital media. The daily use of all forms of digital media is part of

our lives and therefore becomes a key component of education. Truly effective contemporary education must consider these elements—the changes they bring about in our social and cultural environment—and apply them today. In modern society, people use digital media daily and seamlessly, and educators need to consider the integration of digital media today and for the future. Historically, educators have reviewed digital media in education, thinking of it in a range of roles, including tutor, supplier, communications facilitator, motivator, stimulator of a specific activity or thought, and more, as digital media can serve this and beyond. Educators are yet unable to see all the potential of these tools. However, often on their own initiative, they show commitment and preparation, bearing proof of their belief in the value of this component in education. Where teachers are open to these tools and techniques for learning, students are encouraged to explore the application of digital media and technology.

The society of today is viewed as a digital society. People enjoy using digital media and have many of its elements integral in their daily lives. Because discussing educational reform is crucial, however, the most critical point for any tool within the framework of pedagogy is to assist educational reform to understand the best techniques and environment of students' lives as they take up new ideas in learning.

For educators to attain the levels of advancement in interest, capability, and stimulation within the grasp of the attention of their students, careful consideration must be given to the process of digital media. With the change from the "lecture and learn" model to fully interactive learning available through digital media, students gain greater responsibility for their own education and view it as a process of lifelong learning; they learn the consequences of enhanced thinking ability and problem-solving skills connected to the many tools around them. It is essential to describe digital media as a means for creating new approaches to learning. The purpose for using these technologies in education is not just to prepare students for their careers, but also to nurture a new generation of creative thinkers who are fluent using digital media (Chien, J., 2012).

#### V. DISABILITIES AND DIGITAL LEARNING

The design of e-learning platforms in ways that enable universal access has received attention from several directions, including the World Wide Web Consortium's Web Accessibility Initiative (WAI). WAI provides universal formatting standards for websites so they can remain accessible to people with disabilities. For example, developing or adopting e-learning material can enable accessibility for people with visual impairment.

Online education may appear to be a promising alternative for students with physical and sensory disabilities because they get to work at their own pace and in their own home.



Through the use of educational technology, education is able to be individualized for each student allowing for better differentiation and allowing students to work for mastery at their own pace. (Ross, S., Morrison, G., & Lowther, D. (2010).

## VI. ADVANTAGES OF ONLINE EDUCATION

One of the advantages is that students usually learn more in less time when receiving computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes. Students can independently solve problems. There are no intrinsic age-based restrictions on difficulty level, i.e. students can go at their own pace. Students editing their written work on word processors improve the quality of their writing.

According to some studies, the students are better at critiquing and editing written work that is exchanged over a computer network with students they know. Studies completed in "computer intensive" settings found increases in student-centric, cooperative and higher order learning, writing skills, problem solving, and using technology. In addition, attitudes toward technology as a learning tool by parents, students and teachers are also improved.

Employers' acceptance of online education has risen over time. More than 50% of human resource managers SHRM surveyed for an August 2010 report said that if two candidates with the same level of experience were applying for a job, it would not have any kind of effect whether the candidate's obtained degree was acquired through an online or a traditional school. Seventy-nine percent said they had employed a candidate with an online degree in the past 12 months. However, 66% said candidates who get degrees online were not seen as positively as a job applicant with traditional degrees.

The use of educational apps generally has positive effect on learning. Pre and post-tests reveal that the use of apps on mobile devices reduces the achievement gap between struggling and average students. Some educational apps improve group work by allowing students to receive feedback on answers and promoting collaboration in solving problems. Mobile devices and apps have also been shown to assist in the education of disabled students, with one study reporting increased engagement and accelerated comprehension and learning.

## VII. DISADVANTAGES OF ONLINE EDUCATION

New technologies are frequently accompanied by unrealistic hype and promise regarding their transformative power to change education for the better or in allowing better educational opportunities to reach the masses. Examples include silent film, broadcast radio, and television, none of which have maintained much of a foothold in the daily practices of mainstream, formal education. Technology, in and of itself, does not necessarily result in fundamental improvements to educational practice. The focus needs to be on the learner's interaction with technology-not the technology itself. It needs to be recognized as "ecological" rather than "additive" or

"subtractive". In this ecological change, one significant change will create total change. Adaptive instructional materials tailor questions to each student's ability and calculate their scores, but this encourages students to work individually rather than socially or collaboratively (Kruse, 2013). Social relationships are important but high-tech environments may compromise the balance of trust, care and respect between teacher and student. According to Branford et al., "technology does not guarantee effective learning" and inappropriate use of technology can even hinder it.

## VIII. CONCLUSION

As we live in digital era, the task for educators is to review and design innovative educational approaches supporting students in their good use of digital media and technology. In actuality, it is not an idea for more consideration but a necessity of paramount and urgent importance. Moreover, the framework that guides our educators' beliefs and actions is important, because this framework will guide the style of the programs of digital media that are implemented, as well as the new kinds of learning cultures that will emerge from their realization.

Educators need to continue to help students become active participants as well as authors of their own identity and creativity. The act of learning, along with new literacy, should develop informed, reflective, and engaged members of society, essential to becoming a modern citizen. These issues are central to the experience of growing up in a world full of mass media, personal recognition, diverse cultures, and digital media.

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