

DISTANCE EDUCATION: THEN AND NOW

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Abstract. *The article dwells on the development history of distance education. It considers the evolution of distance education forms from correspondence to radio, then to television, and finally, to online education. The article also touches the problems of online education during the global coronavirus pandemic, as now it is the time to gravely rethink, renovate and redesign education systems throughout the world to make them correspond to current situation.*

Keywords: *distance education, correspondence education, education by radio, education by television, online education, coronavirus pandemic.*

Nowadays educational technologies continue to develop, so do the ways in which we provide and get knowledge in both the traditional and online classrooms. That is why it is necessary to investigate and understand developments in educational technologies and methods used to provide knowledge in order to improve the education quality and educate students today.

Great changes have been brought in the world of education in the 21st century.

Teaching has become no more limited by the frames of a classroom. The Internet has brought new ways in the way the process of teaching is done. So, it can be said that online education is no longer a trend, rather mainstream.

Distance education is defined as “a method of teaching where the student and teacher are physically separated. It can utilize a combination of technologies, including correspondence, audio, video, computer, and the Internet” [1]. The main objective of distance education is to give opportunities for education to those who cannot attend an educational institution [2].

There have been many forms of distance education throughout history.

The first form of distance education was a correspondence one. It is defined as “a method of providing education for nonresident students, primarily adults, who receive lessons and exercises through the mail, or some other device, and, upon completion, return them for analysis, criticism, and grading” [3].

The first reference to correspondence education was in 1728, when Caleb Phillips from

Boston, the USA, offered to give shorthand lessons using the Postal Service.

In 1840 Isaac Pitman, who was later called the pioneer of distance education, began teaching shorthand by correspondence in Bath, England. Pitman, who was a qualified teacher, sent postcards to his students and gave them instructions how to transcribe passages from the Bible into shorthand. Then the students sent those postcards back for correction. This form of symbolic writing was invented to improve the speed of writing. It was popular among secretaries, journalists and other individuals who wanted to master note taking or writing.

Thus, by the 1870s the foundation for correspondence education was formed, i.e. many institutions offering correspondence model of education appeared. In 1873 the Society to Encourage Studies at Home in Boston, Massachusetts, was founded and Illinois Wesleyan College became the first academic institution to offer degree programs “in absentia” [4]. In the late 1800s and early 1900s the need for correspondence education continued to grow as many people who wanted to get education could not attend traditional universities due to various reasons (financial, family, geographic, etc.).

Distance education changed when the work of scientists and inventors such as Nikola Tesla, Guglielmo Marconi, Lee De Forest, and many others laid the foundations for all forms of radio broadcasting. By that time people had been already looking for new communication technologies as a means to attract more learners.

Both public and private radio stations started to develop programs for education. So, students in traditional classrooms, as well as those who studied distantly could listen to these programs and interact with them using the transceivers. In this manner, students received educational programming that expanded on their classroom learning.

Three countries in the world had a great influence on using the radio in education: the United States, Canada, and Australia.

Educational radio in the United States was provided both by educational institutions and by private, for-profit broadcasters. In 1906, the University of Wisconsin-Extension was founded as a distance-teaching unit. In 1919 University professors began a non-professional wireless station. Later it was recognized as WHA, the first radio station licensed federally and dedicated to educational broadcasting. According to some scientists “the first years of [American] university broadcasting were generally ineffective because many a professor repeated his classroom lecture before the microphone without realizing that a good lecturer was not necessarily an effective broadcaster” [5].

Educational radio in Canada was developing similar to the USA, but with a small difference, i.e. in the US national broadcasting was more popular, while in Canada regional varieties demonstrated the diversity and locality of the Canadian education system.

Thus, educational radio programs in the USA and Canada were meant primarily for indirect broadcasting of general educational programmes to a widely distributed learning audience within the traditional classroom setting.

Educational radio development in Australia was rather different. As Australia was not so densely populated many students in remote areas need to attend boarding schools or work with postal-based correspondence school materials. Shortwave radio broadcasts started being used in 1948 with the support of Royal Flying Doctors Service. By 1956 the “School of the Air” (SOTA) was organized. The SOTA program allowed students and teachers communicate directly with each other. So this program was mostly focused on student to teacher, teacher to student and student to student radio communication rather than on gen-

eral scheduled educational programs. Nevertheless, the great advantage of that program was that it made the students feel direct presence and support of a teacher and, therefore, being motivated to perform well.

What were the advantages of using radio in education? Firstly, it was more reliable, than the post service, and it could reach a larger number of people. Secondly, it is an ideal instrument for informing and educating people. Thirdly, it was cheap and immediate, i.e. its content could be changed quickly.

So, it can be said, that using radio in education formed the bases for development of other educational technologies. Moreover, it is still used in educational purposes today and perhaps, will continue to be used with other technologies in the future.

The first testing machine was invented in 1924. The students were allowed to test themselves with it. Then, in 1954, B.F. Skinner, a Harvard Professor, created the so-called “teaching machine”, which allowed schools to administer programmed instruction to their students.

The first computer based training program (or CBT program) was presented to the world in 1960. It was known as PLATO-Programmed Logic for Automated Teaching Operations. Initially, it was designed for students attending the University of Illinois. Later it started to be used in schools throughout the area.

In the early 1960s television started to be used as a new educational technology. The pioneers of educational television were the University of Iowa, Iowa State University, Kansas State University, the University of Michigan, and American University.

Information transferred through audiovisual presentation was different from traditional education methods. Teachers could present new concepts, give explanations and examples related to the subject visually, so students got motivated for learning and the process of learning and remembering was easier. But, on the other hand, the use of television for distance education was not very popular. There were a few reasons for that. The first one was asynchronous interaction between an instructor and students. The instructors just read notes without keeping students’ attention. The second reason was that

television could not provide instant feedback. It was difficult to capture the students' reactions about the program. And the last reason was not having an opportunity to control the students, whether or not they watched the program. So, these were the reasons for the low viewership and as a result for closing many education television programs.

Thus, in the late 1960s and early 1970s, the use of radio and television in education continued to grow, but not in terms of distance education.

It should be noted, that the best way to use television in the process of education is through informative videos or documentaries that teachers can show during a lecture. When a lecture is combined with a video support, the students can understand it easier.

Creating a connection between the textbook and "real life" through the TV is essential. For example, if a professor shows his students a video and then continues with his traditional lecture, the students would be able to correlate easily what they have learned with what they have watched, as the informative video helps people form a visual representation of their thoughts. Thus, we can conclude that television is adaptable and can follow different approaches when used in different educational situations [6].

At the same time, the use of computers as a medium for delivering education was implemented. Since that time distance education can be said to turn into online education, which is defined by some scholars (Allen, Saltsman, Seaman, etc.) as the form of distance education is online education, which uses computers and the Internet as the delivery mechanism with at least 80% of the course content delivered online [7].

The University of Illinois, USA, was the first to create the Intranet for its students in 1960. Students studied from computer terminals. These terminals were interlinked to form a network and students could get access to course materials and to the recorded lectures.

The first online teaching systems were invented and used only to deliver information to students. But in 1970s these systems gradually became more interactive.

In Britain, the Open University did their best to take advantage of online learning. Their system of education was primarily fo-

cused on learning at a distance. In the past, course materials were delivered by post and correspondence with tutors was via mail. With the invention of the Internet, the Open University began to offer a wider range of interactive educational forms as well as faster correspondence with students via email.

In 1984 the University of Toronto presented the first complete online course. Three years later, the University of Phoenix launched an online collegiate institution offering both bachelor's and master's degrees. CompuServe was then used as one of the first consumer online services. When the World Wide Web was invented, in 1991, the University of Phoenix became one of the first to start online education programs through the Internet. Universities and colleges began their experiments in online courses in the early to mid-1990s. Many online courses were offered by different universities in the USA and Europe. But many of those online educational programs of that time did not survive. Some factors influenced the closure of all these online institutions:

- Failure to recognize the difference between traditional and online education.

- The lack of understanding of online teaching methods.

- Many concerns about the quality of such education.

Nevertheless, the foundations for online education were built and universities started investing in researching new technologies and used them to improve the quality of education. Online education now is the fastest growing form of distance education and it continues to develop.

Now educationalists are exploring opportunities to discover new ways in which the Internet can be used to improve education outcomes. As the Broadband Commission for Sustainable Development states, the challenge is "to help teachers and students use technology ... in relevant and authentic ways that actually improve education and foster the knowledge and skills necessary for lifelong learning" [8].

In 1992, the Educational Technology Leadership (ETL) Program at the George Washington University offered a Master's degree for the students. The program was developed by Dr. William Lynch and originally

delivered course content in association with Jones Intercable's Mind Extension University. All the classes were conducted via satellite late at night. The students communicated through a Bulletin Board system. Their first cohort graduated in May, 1994.

By early 1996, Bill Robie transitioned the ETL Program to the Internet where the graduate degree program was offered completely online. He assembled a set of web-based tools and HTML pages that allowed asynchronous communication among students and faculty, the delivery of lectures, drop boxes for assignments, and other features that became the core toolkit for course management systems.

Although many online educational resources were created at the beginning of the century, it doesn't necessarily mean they were used. In 2004, a multinational company with a homemade online language learning platform completed a research which showed that 93% of their users drop out courses within a month of their first login despite lots of different educational activities for learners at all levels. So, the company concluded that investments in online education was a waste of money [9].

Another research shows that in 2000 there were only 8% of students who studied online, but by 2008 this figure had increased to 20%.

The widespread use of the Internet has opened up education in poorer countries and distant learning opportunities for a broader range of people. In fact, it can be claimed that it has erased any boundaries in education.

In the 2000s, businesses began using online education to train their employees. Both new and experienced workers got the opportunity to improve on their industry knowledge base and expand their skills. At home, individuals were given access to programs that offered them the ability to get online degrees and enrich their lives through expanded knowledge.

In 2020, the global coronavirus pandemic prompted the majority of educational institutions to hastily transition to online education, as they shut across the world. As a result, education has changed dramatically, because whereby teaching is undertaken remotely and

on digital platforms. More than 300 million students worldwide have had their education disrupted by the spread of Coronavirus. Schools and universities have never faced this level of disruption, but unlike any time in the past, there exists the ability to continue education even when educational institutions are closed.

Therefore, this is the time to gravely re-think, renovate and redesign education systems to make them correspond to current situation.

However, it is a well-known fact that none of the pedagogical approaches can replace the superior position of formal education due to teacher-taught direct interaction. But during COVID-19 crisis there has been a shift from traditional education with online elements to totally online teaching and learning, from classroom to Zoom and Google Meet, from personal to virtual and from seminars to webinars.

Previously, e-learning, distance education and correspondence courses were popularly considered as the part of non-formal education, but as of now, it seems that it would gradually replace the formal education system if the circumstances enduringly persist over the time [10].

From all above-mentioned following conclusions can be made:

- Distance education was based on the idea that education was possible without the face-to-face interaction between a student and a teacher.

- Today, with development and breakthrough in communications technologies and the connectivity of computers and the Internet, distance education is commonplace.

- From the Postal Service, to the radio, to television broadcasting, to the Internet and the Web, progress in communication technology has led to the changing of education and the rise of distance education.

- COVID-19 pandemic has utterly disrupted an education system all over the world.- Now, online education is the fastest growing form of distance education.

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ДИСТАНЦИОННОЕ ОБРАЗОВАНИЕ: ПРОШЛОЕ И НАСТОЯЩЕЕ

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***Аннотация.** В статье рассматривается история развития дистанционного образования, а именно, эволюция форм дистанционного обучения, начиная от образования посредством переписки до радио, затем к образованию через телекоммуникации и, наконец, к онлайн-обучению. В статье также затронуты проблемы онлайн-образования во время глобальной пандемии коронавируса, поскольку наступило время для серьезно переосмысления, обновления и перестройки системы образования во всем мире так, чтобы эти системы соответствовали текущей ситуации.*

***Ключевые слова:** дистанционное образование, образование посредством переписки, образование по радио, образование через телекоммуникации, онлайн образование, пандемия коронавируса.*