

Затонацька Т. Г.

доктор економічних наук, професор, професор кафедри економічної кібернетики Київського національного університету імені Тараса Шевченка, Київ, Україна, tzatonat@ukr.net
ORCID ID: <https://orcid.org/0000-0001-9197-0560>

Воловець Томаш

габілітований професор, доктор філософії, директор Інституту державного управління, менеджменту та бізнесу, факультет управління та соціальних наук, Університет економіки та інновацій у Любліні (WSEI), Люблін, Польща, tomasz.wolowiec@wsei.lublin.pl
ORCID ID: <https://orcid.org/0000-0002-7688-4231>

Анісімова О. Ю.

кандидат економічних наук, науковий співробітник відділу статистики та аналітики фінансування освіти ДНУ «Інститут освітньої аналітики», Київ, Україна, olgaanisimova@ukr.net
ORCID ID: <https://orcid.org/0000-0002-6721-3030>

ДИСТАНЦІЙНА ОСВІТА: МЕХАНІЗМИ ОРГАНІЗАЦІЇ ТА ПЕРСПЕКТИВИ РОЗВИТКУ

Анотація. У статті розглянуто визначення, основні механізми і концепції розвитку дистанційної освіти у сфері вищої освіти. Проведено аналіз основних етапів розвитку процесу дистанційного навчання, форм та інструментів його імплементації. Окреслено основні переваги і недоліки дистанційної освіти. Встановлено, що дистанційною освітою можна вважати будь-який освітній процес, де викладання здійснюється переважно особою, яка віддалена у просторі або часі від студента, а контакти між викладачем та здобувачем знань відбуваються опосередковано, через певний носій, переважно друкований або цифровий. Обґрунтовано, що на макроекономічному рівні можна виокремити три епохи розвитку дистанційної освіти, а на мікроекономічному рівні – п'ять поколінь, які визначаються типом комунікаційних технологій, що домінують на кожному конкретному етапі. Виділено три основні підходи до дистанційної освіти: теорії автономії та незалежності, теорії індустріалізації та теорії взаємодії й комунікацій. На основі цих підходів сформовано чотири основні освітні концепції: трансакційної відстані, взаємодії, контролю з боку здобувача та соціальної присутності. Окреслено подальші перспективи розвитку дистанційної освіти.

Ключові слова: дистанційне навчання, дистанційна освіта, теорія автономії та незалежності, теорія індустріалізації, теорії взаємодії та комунікації.

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Distance education is the kind of education in which students may not always be physically present at a school. In other words, you learn, study, and qualify in your chosen subject online without having to attend an exam center, a college building, or university campus. The field of distance education

has changed dramatically in the past several decades. Distance education, structured learning in which the student and instructor are separated by place, and sometimes by time is currently the fastest growing form of domestic and international education. What was once considered a special form of education

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using nontraditional delivery systems, is now becoming an important concept in mainstream education. Concepts such as networked learning, connected learning spaces, flexible learning and hybrid learning systems have enlarged the scope and changed the nature of earlier distance education models [1].

The goal of our article is to determine the concept, models and advantages of distance education in the field of higher education and its role in promoting the internationalization of higher education.

The distance learning is not a new concept, but it has demonstrated a marked development recently. The main reason for it was technological progress and advancements in the ICT. Yet, the end of the year 2019 brought a new challenge to the field of education, that is the global pandemics of the COVID-19 leading to the necessity of the social distancing and new realities of life. It caused the transformation of education services worldwide. Some countries have already developed all the necessary infrastructure to proceed with transferring education to the distant format as they have a legislature, technologies, organizational framework and efficient practices to do that. For some HEIs it's not anything new, as they already had the same educational and learning programs both on campus and at a distance. More so, there was no difference for the diploma obtained. Sadly, in some states there is a difference between the ways to obtain education so it can become a problem to recognize the grades earned online, at least legally. So now they scramble to legalize those forced changes.

Another problem is that distance learning is mainly widespread in higher education and life-long learning as it allows to work while studying. The

problem is that now it's been forced to spread to secondary education. While the benefits of the distance learning for higher education are clear, it's less so for younger children as they require constant supervision for the learning process to be successful. As a result, our research is dedicated to distance education in both higher education and life-long learning.

Distance education has experienced dramatic growth both nationally and internationally since the early 1980s. It has evolved from early correspondence education using primarily print-based materials into a worldwide movement using various technologies. The goals of distance education, as an alternative to traditional education, have been to offer degree-granting programs, to battle illiteracy in developing countries, to provide training opportunities for economic growth, and to offer curriculum enrichment in non-traditional educational settings. A variety of technologies have been used as delivery systems to facilitate this learning at a distance [2].

Teaching and learning by correspondence is the origin of what is today called distance education. Correspondence education has been known for several generations, mainly as a part of adult education. References to what was probably correspondence education occur as early as the 1720s and to what was indisputably correspondence education in the 1830s [3, p. 6–7]. Correspondence education is taken to denote teaching in writing, by means of so-called self-instructional texts, combined with communication in writing, i.e. correspondence between students and tutors. Although there has been a recent explosion of distance education, particularly due to the new technologies available, the origin of distance education

can be traced back to over 100 years ago [4–7]. Distance education (DE), originated in the mid-18th century, and aimed to compensate the insufficiency of traditional education. It rapidly developed from correspondence courses and tapes to the release of personal computers and the applications of computer-based multimedia applications. New tools and techniques, eLearning, new courses, and instructors are playing an important role in distance education and increasing the satisfaction level of students [8]. Learners could receive resources of texts, figures, audio and video, and interpersonal interaction through hyperlinks and online inquiries. Since the early 1970s, distance education is the designation that has gradually been adopted in the United Kingdom and Ireland (though resisted by the Association of British Correspondence Colleges), in North America, Australia, New Zealand, and other parts of the English-speaking world, as well as internationally [9].

Correspondence education, as an early form of DE, is defined as follows:

Correspondence education is «conducted by postal services without face-to-face interaction between teacher and learner. Teaching is done by written or tape-recorded materials through written or taped exercises to the teacher, who corrects them and returns them to the learner with criticisms and advice» [10, p. 42].

According to Moore, distance teaching can be defined as «The family of instructional methods in which the teaching behaviours are executed apart from the learning ones, including those that, in a contiguous situation, would be performed in the learner's presence, so that communication between the teacher and the learner must be facilitated by

print, electronic, mechanical, or other devices» [11, p. 66].

Holmberg defined distance teaching/education as «a method of imparting knowledge, skills and attitudes which is rationalized by the application of division of labor and organizational principles as well as by the extensive use of technical media, especially for the purpose of reproducing high quality teaching material which makes it possible to instruct great numbers of students at the same time wherever they live. It is an industrialized form of teaching and learning» [12, p. 9].

UNESCO presents a definition of DE: «Distance education is any educational process in which all or most of the teaching is conducted by someone removed in space and/or time from the learner, with the effect that all or most of the communication between teachers and learners is through an artificial medium, either electronic or print» [13, p. 22].

Moore and Kearsley redefined DE as «Teaching and planned learning in which teaching normally occurs in a different place from [the] learning, requiring communication through technologies, as well as special institutional organization» [14, p. 2].

The primary focus of these definitions is the separation of learners in time and space from other learners, learning sources, and teachers. Many of the early definitions of DE are no longer valid in today's world. However, regardless of the degree to which DE depends on technology, it is important to keep in mind that the use of technology is not the ultimate goal, but rather, just a medium to convey the learning content.

According to Mehrotra, Hollister, and McGahey, distance learning or

distance education, is not a future possibility for which higher education must prepare, it is a current reality creating opportunities and challenges for educational institutions; a reality offering students expanded choices in where, when, how, and from whom they learn; a reality making education accessible to ever larger numbers of persons. The facts that the number of universities offering distance education programs has increased, that the courses have become more varied and that the number of students applying these programs is rising, raise the question of whether the given education is as efficient as it could be [6].

According to Meyer, in order to help alleviate the demands of travel for faculty and students, institutions began utilizing available technologies, such as audio connections (i.e. telephones), videotapes, and television, to conduct distance education efforts. These types of delivery methods and media continued to be used, as distance education began to grow as a form of education [7].

Early distance education courses employed the first and second generation communication technologies. The first generation (the 1850s to 1960) was predominately one technology and consisted of print, radio, and television. As new media emerged such as radio and television, these new technologies were integrated into distance education delivery methods. The second generation (1960–1985) distance learning courses utilized multiple technologies without computers. The media used to deliver distance education within the second generation included audiocassettes, television, videocassettes, fax, and print. The establishment of the British

Open University (1969) marked a significant development in the delivery of distance education by offering a mixed-media approach to distance learning technologies. Learning materials (text, audio & visuals) were sent to students by mail and supplemented by broadcast radio and television.

In the last 20 years, with the advancement in technology, independent learning has become more accessible for distance education students. The 1970s and 1980s introduced the related concept «distance education» which posed new challenges to traditional independent study, forcing a reexamination and redefinition of the place of independent study in this new international movement [15].

According to Traxler, in formal distance education, there is an enormous potential for widening access to higher education and increasing the diversity of student population since online technologies provide opportunities to learn anywhere, anytime from anyone. New technologies facilitate greater collaboration, both with global partners and at a more local level. However, there is a culture of conservatism within European higher education which needs to change along with the recognition that new service delivery models, such as open online courses, bring specific challenges. Technology has been co-opted to support changes, as universities and colleges use online and distance learning approaches to compete in more distant markets, and technologies replace human pedagogic and administrative functions, amounting to the creeping industrialization of the universities' and colleges' core business [16].

According to most researchers, the history of DE dates back to the 1700s

and 1800s and reflects an egalitarian approach to education. It can be classified under three ages at the macro level and under five generations at the micro level. These ages and generations were shaped and determined by the dominant communication technologies adopted by DE (Figure) [17].

1st Age: Correspondence DE

The history of DE began with courses whose learning content was delivered by mail, and thus it was referred to as correspondence study. By highlighting different characteristics, correspondence study was also called «home study» by the early for-profit schools, and «independent study» by the universities. Owing to the railway networks, which were the cheapest, fastest and most reliable mode of transportation at the beginning of the early 1880s, individuals started to receive their education at home or at work. The primary motive for correspondence educators at that time was to connect with those whose only opportunity to learn was through correspondence DE [14]. In correspondence DE, the learners were mostly adults, whose decision to receive this form of education was due to their occupational, social, and family

commitments. The dominant technology in this era was print technology, and therefore, as a result of the nature of written/printed materials and their method of delivery, this macro age of DE was characterized by a didactic teaching style and an industrialized form of education. Although there were different types of print media, the combination of the printing press and postal services paved the way for correspondence DE. The last but most important aspect of this DE age was the target group, which consisted largely of women, workers, and farmers, all of whom had been traditionally left out of the formal education process. Correspondence DE served well to redress social injustices and decrease rates of illiteracy by providing common people with access to learning [18].

2nd Age: Visual-Auditory DE

Live educational radio reduced many of the limitations of correspondence education, especially delivery time, and increased the immediacy of the learning processes. Delivery of learning content through postal services was no longer necessary once live educational radio emerged. The dominant technologies

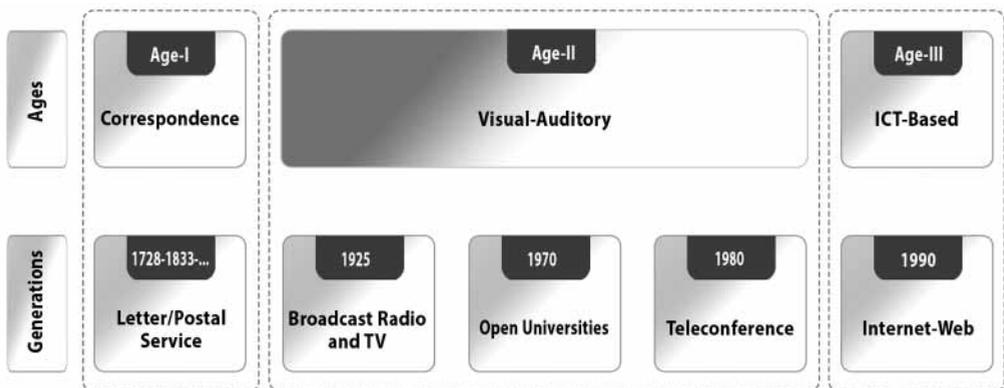


Figure. Ages and generations of distance education

Source: Casey, D. M. (2008). The Historical Development of Distance Education through Technology. *TechTrends*, 52(2), 45–51.

in this age were first audio (e.g., radio) and then visual-auditory (e.g., television) technology. The invention of radio and television enhanced and accelerated the speed of communication and interaction. Although the interaction between learners and their teacher was at first minimal at this age, with each successive generation there was an increase in the level of interaction and the social presence of the teacher, and in terms of immediacy, this age was revolutionary. During this second age, it became possible to reach masses of people, which prompted an increase in educational research on instructional design. Given this ease of reaching the masses, it did not take long for open universities to emerge. Though instruction was teacher-centred in this age, learners gradually started to gain independence and autonomy through the advantages offered by new communication technologies [17]. Research, therefore, began to focus on communication technologies and the effectiveness of new delivery methods. During the 1970s and 1980s, the increase in telecommunication satellites led to the testing of many television programs. Following the developments in educational television, learning opportunities were provided not only for adult learners but also for young learners. The advancements in communication satellites and cable television increased the coverage zone capacity and opened doors for the era of DE [19].

3rd Age: Computer-Based DE

This age also marked the beginning of the digital-knowledge age and network society. The scope of the concept of «distance» was altered, as distance in time and space had lost importance. Rather than reaching masses, a more personal approach to reaching individuals became

possible. The prominence of teacher-centred education diminished and was replaced with learner-centred education. In addition to mega-universities with more than 100K students; giga-universities with 1M students and virtual universities with online campus concept began to appear.

With the advantages and capacity increase offered by technology, the interaction became the central focus for DE. The multimedia used in the previous age had become obsolete when compared to the new, higher quality computer-based multimedia, and synchronous and asynchronous instruction had grown to be as efficient as face-to-face instruction [18].

New learning models, such as e-learning, mobile learning, and ubiquitous learning, appeared with highly rich and interactive content. Learning rather than teaching became the focus, and the idea of lifelong learning took on great importance. Saba [20] states that, though not numerous, theory-based researches were conducted in the 90s. Researchers started to move beyond experimental comparative studies and introduced new methods, such as discourse analysis, and in-depth interviews with learners. In other words, qualitative studies gained particular importance in this age.

For many years, universities with a significant commitment to distance and open education institutions have been at the forefront of adopting new technologies to increase access to education and training opportunities. Distance education operations have evolved through the following four generations: the first, the Correspondence Model based on print technology; the second, the Multi-media Model based

on print, audio and video technologies; the third, the Telelearning Model, based on applications of telecommunications technologies to provide opportunities for synchronous communication; and the fourth, the Flexible Learning Model based on online delivery via the Internet. Although many universities are just beginning to implement the fourth generation distance education initiatives, the fifth generation is already emerging based on the further exploitation of new technologies. The fifth generation of distance education is essentially a derivation of the fourth generation, which aims to capitalize on the features of the Internet and the Web. To place the fifth generation Intelligent Flexible Learning Model into a meaningful conceptual framework, it is first worth reviewing briefly certain features of the previous four generations of distance education. Some of the characteristics of the various models of distance education that are relevant to the quality of teaching and learning are summarized in Table, along with an indicator of institutional variable costs [21].

Although a detailed cost analysis of various technology/pedagogy interfaces is beyond the scope of the present paper, it is worth noting that prior to the advent of online delivery, variable costs tended to increase or decrease directly (often linearly) with fluctuations in the volume of activity. For example, in the second generation distance education delivery, the distribution of packages of self-instructional materials (printed study guides, audiotapes, videotapes, etc.) is a variable cost, which varies in direct proportion to the number of students enrolled. In contrast, the fifth generation distance education has the potential to decrease significantly the costs associated

with providing access to institutional processes and online tuition. Through the development and implementation of: automated courseware production systems, automated pedagogical advice systems, and automated business systems, the fifth generation of distance education has the potential to deliver a quantum leap in economies of scale and associated cost-effectiveness. Further, effective implementation of the fifth generation distance education technology is likely not only to transform distance education, but also to transform the experience of on campus students.

The theory is important, as it directly impacts how practices are conducted in the field. Keegan [2] identifies three historical approaches to the development of the theory of distance education. The theories of autonomy and independence from the 1960s and 1970s, argued by Wedemeyer [22] and Moore [14], reflect the essential component of the independence of the learner. Otto Peter's work on a theory of industrialization in the 1960s reflects the attempt to view the field of distance education as an industrialized form of teaching and learning [23]. The third approach integrates theories of interaction and communication.

Theory of Independence and Autonomy

Wedemeyer, who proposes the theory of independence and autonomy, highlights that the core of ODL (Open and Distance Learning) is learner independency, emphasizing the characteristics of independent study systems such as separation and time, the earlier definitions of ODL can be said to be built on this theory. As Gunawardena and Mclsaac [1] state Wedemeyer's vision of independent study was consistent with self-directed learning and self-regulation.

Table

Models of Distance Education - A Conceptual Framework

Models of Distance Education and Associated Delivery Technologies	Characteristics of Delivery Technologies					
	Flexibility			Highly Refined Materials	Advanced Interactive Delivery	Institutional Variable Costs Approaching Zero
	Time	Place	Pace			
FIRST GENERATION The Correspondence Model • Print	Yes	Yes	Yes	Yes	No	No
SECOND GENERATION The Multimedia Model • Print	Yes	Yes	Yes	Yes	No	No
• Audiotape	Yes	Yes	Yes	Yes	No	No
• Videotape	Yes	Yes	Yes	Yes	No	No
• Computer-based learning (e.g. CML/CAL/IMM)	Yes	Yes	Yes	Yes	Yes	No
• Interactive video (disk and tape)	Yes	Yes	Yes	Yes	Yes	No
THIRD GENERATION The Telelearning Model • Audio tele-conferencing	No	No	No	No	Yes	No
• Video-conferencing	No	No	No	No	Yes	No
• Audiographic Communication	No	No	No	Yes	Yes	No
• Broadcast TV/Radio and audio-teleconferencing	No	No	No	Yes	Yes	No
FOURTH GENERATION The Flexible Learning Model • Interactive multimedia (IMM) online	Yes	Yes	Yes	Yes	Yes	Yes
• Internet-based access to WWW resources	Yes	Yes	Yes	Yes	Yes	Yes
• Computer mediated communication	Yes	Yes	Yes	Yes	Yes	No
FIFTH GENERATION The Intelligent Flexible Learning Model • Interactive multimedia (IMM) online	Yes	Yes	Yes	Yes	Yes	Yes
• Internet-based access to WWW resources	Yes	Yes	Yes	Yes	Yes	Yes
• Computer mediated communication, using automated response systems	Yes	Yes	Yes	Yes	Yes	Yes
• Campus portal access to institutional processes and resources	Yes	Yes	Yes	Yes	Yes	Yes

Source: Taylor, J. C. (2001). *Fifth generation distance education*. Higher Education Division, Department of Education, Training and Youth Affairs, p. 3.

Theory of Industrialization

Otto Peters' view of distance education was as an industrialised form of teaching and learning. He compared distance education with the industrial production of goods. He also claims that before the industrial age distance education couldn't have existed. From this aspect, Peters proposed a new terminology, which heavily highlights the concepts from industrialization

for the analysis of distance education: Rationalization, Division of Labor, Mechanization, Assembly Line, Mass Production, Preparatory Work, Planning, Organization, Scientific Control Methods, Formalization, Standardization, Change of Function, Objectification, Concentration and Centralization. Accordingly, division of labor is the key element of distance education and with the help of «mechanization» and

«automation», teaching process in Peters' theory has been updated [23].

Theory of Interaction and Communication

Borje Holmberg's theory of distance education, what he calls «guided didactic conversation», falls into the general category of communication theory. At first Holmberg proposed seven background assumptions and in 1995 these assumptions were extended.

Accordingly, the theory consists of eight parts:

1. Distance education serves individual learners who cannot or do not want to make use of face-to-face teaching.
2. Distance education promotes students' freedom of choice and independence.
3. Society benefits from distance education.
4. Distance education is an instrument for recurrent and lifelong learning and for free access to learning opportunities and equity.
5. Distance education may inspire metacognitive approaches.
6. Distance education is based on deep learning as an individual activity
7. Distance education is open to behaviorist, cognitive, constructivist and other modes of learning.
8. Personal relations, study pleasure and empathy between students and those supporting them are central to learning in distance education.

All in all, Holmberg highlights that the dialogue between the learner and the teacher as the basic characteristic of distance education and states that guided conversation facilitates learning [15].

Recently, a wider range of theoretical notions has provided a richer understanding of the learner at a distance. Four such concepts are transactional

distance, interaction, learner control, and social presence.

Transactional Distance

Moore's concept of «transactional distance» encompasses the distance that, he says, exists in all educational relationships. This distance is determined by the amount of dialogue that occurs between the learner and the instructor, and the amount of structure that exists in the design of the course. A greater transactional distance occurs when an educational program has more structure and less student-teacher dialogue, as might be found in some traditional distance education courses. Education offers a continuum of transactions from less distant, where there is more interaction and less structure, to more distant, where there may be less interaction and more structure. This continuum blurs the distinctions between conventional and distance programs because of the variety of transactions that occur between teachers and learners in both settings. Thus distance is not determined by geography but by the relationship between dialogue and structure [14].

Interaction

The second theoretical construct of recent interest to distance educators, and one that has received much attention in the theoretical literature, is that of interaction. Moore discusses three types of interaction essential in distance education. Learner-instructor interaction is the component of his model that provides motivation, feedback, and dialogue between the teacher and student. Learner-content interaction is the method by which students obtain intellectual information from the material. Learner-learner interaction is the exchange of information, ideas, and

dialogue that occur between students about the course, whether this happens in a structured or non-structured manner. The concept of interaction is fundamental to the effectiveness of distance education programs as well as traditional ones [14]. Hillman, Willis, and Gunawardena have taken the idea of interaction a step farther and added the fourth component to the model of learner-interface interaction. They note that the interaction between the learner and the technology that delivers instruction is a critical component of the model, which has been missing thus far in the literature. They propose a new paradigm that includes understanding the use of the interface in all transactions. Learners who do not have the basic skills required to use a communication medium spend inordinate amounts of time learning to interact with the technology and have less time to learn the lesson. For this reason, instructional designers must include learner-interface interactions that enable a learner to have successful interactions with the mediating technology [24].

Control

The third theoretical concept receiving attention in the distance education literature is that of independence and learner control. Studies that examine locus of control conclude that students who perceive that their academic success is a result of their own personal accomplishments have an internal locus of control and are more likely to persist in their education. Students with an external locus of control feel that their success, or lack of it, is due largely to events such as luck or fate outside their control. Thus, externals are more likely to become dropouts. The factors of control that influence dropout rate have been of concern to distance

educators as they search for criteria to predict successful course completion. Baynton developed a model to examine the concept of control as it is defined by independence, competence, and support. She notes that control is more than independence. It requires striking a balance among three factors: a learner's independence (the opportunity to make choices), competence (ability and skill), and support (both human and material). Baynton's factor analysis confirms the significance of these three factors and suggests other factors that may affect the concept of control and which should be examined to portray accurately the complex interaction between a teacher and a learner in the distance learning setting [25].

Social Context

Finally, the social context in which distance learning takes place is emerging as a significant area for research. Theorists are examining how the social environment affects motivation, attitudes, teaching, and learning. There is a widespread notion that technology is culturally neutral, and can be easily used in a variety of settings. However, media, materials, and services are often inappropriately transferred without attention being paid to the social setting or to the local recipient culture. Technology-based learning activities are frequently used without attention to the impact on the local social environment. Computer-mediated communication attempts to reduce patterns of discrimination by providing equality of social interaction among participants who may be anonymous in terms of gender, race, and physical features. However, there is evidence that the social equality factor may not extend, for example, to participants who are not

good writers but who must communicate primarily in a text-based format [26].

With the rise and proliferation of distance learning systems has come the need to critically examine the strengths and weaknesses of various programs. A majority of new programs have been developed to meet the growing needs of higher education in responding to demands for flexible learning environments, continuing education and lifelong learning. Due to the rapid development of technology, courses using a variety of media are being delivered to students in various locations in an effort to serve the educational needs of growing populations. In many cases, developments in technology allow distance education programs to provide specialized courses to students in remote geographic areas with increasing interactivity between a student and a teacher. Although the ways in which distance education is implemented differ markedly from country to country, most distance learning programs rely on technologies which are either already in place or are being considered for their cost-effectiveness. Such programs are particularly beneficial for the many people who are not financially, physically or geographically able to obtain traditional education. Although there is an increase in the number of distance services to elementary and secondary students, the main audience for distance courses continues to be the adult and higher education market [27].

Distance learning might not be the best choice for every student seeking to pursue a college degree or university program but the list of advantages seems to outweigh the list of disadvantages.

Study from Anywhere, Anytime

The best thing about the distance education is you could get it anywhere and at any time. No matter what part of the country you live in, you can join the course and start learning. Even if your course is offered by an international school you could easily get access to the course material if you are a citizen of a different country. Get all the knowledge and training anywhere you reside on the planet [28].

Saving a Significant Amount of Money

According to Bijesh, for any given program, the fee of a distance education degree (online or otherwise) may be much more affordable than the fee of a regular on-campus degree. Students who are looking for economically viable options can go for a distance learning program. You don't have to live in the same city or the same country to attend the learning institution of your choice. You can study wherever you have access to a computer and the Internet connection. Moreover, the course offered at distance learning centers is cheaper than the courses provided at traditional education centers [29].

No Commuting

Nagrale stated that if you are opting for distance education, then you do not have to commute in crowded buses or local trains. You need a computer with an internet connection at home. The entire college would be in your bedroom and you do not have to go out. Commuting is the most difficult part because you waste a lot of time, money, and more importantly the energy. No one likes commuting for long hours [28].

Flexibility to Choose

Learners will have to follow a set schedule of learning as per the curriculum of the school if they are following traditional ways of learning. But different

types of distance learning allow learners to set their learning schedule as per their convenience without following a regular schedule of learning. Even if they are out of touch with the learning process, a distance learning program offers them flexibility to choose their course of learning [30].

Saving Time

Bijeesh argued that there's no time wasted in going to and from a college, no time wasted waiting for a bus or train. In a distance learning program, your classroom is right in your bedroom – the study material is on your desk or the e-material is on your computer. Students who don't have enough time on their hands can turn to distance education as an option and pursue it from the comfort of their homes [29].

Earn While You Learn

For those who want to improve their resume by getting a higher education and not disrupting existing job, distance learning may be the best option. Learners can go on earning their livelihood along with improving their qualification as distance learning will accommodate both learning as well as earning [30].

Although distance learning offers more people an opportunity to attain higher education, it is not all advantages and benefits.

High Chances of Distraction

According to Bijeesh, with no faculty around for face-to-face interaction and no classmates who can help with constant reminders about pending assignments, the chances of getting distracted and losing track of deadlines are high. You need to keep yourself motivated and focused if you want to complete your distance learning course successfully [29].

Distance education is not a good idea if you tend to procrastinate and can't

stick to deadlines. Moreover, if you have any doubt then you have to clear yourself without taking help from your teacher or friends since you cannot talk to friends and other colleagues that you do in a normal college course. It only requires one to be self-motivated and focused to be able to complete a course successfully [28].

Complicated Technology

Brown explained that any student seeking to enroll for a distance learning program needs to invest in a range of equipment including a computer, a webcam, and stable internet connection. There is absolutely no physical contact between students and instructors as instruction is delivered over the internet. This overdependence on technology is a major drawback to distance learning. In case of any software or hardware malfunction, the class session will come to a standstill, something that can interrupt the learning process. Moreover, the complicated nature of the technology used in distance learning only limits online education to students who are computer and tech savvy [30].

No Social Interaction

Learners will often be studying alone and so they may feel isolated and miss the social physical interaction that comes with attending a traditional classroom. Moreover, they don't have a chance to practice the lessons verbally. The lack of physical interaction in the education process may cause many problems, such as a great degree of flaming and isolation. Brown held the idea that learning in a brick-and-mortar institution presents students with the opportunity to meet and interact with people from different locations on a personal level. Distance learning only limits students to classes and learning materials that are based

online. Though students can interact through chat rooms, discussion boards, emails and/or video conferencing software, the experience cannot be compared to that of a traditional campus [30]. Hara and Kling's controversial study also found that the difficulty and distress experienced by students online might not be adequately understood. Working alone at night caused many complexities and depressing experiences [31].

Difficulty Staying in Contact with Instructors

If learners ever have trouble with assignments, or questions about a lecture while in a traditional class it's generally quite simple to talk to the instructor before or after class or schedule meetings online at a different time. When learners are distance learning, however, they are going to have more difficulty getting in touch with their instructor. Though they can send an email, it's definitely not going to get them the immediate response they would get if they were able to sit down with their instructor [32].

Job Markets Do Not Accept Online Degrees

Nagrle believes this could be quite dangerous if you are totally relying on distance education for a degree. You might get a degree but that is not going to be recognized by private companies in the job market and there is the same problem in government jobs. Still employers prefer a degree from a regular college over online or distance education. They think that distance education is still not a serious form of education [28].

Distance education programs will continue to grow. One of the reasons for this growth is related to the ever growing global need for an educated workforce combined with financial constraints of established educational systems.

Distance education offers life-long learning potential to working adults and will play a significant part in educating societies around the world. Distance education will become of far greater importance in the years ahead because it is cost-efficient and because it allows working adults to learn independently. If society is to cope with this growing need for an educated workforce, distance education must continue to take its place in the educational community.

The changing and diverse environment in which distance education is practiced has inhibited the development of a single theory upon which to base practice and research. A variety of theories have been proposed to describe traditional distance education. They include theories that emphasize the independence and autonomy of the learner, industrialization of teaching, and interaction and communication. These classical theories emphasize the notion that distance education is a fundamentally different form of education. Recent emerging theories based on the capabilities of new interactive telecommunications-based audio and video systems suggest that distance education may not be a distinct field of education. Both the utilization of existing educational theory and the creation of equivalent experiences for the distant and local learners are emphasized. Classical distance education theorists need to address the changes to distance education facilitated by new technologies. Advocates of the new theories must consider the relationship of these to the traditional strengths of distance education. For example, the new theories' focus on face-to-face instruction eliminates the advantage of time independent learning that traditional theories of distance education value. The

debate on these theoretical issues will only increase in the face of continued technological change.

An environment in which technology, society, economics, politics, and approaches to learning are all in transition suggests that theories, definitions, and the practice of distance education will continue to be contested. This theme of change will both challenge and motivate distance educators and researchers as they strive to understand and develop effective ways to meet the needs of learners around the world.

The future opportunities for distance education are unlimited. Clearly, distance education programs and courses are here to stay and will increase in the future but there are still many uncertain issues to be clarified and investigated. While distance learning can be at least as effective as conventional classroom learning under certain situations, it hasn't been claimed that e-learning can replace traditional classroom learning. Like any kind of educational program, distance learning comes with a host of pros and cons. Before learners enroll in any kind of distance learning program, they had

better make sure to carefully consider these points in order to be sure they'll be getting an education that meets their personal needs, strengths, and career goals.

The global COVID-19 pandemic brought new challenges to the HEIs around the world. The introduction of the strict quarantine measures and future uncertainties caused them to reexamine the future of distance education. Unfortunately, there is still no guaranty that the learning process can be organized on campus, and there are severe financial implications of the scenarios under consideration. The estimations considered by the HEIs assumed, in all cases, a drop in the expected number of international students; physical restrictions to the research capacity, and a loss of research funding; a drop in the value of the HEI's endowment (and the associated income); a drop in the normal cash-flow for the HEI; and additional costs on current capital projects as a result of the disruption. And while transferring to the education at a distance seems more financially viable, there is a matter of rankings and traditions that can cause some loss of students.

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Tetyana Zatonatska

Dr. Sc. (Economics), Professor, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine, tzatonat@ukr.net

ORCID ID: <https://orcid.org/0000-0001-9197-0560>

Tomasz Wołowiec

Prof. Hab. PhD., Institute of Public Administration, Management and Business, University of Economics and Innovation in Lublin (WSEI), Lublin, Poland, tomasz.wolowiec@wsei.lublin.pl

ORCID ID: <https://orcid.org/0000-0002-7688-4231>

Olga Anisimova

Ph. D. (Economics), SSI «Institute of Educational Analytics», Kyiv, Ukraine, olgaanisimova@ukr.net

ORCID ID: <https://orcid.org/0000-0002-6721-3030>

DISTANCE LEARNING: MODELS AND PROSPECTS

Abstract. *The article examines the definition, key models and framework of distance education in the field of higher education. The analysis of the main stages of the development of the distance learning process, the main forms and models of its implementation is carried out. It is defined that distance education is any educational process the teaching of which is conducted mainly by someone remote from the learner in space or time, with the effect that all or most of the communication between teachers and learners is through an artificial medium, either digital or print. The history of distance education can be classified under three ages at the macro level and under five generations at the micro level. These ages and generations were shaped and determined by the dominant communication technologies adopted by distance education. With the advantages and capacity increase offered by technology, interaction became the central focus for distance education. The multimedia used in the previous age had become obsolete when compared to the new, higher quality computer-based multimedia, and synchronous and asynchronous instruction had grown to be as efficient as face-to-face instruction. Three historical approaches to the development of a theory of distance education were identified: theories of autonomy and independence, reflecting the essential component of the independence of the learner; a theory of industrialization showing the attempt to view the field of distance education as an industrialized form of teaching and learning and theories of interaction and communication. To illustrate the practical aspects of those theories, four learning concepts such as transactional distance, interaction, learner control, and social presence were introduced. It was established that distance education programs will continue to grow. One of the reasons for this growth is related to the ever growing global need for an educated workforce combined with financial constraints of established educational systems. Distance education offers life-long learning potential to working adults and will play a significant part in educating societies around the world.*

Keywords: *distance learning, distance education, theory of autonomy and independence, theory of industrialization, theories of interaction and communication.*