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Distance Education

Kształcenie na odległość

Defining notes

Beyond the small controversies regarding the need for implementation, the feasibility of the system, etc., distance learning is a variety of educational models, which uses technologies to make possible new approaches to the teaching-learning-assessment process. We find the origin of distance learning in attempts to define distance education, the different visions about this term not affecting the educational praxis. Historically, distance education has meant studying by correspondence, but at the present stage it has become closer to the methods of transmitting materials through modern information technologies, which contain video, audio information and the global internet.

Overall, the definitions presented by the specialized institutions accept that when we talk about distance education, it is considered that the teacher and the student (s) are separated and the current existing technology (audio, video, internet, etc.), combines with face-to-face communication, being used

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for training (EOSUI, 2018). Another common aspect is the ability to argue for students' learning opportunities (CDLP, 2021), eliminating spatial, temporal, or rhythmic barriers to learning. Thus, study opportunities will be provided to several categories of people, without interrupting their professional activity. This main feature makes the system viable and relevant for higher education, lifelong learning and vocational education, probably placing it among the most sought after the types of education systems of the future.

An excellent definition with operational value is given by the Council for Distance Education and Training (CDET, 2021): "Distance education involves enrollment and study at a training institution, which provides teaching materials prepared in a sequential and logical order for students to study on their own. At the end of each stage, the student sends by fax, mail, or computer to qualified instructors the product of his work for correction, grading and tutorial guidance on the problems of the subject. The corrected tasks are returned, this exchange ensuring a personalized student-teacher relationship".

At the current stage, teachers largely apply the interactions between students, probably because this is one of the directions in which the distance learning system will push its limits. At the current stage, teachers largely apply the interactions between students, probably because this is one of the directions in which the distance learning system will push its limits. Emphasis is also placed on the mediating role of education specialists, i.e. establishing students' connection with the existing educational resources, as an important advantage of distance education via the Internet in the current context of digitization of culture, and variety of information orientation in the information field.

We define virtual education (or distance education) as a planned teaching-learning-assessment experience, organized by an institution that provides mediated materials in a sequential and logical order to be assimilated by students in their own way, without constraining the agents of the activity to co-presence or synchronicity. Mediation is done in various ways, from printed material (by email) to audio, video or new information and communication technologies.

The main educational levels that distance learning can support give an image of the importance of deepening the theory and application in practice of this type of education (Achimaş-Cădariu, 1998, p. 26):

1. Alternative to traditional schooling:
 - second chance for schooling for adults;

- schooling schemes for school-age children in conditions of distance, inaccessibility, resource problems;
 - at the university level.
2. Training of trainers, justified by:
- the great requirement for trainers;
 - lack of the necessity to remove teachers from the classrooms, and the benefits are validated immediately;
 - teachers have already formed study skills, so they adapt easily to the requirements of distance education;
 - teachers' motivation for study (improvement, promotion).
3. Non-formal education (literacy, community development, education for democracy values, etc.)
4. Vocational and technical training:
- on-the-job training;
 - various schemes made and sponsored by the beneficiaries (those for whom the trained specialists will work).
 - Problems that distance education can solve are:
 - Physical distance (students from rural or remote campuses; teachers from different geographical areas) – vanishes the distance.
 - Time and scheduling problems (difficulty of frequent meetings between students; work, family, personal, community problems) – elimination of the time and learning pace requirements.
 - Limited available spaces (large number of candidates versus limited space in institutions).
 - Limited or scattered registrations (few registrations in a long period of time; few registrations in a certain geographical area).
 - Limited number of available teachers (lack of trained staff, related to demand; geographical concentration of teachers).
 - Cultural, religious and political considerations (discrimination; emigration; administrative-territorial barriers).

We reproduce here the functions of a distance education system (Achimaş-Cădariu, 1998, pp. 22–24):

1. Recruitment and marketing:
- To mediate information at the right place and time about duration, cost, access, enrollment and graduation conditions, expectations;
 - To ensure potential beneficiaries about legitimacy and accreditation;

2. Registration (in specific ways from manual lists to digital databases);
3. Examination, credentialing and accreditation guarantee:
 - Requirements for taking exams and credit assessment;
 - Involvement of professional associations and accreditation agencies;
4. Obtaining and managing resources:
 - Taxes, grants or self-support;
 - Development and expansion costs;
5. Development and improvement of programmes and courses:
 - Defining the differences between distance education and conventional education;
 - Sufficient time for the development of learning support in distance learning (at least 8–12 months);
6. Production, reproduction, storage and distribution of learning materials:
 - The subject matter may require print, audio, video or digital support for the Web;
 - Distribution may require postal services, couriers, telecommunications, satellites;
 - Physical time consumed for the production and multiplication of learning materials;
 - The need for storage, inventory, and storage and distribution equipment;
7. Offer of programmes and courses:
 - Requires two-way communication;
 - Requires evaluation and feedback;
 - Collaboration with other agencies or faculties (credential);
 - Library services (provided in collaboration with the Zonal Study Centers (MEN, 1998));
 - Recording systems;
8. Management of the group of students:
 - Organizational support (group cohesion; course structure);
 - Social role (promoting effective communication, developing leadership skills, conflict management);
 - Intellectual role (promoting decision-making skills, analytical thinking, and academic support);
 - Technical support;

9. Evaluation:

- measuring the achievement of the programme goals;
- estimating the efficiency of courses or materials;
- measuring the inputs in the programme – number and categories of staff, number and content of team work hours, time spent by the student, etc.;
- comparative exploration of the efficiency of different ways in providing the same services;
- identifying the troublesome effects (hidden curriculum) of the programme, either on the students or on the staff of the distance institution (tutors, teachers, computer scientists, coordinators, etc.), as well as identifying their availability for change;
- permanent feedback regarding the students' progress related to the programme objectives;
- identifying the students' needs at different stages and ways of intervention;
- estimating the factors that can affect the exit from the system.

In relation to traditional education, we can highlight some advantages of virtual education through the Internet, considering it applicable, at least, at the level of college education and in lifelong learning, following the model of open and distance institutions in high-tech countries:

- First of all, all the resources that are the object of the course can be accessed ubiquitously;
- The purpose of the curriculum will be more comprehensive than the current one, offering multiple ways for acquisition in all fields of culture at the highest level;
- The audience will be larger, the virtual education may include people who can not participate, for some reason, in the courses of the traditional system, while the access to local, regional, and national networks connects students from a variety of social, cultural, economic, and diverse backgrounds;
- It facilitates learning at your own pace, in a personal style, while the completion or listening of courses can be done gradually and repeatedly.

- Modern technologies incorporate various predominantly flexible software packages, giving you maximum control over your content information;
- Synchronous and asynchronous interactions between teacher and students can become complementary; a current issue could be the possibility of setting up a pedagogical group (team teaching) in order to transmit the knowledge of a certain field and to train in activities from some educators who are currently not available for various reasons;
- Interactive technologies allow close communication in real time, allow formative or summative evaluations, quantitative or qualitative ones in an easy way.

The implementation difficulties, which are also considered limitations of the new system can be:

- High costs for system development, including high costs related to technology (hardware and software), network information transmission, equipment maintenance, production of the necessary materials;
- The difficulty of sustaining a consistent and sustained effort of students, teachers, intermediaries that provide technical support at the time of system implementation;
- Lack of students' experience in the field of computers;
- Students should be extremely high motivated to participate. The phenomenon of school dropout is much more common in distance education than in traditional education settings, as the established interrelationships, being relatively impersonal, make the option easier for the student;
- The relative "dehumanization" of the courses until the development of optimal interaction strategies and the focus on the student and not on the system occurs.

From the experience of other countries we can conclude that people who participate in education through new information technologies quickly become familiar with the digital system and quickly enter the pace of transmission and therefore the acquisition of knowledge.

Types of distance education

Distance education is not a new phenomenon, but it is a way of teaching-learning-assessment known for at least a hundred years. Before the advent and use of new information technology, teachers used printed materials and postal services for what was called correspondence education.

As early as 1910, a study dedicated to a distance learning institution (ADE, 2021) gives us a measure of what was happening in the United States and Canada: “No less than 1600 people are involved in training activities by the International School of Correspondence, whose main mission is to penetrate the heterogeneous mass of humanity to discover, direct and convince individuals of the benefits of education. I know of no other innovation among the existing methods more revolutionary and more radical than this. We are dealing here with an institution that spends over two million dollars annually to create a demand for education.”

This form of distance education still remains a viable way of training where the infrastructures necessary for a modern and more efficient approach are not yet developed.

Some of the current forms of correspondence education should also be noted here, in which learning materials are in electronic format and can be delivered on disks, CD-ROM or directly by e-mail. This provides some advantages over distance learning through postal correspondence: reduced costs, staff and storage space.

Distance education by radio had a lower popularity, being used with the extraordinary development of this new information carrier and dissolving in the other functions of communication through the media: promoting culture, information, socializing and even entertainment. Immediately after obtaining the first license for radio education by the University of Salt Lake City, in 1921, the first appreciation regarding the new pedagogical methods offered by broadcasting appeared in Romania. At the suggestion of Dimitrie Gusti, the president of the Romanian Broadcasting Society, two radio conferences were organized since 1930 for the lower and upper classes. Undoubtedly, radio had its period of positive predominance in the perimeter of informal school instruction and education.

Similar is the situation of education through television, which also takes over, at some point, from the book/textbook and press, various activities of

accumulation and transfer of information. Through its wide and varied means and using the advantage of open source, television contributes to cultural information, but can also be used for education, remaining a pedagogical alternative in the interest of educators since 1945 (University of Iowa obtained its first license) and until the middle of the eighth decade. It has been shown that the results obtained through school television are not inferior to those obtained through traditional education. The necessary distinction is between the TV programmes with a general educational character, which pursue instructive objectives through diffuse educational influence and the programmes designed and realized according to the school-type programmes as an alternative form of education, which benefits from the specific advantages of distance education – a teacher can lead learning situations for a larger number of students; realities inaccessible to direct observation are presented to students; the attractiveness of the materials by combining the image with the sound; the transmitted contents can have the endorsement of some personalities present at the lesson; cancellation of the distance impediment; subsequent reuse of materials, etc.

Despite their widespread use and the force of seduction the educators have for it, these modern means of mass communication deviate from the presence among effective educational means through two major shortcomings:

1. The receiver being a large and heterogeneous mass of people, addressing everyone carries the risk of addressing no one; there is no certainty that the message will be received by those to whom it is specifically addressed (we cannot be sure that students will receive the literature show specially prepared for them).
2. Teaching-learning-assessment through radio and television has a unidirectional and not omnidirectional character, i.e. there is no permanent and real dialogue between transmitter and receiver.

Another type of distance learning-learning-assessment, gaining increasing popularity, is education via the Internet. The courses are stored on a computer in a specific form and a common Internet browser or, in some rare cases, a special program, allows students to access information at a personalized pace. These didactic materials are presented in a multimedia form by combining image, sound, text, and even short videos, and in a hyperlink mode which presents itself as a structural model where access to other information is achieved via various links on a single page; in turn, other pages allow you

to go back, deepen by accessing another pages with a similar topic, or jump to other types of information.

The “paperless” type of didactic material can have a number of advantages (Achimaş-Cădăriu, 1998, p. 40):

- no need for storage spaces and large staff;
- cheap shipping costs;
- student’s possibility to choose what to print and what to use in electronic format;
- sending the respective material exactly to the student and on time;
- integration of a variety of learning environments: static and animated image, sound, text, graphics, short films;
- allowing access to materials from other sources, via links from the site of origin;
- making connections with tutors and other students via the web-site.

The study of the implementation of the forms of distance education, and their comparison can be made by the following indicators (ODU, 1996):

- scale – the number of participants who will be involved in the learning-assessment activity for a specific period;
- symmetry – the level of attention focused on each participant (it is a size inversely proportional to the number of people in the given class);
- perception – the quality level of the materials received by the participants;
- interactivity – the relevant time in which we can receive a response in an interaction;
- co-location – the physical distance that separates the participants;
- means – the range of means/working tools available for students in the learning and communication activity;
- costs – the student’s expenses for achieving the relevant set of objectives;
- time – the time required for a student to achieve the learning-assessment objectives.

The level of development of information technologies allows, at the current stage, to reduce the time distance, by introducing an interactive dimension, which, until now, was absent or reduced. Distance education via computer networks (the Internet) tries in addition to other ways of distance education to materialize a form of verbal exchange which is that of dialogue and not that

of simple conversation. The difference that Francis Jacques points out is that: “in the dialogue, the verbal interaction is not only strongly communicative, it is also completed. The same argumentative orientation is imposed on all its constituents. The partners of a dialogue affirm theses that they share. Those of a conversation evoke themes” (Jacques, 1988). According to some researchers (Pierre Levy), this change in the way of dissemination inaugurates a new era of communication, “because this dynamic text, i.e. hypertext, reconstitutes the co-presence of the message and its living context that characterizes oral communication”. The gain of knowledge that is sought is really based on a presentation of the words that should ideally produce the “truth”, resulting from this confrontation.

These are also the reasons why this article has a preferential orientation towards teaching-learning-assessment via the Internet, most of our analyses paying special attention to the particular forms that characterize this type of distance education. The task of education based on new information and communication technologies is not to demonstrate that it has immediate results in a competition with other types of educational systems, but to replace some of the current structures with a new, probably superior, spectrum of performance, in the face of the inherent changes that take place in culture and civilization.

Virtual institutions

The term *virtual education* is increasingly used, in direct relation to the growing presence of information and communication technologies in the methodology of open distance learning. The development of *virtual institutions* takes place under conditions that, on the one hand, hinder the change or slow down its pace and, on the other hand, lead to the need for change. These conditions vary from regional to some that act globally, the importance of each differing relative to the specific socio-economic context of a particular state under consideration.

We can say that an institution for virtual education can have several definitions:

- a. As an institution that is involved in various educational activities that promote its programme and courses directly to those interested through modern information technologies, providing the necessary tutorial support;

- b. As an organization created through a partnership/consortium in order to facilitate teaching-learning without being directly involved as a provider of respective educational programmes.

Virtual institutions can include both the public and the private sector, at different levels: elementary, secondary, high school, university, etc. They may also include forms of non-formal education, continuing education, vocational education.

The emergence of virtual institutions has four different sources:

- Institutions that have been involved in distance and open education;
- These institutions move to the application of new information technologies as a support to increase quality, to increase productivity and flexibility in order to reduce costs and attract revenue through the recruitment of new students, and this transition occurs in the typical situation of specific projects that create a virtual institution within a traditional one;
- The sector of large organizations and corporations that develop and provide training programmes for internal use with the means and distribution of modern information technologies and which have the label of virtual;
- Individuals who use existing information technologies to create teaching-learning-assessment opportunities for any interested person.

After an analysis of distance education in 11 regions (Canada, the USA, Caribbean, Latin America, Europe, Africa, India, Korea, Australia, New Zealand and the Pacific Islands), the London Department of International Development published in 1999, the following general remarks on virtual education and virtual institutions (Farrell, 2014):

- The virtual label is used widely and indiscriminately throughout the world, interchangeable with other terms such as: “*open and distance learning, distributed learning, networked learning, Web-based learning and computer learning*”. Moreover, the term is sometimes used to refer to systems that combine real-time interactive TV and teleconferencing technologies.
- Despite the increasing use of the term virtual, there are still few institutions that use modern information technologies to meet all the needs and functions of the definition of virtual education. The most common applications of new technologies are found in the adminis-

tration, preparation and distribution of support materials and, where possible, tutoring activities in the form of student-student and student-teacher interactions.

- Although there are few virtual institutions in the pure sense, the number of activities of this type, at all levels of educational and educational organizations, public or private, is considerable all over the world. No one doubts that the development of information technologies will, in the future, have a major impact on access, institutional functioning and teaching-learning-assessment processes.
- The development of virtual institutions is still in the experimental phase in most countries; The World Wide Web is usually used only as a publishing medium, without resorting to the real potential of technologies. This is due to the lack of importance given to the training and improvement of teaching staff.
- There are some examples (Korea) of transformations that can take place when a relevant vision of an education system is developed and its implementation is supported by decision makers.
- The emergence of virtual institutions is directly related to the development and access to information and communication technology infrastructure. However, most of the socio-economic and geographical gaps lie in this access and are the critical point of distance education because the lack of access increasingly disadvantages the acquisition of skills and knowledge. Despite this obvious direct relationship, it seems that strategic plans for the development of information and communication technology infrastructure do not take into account applicability in education.
- It is generally considered that we will witness the development of a relatively small number of international institutions that dominate the education market through extensive distribution networks and strategic partnerships. However, at this stage of the evolution of virtual institutions, this observation is more rhetorical than real.
- Cost reduction is often cited as an objective for the introduction of new information technologies in education and training institutions. But valid data on costs is insufficient. The continuous increase of capacities and flexibility of new information technologies with applicability in educational situations, doubled by a continuous decrease in cost of

equipment, as well as the capacity of technologies to facilitate the functioning of certain traditional structures of institutions, are arguments that convince decision makers to adopt change and accept a dual mode of organization, this being a fairly common model of distance education.

Models of distance education

The limited space in institutions, as well as various difficulties encountered by some students, in conjunction with the need for lifelong learning leading to a demand for increased education, lead to the consideration by traditional institutions of alternatives to open and distance learning. Various models of distance education can be adopted, depending on the purpose pursued, the demand for education and the available resources (Achimaş-Cădariu, 1998, pp. 26–28):

1. Independent model – involves an exclusively virtual institution, which will provide the following functions:

- Development of educational programs (including design of learning materials).
- Tutoring and guidance.
- Allocation of credits.
- Production, storage and distribution of learning materials.
- Administrative and financial problems.
- Marketing.
- Evaluation and accreditation.

The arguments for an educational system based on distance learning are the following:

- The administrative structures of conventional education systems do not correspond to the development and management of distance systems.
- Traditional institutions often consider distance education to have inadequate results, so they are reserved in allocating resources to them.
- The requirements of distance learners can be better met if the institution is entirely dedicated to their requirements.
- The characteristics of the target population are totally different from the conventional system to the remote one.

- The pedagogy of distance education differs from that of traditional education.

These institutions are classified into two types: multi-sectional – provide training in several areas, and uni-sectional – provide training in a single field.

2. Department of distance education within an existing educational institution.

The arguments for such a bimodal system are:

- Learning support materials prepared by teachers can serve both internal and external students on campus.
 - Self-study materials encourage independent learning of both categories of students.
 - Students can opt for one or the other of the systems.
 - Distance students benefit from the tradition and reputation of the institution and are subjected to its standards.
 - Teachers are encouraged to practice more interactive education.
3. Cooperative structures – various institutions work together both in the activity of education and in fulfilling their other functions (production and distribution of learning support, administrative, etc.). These institutions do not enroll students directly, but provide services for the educational institutions themselves.
 4. Hybrid structures are developed as a result of the combination of various structures from the models described above.

In addition to the description of the above distance education models, which carry with them the degree of practical applicability in various situations, there are several factors that influence the choice of a structure:

- The purpose of education. If the aim is to train teachers in the sense of getting acquainted with the provisions of the education reform, then the option could be for an independent or dual, unisectional model.
- Needs for education. An open university is the best solution for high demands.
- Available human, physical and financial resources.
- The degree of autonomy and control that are dependent on the orientation and support at the level of educational policies.

In general, educational institutions prefer to adopt a bimodal system of organization, through specific projects that create a virtual institution within a traditional one. The effects are obvious in a relatively short time – a univer-

sity enrolling tens of times more students than it can fit in its classrooms, but the long-term effects are also targeted, with traditional institutions occupying a place in tomorrow's educational space, the virtual space, towards a future of "universities without headquarters, linked (first) to people and ideas" (Oprea, 2000).

Abstract. The concept of preparation for life, which has long been a major goal of education systems around the world, has become redundant in the open perspective by the huge transformations in society, due to changes in technology and economy. Fifty years ago, lifelong learning could be seen as an option for an age with more free time. Now it has become a necessity. The offers of education and training have become segmented and diversified, in accordance with the various demands of consumers who pay for the educational modules adjusted to their own needs. Distance education is just one expression of this new consumer orientation of the various training institutions. Accumulation of credits and their transfer, modularization of courses are part of the same structural transformation of the educational process.

Keywords: distance education, types of education, virtual institutions, education models

Streszczenie: Koncepcja przygotowania do życia, która przez długi czas była głównym celem systemów edukacyjnych na całym świecie, stała się zbędna w otwartej perspektywie przez ogromne transformacje w społeczeństwie spowodowane zmianami w technologii i gospodarce. Pięćdziesiąt lat temu uczenie się przez całe życie mogło być postrzegane jako opcja dla osób dysponujących większą ilością wolnego czasu. Teraz stało się ono koniecznością. Oferty edukacyjne i szkoleniowe są dziś segmentowane i zróżnicowane, zgodnie z wymaganiami konsumentów, którzy płacą za moduły edukacyjne dostosowane do ich własnych potrzeb. Kształcenie na odległość jest tylko jednym z przejawów tej nowej orientacji konsumenckiej instytucji szkoleniowych. Akumulacja punktów i transfer, modularyzacja kursów są częścią tej samej strukturalnej transformacji procesu edukacyjnego.

Słowa kluczowe: kształcenie na odległość, rodzaje kształcenia, instytucje wirtualne, modele kształcenia

References

- Achimaș-Cădariu, A. (1998). *Practical guide for distance education*. Bucharest: Alternatives.
- ADE. (2021). *Apud Distance Education – An Introduction*. Retrieved from: http://www.distance-educator.com/portals/research_deintro.html (21.10.2021).
- CDLP. (2021). *The California Distance Learning Project (CDLP)*. Retrieved from: <http://www.otan.dni.us/cdlp/> (17.03.2021).
- CDET. (2021). *Council for Distance Education and Training*. Retrieved from: <http://www.detc.org/> (12.11.2021).
- EOSUI. (2018). Engineering Outreach Staff at the University of Idaho. *Distance Education at a Glance*. Retrieved from: <http://www.uidaho.edu/evo/dist1.html> (15.09.2018).
- Farrell, G. M. (2014). The Development of Virtual Education: A Global Perspective. *The Commonwealth of Learning*. Retrieved from: <http://www.col.org/virtualed/index.htm> (22.05.2020).
- Jacques, F. (1988). Three interactional strategies: conversation, negotiation, dialogue. Exchanges sur la conversation. In: A. Lochard, G. H. Boyer (eds.), *Media communication*. Iași: European Institute.
- MEN. (1998). *Nominated in the MEN Order 3289*. 19.02.1998.
- ODU. (1996). Old Dominion University. Dept. of Computer Sciences. *Interactive Remote Instruction*. Retrieved from: <http://www.cs.odu.edu/~tele/iri/> (13.05.2020).
- Oprea, D. (2000). Rector of the “Al.I.Cuza” University of Iași, in an interview conducted by the student publication. *Sfertul Academic*, 7, pp. 15–21.

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