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REGULATORY AND LEGAL ASPECTS OF DISTANCE LEARNING IN HIGHER EDUCATION OF UKRAINE

Introduction. At the current stage of development of Ukrainian society the necessity to develop and introduce new forms, methods and means of higher education becomes more and more urgent. The development of information and communication technologies, social demand for new educational forms urge the introduction and development of distance learning to provide the required level of training. It is distance learning that creates conditions for obtaining high-quality knowledge in the context of the principle of "life-long learning" on the job, in convenient time in the necessary field of study. However, not all modern universities are capable to create and implement distance learning due to lack of financial and material resources, lack of desire and teacher's time to master new technologies. Also we should stress imperfect and contradictory legal framework of the implementation of distance learning in Ukraine.

The relevance of research is due to: in theoretical perspective - the need to further develop aspects of distance learning, concepts and categorical apparatus in the context of modern institutions of higher education; in practical perspective - the demand for social practice in specific areas of distance learning among students of modern youth and the general population.

The setting of the task. Different aspects and trends of distance learning in Ukraine and abroad are discussed in scientific publications by such scholars as V.Brustinov, P.Dimitrenko, A.Zaritsky, J.Ivanyuk, I.Kuzmin, J.Napryeyev, V.Oleinik, T.Petrenko, P.Ryzhko, R.Sobko, R.Sharan, A.Shpagina, V.Yanushevskyy et al. At the same time, M.Ishchenko and L.Ishchenko are investigating the legislation behind the launch of distance learning, uncovering in current legislation on education from 1991 to 2010 some lack of unified definitions and a clear statement of legislative acts on the regulation of distance learning [1]. Analysis of legal framework that is governs the development and implementation of distance learning in higher, vocational, general and postgraduate education was made in an article by V.Kuharenko [4]. Analysis of electronic systems to support regulatory framework in distance learning is presented in the publication Petukhova L. and N.Osipova [5]. However, despite the wide range of research in the field of distance learning, scientists tend to focus mainly on scientific and technological aspects of meaningful use of distance learning in modern Ukrainian universities. The papers analyzing legal and normative basis for implementa-

tion of distance learning, are very rare. The purpose of the article is to analyze legal documents and other legal acts to check the opportunities for higher education in distant form.

The presentation of main results and their justification. According to the Concept of development of distance learning in Ukraine, distance learning is a form of learning equivalent to day, evening, part-time and external studies, implemented mainly by distance learning technologies. The distinctive features of distance learning is flexibility, modularity, concurrency, large audience, economy, adaptability, social equality, internationality, the new role of the teacher, positive impact on a student and quality.

Distance learning - is the interaction between teachers and students at a distance, which displays all characteristic components of learning (objectives, contents, methods and forms of work, learning tools) and is implemented by means of specific Internet technologies or other means, providing interactivity [13].

The main legal acts that regulate distance learning in Ukraine are as follows:

The Constitution of Ukraine;

The Law of Ukraine "On Education";

The Law of Ukraine "On Higher Education";

The Law of Ukraine "On the National Program of Informatization ";

The concept of distance learning in Ukraine;

Decree of the President of Ukraine from 31. 07. 2000, № 928/2000 «On measures to develop national component of the global information network Internet and provide wide access to Internet in Ukraine»;

Resolution of the Verkhovna Rada of Ukraine "On Approval of the objectives of the National Informatization Program for 2006-2008» № 3075-IV dated November 4, 2005;

Resolution of the Cabinet of Ministers of Ukraine of 23 September 2003, №1494 "On approval of development of distance learning in 2004-2006";

Resolution of the Cabinet of Ministers of Ukraine "On Approval of the State Program" Information and Communication Technologies in Education and Science in 2006-2010", of 7 December 2005, № 1153;

Order of Ministry of Education and Science of Ukraine "On approval of distance learning» 25.04.2013, № 466;

Order of Ministry of Education and Science of Ukraine "On Approval of Requirements for universities and graduate schools, scientific, educational and research institutions that provide educational services for distance learning with training and improving qualifications for accredited direction of study and specialties" from 10. 30. 2013, № 1518;

The Decision of the Ministry of Education and Science of Ukraine "On the state and prospects of development of distance learning in Ukraine" dated June 23, 2005.

The Constitution of Ukraine guarantees the right of every person to have education. The state ensures accessible and free pre-school, complete general secondary, vocational and higher education in state and communal educational institutions; development of pre-school, complete general secondary, extra-curricular, vocational, higher and postgraduate education, various forms of education; provision of state scholarships and privileges to pupils and students. At the same time it states that the citizens have the right to obtain free higher education in state and communal educational institutions on a competitive basis, though not defining forms of higher education. Such position of the Constitution of Ukraine is consistent with the principles of democracy and leading foreign experience because any restriction in the forms of higher education restricts the freedom of choice [2].

It should be noted that the specification of modes of higher education takes place in the Law of Ukraine "On Education", stating that the training of specialists in higher education can be conducted at a distance from work (full-time), on the job (evening, part-time), by combining these forms, and for certain specialties - externally [12]. However, this law has no provision for higher education through distance learning. In our opinion, this fact is explained by

the fact that the law "On education" was passed as long ago as in 1991, and at that time Ukrainian society was not as developed in terms of information technology as it is today. Therefore, it is necessary to update the Basic Law of Ukraine "On Higher Education", primarily in order to enter to its provisions an opportunity to study in remote form.

Today we have a paradoxical situation: in practice there is distance learning that's growing rapidly, but also there is not a word about it in the basic regulatory legal act. At the same time, the possibility of distance learning is mentioned in the Law of Ukraine "About Higher Education".

Thus, the Law of Ukraine "About Higher Education" (2014) defines that distance learning in institutions of higher education is realized in such forms: full-time education (day and evening) and correspondence course (distance learning) and it's also defined that these forms of education can be mixed [7]. For comparison we can see that the list of learning forms was even more detailed in the Law of Ukraine "About Higher Education" in 2002 - there were 1) day / full-time education, 2) evening form, 3) correspondence course /distance learning, 4) external studies [6]. So one can make a conclusion that there is a process of narrowing of opportunities to get higher education with the help of distance learning as the legislation supposes distance learning can be a particular case of correspondence learning.

In order to identify the strategy to solve the problem of information needs and information support for socio-economic, environmental, scientific, technical, defense, national, cultural and other activities in the areas of national importance National Program of Informatization was passed in 1998. The main aim of the National Program of Informatization was to create necessary conditions to provide citizens and society with timely, trustworthy and complete information with the help of information technologies and providing for the state information security. One of the most important tasks of the National Programme task is to create a national network of information support for science, education, culture, healthcare, etc. [11].

The Verkhovna Rada resolution "About adoption of Tasks of the National Informatization Program 2006-2008" was passed in 2005. With the help of expected results they defined the development of national education and research network with the access to the trans-European network GEANT, recommendations about the special software for distance learning, distance learning course for teachers in the field of administering e-learning applications, distance learning introduction in the system of technical-vocational education, e-resources, system of electronic informational resources for educational institutions, scientific and educational portal "The Island of Knowledge", system of scientific and technical information, database of scientists of Ukraine, automated system for registration of intellectual property rights [9].

As it's defined in the Concept of distance learning development in Ukraine, the state of distance learning development in Ukraine today does not satisfy the information society demands, which tries to integrate into the European and world community. Firstly, Ukraine lags behind developed countries in the use of distance learning technologies in training, re-training and advanced training of specialists in various fields and levels. Secondly, there is a significant backlog of telecommunication data networks, which are marked by the lack of bandwidth, reliability of communication and its low quality. Thirdly, in Ukraine there is no normative legal base that would regulate and ensure the activities of educational institutions towards the implementation of distance learning as a form of education equivalent to full-time, part-time and external studies. Despite these problems, the number of students and listeners who are able and wish to get an education with the help of distance learning is already quite large and is growing very rapidly [3].

Some steps in the development and implementation of distance learning in the learning process were made in many schools, organizations and institutions of Ukraine, where scientific and methodical, human and production potential, information resources and technologies are accumulated, where telecommunication infrastructure exists. But most schools, organizations and institutions that use or try to use distance learning technology need to combine their

efforts and the efforts of state institutions to: accelerate the process, coordination, regulatory and legal protection, give to distance learning the status equivalent to full-time, part-time, external forms of training, decrease intellectual, material and financial costs of implementation and development of distance learning.

To ensure these needs, as well as systematicity, comprehensiveness and coordination of actions in the reformation of the educational system towards establishing distance learning we need government support - the creation, implementation and development of the national system of distance learning in Ukraine (DLS), which will be the part of educational system in Ukraine and will integrate into the European and world educational space. The main goal of DLS is to provide nationwide access to educational resources through the use of modern information technologies and telecommunications networks and to enable population to realize their rights to education.

The social value of DLS is potential to help solve such problems as: increasing of public education level and education quality, providing education and educational services to population, improvement of social and professional mobility, its business and social activity, preservation and extension of knowledge, human and logistical capacity, accumulated with the help of national education system, formation of a unified educational space within the framework of entire international community.

The main objectives of DLS be the creation of legal, organizational, methodological, information and telecommunicational, material and technical, personnel, economic and financial support; the use of distance technologies not only in distance learning, but also in all forms of education; integration of DLS into the global system of modern education.

The next significant date in creation of distance learning was the year 2003, when the Program of distance learning development from 2004 to 2006 was passed. It emphasized that all educational institutions, organizations and agencies that implement or use distance learning technology encounter real difficulty which will be impossible to overcome without objective funding, joined efforts of these organizations with the efforts of state bodies, coordination of joint actions and regulatory support, which will help accelerate the process and reduce the intellectual, material and financial costs of implementation and the development of remote education in general. Therefore, it's necessary to receive government support for further development of distance learning system and providing systematicity, complexity and consistency of acts in the reform of the educational system, which is connected with distance learning.

The goal of the program is to provide broad public access to educational resources and create conditions for continuous lifelong learning through the development of distance learning system based on the latest educational, information and telecommunication technologies.

To realize the program it was also necessary to carry out such legal activities: to develop and pass the project Regulations about distance learning, the draft version of Regulations on expertise in distance learning system, the draft version of Regulations about the bank of certified distance learning courses in distance learning system, drafts of standards for distance learning technologies [8].

In accordance to the standards of the Program of development of distance learning in 2004-2006 in 2004 there were approved the Regulations on distance learning and updated in 2013. This document states that the purpose of distance learning is to provide educational services by means of modern information and communication technologies for specific educational or educational levels according to state educational standards; for training programs aimed at citizens who want to join the schools, for preparing foreigners and for professional development. The objective is to provide distance learning opportunities to citizens to exercise their constitutional rights on education and professional qualifications, training, regardless of gender, race, ethnicity, social or property status, type and nature of occupation, philosophical beliefs, membership in political parties, religion, creed, health status, place of residence in accordance with their abilities [10].

The introduction of distance learning in higher education institutions must be in coordination with the Ministry of Education and Science of Ukraine. To implement distance learning the educational establishment can create distance learning centers as their structural divisions.

We should stress considerable interest among students to modern distance learning. This indicates a rather extensive network of centers of distance learning at the universities, and the students' opinion concerning the quality and value of education which was obtained by means of this form. To demonstrate this point of view, we present the sociological research conducted by interviewing students of Dneprodzerzhinsk State Technical University in the framework of the international project "International Research Network on the study and development of new instruments and methods of teaching science in advanced information and communication technologies, e-learning and intercultural competences (IRNet)". According to the analysis of results there is a certain interest in distance learning, computer technologies among most of the students. Among all the students surveyed almost 25% prefer to study via the internet. The main commonly mentioned reasons for this choice are convenience, time-saving, large amount of information. At the same time, 65% of students believe that Web-technologies can be a handy tool for achieving educational goals and access training materials for individual items. Among these students, 37% think that the volume of studies to be carried out remotely should not exceed 30% and almost 30% of students believe that this volume is between 30-60% (Fig.1).

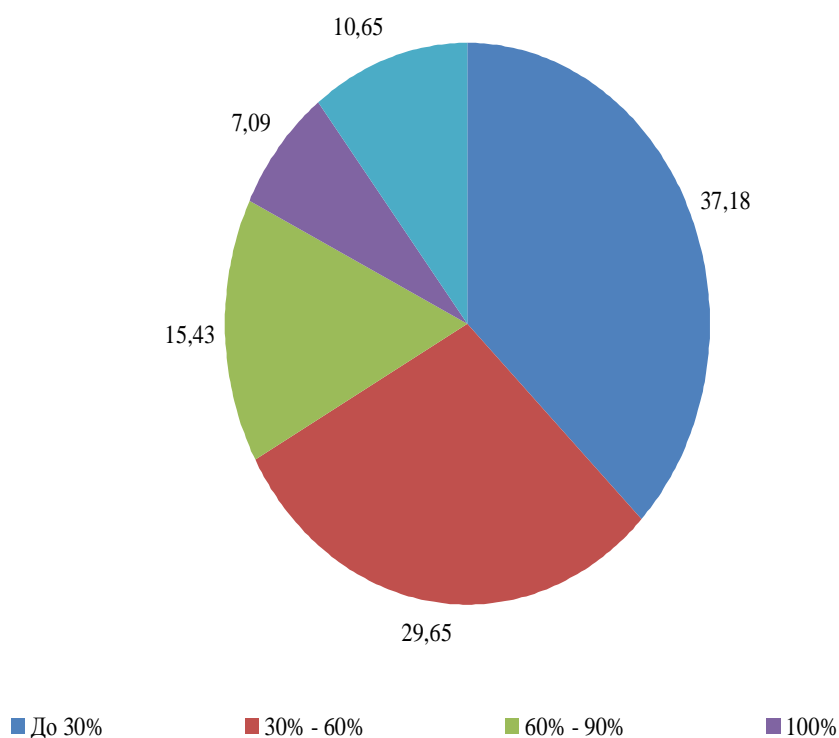


Figure 1 – Distribution of students' answers to the question "How many classes should be conducted in distance mode" (in %)

As to the possibility of distance learning platform to be particularly useful for students with disabilities, almost 95% of students believe that it can be useful. Students who were surveyed believe that the most useful distance learning courses are those where not only educational materials are available but also control tests (35.76%); course that supports all stages of education (31.25%); course, which is a database of educational materials (31.25%) and the course - Forum (11.11%).

Conclusion. The analysis of regulatory and statutory support for distance learning in higher school in Ukraine showed that legal and statutory documents were worked out in Ukraine, these documents legitimized opportunities for distance learning, formed requirements for organizational, infrastructural and academic training for distance learning. The adoption of legal acts on solving strategic problems concerning the informational Ukrainian society was an important step. Only then there were worked out legal principles and standards of distance learning, principles of funding, the introduction of distance learning as a separate form of training, equivalent to full-time, part-time and external studies; there was implemented a system of licensing, certification and accreditation of distance learning.

Nevertheless, there is still some maladjustment in the laws which is the main reason of the holdback in the development of distance learning, although there are reasons to believe that distance learning is a promising mode of education in Ukraine. After all, distance learning expands access to alternative sources of information, increases effectiveness of self-study, gives new possibilities for creativity, finding and fixing different skills, and allows us to implement fundamentally new forms and methods of teaching with the use of conceptual modeling of phenomena and processes.

Prospects for further research. We consider that further research will include the study of organizational and financial support for training in distance learning systems, as well as analyzing main trends and positive experience of distance learning in higher educational systems of Europe so as to use and adapt the best practices in Ukraine.

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THE DEPLOYMENT OF CLOUD ENVIRONMENTS OF EDUCATIONAL INSTITUTIONS: SUPPORTING NETWORK SECURITY

Introduction. The main difference between traditional data centers and cloud environment is in the physical location of educational materials on servers that don't belong to the user (e.g., for schools), but to the outside organizations. It is clear that the use of outsourcing and MCP provider's services will reduce some of the problems that appear between the physical infrastructure of information-communication technologies and cloud environment [1]. The user develops emotional problems at using cloud services which consist in the failure of visual perception of server, where the user data are kept.

Setting of the task. The problem of implementing computing infrastructure Cloud Computing is explored by B. McConnell, group Beyond Contact, R.L. Krutz, R.D. Vienes, J. Ransome, J. Rittinghouse, J. Rhoton et al. They all stress an important principle – the question of security in Cloud-systems. Hypothetically, it is recommended to use additional levels of identification in security systems, encryption, secure data transmission, restricting access to data of different users and other mechanisms. It is important to understand that security requirements do not change regardless of the calculations in the "cloud," or out of "the cloud."

Obviously, from a formal point of view, there is a set of specifications to ensure safety. During the deployment of cloud environment of the institution particular attention should be paid to applied security, because users perform their tasks using common equipment. Hence, the work in this mode should not be interrupted by failures, otherwise all this will contribute to violations of ideology behind cloud computing. This is how the problem of security is solved in Cloud Computing.

An important problem is to limit access to educational materials (data), e.g. the inability of chosen cloud provider to protect the components of its infrastructure. The necessary measures are data encryption and remote backups (including backup encryption and network communications on a different cloud unit, encryption of network traffic with web-traffic). It is recommended to attach an additional cloud provider to perform the automatic backup procedures, providing a guaranteed recovery of all data and their history, even in case of physical destruction of the main cloud provider. In addition, it's necessary to set up the level of control for using own data in cloud environment and data centers. To form sets of data backup it's recommended to use cryptographically secure algorithms, like Pretty Good Privacy, which enables you to save messages (data) even in an unprotected network environment. You should encrypt on individual backup server, which facilitate the creation of a single system with the saving of all accounts (all data) for access to cloud storage.