Postmodern Education as a Factor of Innovative Distance Learning in Quarantine

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Abstract: The article talks about the postmodern education system, its focus on the modernization of distance learning in connection with quarantine, which requires new integration approaches to the organization and content of the educational process in higher education institutions. A systematic approach to the integration processes in postmodern education as a result of the search for new innovations and the organization of distance learning as a universal and most humanistic form of learning, which initiates multivariate strategies for the innovation process in the hyperspace of European education and cultivates the integration of educational values. The author's ideas on creating optimal conditions for the adaptation of a particular applicant for higher education to the requirements of the distance learning and professional environment with an innovative information technology system are substantiated. The optimal conditions for the information-technological system of activating interactive communication of all participants of the educational process not only of a certain university, but also outside it, thanks to Smart-learning are determined. Innovative changes in personnel management of postmodern education as the main factor of effective strategy of management of distance learning, capable to be provided only by competitive teachers with a high level of display of creativity in professional skill are outlined. Algorithms of optimal actions of personnel management on introduction of innovative technologies of distance learning in the conditions of quarantine taking into account prevention of conflicts and crisis states at participants of educational process in the conditions of pandemics and unexpected educational changes are developed.

Keywords: pedagogical and information technologies, needs, professional development, modernization of education, adaptation, postmodernism, students.

Introduction

Postmodernization of the educational space in pandemics has led to a mixed type of domestic and European models of education, rethinking the need for new reforms, loss of values of modern education, non-normative professional crises of the teaching staff and crises in the professional development of future professionals. In this regard, it is important to find ways to preserve the best optimization technologies and significant scenarios for the modernization of the educational process in the open hyperspace of domestic and European higher education institutions. Postmodern realities of education recognized the priority of the learning process compared to its results, the importance of competent provision of educational services, at the center of which - a particular student with his social needs and personal resources in the development of educational and professional activities.

Postmodern education in quarantine has led to distance learning as an open pedagogical model of education using modern information computer and telecommunications tools to ensure interactive interaction of all participants in the learning process. Systematic and timely introduction of modern information technologies in distance learning, including social networks of information communications, availability of computer testing of students' cognitive abilities, conducting lecture courses at a distance, electronic textbooks and scientific conferences online or interactive communication between students and teachers in MOODLE, through e-mail, SKYPE program, or ZOOM platform tools and constant updating of various methodological technologies for the implementation of distance learning in quarantine are integral components of the postmodern model of education.

The postmodern system of education cannot be called independent, i.e. it is not devoid of the best traditions of classical or modern model of learning, moreover, it combines traditional and innovative pedagogical technologies as two interconnected and at the same time different methodological and applied vectors of postmodern society. At the same time, complex theoretical constructions regarding the goals of education and the function of the educational process have lost their value; instead, educational clients have significant important tasks and opportunities to study throughout their lives thanks to distance educational services, as well as to self-actualize in several professional fields through a combination of work and study, saving time without moving in space and the resources obtained competitiveness.

The world experience in the information technology implementation of distance learning on the coronavirus epidemics has made a combination
of modern and postmodern education models (Gerasymova et al., 2019; Maksymchuk et al., 2020a; Maksymchuk et al., 2020b; Melnyk et al., 2019; Nerubasska & Maksymchuk, 2020; Nerubasska et al., 2020; Onishchuk et al., 2020; Palamarchuk et al., 2020; Sheremet et al., 2019). The methodological basis of postmodern education in quarantine was the modernization of innovative technologies of distance learning in the context of specialization of a particular future specialist with applied aspects of his qualifications. In the context of the scientific paradigm of postmodern education, distance learning is inherently innovative.

**Innovative space of distance learning in the context of postmodern education**

The phenomenon in education, in which educational activities (interaction) are carried out, respectively, with the help of any innovation, is called innovation (Latin Innovatio - renewal, change) (Martynets, 2015). Today, there is no single common definition of "innovation". There are various, often contradictory views on what should be considered innovation - completely new or improved old, global or local changes, the process of creating a new or its result, anything new or only what is relevant and significant (Ministry of Education and Science of Ukraine, 2017). Innovations in the postmodern educational system improve this system through the processes of integration of classical pedagogical and modern distance technologies. The systems approach considers innovations as purposeful changes in the dynamic development of distance learning. Innovative technologies of the system of higher education are modeling by the teacher of the maintenance, forms and methods of educational process according to the set purpose with use of theoretical and practical novelty.

Signs of educational innovations are as follows: relevance; novelty (objective or subjective), originality; demand; its potential possibility exacerbates the contradiction; readiness of pedagogical science to explain innovations; dialectical connection with educational systems; increase scientific or subjective knowledge. Additional requirements should also include: focus on improving the effectiveness of education (increasing education), to improve educational processes and their management; to improve the educational space; Health Safety of Educational Entities (Martynets, 2015).

Innovative learning - focused on dynamic changes in the world educational activity, which is based on original methods of development of various forms of thinking, creative abilities, high social and adaptive
capabilities of the individual. His vocation is to prepare not only "the man who knows", but also "the man who acts" in determining the ratio of reproductive and productive, active and creative. The problem of innovative development of educational innovations is relevant because it causes a wide social and scientific resonance, increases the effectiveness of the educational process (Kremin, 2008).

Innovative technologies used in the system of higher education are considered as modeling by the teacher of the content, forms and methods of educational process in accordance with the set goal with the use of novelty. In the practice of educational activities of modern universities such learning technologies are used as: differentiated, problem-based, contextual learning, game learning technologies, information technology, credit-module technology, personality-oriented learning (Bondarchuk, 2020).

The innovative process of learning in free economic education - distance learning and various models of education based on the use of ICT shows that the problem of reforming education is related to finding new effective ways to organize and implement, innovate in education. The quality of training will increase significantly with the introduction of such technologies. It will be possible to implement distance learning and various modern learning models: e-learning (e-learning); m-learning (mobile learning), blended-learning (blended learning), flipped-learning (inverted learning), ubiquitous learning (Gurevich et al., 2015).

Foreign teachers, in particular, consider the following types of inverted learning: 1) a typical inverted classroom (The Standard Inverted Classroom). Students independently work on the material of a future lecture or practical lesson; 2) The Discussion-Oriented Flipped Classroom. Students are given the task to watch certain videos or materials of Internet resources, and the teacher in the classroom organizes a discussion of the information obtained; 3) focused on demonstrating the Flipped Classroom (The Demonstration-Focused Flipped Classroom). The teacher demonstrates the necessary activity, and the students perceive and analyze it, and then independently perform the assigned tasks; 4) pseudo-flips class (The Faux-Flipped Classroom). The use of this form will be appropriate if there is no confidence that students will prepare independently at home. This model allows students to watch videos in the lesson, and then perform the corresponding tasks and, if necessary, receive individual advice from the teacher; 5) The Group-Based Flipped Classroom.

This model encourages students to learn from each other, in the process of interactive interaction to get the right answers, find effective ways to obtain information, ways to conduct research and more. To apply the
model, students must, at their own request or on the recommendation of the teacher, form groups, get acquainted with the relevant materials, and work together on a specific scientific problem; 6) **The Virtual Flipped Classroom** allows students to organize their work so that the entire learning process takes place remotely: the teacher offers students material to view, download practical assignments, consult online, conduct testing and set final scores. The main principle is the independent processing of the relevant material as it is based on the principles of the "inverted class"; 7) "Flipping The Teacher" implies that not all work must be done by the teacher - to prepare or search for videos, to form practical tasks, to consult, to check the works. Certain types of work can be performed by students, and the teacher will monitor how the learning process will be organized, how information will be presented and will provide assistance if necessary (Kovtun & Krykun, 2019).

The technology of inverted learning is not new in the educational practice of Ukraine, but in the conditions of quarantine it has aroused increased interest of teachers of higher educational institutions. Thus, the technology of "inverted learning" is presented in the works of many foreign and domestic authors. The authors of the technology of "inverted learning" are considered to be chemistry teachers A. Sams and J. Bergman (USA). In 2008, they began recording videos with their lectures and offering them for homework to students (Dobrovolska, 2020).

In modern European countries, the pace of updating the educational resource of higher education knowledge is constantly declining. In the context of international scientific and technical cooperation, this trend also affects the domestic higher school and finds its practical implementation in the traditional system of education and open distance education. However, for the domestic higher school the problem of innovation is not limited to this. Mechanisms and technologies for the implementation of the "paradigm of innovative thinking" in the free economic zone and the implementation of innovation management, as in the educational model "Flipped learning". This model assumes that the typical student activity in the classroom and outside it changes to the opposite. In addition, different types of inverted learning technology can be used in the study of one discipline. The teacher determines which type in the process of studying a particular topic of the discipline should be used. For example, in the Moodle system, it can be a video lecture on the topic, a text document with topic material or a presentation on the topic, creating mini-projects, compiling algorithms (Dobrovolska, 2020; Gurevich et al., 2015).
Traditional learning is accompanied by an explanation of new material in the classroom. In the postmodern model of education - distance learning, the initial acquaintance with the educational material of students takes place outside the classroom. They can study material in literature, video lectures, on the Internet, and in the audience to discuss debates, solve professional problems. Extensive use of ICT allows students to use audio and video resources during school hours and in a convenient place. The advantages of implementing the educational model "Inverted learning" are: trained students come to class with whom you can solve problems, discuss project activities, lead discussions or debates; the possibility of organizing active student activity increases; the role of the academic lecturer changes to the role of the consultant, the organizer of activity; significantly increases the personal activity of students, the development of their individuality; the teacher becomes a consultant of complex professional problems, students and the teacher become partners (Gurevich et al., 2015; Kademiya & Umanets, 2016).

Foreign researchers also use an integrative approach in the methodological analysis of the postmodern model of education: the mixed type of learning combines classical and distance learning models and a system or combined model of inverted learning. Teaching is partly distance-based, but the pedagogical methods of the traditional education system are used: first the student studies the material with slides, video and audio documents, and then the teacher and the student find practical application using interactive teaching methods (Dumont & Berthiaume, 2016). Encouraging students in problem-oriented learning through the active use of distance learning elements of e-learning resources allows students to develop the ability to think critically and work in a team on a common task (Johnson et al., 2015).

Traditional professional education is aimed at obtaining knowledge, skills and abilities in professional activities related to obtaining a product, the result of activities. The use of smart technologies in universities allows not only to be a professionally trained person (knowledge, skills, abilities), but also to see the development, movement of professional thought, or, speaking in mathematical language, to know the "first derivative" of their profession. Therefore, the use of innovations should be based on such an educational resource, which can be constructed as a cognitive space that reflects the change in quality in this professional field (Gurevich et al., 2015; Kademiya & Umanets, 2016).

In the context of pandemics and quarantines, the introduction of distance learning depends on the use of innovative educational technologies,
updating the methodological system of distance education, the actual level of readiness of teachers to implement distance education and the real state and nature of training future specialists in the implementation of elements of distance education in their own professional activities, professional competence of the teacher of the university's readiness to study in the context of distance education and acquire knowledge and skills for future professional activities, increasing professional mobility and the level of education and quality of education within a single educational space and the world community (Ohienko, 2012).

Dobrovolska (2020) argues that the modernization of education in Ukraine, its focus on distance learning in connection with quarantine requires new approaches to the organization and content of the educational process. The introduction of inverted learning technology in higher education somewhat complicates the work of teachers, as it is necessary to learn new pedagogical techniques, learn the specifics, prepare and develop new materials, create multimedia content, but this work will improve the quality of student training. consumer in an active participant in the educational process.

Of course, postmodern education is designed to combine distance learning with personality-oriented. This is the paradox that personality-oriented learning, according to Akhmetova (2007), in practice is quite poorly implemented. Despite the introduction of innovations in the educational process, most students expect from the teacher ready processed information, without independence in cognition. The main thing does not change - the vision of the future specialists of the subject of their own learning. This fact can be explained by the consumer attitude of students to teachers as a consequence of traditional learning. External encouragement requires a talented teacher who will encourage you to think, to defend your point of view in the discussion. The student, choosing distance education services, relies on mostly independent learning, comparing their positive self-esteem, intellectual resources, level of professional self-awareness, opportunities (Akhmetova, 2007).

The change in the status of knowledge in society has led to the formation of a new educational paradigm, in the center of which instead of the question "what do students know?", The question is asked, "who are they?". It is this approach to gaining knowledge about the subjects in educational activities that contributes to the formation of a self-sufficient, autonomous personality. Postmodernism does not recognize the integrity, universality of knowledge, but puts parts, differences, differentiations, pluralism in the foreground, ie it denies the so-called "knowledge" model of
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In our opinion, there are more significant for scientists "white spots" in the success of the implementation of innovative remote technologies developed by them. Theoretical and methodological analysis of the problem of development and implementation of innovative technologies of distance learning in the postmodern model of education by domestic and foreign researchers has shown important, but still insufficiently resolved issues. On the one hand, the postmodernism of European education focuses on the student as a self-sufficient individual with subjective activity in educational and cognitive activities. On the other hand, the transience in updating the ICT information flow of knowledge does not always correspond to the real capabilities of students in their development. Under conditions of quarantine, such a discrepancy only exacerbates the problem of lack of time and personal resources for the timely manifestation of educational and professional competence of future professionals.

Another problem is the lack of time for the manifestation of the creative activity of the teachers themselves, who, under conditions of quarantine, are limited only to a test computer survey, which turns the educational process into the formalization of the assimilation of knowledge by students. Information overload and signs of emotional burnout both among the teachers of the HEI and their students may also indicate an exacerbation of contradictions between the personal factor and the information technology requirements of distance learning. In addition, it is known for teachers that improving the quality of students' cognitive activity is associated with the development of emotional intelligence, possibly in the process of live communication between the teacher and the students. Taking this into account, it is appropriate to compare the technical capabilities and personal resources of all participants in the educational process, gradually,
consistently and with a reasonable measure introducing innovative distance technologies.

Thus, the main purpose of our study is to study the most optimal psychological and pedagogical factors for the successful implementation of innovative distance technologies of the postmodern education system in quarantine. A number of such important tasks for the organization of the educational process are subordinated to the defined goal: 1. To determine the optimal conditions for the information-technological system of activating interactive communication of all participants of the educational process not only of a certain free economic zone, but also outside it, thanks to Smart-learning. According to Bykov (2009), smart-learning is an association of teachers and students of several higher education institutions for joint activities with the help of Internet-technologies, interactive content from different worlds.

2. To substantiate the strategies of functional-professional and psychological dynamic adaptation of students and specialists to the rapidly changing educational and professional environment with innovative distance technologies and social changes that occur in quarantine. 3. Identify innovative changes in the strategy of distance learning management, which means the need for postmodern education in competitive teachers who have the skills to work in a smart environment, have a high level of mobility, creative development and information culture.

**Optimal conditions for innovative changes in postmodern education and an effective distance learning management strategy**

Postmodern education can rightly be called a European education system, which includes classical and postmodern structures, built on the principle of information technology functioning as a continuous introduction of innovations in pedagogical and distance technologies; determinism as a conditionality of innovative implementations, first of all, by social changes and needs of participants of educational process and indeterminism as universality of integration of pedagogical, technological, telecommunication and remote phenomena. The world postmodern education system is considered by leading American philosophers of education and postmodern educators in the experience of European countries.

The combination of the new classical pedagogical theory in the analysis of the concept of postmodern education, initiates polyvariant strategies for its implementation, cultivates the universality of knowledge,
human creativity and subjectivity, creates innovative educational conditions, disclosed in many foreign works (Beck, 1993; Best & Kellner, 1991; Burbules, 2009; Kritsonis & Jacobs, 2006). Thus, William Allan Kritsonis associates postmodernism with innovations in education and emphasizes the responsibility of teachers, especially the “leader”, that is, the head of the educational institution, to be psychologically ready for changes.

Understanding all the problematic issues related to innovative learning and its high requirements, the researcher recommends addressing it only to intellectually developed students and creating an educational environment that delights everyone, takes into account mistakes, works on introducing new pedagogical theories, does not limit anyone, teaches coherently. Burbules (2009) and Kritsonis and Jacobs (2006) also emphasize the importance of partnerships in pedagogical interaction, cultural values, and the preservation of human identity and best traditions in teaching with conflicting views on pedagogical theories of postmodern education.

The pedagogical theories of the new postmodern education are the result of the search for new innovations and the organization of distance learning in the context of postmodern education as a universal and most humanistic form of education, which initiates multivariate strategies for implementing the innovation process in the hyperspace of European education and cultivates the universality of the integration of values in the systems "man - technology" and "Man - man".

Some features of postmodern trends in education can be seen as the factors in educators’ adaptation to those unexpected changes in society and science associated with reforms or the need to implement innovative projects (e.g., to maintain the effectiveness of some educational systems during the pandemic). These include the following: the universality and priority of innovations in educational practice; the observance of the social justice principles; the formation of one’s professional identity in terms of self-improvement and unconditional acceptance of one’s freedom, creative pursuits and subjectivity in cognition (Campbell, 1993; Giroux, 1999; Hytten, 1994; Usher et al., 1997).

Postmodern education is focused on the disclosure of the creative resources of all participants in the educational process - its applicants, specialists in various categories, primarily teachers. Partnership cooperation between the older generation and the younger, benevolence, a positive and creative atmosphere in a team of partners with common interests and intrinsic motivation contribute to the development of students' reflection, critical thinking, and positive professional self-esteem. Only under such
psychological and pedagogical conditions is postmodern perception of the new professional world possible.

The concept of mutual learning in pairs of variable composition are vivid examples of the implementation of the idea of teamwork. Modern unique innovative experience of educators-innovators, the application of which allows to create conditions under which each student and the whole student group as a whole become subjects of study. This means that they are included in the learning process not on the principle of the so-called tabula rasa or "blank board" on which the teacher has to "write" something, but on the principle of a conscious participant, for whom learning is a conscious goal to be achieved (Sysoeva, 2006).

One of the significant goals of the article is to substantiate the strategy of functional, professional and psychological dynamic adaptation of students and specialists in a rapidly changing educational and professional environment with innovative distance technologies and social changes taking place under conditions of quarantine. We believe that for better adaptation of education applicants to the requirements of innovation in distance learning, it is appropriate to introduce such innovative interactive models, the structure of which should contain applications with clear instructions on psychophysiological adaptation to individual training and activation of cognitive processes necessary for the successful mastering of the academic discipline and use for this certain technical means.

Such applications may include pedagogical and psychological aspects of adaptation of a particular participant in the educational process to the requirements of a particular educational and professional environment. Of course, the justification of such ideas should be supplemented by technical developments for their subsequent implementation, mutual control and cooperation of all involved in the educational process - it depends on the quality of distance education services and their social acceptability.

Interactive learning involves the interaction of participants in the educational process in a dialogue or conversation with a teacher or with a computer. The use of new technologies allows the formation of social competencies, and these are communication skills and presentation abilities. This, in turn, makes it possible in the future to effectively interact and make collective decisions, expert skills and abilities, the ability to independently solve situational problems. Modern students live in the world of electronic culture. In order to communicate with them in one language, teachers master new learning technologies, work creatively, acquiring new competencies. They improve methodical work, develop new teaching methods, apply them, are initiators and implementers of ideas of
modernization of educational content. Their work is aimed at creating conditions for effective work with students and obtaining a positive learning outcome (Bondarchuk, 2020).

Equally important for considering the problem of innovative distance learning is to determine the optimal conditions for an information technology system to activate interactive communication of all participants in the educational process, not only of a certain HEI, but also outside it, thanks to Smart-learning. Technological innovations thanks to the Internet leads in the new, postmodern Smart-community made the development of distance education and the satisfaction of the information needs of students and teachers, including during the study of academic disciplines by students, taking into account their multidimensionality and continuous updating of content.

Smart universities, united in groups of higher education institutions, contribute to the expansion of the postmodern worldview, raising the level of information culture of a large number of students at the global level. Undoubtedly, for the successful functioning of Smart-universities you need teachers with creative potential, flexible thinking, appropriate professional cognitions. It is teachers who are innovators in the development and implementation of innovative ideas as direct organizers of the educational process.

In education management, innovations are considered to be the cause of frequent conflicts between teachers and students with teachers, who are sometimes psychologically unprepared to participate in innovative activities. The introduction of innovations in the education system is a crisis, especially for people whose crisis can be exacerbated by the social conditions of quarantine as well. In this regard, we need a forecast of the success of the implementation of innovations in educational activities, which is discussed by the head of the educational institution together with his partners.

Algorithms of personnel management actions for the introduction of innovative distance learning technologies can be as follows: discussion of an imaginary case situation or program to improve the quality of educational services in connection with the proposed innovations, anticipation of problem areas in pedagogical interaction; search for ideas for decision-making on innovation; clear personnel redistribution of responsibilities with its expected consequences for the implementation of the plan of decisions taken, as well as theoretical and methodological and psychological and pedagogical training of all participants in the remote process for innovation; the last is the most responsible stage - it is transformation of innovative
practice and statistical processing of the received information on dynamics of innovative distance technologies in training.

**Conclusion**

The postmodern education system has integrated distance education services into human resources and social capital, which has increased the success and value of professional self-realization for many people regardless of their age, gender and status, outlined directions for new strategies for the development of educational space. In this regard, the postmodern education system is a factor of innovative distance learning, which is able to integrate all educational technologies - this is the essence of its advantages - versatility, accessibility, curiosity, demand, mobility, humanism. Innovative distance learning is the optimal form of advanced learning and training of future professionals in the postmodern education system and a resource for the psychological well-being of all participants in the educational process in quarantine.

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