

Application of Game Technologies in Distance Learning Students: Advantages and Experience

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Abstract

The article raises the problem of modern education, which is based on the requirements and requests of employers. Therefore, one of the tasks in the field of education is to improve the professional level of graduates, and an important strategy of the educational organization is the training of qualified, competitive specialists, not only possessing general cultural, general professional, and professional competencies but also immersed in information culture on a personal level: not only fundamental training but also information and communication literacy. The theoretical and methodological analysis of research revealing different approaches to gaming technologies is presented. The paper discusses the functions and advantages of gaming technologies in distance learning. The principles and structure of the game are shown. The examples of games in the implementation of the discipline "Psychology and Pedagogy" for future specialists in practical health care are presented. Game technologies in distance learning allow students to be interested, facilitate the assimilation of information, processing, and analysis of the material that contains problem situations; form reflection, self-control; develop communication and digital competencies.

Keywords 1

Modern education, learning technology, game, gaming technology, distance learning.

1. Introduction

Modern university education is built into the process of global cultural, economic, and political integration and unification; there is a gradual process of the national educational systems going beyond the state borders. An example of the global integration of higher education is the single European educational space, which was created as a result of the implementation of the Bologna Process. The expanding globalization of higher education is facilitated by rapidly developing information technologies, which fundamentally level national educational boundaries and make it possible to talk about the existence of a single world digital educational space.

One of the main trends in the development of higher education is the increased attention to the issue of the ratio of the volume of fundamental theoretical knowledge and practice-oriented competencies among graduates, which leads to a significant approximation of the educational process to practical problem-oriented professional activity.

Modern education implements many different professionally significant functions and competencies, which, in turn, are constantly being transformed under the influence of public demands. They are of the nature of integration, practice-orientedness, mobility, personality-orientedness. While modernizing modern higher education, it is necessary, on the one hand, to strive to preserve the effective traditions of the classical teaching model, and on the other hand, to actively develop new methods and technologies with students, thereby increasing the competitiveness of the Russian education system [3]. For a competitive and highly qualified specialist in the period of professional development, it is

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necessary to use such training technologies that contribute to self-actualization of the individual, the disclosure of scientific and creative potential, effective interaction in a team, the development of communicative and digital culture, etc. “The cultural dimension ... implies that how health stakeholders accept or reject new technologies is more dependent on outcomes than on how technologies develop” [10].

2. Digital Transformation in Modern Education

The challenges of digital transformation in education are, on the one hand, - ensuring the ability of the educational system to respond to changes in society, the development of new technologies, meeting the demand for new professional skills and the formation of competencies, and on the other hand, ensuring the technical knowledge of teachers of educational institutions and their access to technologies to meet the needs of the industry [7].

The problems associated with the digitalization of education have been actively discussed throughout the world for some years [8], but they have become so acute for the first time.

It is known that an important paradigm of modern education is the subject-subject relationship of teachers and students.

Figure 1 presents a vision for the approach of the educational process in the context of digital learning in distance learning (Figure 1).

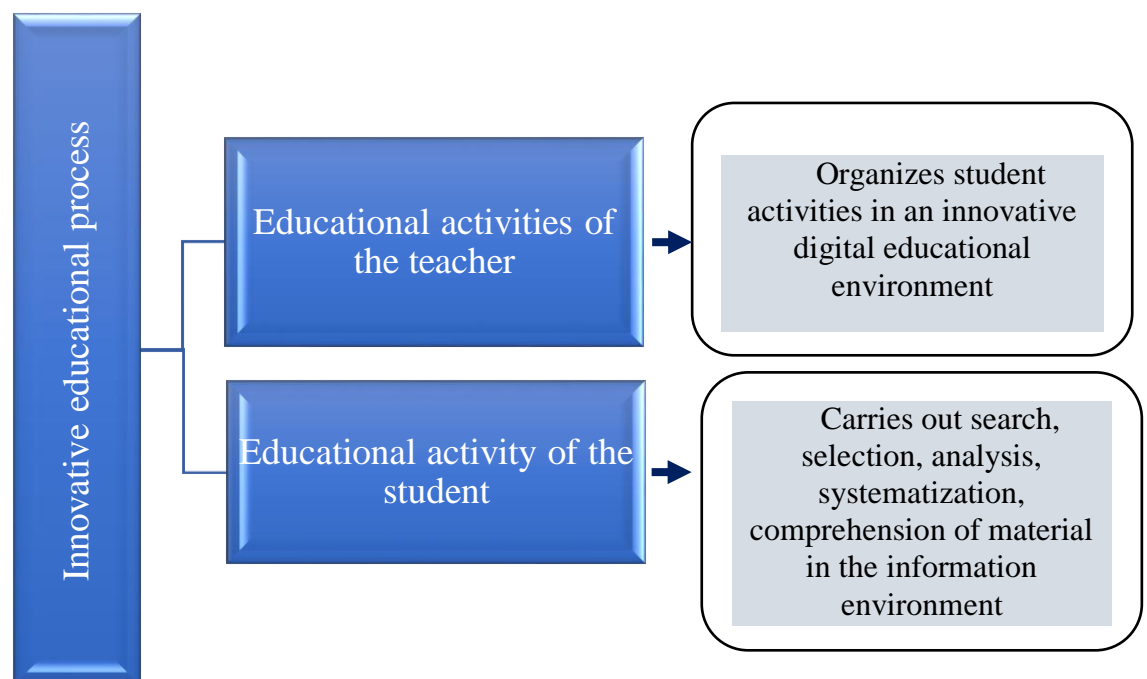


Figure 1: Innovative educational process in the context of digital learning in distance format

Attention is drawn to the peculiarities of the educational process, which is a purposefully organized two-way process "teacher-student".

2.1. The Essence of Distance Learning in Education

Modern society is rapidly changing and mastering remote forms of interaction, which leads to a change in the paradigm of the educational process as a whole. Students need to perceive a large volume of educational material, the mental, psychophysiological load increases. In this regard, the teacher is faced with the question “How to effectively organize the educational process in a distance format? What

learning technologies to use to arouse interest and motivational readiness to study and assimilate new educational material, thereby developing a desire for further independent study.

Note that distance learning technologies are information technologies that are aimed at interactive interaction between students and a teacher, transfer of experience, educational material, as well as providing an opportunity for independent work in mastering the material being studied.

The main problem in the development of distance learning is the creation of new teaching methods and technologies that meet the telecommunications environment of communication. In this environment, the fact that students in the learning process create their understanding of the subject content of education and reveal their potential is manifested.

In the process of digitalization of education, it is necessary to take into account such factors as:

1. Stability (stability of the system, its functioning, the number of users, and their activity).
2. Modularity (the use of didactic units of the electronic course in other courses of the discipline, thereby ensuring interdisciplinarity).
3. Multimedia (use of audio and video resources).
4. Technical support (means to support the system's performance, stability of its functioning).

The constant expansion of the range of tools and mechanisms for distance learning, as well as their obvious advantages, such as the ability to provide the widest possible coverage of the number of listeners, the reported interaction of students from different locations, live exchange of experience improve the quality of educational services: there are many different forms of presentation, for example, training seminars, gaming technologies, training, tests, simulators, constructors, intensive courses.

In our opinion, gaming technologies play an important role in the implementation of a particular discipline.

2.2 Game technologies in the educational process: role, functions, principles and their application in practical classes

The role, functions, and application of gaming technologies in the educational process were considered by both domestic and foreign scientists (A.A. Verbitsky, N.S. Erukova, G.A. Kitaigorodskaya, V.N. Y. Platov, A. S. Prutchenkov, D. Horner, J. Stratton, and others).

The methodological basis of the game, its theory, and its social nature were investigated by N.A. Anikeeva, L.S. Vygotsky, L.V. Zankov, A.N. Leontiev, S.A. Smirnov, and others).

Game technologies represent a set of technologies, techniques, methods of organizing the educational process. V.S. Kukushkin believes that play is a type of activity in situations, aimed at assimilating social experience, which improves self-management of behavior [2].

Gaming technologies can perform different functions:

1. Educational (development of competencies, study of new educational material, perception of information, testing of knowledge, abilities, skills, the ability to manage conflict situations);
2. Developmental (the development of cognitive processes, interest in the discipline, the development of the ability to set goals, the choice of ways to solve a problem, the development of flexible skills);
3. Communicative (establishing contacts, managing a team, developing oral speech);
4. Educational (education of digital culture, literacy, creating a favorable mood);
5. Psychotechnical (formation of skills for preparing the psychophysiological state of the game areas for effective activity).

Games allow you to reveal the potential of students, design clear goals, give feedback, encourage and stimulate learning activities.

The game belongs to practice-oriented technologies, the main principles of which are:

1. Integrity (the unity of training, education, and development);
2. Fundamentality (based on modular learning);
3. Cultural conformity (training by the modern level of development of general, communicative, professional culture);
4. Humanitarization and humanization of education (humanization is associated with the introduction into the curriculum of humanitarian disciplines: history, psychology, pedagogy, cultural studies, sociology, etc.; humanization is all for man, for the sake of man);

5. The activity approach (based on the didactic principle of the connection between theory and practice) [1].

These principles help the teacher to master pedagogical skills, and students - their professional activities.

The introduction of gaming technologies is based on knowledge of the characteristics of the course of mental processes and taking into account the laws of mental development [5].

The digital educational process in a distance format using gaming technologies is based on the following principles:

1. rethinking the educational process and designing the learning environment;
2. personalization of the educational process;
3. the motivation of educational activity and independence of students;
4. development of soft skills (flexible skills) of students;
5. the principle of practice-orientedness;
6. the principle of accessibility;
7. flexibility and activity in subject-subject relations;
8. active self-organized learning;
9. interactive and collaborative learning;
10. the principle of success in learning;
11. intercultural communication;
12. digital culture.

The structure of the gaming technology includes such positions as:

1. Playing roles, which were taken over by the teaching;
2. The game actions themselves;
3. The relationship between the players and the plot of the game.

There are many games that we use in our practice in the implementation of the discipline "Psychology and Pedagogy" for future professionals in practical health care. Here are some of them.

Role-playing game "Highly qualified specialist".

Purpose of the game: development of communication, management skills, creative thinking, emotional stability in students, the ability to convince people.

The course of the game. One student is selected from the group. He plays the role of a highly qualified specialist. The rest of the group is united in small groups (3-4 people). These groups represent medical institutions, and the students themselves are specialists in these organizations. Further, the teacher informs the group that: "You have read the resume (by the name of the selected highly qualified specialist, his age, status, regalia, scientific interests, etc.), wanted to interview him and invite him to work in your organization. It is necessary to interest, convince this person so that as a result he chooses your institution. "

Mini-groups are offered the following tasks:

1. Come up with a name for a medical organization.
2. Territorial location.
3. What does the organization do?
4. What functions will a specialist perform in a medical facility?
5. Think over a social package and salary for a specialist.
6. Distribute the roles among the participants, ie. what positions they hold in this medical institution.
7. Think over the scenario of communicative interaction.

After completing this task, each group starts playing the situation, an interview.

During the interview, the specialist makes written notes of positive and negative points, paying attention to verbal communication, means of non-verbal communication, asks questions to orient the mini-group in this situation, interrupt each other or not, etc.

The emphasis is on basic communication skills, communication culture: greeting, presentation by name, position, listening, persuading, arguing, negotiating, self-presentation, teamwork, focusing on results, promoting the development of relationships with people, helping to maintain a conversation, effectively behaving in critical situations when communicating with others.

When all groups have performed, a highly qualified specialist gives feedback to each institution on the implementation of basic communication skills, recommendations. In the end, he informs (with arguments) the medical organization where he would like to work [4, p. 468-477].

Intellectual game - quiz "Own game".

The goal of the game is the theoretical repetition of educational material for a specific module of the discipline, for example, "Developmental Psychology".

This game is aimed at developing cognitive interest, motivation, activity, logical thinking.

Game progress: two teams are involved. They are offered questions in five sections: "General concepts", "Scientists", "Age periods", "Age crises", "Situational tasks". Each section contains 5 questions from easy to hard. Each question has its score. The questions are arranged in the form of a table with the indication of points. Questions are voiced to each team in turn. 1 minute is allotted for discussion. The level of questions with an appropriate score is chosen by the students themselves. The team that gets the most points wins.

We also use various open-answer or multiple-answer quizzes in practical classes; assignments for matching a portrait and an event; various crosswords through the Web 2.0 LearningAhhs.org application.

Innovations in medical education have become practically synonymous with technology, and their use in this area is growing exponentially [9].

There are many positives about digital technology. It should be noted that information and communication technologies by themselves are not a means that can completely solve the problem of education. Unfortunately, they do not form a holistic picture of the world in students. Another disadvantage of the "digitalization of medical education is the danger that even the practical side of the study of medicine will move outside the hospital wards" [6].

Significant capabilities of gaming technologies are:

1. Personality - the availability of unlimited opportunities for personal adjustment to the needs and characteristics of each student, including the choice of the method of presenting the material, the level of complexity, the pace of work, the number of reinforcing repetitions, etc;

2. Freedom to search for information in the global information network;

3. Interactivity - the ability to provide multi-personality in the process of communication and interaction;

4. Multimedia (polymodality) - the ability to comprehensively use various channels of perception (auditory, visual, motor) in the educational process.

The use of gaming technologies in the learning process can be used in different forms:

1. virtual classroom - distance learning technology, in which participants and the teacher have the opportunity to interact with each other, transmitting and analyzing information using the Internet;

2. business game - a type of simulation that includes game elements: plot, interactivity, feedback, as well as rules and game processes;

3. microlearning - learning in which educational content is presented in small parts, each of which has one specific goal, and its implementation takes a little time;

4. simulation training - an interactive method of developing skills and abilities, in which real situations, processes, events are simulated;

5. inverted learning - a key model of blended learning, in which the student independently studies theoretical material, and in practical classes consolidates the studied information together with the teacher. When implementing this technology, the teacher needs to design educational goals, tasks that correspond to the educational standard and the work program of the discipline, reflecting the content of the classroom. Turning to open educational resources, the teacher invites students to select videos on the topics of classes, write a synopsis, compile a glossary, an interactive game, a mind map to quickly and conveniently master the educational material by students, while making good use of the Internet.

3. Conclusions

Education is one of the backbone social institutions that perform a large number of socially significant functions and are actively transforming under the influence of scientific and technological progress. A feature of modern higher education is the fact that at the same time it is not only the most conservative institution that preserves and reproduces traditional forms and relationships, but also the concentration of the most advanced innovations and modern practices that determine promising directions for the development of society.

The system of higher education in the Russian Federation faces many tasks, the solution of which will increase the economic and intellectual competitiveness of the state. Higher education is increasingly viewed from the point of view of the development of the creative and creative potential of future specialists, freedom of self-expression.

Practice shows that students are happy to participate in such games within the framework of distance learning. Participants take an active position, which leads to increased motivation, effective memorization of educational information, and consolidation of knowledge.

Summarizing the above material, it can be argued that gaming technologies in distance learning allow students to become interested, contribute to the assimilation of information, processing, and analysis of the material that contains problem situations; form reflection, self-control; develop communication and digital competencies.

In the context of rapidly developing technologies of distance education, the creation of an informal educational environment, teachers need mobile professional support.

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