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INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE EDUCATIONAL PROCESS WITHIN THE DIGITALIZATION

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Abstract

The paper studies the information and communication technologies, their varieties and characteristics. The relevance of this topic is dictated by the fact that information and communication technologies are being introduced into the field of education. This process is a natural step in global informatization. The main aspects and advantages of using information and communication technologies in the educational process are described in the article. The paper determines and substantiates possibilities of using informatization means in the educational process for students studying in the direction of training bachelors "Advertising and Public Relations" of the Humanitarian faculty of the St. Petersburg State Economic University. The article provides material reflecting the forms, methods and techniques of using information and communication technologies which are contributing to increase the efficiency of mastering disciplines relating the communication cycle. The results of the research show the importance of maintaining didactic continuity during the transition to the new learning technologies, which required systematic development of scientifically based methodological approaches and models for the educational process using information and communication technology. The following conclusions are drawn the fact that the educational process in a new technological environment should preserve a humanitarian orientation and be focused on the cooperation between a student and a lecturer.

Keywords: Digital technologies, digitalization, information and communication technologies, university education.

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1. Introduction

Because of the increasing role of information and the widespread informatization of all spheres of human life, including education, there are urgent problems that require consideration and solutions. In our opinion using the information and communication technology (ICT) in the educational process is one of the main problems in these days.

2. Problem Statement

The transition process from traditional learning to learning via computer technologies developed over several decades (Pearce, 2009). The evolution of learning via computer technologies may be represented by the following levels:

1) courses on CD-ROM (Schrum et al., 2005);

2) distance learning;

3) e-learning (online learning, e-Learning) (Satunina, 2006).

Each subsequent stage includes the previous one, and each form of training has both advantages and disadvantages (Smith et al., 2009).

Many students consider these forms of learning as an alternative to the traditional one, not only when obtaining second higher education or advanced training, but also they choose this method for obtaining their first higher education.

According to Federal State Statistic Service data for 2016, published on the website of the Public Opinion Fund, the total number of students in higher professional and secondary vocational education programs was about 7.2 million people. Analysts believe it will be reduced to 6.9 million people by 2021. At the same time, according to analysts, the share of higher professional online education, which is 1.8% in 2016, will increase to 4.4% by 2021 (Tereshchenko & Zagorskaya, 2018).

3. Research Questions

Nowadays most of the educational institutions in Russia and abroad use to varying degrees in the pedagogical process distance and/or e-learning based on educational platforms of various types (Jacobson et al., 2009).

As indicated in the UNESCO Institute for Information Technologies in Education's monograph learning platforms are divided by the type of licensing into platforms based on free software and commercial platforms. Free software platform may be used, copied, modified and redistributed with minimal license restrictions (Moodle, SAKAI and OLAT). Commercial platforms are considered more secure and reliable than free software platforms (Blackboard, Desire2Learn and Pearson LearningStudio). Learning platforms may also be classified by the scope of application on web-based (PLE) and mobile (Dendev, 2013).

New information and communication technologies have found application in learning platforms.

The easiest and most convenient way to check students' knowledge is the test. However, when traditionally conducting a test on paper more material and time resources are spent. This is an inconvenience

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and takes a long time to check, and there is a possibility of teacher's errors too. Electronic tests in here compare favourably with the speed and accuracy in the monitoring. There are also specialized systems that allow to create unique forms and collect test statistics (Indigo, StartExam, SanRav).

Screencast (video screen capture) records video from the screen intending to teach something that may be demonstrated. This format is suitable for training for working in a complex program (Adobe Photoshop).

A training webinar looks more like a traditional lecture which unlike a recorded screencast is broadcast in real-time regime (Kamalitdinova et al., 2018). During the broadcast of the webinar, both students and the teacher can ask questions and get answers immediately. It is the great advantage of this type of ICT (Hickey et al., 2009).

Unlike a screencast, a video course can include not only video but also graphics and additional effects. There are quite a lot of video courses on various topics in the public domain, for example, on the YouTube platform, which is certainly an advantage. The disadvantage of this type of ICT is that a professional editor is needed to create and prepare such training courses.

Dialogue simulators allow students to play out real situations to train various skills (conflict resolution, negotiation, etc.) by offering an interactive with a virtual character that shows different reactions depending on the student's response (Wrzesien & Alcañiz Raya, 2010).

Slide courses are full-fledged activities that allow you to train and test the examinee. The course may include, for example, text with graphics or pictures, interactive simulators. Slide courses are created in programs like iSpring Suite, Adobe Captivate, Articulate 360 and CourseLab.

4. Purpose of the Study

The St. Petersburg State Economic University has accumulated a certain experience in the use of distance learning. Most of the lecturers use distance technologies in addition to traditional ones.

When preparing students studying in the direction of training bachelors "Advertising and Public Relations" electronic courses have been developed based on MOODLE which are successfully used by full-time students.

Below is the material reflecting the use of ICT in the classroom in the disciplines "Communication Management" and "The Theory and Practice of Advertising".

Within the framework of the course "Communication Management" webinars are practiced, including screencasts and electronic tests in the learning process. To better assimilate the material and receive feedback several webinars were held on the topic "Implementation of modular technologies in the communication process for information and communication support of a social project". The main message was to convey to the students the information that the implementation of modular technologies involves adherence to certain principles, the most important of which are:

- Complexity. All modules should work as a system providing a synergistic effect, i.e. mutual reinforcement of each of them.
- Consistency. Each module is a subsystem of the entire set of modules that form a system. Each module occupies a certain place in this set and all together form its system integrity.
- Complementarity. Each module complements the other modules functionally.

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- Practical feasibility. Each module should be practically justified. In a particular project, some of the modules may be missing due to their inexpediency.
- Openness. Each module should be open for making additions and changes to its content.

Thus, students should learn that in the implementation of social projects modular technologies are a relatively independent set of step-by-step actions (modules) that make up a system of activities leading to the achievement of project goals. Also, it is important that the phased actions (modules) of the social project can be reduced to the following steps, namely: development of a basic information materials set and corporate identity; creating a pool of information support; organizing a presentation campaign and an information module at the exhibition; attracting the attention of leading statesmen and public figures; enhancing media activities; organizing discussions in the format of "round tables"; climax action.

Test tasks involved checking the digestion of the content and functional purpose of each of the above modules (Lim, 2008).

Module 1: Development of a set of basic information materials. Based on the understanding of the corporate essence of the project, a set of basic information materials is being developed to inform target groups of the public and the media about the content of the project. The contents of such a kit should be characterized by universal coverage of the problem, clear structure, brevity and popularity.

The task: Name the content of the information kit: basic and additional.

Module 2: Development of a corporate identity. For an ongoing project, it is important to develop a corporate identity, elements of which would consider the specifics of the project, reflect its identification profile and thereby ensure the effectiveness of perception of basic documents.

The task: Determine the functional purpose of various elements of corporate identity.

Module 3: Creating a pool of information support. After the first and second modules are formed, the problem of active information and communication promotion of the project idea arises. The main means of communication the media at this stage are.

The task: List the steps involved in creating an information support pool.

Module 4: Presentation action. Presentation of the project idea, its concept and strategic goals is the next stage and module of the project. The basic initial data and tools are ready for presentation work. There is an idea, a set of basic materials has been formed, elements of corporate identity have been developed, communication tools have been prepared represented by the media (pool).

The task: Determine the functional purpose of the idea, tactics and strategy of the project.

Module 5: Attracting the attention of leading government and public figures. A special stage and module of the project is the activity aimed at drawing attention to the project from the leading state and public figures. The support of the project by prominent representatives of the authorities and social movements is a powerful incentive for its promotion, therefore, the organization of interaction with such persons is the most important component of the project.

The task: Determine the motivation and factors of attracting attention to the project from leading government and public figures.

Module 6: Revitalizing the Media. At this stage of information and communication support of the project, active forms of interaction with journalists are planned and implemented: press conferences, briefings, press tours and others.

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The task: Name the features of various forms of interaction with journalists.

Module 7: Organization of Round Table Discussions. Often during the implementation of the project, discussion problems arise that require discussion in a democratic style. Such tasks are solved within the framework of the next module and stage of the project - the organization of discussions in the format of "round tables".

The task: Define the main tasks when organizing round tables.

Module 8: Climaxing Action. The final stage and module of the project is the culmination action, which involves the adoption of the documents necessary for the implementation of the project - approvals, protocols, contracts that give the project a legitimate character.

The task: Name the content and functional purpose of the climactic action.

Thus, in the process of studying the topic, students learn a fairly complete list of communication modules in the communication support of social projects and have the opportunity to test their knowledge.

In addition to the webinars, podcasts were organized during the practical sessions, in which interviews and discussions were recorded with successful management practitioners from various spheres of public life. The trainees responded favourably to the idea of perceiving information through the prism of podcasts and were happy to participate in the discussion in the contest of the practical lesson. Also, podcasts contributed to a more global understanding among students of the specifics of modular technologies in information and communication support of social projects. So, for example, students learned that not all modules considered within the framework of the topic should be included in the process of communication support of a particular social project. For example, if a social project is positively accepted by target groups, then there is no need to include in the communication process organizing discussions in a round table format. It was also emphasized here that the use of communication modules in the communication process should be carried out in the sequence in which they are considered above. In other words, you cannot first create a media pool and then start developing a corporate identity for the project. The hierarchy in the process of using communication modules is one of the most important regularities of modular technologies in this process (Ketelhut & Nelson, 2010).

Lectures on the discipline "Theory and practice of advertising" use multimedia presentations and screencasts, viewing thematic videos, webinars, which contributes to the assimilation of theoretical material

Seminars are conducted with the use of exercises in the practical application of the formed competencies, exercises according to the model included in the interactive digital educational resources. At the same time, the use of ICT increases the possibilities of setting educational tasks.

Independent work of students includes the use of electronic teaching aids that can effectively attract all types of visualization, combine and add them, enhance the motivation and intensity of learning.

A credit for a course assumes test control and checking the digestion of the content of each module of the discipline.

The inclusion of ICT in the traditional lecture-practical system of teaching communication disciplines ensures purposeful work with various sources of information and increases the efficiency of classes and the efficiency of ongoing monitoring of learning.

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It is worth noting that the effective use of ICT in the educational process is due to the interconnection of these information technologies with each other, as well as the compatibility of ICT with traditional teaching methods and preferences.

During the training of students in the disciplines of the communication, cycle ICT are used by teachers to explain new material, consolidate already studied topics, control and organize students' independent work.

Medium and final ICT-assisted test control allows more quickly and objectively identify the knowledge and the lack of student's knowledge and to evaluate their knowledge and the level of professional competencies by themselves.

With the systematic practical application of ICT, it is possible to adjust the methodology of conducting classes, make additions and changes to the fund of assessment tools.

Thus, the use of ICT can be considered appropriate and practically useful in teaching the disciplines of the communication cycle.

Also, ICT allows teachers to work simultaneously with students who have different levels of knowledge in a particular subject, for example, by offering students assignments of varying degrees of difficulty, providing a high percentage of participation.

5. Research Methods

After studying the disciplines "Theory and practice of advertising" and "Communication management", a survey of students was carried out to identify the problems that they face when working with electronic courses. Another purpose of the survey was to study students' opinions on the effectiveness of using distance technologies in the educational process. According to the students, the combination of regular classroom studies with independent work with e-courses is quite effective. The analysis of students' progress is presented in the table (Table 01).

Table 01. Students' answers to the question "Did the e-course help you to better master the discipline?" as a percentage

Answer options	**Response rate**
Definitely yes	24%
More likely than not	58%
No	7%
Don't know	11%

6. Findings

The benefits of using ICT in the learning process can be as follows:

1. The motivating function of ICT. The use of interactive educational games, test tasks give an opportunity to immediately find out the result and increase the interest of students.
2. Diversity of ICT. Students receive material in new forms.
3. Feedback regardless of the location of the communication participants.
4. Involvement of students in the educational process and, as a result, improved understanding of the studied material.

In the educational process, there are several points of view on the use of ICT.

First of all, it is the motivational aspect. The use of ICT increases interest and positively motivates students. ICT allows teachers to provide an individual approach to each student and to consider the needs of students, and to choose forms, rates and levels of education, and to realize the intellectual and creative potential of students (Bradley & Russell, 1997).

This is followed by a substantive aspect when the capabilities of ICT can be used to create individual maps and learning paths, simulators for independent work.

The educational and methodological aspect is also important (Bingimlas, 2009). Electronic and information resources are used as educational and methodological support at different levels of the educational process. Moreover, this can be a partial application or full support of the educational process, which depends on the amount of university resources, the level of preparedness of teachers and students, and other factors.

It is the organizational aspect too. ICT can be used in the educational process for interacting with each student according to the individual map as well as the group of students.

And last but not least, it is the control and evaluation aspect (Yamaletdinova & Medvedeva, 2016).

As a result, we can say that the availability of ICT does not guarantee the quality of the educational process. This requires the systematic development of scientifically grounded methodological approaches and models for the introduction of ICT into the educational process.

7. Conclusion

National researchers point out that to avoid the mechanical transfer of old methodological approaches to a new environment, the models and algorithms for ICT integration should be based on the concept of humanistic pedagogy with its personality-oriented approach. That is, the learning process in a new technological environment should be focused on cooperation between a student and a teacher (Budenkova & Tsvelyukh, 2011).

Similar views on the prospects for e-learning can be observed in the articles of foreign researchers and scientists. So, according to the eLearning Industry research, for e-learning to enter a new phase, the emphasis should be on the student, his learning and the perception of the material. And games should help increase motivation and involve the student in learning since they concentrate attention and introduce a competitive element, which improves the perception of information (Wyted, 2016).

Nowadays it is clear that e-learning is not just a global experiment, but an educational technology of the future.

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