

Use of Modern Communicative Opportunities during Distance Learning in Institution of Higher Education

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Abstract

The introduction of new technologies makes it possible to implement a wider range of methods and techniques in distance learning. The relevance of research on the quality, efficiency and potential of modern communication channels is gaining momentum in the modern educational paradigm. The purpose of the study is to consider the educational potential of high-tech means of communication and applications that allow expanding modern communication opportunities during distance learning in the free economic zone. Methods: system and logical analysis; information synthesis method; experimental method and questionnaire; systematization, generalization. Results: 42 respondents (student-volunteers) took part in the experimental research. In order to determine the technological and communicative readiness of the respondents, preliminary tests were introduced, and at the end of the experiment post-tests. The results of the experimental study proved that in the process of mastering communication skills during distance learning significantly increases the number of high-tech technical means used, which has a positive effect on students' communication skills. The hypothesis that high-tech communication tools that were used in the experimental group should be used in the learning process in terms of distance learning has been confirmed. The novelty of the study is that it describes and analyzes the effectiveness of the use of communicative opportunities in distance learning in order to identify the frequency of their use.

Key-words: High Technologies, University Education, New Technologies, Online Learning, Communication Skills.

1. Introduction

New means of forming communicative opportunities are an integral part of modern education and apply to all components of society – the educational process of free education is no exception. This type of learning occurs mainly with the use of electronic means and communication channels (Faryadi, 2017). Today, in a pandemic and distance learning in university education, high-tech means of communication are the main tools of communication in the educational process, have a huge potential for use. The communication skills of modern youth of the “digital generation” contribute to the change of educational paradigm in the field of communication, ways of receiving, processing and using information. The implementation of the communicative approach involves the involvement of various channels of communication to ensure an effective learning process. These are several levels of communication that are necessary in the context of distance learning, the introduction of online education using the capabilities of cloud services, network sites (SNSs) and social networks (Kostikova et al., 2019). They are part of the social life of young people, and have great potential for use in the educational process and are characterized by specific and convenient ways of receiving and using high-tech means of communication.

Involving these means of communication in the educational process can be of great value in distance learning from a pedagogical point of view. Their use can positively affect the interest of students in the learning process and improves learning motivation through active interaction between students and teachers, who can change roles, build communication not on an authoritarian-hierarchical principle, but in a democratic communication, where during the discussion, dialogue gives rise to a new understanding of the material and facilitates the acquisition of skills (Köktürk, 2012). An important factor in intensifying learning is the introduction of educational activities in a comfortable environment for young people. In addition, the constant improvement of technical equipment increases communication opportunities during the acquisition of educational material. From the linguodidactical point of view, all participants in the educational process working with special applications, learning platforms and materials have the opportunity to expand the field of exchange of ideas, methods, learning materials (Ivanova et al., 2020). However, in such a high-intensity and open communicative environment, the opportunity for personal communication is lost, it is difficult to improve speech skills, learn to communicate and manage the learning process.

The scientific problem is to open new creative and high-tech ways to modernize the process of acquiring knowledge, which can take into account the personal characteristics of each student, his educational needs and opportunities. The technologization and change of the actual algorithm of

modern education in the Free Economic Zone encourages the development of such a methodology for distance learning, which will use new technologies and social guidelines of the modern type of communication – online communication. All this within the study of one course will make learning more effective, will allow you to accumulate the necessary material. The teaching potential in the implementation of distance learning can be explained by an authentic educational environment, a small social group, united by the educational process, within which free constant interaction, discussions and debates can take place.

2. Literature Review

Autonomy of students is one of the outstanding characteristics of distance education. Learning that minimizes the intervention of external management, or in general, takes place without the help of a teacher reveals the opportunity to take responsibility for learning and the potential ability to creatively and at a high technological level to approach the learning situation (Synorub and Medynska, 2019; Mykytiuk et al., 2020). A group of researchers (Chatterton and Goddard, 2000; Turula, 2017; Howlett and Waemusa, 2019;) hypothesized that the main purpose of distance learning is to try to teach young people throughout life to acquire knowledge without direct involvement of the teacher, to navigate, among the difficulties of implementing independence in training.

Addressing the use of communication tools in distance education today is part of a wide range of new problems for the educational context caused by the pandemic. Communication tools – high-tech means of communication (digital, portable devices that provide access to online services, applications and social networks) are an integral part of the modern educational process, many educational activities with great potential (Mason, 2006; Čuhlová, 2019). There are also many experimental studies on the use of social networks (Ahmad, 2016; Dzvinchuk et al., 2020), mobile tools (Alfarwan, 2019) in the implementation and improvement of distance education and self-education. All these studies determine the powerful impact on the effectiveness of learning mobile devices, especially when learning foreign languages (Karpushyna et al., 2019; Rababah, 2020). A number of learning aids have also been developed: Mobile Assistive Language (MALL) (West and Vosloo, 2013). This allows educators to easily access additional materials to better understand the training material and consolidate the skills acquired during the training.

The practical orientation of the implementation of distance education through communication involves the consideration of learning as a form of communication (Köktürk, 2012). Researchers consider the sociocultural and linguodidactic principles of the learning process on a communicative

basis (Fritz et al., 2002; Voinea, 2012), features of the process of formation of communicative skills and professional development skills (Damian et al., 2017) and during the acquisition of communication tools (Zhernova, 2018). This gives grounds to talk about the formation of a methodological system of communicatively oriented learning in distance education. Separately presented studies that have appeared in large numbers in recent years: research and analysis of transformations of world educational systems in the context of coronavirus pandemics. This is a consideration of the worldview paradigm in education (Huidu, 2018), the search for new models of coexistence in university education (Dizon, 2018), the peculiarities of teaching students technical and natural sciences (Nenthien and Loima, 2016).

The attitude of students in free economic education to the introduction of distance learning in the conditions of quarantine restrictions, the evolution of quantitative and qualitative approach to the use of high-tech means of communication during distance learning has remained insufficiently studied. The problem of the study is to determine the attitude of students to the use of a large number of different technical means of communication, how fully implemented communication opportunities in the process of distance learning. The purpose of the study is consideration of the educational potential of high-tech means of communication and applications that allow expanding modern communicative opportunities during distance learning in the Free Economic Zone. Research tasks:

- to find out what communicative opportunities in the process of distance learning were assessed by the respondents as effective;
- determine how the attitude of students and their assessment of different forms of learning (distance, full-time, mixed);
- Identify which communication tools best provide communication opportunities during distance learning in institution of higher education (IHE).

3. Materials and Methods

General scientific research methods (systematization, generalization) used to identify leading modern theoretical and methodological research on the educational potential of communication tools in distance education. Used to process information sources system and logical analysis, method of information synthesis. During the experiment, a questionnaire method was used, which allowed to carry out control measures and measure the results of the experiment (pre-experimental and post-experimental evaluation). The experiment was conducted during the 2019-2020 academic year at Kharkiv National Economic University named after Semyon Kuznets. The main stages of the

experiment: at the first stage pre-experimental questionnaires and testing, at the second stage experimental teaching in the conditions of distance education is applied; the third stage included post-experimental testing and questionnaires, which ended with the fourth stage, summarizing – analysis of the results. Offered questionnaires and tests were filled in and completed voluntarily. Throughout the experimental study, the research team adhered to ethical principles, and the data obtained during the questionnaire and testing provided for the preservation of participants' privacy and adherence to the principles of cooperation and integrity. The study was observational and did not contain external interference, no measures were used that would affect the openness and truthfulness of the participants, the experiment was based on the principles of respect for the interests of respondents.

At the first stage, all student-volunteers (42 volunteers) from the faculties of the Humanities and Economics of the Kharkiv National Economic University named after Semyon Kuznets and Kherson State University (students of the Department of Theory and Methods of Preschool and Primary Education) passed a test to assess the quantity and quality of high-tech means of communication in the educational process and a survey conducted by respondents to assess the quality and effectiveness of distance education compared to full-time education. It should be noted that according to the numerical indicators, all respondents showed their own subjective attitude to full-time, blended and distance education. The second stage of experimental training involved the actual activation of interactive learning tools with the involvement of high-tech educational tools. During the experiment, respondents were added to distance courses in the Google Meet system, Google Classroom and tests and tasks conducted on the Google Classroom platform and a special learning control platform (software-learning system (PNS)), as well as to Facebook thematic groups, where they were previously downloaded the necessary and specially designed training and reference materials, as well as training tasks and tests. Kharkiv National Economic University named after Semyon Kuznets, Kherson State University. The set of such measures involved the involvement of high-tech means of communication. All this required the active use of technical means of communication.

The final stages of the study (stages 3 and 4) include questionnaires with questions from the first stage and measure the change in attitudes towards different forms of learning and the degree of mastery of new communicative means of distance learning. Finally, the analysis of respondents' responses at the pre-experimental and post-experimental stages was performed. The questions are evaluative in nature with three possible answers, and the results are expressed as a percentage. The experimental basis for the study was designed for a set of educational materials, specially developed by a group of experimenters, which were downloaded to educational platforms and social networks,

mobile applications and required the use of high-tech communication tools. The hypothesis that high-tech means of communication realize communicative opportunities during distance learning in free educational institutions, are actively used by students, and in the course of active use of these means of communication the perception of distance learning as such improves.

4. Results and Discussion

In order to test the above hypothesis, an experiment was conducted to activate communicative opportunities in the conditions of distance education in the Free Economic Zone. A study of the educational process with the inclusion of interactive forms of distance learning with new and updated communication capabilities, including several stages of the experiment. Participants in the experiment (students of humanities at Simon Kuznets Kharkiv National University of Economics) were asked to evaluate during 4 stages of the experiment, which lasted 2019-2020 academic year. The experiment was conducted in 4 stages.

Stage 1. Pre-experimental. Prior to the start of the experimental training, a preliminary survey of students who participated in the training experiment was conducted. The following questions were asked:

1. In your opinion, which forms of education are more convenient for you? A. Remote. B. Face-to-face. C. Mixed.
2. What form causes you more difficulties A. Remote. B. Face-to-face. C. Mixed/
3. What form of learning requires the active use of high-tech communication tools? A. Remote. B. Face-to-face. C. Mixed (Table 1).

Table 1 - The Results of the Survey of Respondents to Assess different forms of Learning (author's Development)

Form of study	Remote	Face-to-face	Mixed
Question 1	8	22	12
Question 2	30	5	7
Question 3	42	-	-

Before the start of the experiment, 42 respondents identified distance learning (30 people) as the most difficult in their work, and full-time education as the most acceptable (only 5 people have difficulties with this form). A group of respondents identified a full-time form of education (22 people), but 8 people consider the most convenient form of distance learning. However, unanimous in

the experimental group at the beginning of the experiment was the recognition of the need for active use of high-tech communication tools in the process of distance learning – 42 respondents.

Stage 2. At the stage of direct distance learning, students were asked to assess the number and technological complexity of educational material and communication platforms that they use in the process of distance learning (Table 2).

Table 2 - Use of Communication Platforms in Google Meet, Google Classroom, Facebook Thematic Groups during Training (before the Experiment)

Number of respondents	Communication channel
40	Google Meet
40	Google Classroom tests
36	Facebook groups
31	Mobile applications
40	PNS system
23	Others

The participants of the experiment determined that during the educational process in the conditions of distance learning in educational activities they use Google Meet system, Google Classroom and PNS System (own system of higher education) – 40 respondents, where only 2 respondents could not use Google Meet, Google Classroom, PNS system because they did not have access to the Internet. 36 respondents used Facebook groups. 31 respondents resorted to the capabilities of mobile applications.

Stage 3. At this stage, during the completion of distance learning, the experimental group evaluated its involvement in the use of communicative capabilities of high-tech tools used during the experiment in distance learning (Table 3).

Table 3 - The Intensity of the Use of Computer Equipment, Mobile Devices during Training (before the Experiment)

Number of respondents	Training tool (DEVICE)	Rating
35	Laptop computer / Notebook / Netbook	Always
32	Mobile phone with internet access / Smart Phone /	Often
38	Desktop computer	Sometimes
36	e-Reader / Kindle	Occasionally
40	Tablet / iPad	Never

Respondents perceive high-tech tools as additional devices for training in free economic zones. Therefore, the total number of users of high-tech means of communication for training purposes is as follows: 35 people in the group always use a laptop computer in training. e-Reader /

Kindle are not popular teaching aids – they are used by only 6 respondents. In the absence of the Internet in certain areas, the use of recorded learning materials is necessary, so Tablet / iPad is also used by 2 respondents. Mobile phone with internet access is one of the main means of work in the conditions of university education – 32 respondents use it often.

Stage 4. At the final stage, after passing all the tests and qualifications, respondents were presented with a questionnaire in which they could express their attitude to distance learning (Table 4).

Table 4 - The Results of the Survey of Respondents to Assess different Forms of Education (Author's Development)

Forms of education	Remote	Face-to-face	Mixed
Question 1	18	10	12
Question 2	30(15)	5(14)	7(13)
Question 3	40	-	2

The majority of respondents recognized the need for active use of high-tech communication tools during distance learning (40 respondents), the need for such introduction to mixed forms of education is seen by 2 respondents. The number of respondents who find it difficult to mix blended learning (12 people) and full-time education (10 people) increased the number of respondents who feared the difficulties of distance learning (18 respondents) decreased (Table 5).

Table 5 - Use of Computer Equipment, Mobile Devices during Training (at the End of the Experiment)

Number of respondents	Communication tool (DEVICE)	Rating
38	Laptop computer / Notebook / Netbook	Always
32	Mobile phone with internet access / Smart Phone / Android	Often
38	Desktop computer	Sometimes
36	Tablet / iPad	Occasionally
20	e-Reader / Kindle	Never

The total number of users of high-tech means of communication has increased, which means that the level of ownership of technical means and their software has increased. The list of devices used during distance learning in the experimental group has also diversified. Laptop computer is one of the main tools of the experimental group in terms of distance learning. The experiment revealed certain features of the use of high-tech devices: in the absence of the Internet in certain areas, the use

of recorded educational materials is necessary. 22 people from the group started using e-Reader / Kindle. This increases communication opportunities during distance learning.

The availability of technical skills of distance learning in the free economic zone determines that the participants of the distance learning form have the opportunity to improve communication skills (Kuzmina et al., 2020) and establish effective collaboration with teachers and other group members (Boghian, 2019). In fact, the level of students' trust in distance learning has increased with the use of technological means, due to the proper awareness, the emergence of digitized learning materials and adapted learning applications for different devices. A number of studies on the problems of students' concentration and increase their interest in learning are also related to the fundamental renewal of communication tools (Cavus and Ibrahim, 2017). The study confirms this hypothesis, as students recognized the effectiveness of modern electronic means of communication, which increases attention and interest in learning through methods adapted to the peculiarities of the new conditions of communication.

The problem of distance learning in the context of foreign language learning (Cavus and Ibrahim, 2017) was considered from the standpoint of the use of fundamentally new channels of communication. The availability of mobile tools and the educational potential of Internet communications is focused on the interests and professional aspirations of students. They can choose not only the form of education, but also those means of communication that help to implement a quality educational process. Even if students do not know about the existence of the concept of distance education (Zhernova, 2018), then agree that you need to use a variety of communication tools during training. Sometimes students are psychologically or technically unprepared for distance education, in which case it is technical communication tools that can help them in this. Moreover, material that has not been mastered properly or caused questions can be viewed in addition; answers to problematic questions can be obtained with the help of educational applications, learning platforms, etc. Investigations into the role should continue communication tools, modern technologies in distance learning. It is worth exploring the development of communicative competence, the process of acquiring new communication skills in students during distance learning, because in modern conditions they have the opportunity to constantly meet and use the learning experience of other students from around the world. Particularly promising in this regard is the use in distance learning opportunities of both educational platforms ZVO, and public Google Meet, Google Classroom, ZOOM, thematic groups of educational nature, social networks, mobile applications, etc.

5. Conclusions

As a result of the conducted experiment, it was found out that high-tech means of communication, devices, educational applications allow to expand modern communicative opportunities during distance learning in modern free economic zones. The constant increase in the number of means of communication and their technological improvement as a means of learning affect the increase of positive assessments of distance learning. Research tasks: consideration of educational potential. Respondents during distance learning increased the number of high-tech means of communication used, which relate to the need to attract high-tech means of communication in the process of distance learning in the conditions of free learning. This increases the communication capabilities of participants in the distance learning process. The experimental group positively perceived the form of distance learning: before the beginning, 30 respondents did not perceive this form, but at the final stage of the analysis of the results, the number of students who were afraid of distance learning decreased to 18 people. Increasing the number and variety of electronic means of communication, attracting the educational potential of social networks, educational Internet platforms and applications to them help to learn qualitatively and effectively in the conditions of quarantine restrictions and distance learning.

Acquired technical skills and knowledge allow you to expand independently the range of educational tools, technical means of communication that can be used daily in distance learning. This increases communication opportunities within university education. Acquired skills help to build your own trajectory of working with educational material. The obtained results of the experiment encourage the active involvement of high-tech communication tools in the implementation of effective distance learning, help in compiling interactive training courses, creating new teaching methods, help in forming cultural and educational foundations of positive attitude of freelance students to distance learning. In the future, it is worth turning to the study of ways to use effectively such modern communication tools as online learning tools, techniques for the development of creative, critical and logical thinking in distance learning and more.

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