REVISTA ESPACIOS

# Pedagogical support of the information-educational environment of the university

## Apoyo pedagógico del entorno informativo-educativo de la universidad

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**ABSTRACT:**

The article describes the successful experience of using in the Minin Nizhny Novgorod State Pedagogical University such an electronic environment as Moodle which provides an opportunity for active participation in the educational process of students studying remotely. The article also describes the results of a poll conducted in 2018 at the Minin Nizhny Novgorod State Pedagogical University to establish the effectiveness of using information and communication technologies in the educational process. The types of questions that were indicated in the questionnaire for the respondents are presented. The necessary changes are proposed to maintain the effectiveness of pedagogical support of the information and educational environment.
**Keywords:** vocational education, information and educational environment, graduate

**RESUMEN:**

El artículo describe la experiencia exitosa de usar en la Universidad Pedagógica Estatal Minin Nizhny Novgorod un entorno electrónico como Moodle, que brinda la oportunidad de participar activamente en el proceso educativo de los estudiantes que estudian de forma remota. El artículo también describe los resultados de una encuesta realizada en 2018 en la Universidad Pedagógica Estatal de Minin Nizhny Novgorod para establecer la efectividad del uso de las tecnologías de la información y la comunicación en el proceso educativo. Se presentan los tipos de preguntas que se indicaron en el cuestionario para los encuestados. Se proponen los cambios necesarios para mantener la efectividad del apoyo pedagógico del entorno informativo y educativo.
**Palabras clave:** formación profesional, entorno informativo y educativo, licenciado.

## 1. Introduction

The last decade in education has been marked by a number of radical changes. The first thing that this process is connected with is globalization, which influenced all kinds of human life activity. With the entry into the era of the information society, active introduction of network and multimedia technologies began. Over time, these elements evolve and improve,

from which the peculiarities of their use appear. All these processes, as we have already pointed out, are global and penetrate into the sphere of education as well. Thus, the resource-educational environment was created, which develops every year and adopts new, more advanced forms that contribute to the acquisition of quality education, which determines the relevance of the chosen topic. The purpose of the article is to identify the essential characteristics of the pedagogical support of the information and educational environment in the new conditions as well as to establish the effectiveness of the information and educational environment. Specialists note that these changes set qualitatively different goals and objectives, change the requirements for graduates. As you know, all these requirements are covered in the GEF of the new generation (Kashtanova et al, 2017). Modern vocational education today is built on the terms of a competence approach and can not contradict it (Bulganina et al, 2017).

## 1.1. Essence of pedagogical support of the information educational environment

It is important to note that the pedagogical component of information and communication processes in education is not understood precisely, therefore this work is aimed at the effective organization of work of students of a pedagogical university on the use of network and media technologies in the educational process. The information and educational environment is an aggregate of certain conditions that act with the help of information and communication technologies, which are aimed at the implementation of educational activities that contribute to the formation of professionally important qualities of the future specialist in the conditions of informatization of society (Semarkhanova et al, 2018) Among the features that characterize the information and education environment are: the integration of information and communication technologies; development and implementation of new information processing technologies; the use of network resources in the education process; use of modern means, methods and forms of training (Kostylev et al, 2017, Smirnova et al,2017). The organization of pedagogical activity in the conditions considered by us presupposes the introduction of changes in the relations between subjects involved in the educational process. It can be teachers, students, administration of an educational institution (Nabi et al, 2017). The information and educational environment should include the following educational resources: digital educational resources (CDR); computers and other equipment; communication communication channels; systems of modern pedagogical technologies that ensure the quality of the modern information and educational environment, which in turn fosters the information and methodological support of the educational process, the planning of the educational process and its resource support, monitoring of the educational process, the development of modern procedures for searching, collecting, analyzing, processing, storing and provision of information (Chaikina et al, 2018). It should be noted that in the implementation of e-learning, new special requirements are imposed on the information and educational environment. Educational programs with the use of distance educational technologies are implemented in conditions that include electronic information resources, electronic educational resources, information, telecommunication technologies, technological means that facilitate the full-scale mastering of the material by students learning through electronic educational platforms that do not have the opportunity to attend the class in person, directly in the building of the educational institution (Bulaeva et al, 2018, Prokhorova et al, 2015). Higher schools often choose Moodle as such a platform. As this resource provides broad educational opportunities, it does not require costs, it is also easy to learn and manage both by the teacher and by the students (Vaganova et al, 2017, Gladkova et al, 2017). The information and educational environment (IOS), its resource and technical base and its competent use lead to the creation of conditions for the development of the individual and the improvement of the quality of education, by increasing her motivation, developing educational and subject competence in the process of interaction with the components of the ITS (Gruzdeva et al, 2018, Shulga et al, 2017). There is an operative information and communication interaction of all participants of the educational process. Considering IOS as a systemically organized complex of information, educational and methodical, technical support, associated with the

person as a subject of the educational process, it is necessary to point out the communicative, educational and scientific, educational function of the system that contains various technical and software tools for storing, processing, transmitting information , as well as operational access to it (Nabi et al, 2017). As part of the study, we considered the information and educational environment as a model of the educational process, characterized by the above features and allowing to use the potential of ICT for improving the quality of vocational training.

## 2. Methodology

The purpose of this article is to describe the experience of using the information and educational environment in the higher education system. The basis for this study was the information and educational environment of Nizhny Novgorod State Pedagogical University K. Minin, implemented on the platform Moodle, it was attended by full-time faculty members of the university totaling 43 people. The study was conducted using the questionnaire method in April 2018. The questionnaire was placed in the electronic environment of the university, the results were processed using standard Google-form tools.

The research included:

- determination of the attitude of university teachers to the implementation of the educational process in the context of the information and educational environment;

- an estimation of a level of possession of teachers by means of IOS for effective educational process;

- determination of the frequency and effectiveness of the use of tools and tools of ITS to improve the quality of training.

## 2.1. Evaluation of the effectiveness of information and communication technologies in the educational environment

The content of the questions and the possible answers that were given to the respondents are indicated in Table 1.

**Table 1**
Study of the effectiveness of the application of information
and communication technologies by teachers

| Question | Yes | No | Partially |
|---|---|---|---|
| Have you developed a working program for the subjects taught? | 84,6% | 15,4% | - |
| Did you develop a QMS for the taught disciplines? | 88,4% | 11,6% | - |
| Do you feel the need to use electronic educational resources in your studies? | 80,8% | 7,7% | 11,5 |
| In your opinion, could some of the activities that you conducted take place remotely? | 42,3% | 19,3% | 38,4% |
| Does the NGPU audience allow the use of a multimedia projector, use the Internet network? | 26,9% | 19,3% | 53,8% |
| Do you have much experience in creating EUMC in disciplines? | 19,4% | 34,6% | 46% |
| Do you receive the learning effect from the use of ICT in class? | 53,8% | 23,1% | 23,1% |
| Do you have experience working with students who are on distance | 23% | 19,2% | 57,8% |

| | | | |
|---|---|---|---|
| learning? | | | |
| Does your workplace have access to the Internet? | 53,8% | 3,9% | 42,3% |
| In your opinion, will the share of electronic educational resources increase in the coming years? | 84,6% | 7,7% | 7,7% |

# 3. Results

Under this condition, most teachers believe that the didactic effect of using ICT has positive results. A survey of students showed that a large number of teachers in their classes rarely use the technologies we are considering, 14% of the respondents said that teachers use ICT almost always, and only 7% in each class. The data also showed that 65% of students indicate the use of multimedia teaching aids by teachers; 34% - computer technologies; 1% - direct use in the learning process of Internet resources. Moodle has been widely and successfully used in Nizhny Novgorod State Pedagogical University for several years. This platform provides a lot of opportunities for interaction between the teacher and students without compromising the quality of training. The teacher himself can choose the number of used objects on his course. He has the right to set parameters for tasks. For example, to pass a test, you can set a time limit, set the desired form of the question. Almost all the results the teacher and students receive instantly, which allows you to quickly correct the trajectory of learning, to fill the gaps. Communication with the teacher is carried out through private messages, chats or webinars. The teacher can attach individual tasks, which the teacher himself checks. In this case, the student attaches files with an assignment which in the future are subject to verification by the teacher.

## 3.1. Results of the study

The survey data showed that teachers expect in the near future an increase in the share of the use of electronic educational resources in the educational process. At the same time, about 50% of workplaces are equipped with the necessary equipment for Internet access. Most teachers note the positive results of using ICT tools. Therefore, the university will further develop in this direction, providing as much as possible opportunities for conducting classes of this type. Also, despite the relatively small percentage of teachers who worked with students studying only remotely, this area has received a lot of attention and students are getting the necessary knowledge. As for the students themselves, the question "How often do teachers use ICT in their classes?" They point to the rarity of ICT use, only 7% of students talk about the use of ICT in each class. Among positive aspects, it is worth highlighting: 20% of respondents indicate the opportunity to work independently, 36% say about the availability and clarity of training resources, 31% note the time savings in the use of ICT, and 13% talk about financial savings (in the conditions provided, there is no need to print material).

# 4. Conclusions

We have found out that the information and educational environment is a set of all the conditions that are implemented on the platform of information and communication technologies directed to the implementation of educational activities in the conditions of informatization of the society that will contribute to the formation of the qualities of a competent specialist capable of independent activity and solving problems in an unconventional way , qualitatively prepared for professional work. One of the main tasks of all participants of the educational process is the awareness of the information and educational environment of their educational institution as a space that is the foundation of their professional activity. Teachers should bring their pedagogical activity to this environment and, if necessary, enter into information and professional interaction with colleagues, the administration, and students. The data of the conducted survey showed a greater degree of positive influence of modern information and educational technologies on

the learning process. Both teachers and students, despite some difficulties and shortcomings that will be corrected over time, note the positive effect of the use of ICT.

## 4.1. Suggestions

In order to provide quality education in the conditions of the information and educational environment, constant monitoring of the level of training of teachers for work in the electronic environment is necessary, and teachers should be provided with appropriate workplaces with the possibility of access to the Internet network. It is important to pay attention to the organization of various multi-level training courses and seminars that take into account the initial level of training of target groups (teachers, administrators) and equip the material and technical base with modern equipment, constantly conduct diagnostics of learning outcomes for timely identification of educational deficiencies.

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