Educational environment as a development resource for the learning process

Ambiente educativo como recurso de desarrollo para el proceso de aprendizaje
Ambiente educacional como recurso de desenvolvimento para o processo de aprendizagem

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Abstract

Following overseas examples, educational institutions in Russia are trying to interact with other organizations implementing practical competence approach. The relevance of the topic lies in the fact that modern educational environment is constantly changing both due to the dynamics of everyday and professional conditions. Due to competence approach constant monitoring and new resources are required for the development of each subject in this educational environment. The goal of the work is to create means for open social and educational environment realization which allows achieving positive results for all participants in the project. In this article, the authors raise the issue of modern educational environment creation as a resource for each subject of the educational process development.

The article attempts to improve students', teachers' and others participants' interested in educational environment development interaction. We try to achieve a qualitatively new level of participants' skills and competencies development in this process. For this, analysis of the essence and structure of educational process in a higher educational institution was carried out. After that, the authors propose, within the framework of a project implemented by Nizhny Novgorod State Pedagogical University on the organization and development of the social and educational environment, to conduct special computer literacy courses for the elderly. The courses offered combine the activities of a large

Resumen

Siguiendo ejemplos en el extranjero, las instituciones educativas en Rusia están tratando de interactuar con otras organizaciones implementando un enfoque de competencia práctica. La relevancia del tema radica en el hecho de que el entorno educativo moderno está cambiando constantemente debido a la dinámica de las condiciones cotidianas y profesionales. Debido al enfoque de competencia, el monitoreo constante y nuevos recursos son necesarios para el desarrollo de cada asignatura en este entorno educativo. El objetivo del trabajo es crear medios para la realización de un entorno social y educativo abierto que permita lograr resultados positivos para todos los participantes en el proyecto. En este artículo, los autores plantean el tema de la creación de un entorno educativo moderno como un recurso para cada tema del desarrollo del proceso educativo.

El artículo intenta mejorar la interacción entre los estudiantes, los maestros y otros participantes interesados en el desarrollo del entorno educativo. Intentamos alcanzar un nivel cualitativamente nuevo de desarrollo de habilidades y competencias de los participantes en este proceso. Para ello, se realizó un análisis de la esencia y estructura del proceso educativo en una institución de educación superior. Posteriormente, los autores proponen, en el marco de un proyecto implementado por la Universidad Pedagógica Estatal Nizhny Novgorod sobre la organización y el desarrollo

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number of people who, working for a common result, achieve the development of individual qualities. The results obtained are the basis for further improvement of educational environment.

Keywords: educational environment, higher school, subject of the educational process, competence-based approach, competence.

del entorno social y educativo, realizar cursos especiales de alfabetización informática para personas mayores. Los cursos ofrecidos combinan las actividades de un gran número de personas que, trabajando por un resultado común, logran el desarrollo de cualidades individuales.

Palabras claves: entorno educativo, escuela superior, tema del proceso educativo, enfoque basado en la competencia, competencia.

Resumo

Na sequência de exemplos no exterior, instituições educacionais na Rússia estão tentando interagir com outras organizações implementando uma abordagem de competência prática. A relevância do tema reside no fato de que o ambiente educacional moderno está em constante mudança, tanto devido à dinâmica das condições cotidianas e profissionais. Devido à abordagem de competência, monitoramento constante e novos recursos são necessários para o desenvolvimento de cada disciplina nesse ambiente educacional. O objetivo do trabalho é criar meios para a realização de um ambiente social e educacional aberto que permita alcançar resultados positivos para todos os participantes do projeto. Neste artigo, os autores levantam a questão da criação de ambientes educacionais modernos como recurso para cada sujeito do processo de desenvolvimento educacional.
O artigo tenta melhorar a interação dos alunos, professores e outros participantes interessados na interação do desenvolvimento do ambiente educacional. Tentamos alcançar um nível qualitativamente novo de desenvolvimento de habilidades e competências dos participantes neste processo. Para isso, foi realizada a análise da essência e estrutura do processo educacional em uma instituição de ensino superior. Em seguida, os autores propõem, no âmbito de um projeto implementado pela Universidade Pedagógica Estadual Nizhny Novgorod, a organização e desenvolvimento do ambiente socioeducacional, para a realização de cursos especiais de alfabetização em informática para idosos. Os cursos oferecidos combinam as atividades de um grande número de pessoas que, trabalhando por um resultado comum, alcançam o desenvolvimento de qualidades individuais

Palavras-chave: ambiente educacional, ensino superior, sujeito do processo educacional, abordagem baseada em competência, competência.

Introduction

Educational environment throughout the world is a dynamic system that is constantly evolving. With the introduction of computerization in this area, it acquired new features that required universities to adapt the system to electronic tools. With the advent of the competence-based approach educational environment has changed again and began to interact with electronic resources introduced into educational process. As in the rest of the world, in Russia, educational institutions try to interact with other organizations that will provide students with opportunities to get practice skills. This cooperation brings clear advantages to both parties. For example, the issue of competencies development is being addressed and as a result, students' independence is developing. Introduction to educational environment of new stakeholders is a trend that emerged in many countries in educational process precisely due to competence approach. Its requirements are aimed at practical focus of the processes applicable to students. For example, A. Bellak and Walker argue that process of cognitive activity is included in the framework of such interaction. They favor the development of communicative competences(Walker et all, 1992) . Polish scientist V. Okonem and S. Cherner talk about the formation of skills of self-education under such conditions. D. Snow, M. Walters, P. Meyer, D. Sadker are also engaged in research in the field of modern pedagogy (Sadker

2011). When studying modern educational environment of higher schools in Russia, it is necessary to revise its degree of influence on the participants of educational process and its features, since transition to competence-based educational paradigm outlined a different from traditional one preparation strategy (Kuznetsovrt all, 2018). The emergence of a competence-based approach in higher education was promoted by high rates of technical progress, the need for increased mobility, high variability of living conditions, complexity of tasks and the ever-growing amount of information changed the needs of the state and society (LubovKiryalovnallyashenko 2018). And today the system of competencies comes to force, rather than individual knowledge and skills that tend to become obsolete quickly. The development of competence involved such researchers as D. Sandberg, M. Burns, A. Fournham, Safford, A.Wiley (Safford 2011).

The success of the development of all participants in educational process depends on the result of the life of a higher educational institution including educational environment created by it. In addition, we must not forget that the new educational paradigm envisages the implementation of "lifelong education", therefore not only a student masters competency, but also the older generation. Development of a large number of competencies in the interaction of different generations is noted by K. Zecher, J. Raven, D. Campbell, G. Levin, D. Leivi, and P. Popl (Zeichner&Schulte ,2001).

Modern educational environment

Requirements for the level of training of future graduates, including their personal qualities, values and competencies, are steadily growing. The "customer" of the new model graduate in the general account is the state and society (Yao et all, 2009). They are the ones who make demands on him (Bogorodskayaet all 2018). Therefore, among the basic principles of selection and organization of educational content, along with the principles of relevance of content, advanced development, fundamentalization and focus to personal interests, emphasize the principle of the content of teaching social order (Garinaet all 2017). Social order requirements are constantly updated and updated (Ilyashenkoet all, 2018e).

Modern students of higher educational institutions in the framework of the competence-based approach should apply their knowledge in practice, the more it is in the learning process, the more adapted the future graduate, both to their professional activities and to everyday issues in general (Bulaevaet all 2018). According to the Atlas of new professions, presented on the official website of the Skolkovo Innovation Center, by 2030, 186 new professions will appear, displacing at least 57 old ones (Garina et all,2018). This information forces us to look for new training options for students (Smirnovaet all, 2017a). Although the formation of the personality of a professional depends on many factors and conditions of social environment, we highlight the educational environment of the higher educational institution (Vaganovaet all, 2017a). In our understanding, the educational environment includes educational and educational processes carried out within a specific educational institution (Potashniket all 2018). The structure of the educational environment has a clear hierarchy, where each level performs its organizational, managerial, supervisory and other functions (Smirnovaet all 2017b). A clear system with well-functioning communication between levels in the educational environment ensures a stable order (Vaganovaet all, 2017b). The single goal and common functioning of the organization determines the integrity of the educational environment (Yashinet all, 2017). Many scientists, both domestic and foreign, were interested in the development of the educational environment (Perovaet all, 2017). Hence the emergence of a multitude of interpretations and formulations of the concept of "educational environment", the large variation of its structural components (Ilyashenkoet all, 2018d). Modern researchers of these issues include B.N. Bodenko, A.V. Khutorskoy, A.T. Kurakin, Yu.S. Manuilov (Kutepov 2017). The educational environment is understood as the natural and artificially created sociocultural environment of a person, including content and various means of education, which provide intensive activity for the student, guiding the process of personal development through creating favorable conditions for this (Markova, 2018). A.V. Sharypin argues that it is educational environment that influences the development of the student's personality, is one of the main factors ensuring his competitiveness based on the interaction and cooperation of teachers and students in educational and extracurricular fields (Ilyashenkoet all, 2018c). We believe that the

educational environment is a system of pedagogical, psychological and sociocultural conditions that create conditions for the development of already formed abilities, the disclosure of the individual characteristics of the person, and the interests and talents that have not yet manifested.

Methodology

The open socio-educational environment formed at KozmaMinin Nizhny Novgorod State Pedagogical University unites the personnel, material, economic and other resources of the university, educational partner organizations, organizations of potential employers, social services and municipal authorities to solve the problem of vocational guidance, vocational training and employment in the territory of the Nizhny Novgorod region the most talented representatives of the younger generation as well as the creation of comfortable living conditions and social adaptation in the changing world of the elderly.

The study of scientific literature on this topic allowed us to establish the definition of this concept. The educational environment is a system of pedagogical and psychological conditions and influences that create the possibility both for revealing not yet manifested interests and abilities, and for revealing the already existing interests and abilities of the student's personality.

Computer courses “Accessible Environment: Improving Computer Literacy” for older people were implemented at Minin University. The motivation for this development lies in the large-scale computerization of processes that are extremely important for the population (for example, payment for mobile communications, housing and municipal services), as well as an increase in the percentage of older people. (For example, in the Russian Federation today, 22% of population is elderly people of retirement age).

The courses were held in full-time in the presence of specialists and with the help of volunteers studying at the university. During the year, 289 people took part in the project. 199 people took part in the survey (90 people for some reason could not, or refused to take the survey) people, of whom 88% are non-working pensioners, 12% are working pensioners. The age structure of the respondents: 55-64 years - 30%, 65 -74 years - 52%, 75-84 years - 18%. The level of education of the respondents: 30% of respondents have a higher education, 64% have a specialized secondary and 6% have a general secondary. Answers to the question about the availability of technology courses for students providing access to the Internet: 38% - a personal computer; 4% - smartphone; 12% - tablet; 46% - I do not have.

The course program consisted of 12 classes. The first lesson analyzed the characteristics of the computer operating system and types of programs, turn on and off the computer, start the program "notepad", work with the window, keyboard, switch between languages, print punctuation marks, characters, letters, save texts on the desktop. The second lesson: basic skills in the Windows program (the concept of a file and folder, the concept of the desktop, working with a folder on the desktop, creating a file in a folder on the desktop, storage media). The third lesson: working with text editors. The fourth lesson: the main work with the text, the rules of printing paragraphs, paragraph formatting, an example of working with a letter. Lesson five: correcting errors, creating lists, setting page parameters, preparing for printing and printing a document, setting up a screen saver program. The sixth lesson: setting the speed of the mouse, setting the date and time, working with the program guide. Lesson seven: working on the Internet (the concept of a browser, browsing browsers, connecting to the Internet, installing a browser on a computer, creating a mailbox, logging in to mail). Lesson eight: creating a letter and attaching files to them, receiving letters, responding to a letter, deleting one letter and groups of letters, exiting the mailbox, downloading books from the Internet. Lesson nine: use Skype, use YouTube. Lesson ten: use of cards, search for goods on the Internet, shopping in online stores. Lesson eleven: searching for information, saving a site’s page, saving graphic and textual information, registering public services on a site, entering the site and using its resources (generating a payment document, entering readings of water devices and electricity meters, making payments). Session twelve: registration and work in social networks.

According to the results of the courses, a survey of the trainees was conducted. It allowed them to determine knowledge gained by the respondents in the process of learning and those that need to be improved. The survey consisted of several questions.

Table 1- Survey to determine the knowledge gained by the respondents in the course of the course and those requiring improvement

Do you think you can use a computer to the proper (necessary for you) degree?	Well/no
Would you like to continue studying computer literacy?	Well/no
What goals would you like to achieve in the future?	a) chat with friends b) information retrieval c) receiving advice d) payment of utilities i) watching movies
Do you consider it appropriate to organize these courses?	Well/no
"What topics have become most useful to you?"	a) use of e-mail b) search for information on the Internet c) conduct payment for services using the Internet d) work on the portal public services
"What topics caused difficulty and would you like to continue studying them?"	a) use of e-mail b) search for information on the Internet c) conduct payment for services using the Internet d) work on the public services portal
"What skills did you learn while studying the course?"	a) email b) information retrieval c) payment for services d) ticket booking e) video and audio communication f) Online Store g) Internet-money
Do you have any wishes for the course?	Free-form answer

Analysis of the results of the answers showed that a sufficiently large percentage of older people mastered the necessary skills. In addition, each of the parties involved in the event developed the necessary qualities and acquired important competencies.

Analysis and Discussion

Consideration of the modern educational environment requires designation of additional aspects of its development. Let us note that Russia, having enacted the requirements of the new Federal State Educational Standards, has opened a competence-based educational paradigm, and now, higher schools operate precisely within the framework of the competence approach. With the entry into the Bologna process, Russia has identified new educational paths for itself, new trends have emerged. This includes the provision of lifelong education (Vaganovaet all, 2017c). Therefore, in the article we are talking not only about students, but also about the adult generation.

As we have said, educational environment is one of the most important factors in the development of a professional based on the interaction of teachers and students in both educational and extracurricular activities (Vaganova&Ilyashenko, 2018). The proposed project unites the activities of a large number of people who, working for a common result, achieve the development of individual qualities. Russia is actively developing youth work together with older people to create a comfortable educational environment for both parties. The Russian Federation is not the only country improving the model of training the older generation.

The French model of education for the elderly (also common in Germany, the Netherlands, Italy and other European countries) involves the creation of courses for the elderly based on local universities at the expense of public funds, the British model is based on the principles of mutual aid and self-organization Gerogogiki, which recognizes the problems associated with age (Berry et all, 2012): a decrease in the ability of sensory perception, limitation of physical activity and changes in cognitive processes and involves discussions in the form of discussions, dialogues, excursions and practical exercises (Campbell 2014). In the United States, the concept of "pension for pensioners" (Elderhostel) training, developed by M. Knowlton and combining education and tourism in the form of study leave, during which an elderly person travels to interesting places and listens to lectures prepared by university staff. In a number of countries, projects are being implemented that provide for an integrated approach to the issues of additional education throughout life in order to increase the level of social adaptation of the population. In Finland, education for various categories of the adult population (including the elderly) is implemented in the format of people's universities. In Holland, the project "Pension in Perspective" is being implemented, providing additional education for employees who are retiring (Carl et all, 2015).

In the Russian Federation, additional education for the adult population (including the retirement age) is implemented in the form of a partnership of social security agencies, educational organizations and non-profit associations, training is conducted either on the basis of educational organizations or on the basis of social service centers for population.

In particular, within the framework of the Moscow Longevity urban project, the Department of Labor and Social Protection of the Population of Moscow with the participation of the Moscow City Pedagogical University and the Moscow University of Management of the Moscow Government created the Silver University, the main tasks of which is to create conditions for the creative and professional development of the elderly people, improving their quality of life through additional education. In Nizhny Novgorod, KozmaMinin Nizhny Novgorod State University is implementing a project that offers various courses, including those for the elderly.

Work with the elderly was carried out by university professors with the active participation of volunteers from the Territory of Opportunities student association (Pavlov et all, 2016). The trainees gained experience in teaching, made a feasible contribution to creating a comfortable social environment, gained experience, enriched with intergenerational interaction practices (Ilyashenko et all, 2018b).

The project is based on the following approaches: competence (created social and educational environment, ensures the formation of the competences missing in various categories of trainees that allow solving their problems) (Smirnova et all, 2018); systemic (the need for a systemic approach is due to the large number of project participants forming a unified social and educational environment) (Natalie et all, 2018); personal (the formed socio-educational environment is primarily focused on the person as the goal, result, subject and the main criterion of the effectiveness of the activity) (Fedorov et all, 2017); activity (activity is a way of existence and development of society as a whole and of a person separately, a means of transforming nature and a factor of personal development) (Ilyashenko et all, 2018a) The following principles are taken into account: the principle of openness of the educational system. Open education is understood as a complex social system that exhibits the ability to respond flexibly to changing socio-economic realities; principle of continuity of education. Continuing education is the process of increasing the educational (general and professional) potential of an individual over the course of a lifetime (McMahon&Raphael, 2012); the principle of intergenerational interaction that implements the idea of a convention of generations and ensures the

movement of information flows not only from the older generation to the younger, but vice versa (Markova, 2016).

Returning to the "Accessible Environment: Improving Computer Literacy" courses for older people, we identified a range of issues that helped identify problems and broaden the topics offered by the center of educational programs. When answering the question: "Which topics have become most useful for you?", The most sought-after were: using e-mail, searching for information on the Internet, making payments for services using the Internet.

To the question "Which topics caused difficulty and would you like to continue studying them?" The most popular answer was: work on the site of state services.

Answering the question "What skills did you learn while studying the course?" Respondents noted working with documents, paying for utilities, searching for information. A more detailed answer is shown in Figure 1.

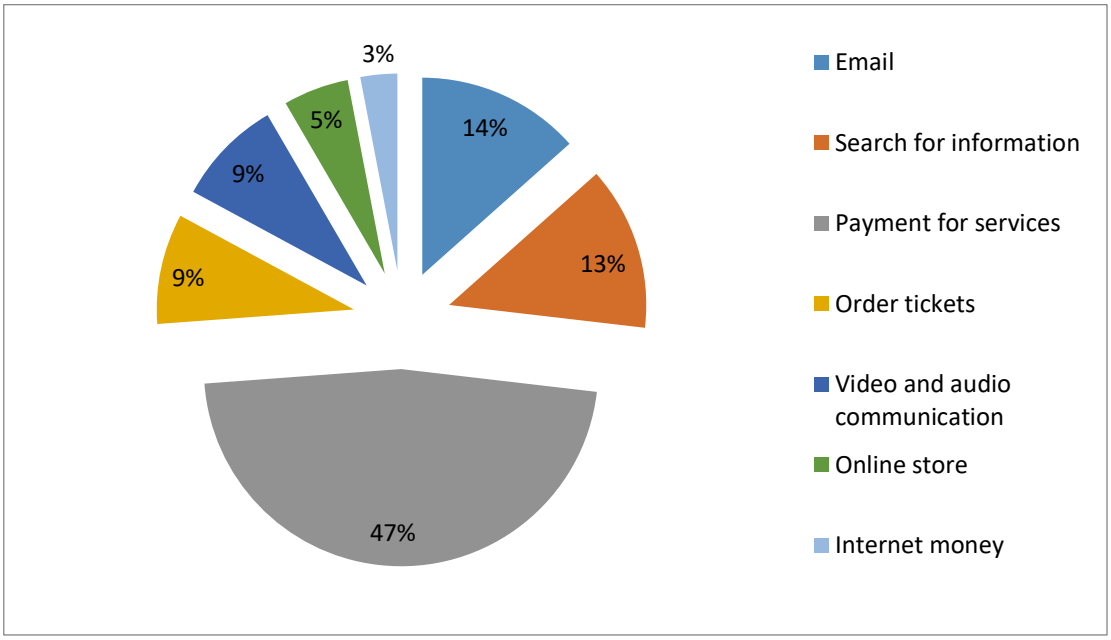

Figure 1- The results of the answers received to the question: "What skills did you learn in studying the course?"

The proposed approach to creating an open social and educational environment allows us to achieve positive results for all participants in the project: obtain additional competences and satisfy individual educational needs for a wide range of stakeholders of different ages; to provide training and reinforcement of the most talented pedagogical personnel, as the most important asset, ensuring the competitiveness of the region in the long term; create a base of practices for students, allowing to form unique competencies; to ensure efficient use of resources of educational organizations of the city and region in solving socially important tasks; create conditions for the formation of a system of social partnership of educational organizations, potential employers, regional authorities for the implementation of additional educational programs for people of different generations to ensure comfortable living conditions for citizens of different age in the region; create conditions for productive interaction of persons belonging to different generations in the course of educational activities, realizing the idea of a convention of generations.

Conclusion

We have achieved the goal of the work. Means to support an open social and educational environment, allowing achieving positive results for all participants have been created.

The implementation of the project developed by the Nizhny Novgorod State Pedagogical University allowed the introduction of special courses for the elderly. As the results of the

respondents' answers after taking the courses showed, their computer literacy has increased significantly. Students who participated in the creation of the project as volunteers also acquired necessary skills and competencies for themselves, developed their independence and creativity. The teachers were able to improve existing skills, including developing project competencies. Thus, the respondents have developed skills necessary to carry out productive activities, and future graduates have necessary competences to carry out professional activities and solve everyday problems, and as a result, future graduates have become highly competitive in the labor market.

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