Modern technologies of adult education

Современные технологии обучения взрослых

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Abstract

The motivation to constant knowledge update is due to the dynamic scientific and technological progress, which affects the change of all spheres of human activity. Employees of many organizations are in need of both professional development as well as obtaining a new specialty in order to maintain and improve their own competitiveness. In these conditions, higher educational institutions focused on adults training, are looking for new ways that will improve the formation of adult students competence. The purpose of the article is to analyze the experience of modern technologies implementation in the process of adult education. The article reveals the possibilities of innovative educational technologies, their essence and role in modern professional education. The role of continuous adult students education is emphasized, their functions are highlighted. The authors have identified the features on which the teacher relies in the process of adults training, which helps to make the training more effective. The implementation of modern adult education is based on the following principles: problematical character (the teacher should remember that adult students may feel uncomfortable in a group, they may be unaccustomed to feel like students again, for this it is necessary to “immerse” them in favorable

Аннотация

Мотивация к постоянному обновлению знаний обусловлена динамичным научно-техническим прогрессом, который воздействует на изменение всех сфер деятельности. И для сохранения и повышения собственной конкурентоспособности сотрудникам многих организаций необходимо как повышение квалификации, так и получение новой специальности. В данных условиях высшие образовательные учреждения, выстраивая отличное от подготовки молодежи обучение для взрослых, изыскивают новые способы, которые будут способствовать улучшению формирования компетентности взрослых студентов. Цель статьи: проанализировать опыт реализации современных технологий в процессе обучения взрослых. В статье раскрываются возможности инновационных образовательных технологий, их сущность и роль в современном профессиональном образовании. Освещена роль непрерывного образования в подготовке взрослых студентов, выделены их функции. Авторами были определены особенности, на которые опирается преподаватель при обучении взрослых, учет которых позволяет сделать подготовку более результативной. В основе реализации современного обучения взрослых...
conditions of communication. Role-playing, “brain storm” (which is more often referred to as discussion technologies, but in gaming it also takes place), blitz games contribute to the removal of emotional tension and the formation of effective cognitive motivation; the principle of dialogical communication. The study conducted among students of professional development courses from the age of 32 to 45 showed the need for further introduction of modern educational technologies in adult education. Their capabilities make the learning process more intense, active, and at the same time contribute to the rapid achievement of positive results.

**Key Words:** adult education, andragogy, competence, competency, innovative educational technologies.

**Introduction**

The constant development of science and technology as well as the increasing pace of life cause the emergence of the need for society to update and improve their own knowledge (Smirnova et al., 2019). Professional fields of activity are filled with new elements; there is the introduction of innovative technical means, so employers aim to ensure that their employees have an appropriate level of education. In the context of continuing education, they have the opportunity to acquire a new profession, master a new specialty or improve their skills (Ilyashenko et al., 2019a). However, teaching adults is different from teaching young people. Hence, there is a need for higher education institutions to find appropriate methods, tools and technologies to improve the adult students’ competency. The modern educational paradigm has indicated the possibility of continuing education (Vaganova et al., 2019e). And at the moment, an adult can improve their professional knowledge and skills to perform professional tasks well that meet modern requirements. Thus, a person's training will correspond to both technological and social changes in order to realize their own professional potential more fully (Rakhimbayeva et al., 2019).

The functions of continuing education are: developing (meeting the need for professional growth); adaptive (in changing industrial and social situations, the need for training and retraining of specialists is met); compensating (filling gaps in education).

When organizing adult education, the following features are taken into account (these features can be associated with both the need to update knowledge, and with the personal inner beliefs of adult learners). They include the demonstration of maximum awareness of the educational process (Ilyashenko et al., 2019b). In addition, it is the demonstration of a high level of independence and responsibility as well as the desire for immediate implementation in practice of the theoretical knowledge. Moreover, it is necessary to take into account the past professional experience (adult learner always relies on his previous life and professional experience, which has a strong influence on his consciousness when learning new material) (Klinkov et al., 2019). Besides, it is the influence of temporary, professional, social and household factors on the learning process (adult student usually has a family, a permanent job, which requires time-consuming problems) (Ivanova et
In this regard, the traditional approach to learning, requiring a constant systematic presence of students in the classroom is not entirely student-oriented and is not suitable for adult learners (Ilnatenko et al., 2018). To make the process practically orientated and to meet the need to apply their knowledge in practice as well as the lack of opportunity for systematic presence in the classroom, modern institutions of higher education use modern educational technologies (information, interactive technologies, game learning technologies, discussion, project) (Garnevska et al., 2019). In this framework there are business and role-play games, trainings, discussions, modeling and implementation of projects that do not require constant presence in the classroom, but the quality of training remains at a high level (Nikonova et al., 2019b). Students have the opportunity to interact on the constant basis through the use of the electronic educational platform Moodle (Andrienko et al., 2019). For adult students, the Advisory role of the teacher is important, so there should be the opportunity of online communication to solve the emerging issues. And modern technologies provide this opportunity.

**Theoretical framework**

Adult education has its own peculiarities, different from the young people training, so this issue should be given special attention. The study of adult training has been conducted for quite a long time and every scientist who has dealt with this issue observes that adults training is based on taking into account their past experience, social status, prevailing professional views and preferences (Kamenez, et al 2019). This feature is considered by the discipline "Andragogy", which studies the specific patterns of knowledge assimilation by a Mature person, based on his psychophysical and mental capabilities. This discipline contributes to the acquisition of students’ knowledge and skills that meet the requirements for the successful implementation of professional activity (Bulaeva et al., 2018). Adults training issues became a subject of studying of Yu. Kulyutkin, I. Yu. Aleksashina, sh. Buhler, S. G. Vershlovsky, M. T. Gromkova. The goals of adult education were reflected in the works of V. P. Simonov, M. N. Skatkin, M. G. Tikhonova, V. P. Bespalko, T. S. Nazarova who spoke about the content of adult education. The use of modern educational technologies in adult education differs according to the following criteria: the formation of specific practical skills, competencies (traditional training involves the usual transfer of knowledge from teacher to students, innovative technologies also contribute to the disclosure of opportunities for practical application of the acquired skills) (Sedykh et al., 2019). Innovative technologies help to solve current professional problems, practical problems that require definite results now, and if traditional technologies turn to the past, forcing students to organize existing facts, modern educational technologies allow students to find new facts, new different solutions to emerging situations (Andrienko, et al 2019). Innovative technologies allow us to find several solutions to the same problem (there are no "right" and "wrong" answers here, there is a finding of the answer that leads to the solution of the problem in the most effective way. This helps when dealing with real-world situations (Nikonova, et al 2019a). Implementation of self-control (if traditional training involves constant control of the teacher, in the framework of modern training, the teacher performs only a consulting role, building partnerships with students, emphasizing equality, where the student is the subject exercising control over their own activities (Koshechko et al., 2018). In case of adult learners, this is an additional advantage, since they are accustomed to carrying out their activities independently (Pichugina et al., 2019). The teacher should be aware that adult students are not only waiting for information, but also for his personal opinion on specific issues (Kobernyk, et al 2018). This is how the role of the teacher as a companion and colleague is demonstrated (Vaganova, et al 2019c); a clearly formed learning goal (if the traditional learning system is characterized by blurred tasks, the modern one focuses on the achievement of specific skills, abilities, competencies) (Vaganova, et al 2019f).

For adults, it is extremely important that knowledge can be applied “here and now”. They are not interested in acquiring knowledge “for the future”. Experts note that this principle is typical for the system of professional development. It is the development of creativity that is valuable for the adult learner (Vaganova, et al 2019d). It is noted that the development of the creative potential of the individual through educational and cognitive activities is a means of adaptation to changing professional conditions (Markova, et al 2019).

The implementation of modern adult education is based on the following principles: problematical character (educational material for students is presented in the form of a problem question, situation or contradiction, which must be resolved with the help of existing experience and the involvement of new material (Garnevksa et
al., 2018). This helps to engage listeners in a collaborative search for finding the answer (Vaskovskaya et al., 2018); the principle of game activity (the teacher should remember that adult students may feel uncomfortable in a group, they may be unaccustomed to feel like students again, for this it is necessary to “immerse” them in favorable conditions of communication (Prokhorova et al., 2018). Role-playing, "brainstorm" (which is more often referred to as discussion technologies, but in gaming it also takes place), blitz games contribute to the removal of emotional tension and the formation of effective cognitive motivation (Osadchenko, et al 2019); the principle of dialogical communication (for effective training it is necessary to organize and self-organize the collective activity of students (Abramova et al., 2018). Through the use of dialogue, students are easily involved in communication and discussion of the problems posed) (Markova, et al 2018).

Methodology

We conducted a study in which 54 (2 groups of students) professional development courses students of pedagogical programs took part. The study was conducted in 2017. The first group of students (25 people), the second group (29 people) students carried out projects, actively used the electronic educational platform Moodle. Professional development courses were held for teachers. A questionnaire consisting of three questions was developed for them. They were asked to answer the question if they think that the educational technologies used in the course are necessary in their training. The technologies used in the professional development courses were evaluated by all participants of the study, however, some, in an additional interview, noted that in the process of training it would be possible to use electronic technologies more. When answering the question about their opinion what modern educational technologies contribute to the formation of competence most of all the following responses were received. The largest percentage was gained by information technology (90%). Modern education professionals are aware that these technologies play a big role, allowing them to be mobile, knowledgeable and at the same time get a profound education. Design technologies were in second place. Next, the audience highlighted the discussion and gaming technologies. When answering the question about the skills, which contributed to the technology used, students identified the ability to organize the learning process effectively; the ability to identify forms of learning that contribute to better assimilation of the material; the ability to apply educational technologies in the learning process. The results obtained in the course of the study showed the need for modern educational technologies in adult education.

Results and discussion

Our study involved 54 people from the age of 32 to 45. Groups training was carried out using game technologies, project, discussion, information technologies. It is important for adult learners to distinguish their professional growth, so at the beginning of training, students were asked to perform a test to determine their initial knowledge. Thus, students will be able to understand exactly how the course has affected them and identify the results of their satisfaction with the courses. During the training, students carried out the project using the electronic educational environment Moodle. They exchanged materials, studied the information provided by the teacher on the electronic course. At the beginning of the program, they were grouped into subgroups and were asked to collect relevant information on a particular topic. To put forward hypotheses for solving the problem, students join groups and hold discussions. "Brainstorming" sessions are often organized, which makes it possible to nominate the largest number of possible solutions to the problem. The main work on the project begins after discussion and selection of several viable options. If the discussion was held in the classroom, the main work on the project is transferred to the electronic environment, which provides students with the opportunity to work when it is convenient for them, to choose the time and place. In addition, materials located to support teacher learning in an e-course are permanently open for use (Vaganova, et al 2019b). Students can also seek advice from a teacher in an online setting. We focus on the fact that the teacher is a colleague in adult education, so his activities are advisory in nature, and the adult, understanding the importance of the teaching role, can take them into account (Denysenko et al., 2018). A chat can be organized with the teacher, where issues related to the entire learning team can be discussed. It can share links to video lectures, other additional materials to expand and deepen students' knowledge (Vaganova, et al 2019a). The participants organize the results of the project in the form of a presentation and a report and speak to the audience in the framework of the rules set aside for the performance (Chirva et al., 2018). At the end of training, students are also tested, with the help of which they identify the impact on their competence of the courses,
conduct self-assessment and self-assessment. They exchange with the teacher recommendations that they would like to make to the courses, note what they would like to make additional to the refresher courses. In this way, we receive feedback from students and improve the content of the course (Pliushch et al., 2018). A questionnaire was developed for the students, the questions of which the students had to answer after the completion of the course. When answering the second question, students were asked to choose one or more options. The questionnaire is presented in table 1.

Table 1. Questionnaire for students of advanced training courses

| Question                                                                 | Answer                        |
|-------------------------------------------------------------------------|-------------------------------|
| Do you think that the educational technologies used in the course are    | Yes / No                      |
| necessary in your professional development?                             | Discussion technologies       |
| What modern educational technologies contribute to the formation of     | Game technology               |
| competency most of all, in Your opinion?                                | Project technology            |
| What skills did the technologies used develop, in Your opinion?         | Information technology        |
|                                                                          | Their own response             |

The results of the survey are shown in the figures. The first figure shows the answers to the first question

![Fig. 1. The answers of professional development courses students to the first question (as part of our research)](image-url)
The technologies used in the professional development courses were appreciated by all participants of the study, however, some, in an additional interview, noted that more electronic technologies could be used in the preparation process, since not all students have the opportunity to attend classes systematically and they would like to have more additional consultations in electronic form. They noted the convenience and importance of the tools of the electronic platform Moodle. It allowed them to organize a separate chat dedicated to the implementation of the project, in which all listeners actively participated.

![Bar chart showing the percentage of modern educational technologies contributing to the formation of competency. The largest percentage was gained by information technology (90%). Game technologies (85%) are an integral part of the training of adult students, as in the process of joint discussion of issues they feel more comfortable and emotional stress goes by the wayside and they are ready to actively address educational issues. Game technologies are also of interest to students, however, they prefer to perform tasks that lead to a particular product, so they are more attracted to project-based learning technologies.]

**Fig. 2.** The answers of professional development courses students to the second question (as part of our research)
Fig. 3. The answers of professional development courses students to the third question (as part of our research)

Most often, students identified the ability to organize the learning process effectively (38%); the ability to identify the forms of learning that contribute to better understanding of the material (35%); the ability to apply educational technologies in the learning process (27%).

Conclusions

We analyzed the experience of implementing modern technologies in the process of adult education. The study showed that educational technologies implemented in the process of training adult students have a positive impact on the result. Students like to participate in the projects that use discussion technologies, interactive and information technologies, as well as game elements. Students note the importance of using the electronic educational platform Moodle, because it allows you to work with materials remotely and at the same time interact with other participants of the course and the teacher in a convenient mode. Wide opportunities of modern educational technologies have a positive impact on broadening students’ knowledge, taking into account all the aspects and peculiarities of the adult students educational process organization. The study conducted among students of professional development courses from the age of 32 to 45 showed the need for further introduction of modern educational technologies in adult education. Their capabilities make the learning process more intense, active, and at the same time contribute to the rapid achievement of positive results.

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