

## Modern technologies of adult education

### Современные технологии обучения взрослых

Received: January 18, 2020

Accepted: March 13, 2020

Written by:

**Olga I. Vaganova**<sup>24</sup><https://orcid.org/0000-0001-8347-484X>**Irina V. Rudenko**<sup>25</sup><https://orcid.org/0000-0002-1395-4263>**Server N. Bekirov**<sup>26</sup><https://orcid.org/0000-0002-2307-5174>**Leviza I. Abbasova**<sup>27</sup><https://orcid.org/0000-0003-4929-9827>**Maxim M. Kutepov**<sup>28</sup><https://orcid.org/0000-0002-5397-6168>

#### 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, ищут 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

<sup>24</sup> Candidate of pedagogical sciences, associate professor Minin Nizhny Novgorod State Pedagogical University, Russia.

<sup>25</sup> Federal State Budget Educational Institution of Higher Education «Togliatti State University», Russia.

<sup>26</sup> V.I. Vernadsky Crimean Federal University.

<sup>27</sup> State Budget Educational Institution of Higher Education of the Republic of Crimea Crimean Engineering and Pedagogical University the name of Fevzi Yakubov Republic of Crimea.

<sup>28</sup> Candidate of pedagogical sciences, associate professor Minin Nizhny Novgorod State Pedagogical University, Russia.

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).

были выделены принципы: проблемности (учебный материал для студентов подается в виде проблемного вопроса, ситуации или противоречия, которое необходимо разрешить с помощью имеющегося опыта и привлечения нового материала); принцип игровой деятельности (преподавателю стоит помнить, что взрослые обучающиеся могут чувствовать себя некомфортно в условиях группы, им может быть непривычно снова ощущать себя студентами, для этого стоит «погрузить» их в благоприятные условия общения); принцип диалогического общения. Проведенное исследование среди слушателей курсов повышения квалификации в возрасте от 32 до 45 лет показало необходимость дальнейшего внедрения в обучение взрослых современных образовательных технологий. Их возможности позволяют сделать процесс обучения более насыщенным, активным, а вместе с тем способствуют оперативному достижению положительных результатов.

**Ключевые слова:** андрагогика, инновационные образовательные технологии, компетенции, компетентность, обучение взрослых.

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

al., 2019). 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 (Ihnatenko 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. Bepalko, 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 (Garnevska 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, "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 (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,

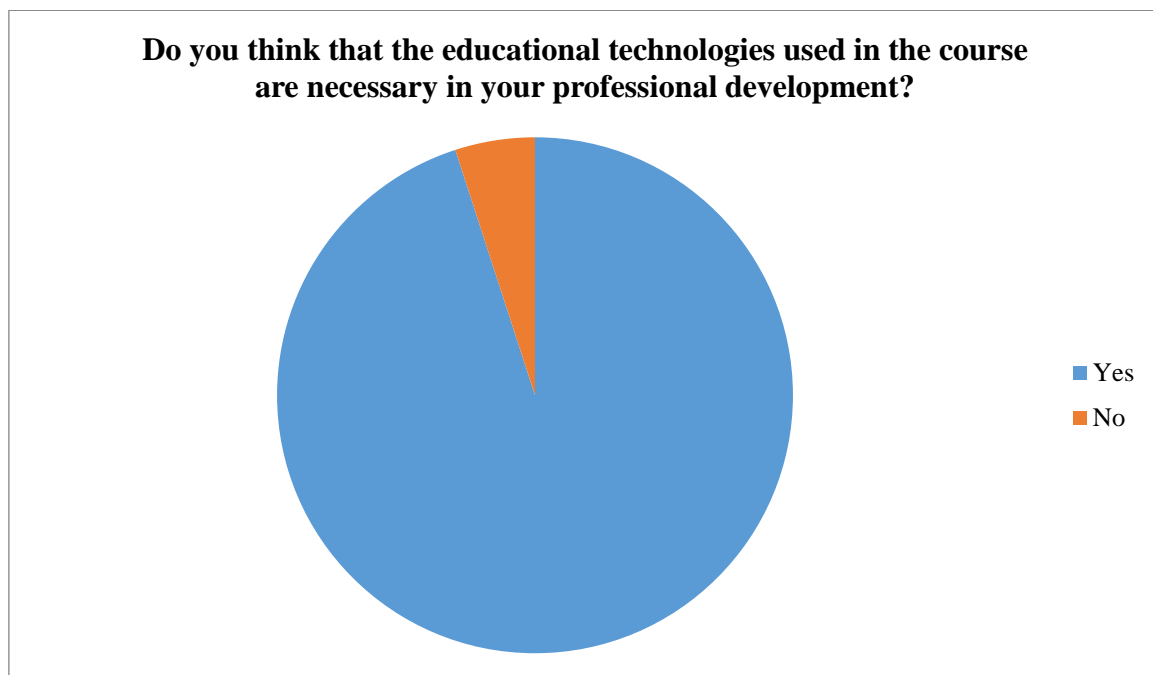
conduct self-assessment and self-assessment. They exchange with the teacher recommendations that they would like to make to the courses, note what they would like to make additional to the refresher courses. In this way, we receive feedback from students and improve the content of the course (Pliushch 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 necessary in your professional development?	Yes / No
What modern educational technologies contribute to the formation of competency most of all, in Your opinion?	Discussion technologies Game technology Project technology Information technology
What skills did the technologies used develop, in Your opinion?	Their own response

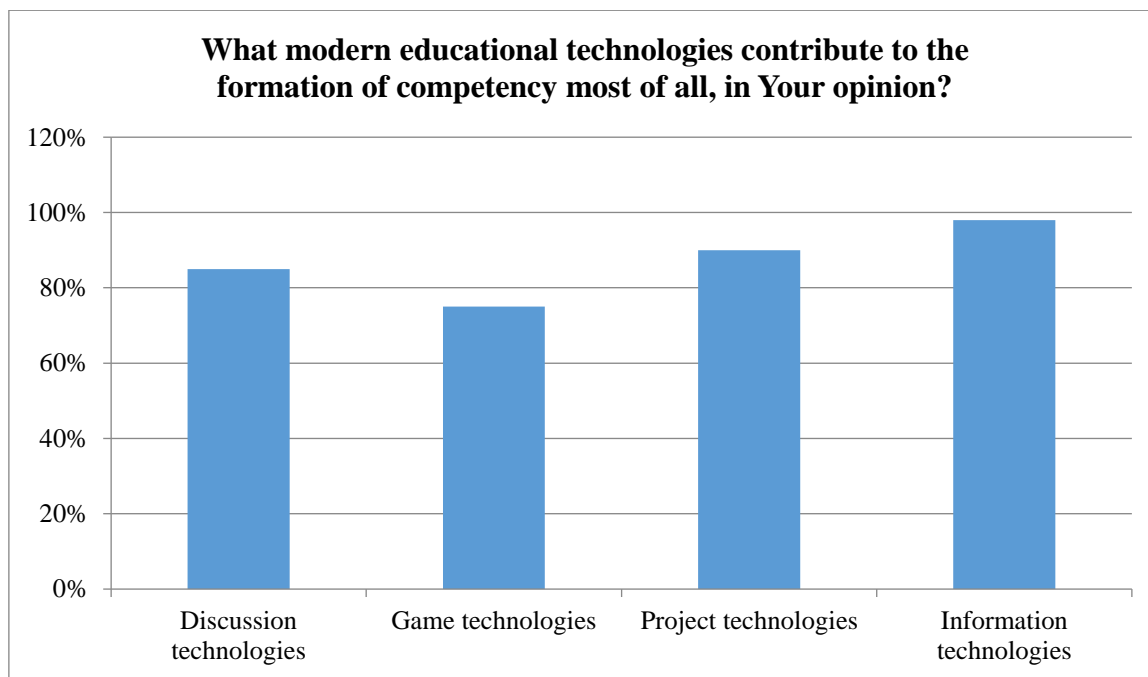
The results of the survey are shown in the figures. The first figure shows the answers to the first question



**Fig. 1.** The answers of professional development courses students to the first question (as part of our research)

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.

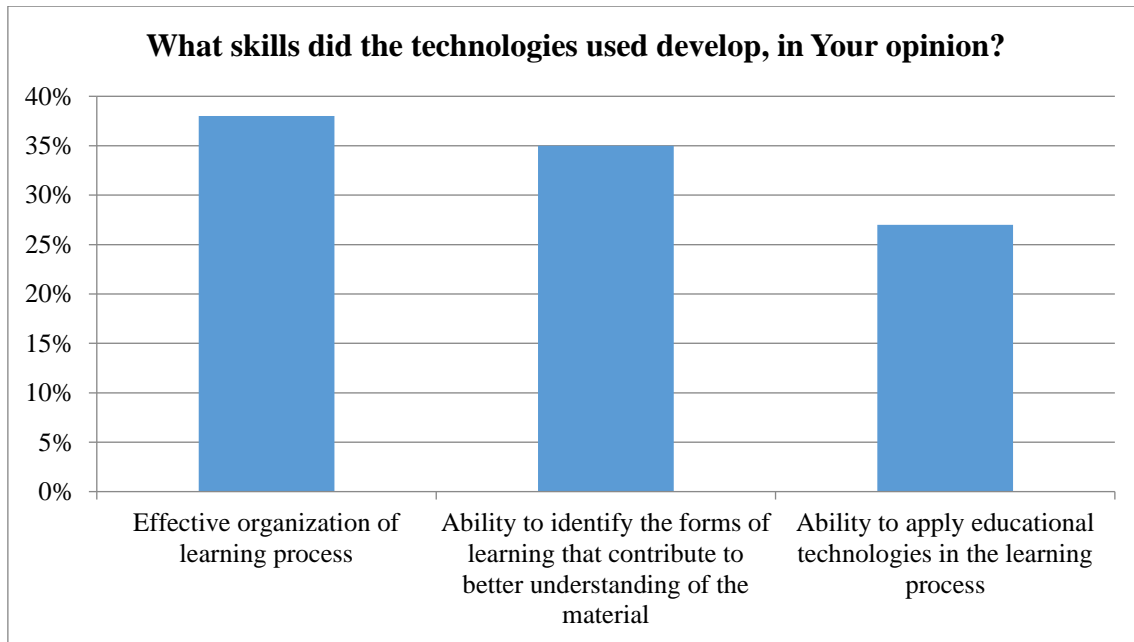


**Fig. 2.** The answers of professional development courses students to the second question (as part of our research)

The largest percentage was gained by information technology (95%). Modern education professionals are aware that these technologies play a big role, allowing them to be mobile, informed and at the same time receive a profound education. Design technologies were in second place. Students identified these technologies as a productive way to perform a joint task, which leads to better results than just lectures and individual tasks. Thus, teachers can apply the acquired knowledge immediately in practice, which awakens motivation for further

study of the material. Discussion 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. 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.

### Bibliographic references

- Abramova, N.S., Vaganova, O.I., Kutepova, L.I. (2018) Development of educational and methodological support in the context of the implementation of information and communication technologies. *Baltiyskiy gumanitarnyy zhurnal (Baltic Humanitarian Journal)*, 7, no. 2 (23), 181-184. (in Russ.).
- Bulaeva, M.N., Vaganova, O.I., Gladkova, M.N. (2018). Activity technologies in a professional educational institution. *Baltiyskiy gumanitarnyy zhurnal (Baltic Humanitarian Journal)*, 7, no. 3 (24), 167-170. (in Russ.).
- Chirva, A.N., Chirva, O.G. (2018). Contents and method of professionally oriented training of informatic disciplines of future teachers of technologies. *Scientific Vector of the Balkans*, 1, 27-31.
- Denysenko, S.M. (2018). Application of quest technology in the professional training Of Bachelor of Publishing and Polygraphy in Higher School. *Balkan Scientific Review*, 1, 29-33.
- Garnevska, S.M. (2018). Opportunities for forming communication technology images in training in technology and entrepreneurship. *Balkan Scientific Review*, 1, 34-37.

- Ihnatenko, H.V., Ihnatenko, K.V. (2018). Formation of self-dependence as a professional ly-important personality trait of a future vocational education teacher by means of case-technology. *Humanitarian Balkan Research*, 1, 40-42.
- Ilyashenko, L.K., Gladkova, M.N., Kutepov, M.M., Vaganova, O.I., Smirnova, Z.V. (2019 b). Development of communicative competencies of students in the context of blended learning. *Amazonia Investiga*, 8 (18), 313-322.
- Ilyashenko, L.K., Markova, S.M., Mironov, A.G., Vaganova, O.I., Smirnova, Z.V. (2019 a). Educational environment as a development resource for the learning process. *Amazonia investiga*, 8 (18), 303-312.
- Kamenez, N., Vaganova, O. Smirnova, Z., Kutepova, L., Vinokurova, I. (2019). Development of content of educational programs of additional education for professor-teaching composition in organization of educational services of training with disability. *Amazonia investiga*, 8 (18), 267-278.
- Klinkov, G.T. (2019). Person-oriented learning as an educational and behavioral paradigm. *Balkan Scientific Review*, 1 (3), 35-37.
- Koshechko, N.V. (2018). Innovations from educational discipline "Pedagogical conflictology" in professional preparation of students. *Scientific Vector of the Balkans*, 1, 59-63.
- Kobernyk, O.M., Stetsenko, N.M., Boichenko, V.V., Pryshchepa, S.M. (2018). Improving professional and pedagogical training of future teachers by moodle platforms (On the example of the course "Pedagogy"). *Scientific Vector of the Balkans*, 1, 5-7.
- Markova, S.M., Zanfir, L.N., Vaganova, O.I., Smirnova, Z.V., Tsyplakova, S.A. (2019). Department of educational process in conditions of implementation of interactive training of future engineers. *Amazonia Investiga*, 8 (18), 450-460.
- Myalkina, E.V., Sedhyh, E.P., Zhitkova, V.A., Vaskina, V.A., Isaykov, O.I. (2018). University resource center as an element of social development of the region. *Vestnik Mininskogo universiteta* (Vestnik of Minin University), 6, (3), 1. DOI: 10.26795/2307-1281-2018-6-3-1.
- Nikonova, N.P., Vaganova, O.I., Smirnova, Z.V., Bystrova, N.V., Markova, S.M. (2019a). Providing partnerships and promotion of additional educational services. *International journal of applied exercise physiology*, 8 (2.1), 347-355.
- Nikonova, N.P., Vaganova, O.I., Smirnova, Z.V., Chelnokova, E.A., Kutepov, M.M. (2019b). Methodological support in partnerships with the institution of additional education and teachers. *International journal of applied exercise physiology*, 8 (2.1), 339-346.
- Pichugina, G.A., Bondarchuk, A.I. (2019). Structure of the training case in the organization of the educational process. *Humanitarian Balkan Research*, 2(4), 5-7.
- Prokhorova, M.P., Semchenko, A.A. (2018). Involving of trainees-future teachers of professional training in project activities in the discipline. *Vestnik Mininskogo universiteta* (Vestnik of Minin University), 6, (2), 6. DOI: 10.26795/2307-1281-2018-6-2-6.
- Pliushch, V.M. (2018). Independent work of students as a factor of improving education quality. *Balkan Scientific Review*, 1, 69-71.
- Sedykh, E.P., Zanfir, L.N., Vaganova, O.I., Smirnova, Z.V., Bulayeva, M.N. (2019). Use of training technology in the preparation of students of engineering specialties. *Amazonia Investiga*, 8 (18), 461-470.
- Smirnova, Z.V., Kamenez, N.V., Vaganova, O.I., Kutepova, L.I., Vezetiu E.V. (2019). The experience of using the webinar in the preparation of engineering specialists. *Amazonia Investiga*, 8 (18), 279-287.
- Vaganova, O.I., Konovalova, E.Yu., Abramova, N.S., Lapshova, A.V., Smirnova, Z.V. (2019a). Increasing the level of teachers' readiness for pedagogical project. *Amazonia Investiga*, 8 (22), 286 – 294.
- Vaganova, O.I., Odarich, I.N., Popkova, A.A., Smirnova, Z.V., Lebedeva, A.A. (2019b). Independent work of students in professional educational institutions. *Amazonia Investiga*, 8 (22), 295 – 304.
- Vaganova, O.I., Sirotyk, S.D., Popkova, A.A., Smirnova, Z.V., Bulaeva, M.N. (2019c). Additional education in higher professional educational institution. *Amazonia Investiga*, 8 (22), 305 – 310.
- Vaganova, O.I., Smirnova, Z.V., Gruzdeva, M.L., Chaykina, Z.V., Ilyashenko, L.I. (2019d). Development of training content for master students in course "mechatronics and robotics" at the University. *Amazonia Investiga*, 8 (22), 694 – 700.
- Vaganova, O. I. (2019e). Formation of competence in the possession of modern educational technologies at a university. *Amazonia Investiga*, 8 (23), 87-95.
- Vaganova, O. I. (2019f). Organization of practical classes in a higher educational institution using modern educational technologies. *Amazonia Investiga*, 8 (23), 81-86.
- Vaskovskaya, G.A. (2018). Features of implementation of pedagogical technologies of profile training. *Balkan Scientific Review*, 1, 76-79.
- Ivanova, N. L., Korostelev, A. A. (2019). The impact of competitive approach on students' motivation in sport. *Amazonia Investiga*, 8 (18), 483-490.
- Rakhimbaeva, Inga E.; Korostelev, Aleksandr A., Shakirova, Indira A., Ayshwarya, B., Phong Thanh Nguyen, Hashim, Wahidah, Maseleno, Andino. (2019). Integration of the Educational and Didactic Systems in the Training of Future Teachers. *International Journal of Applied Exercise Physiology*, 8 (2.1), 1131-1136.