Methods and means of realization of interaction technologies in the university

Методы и средства реализации технологий взаимодействия в вузе

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Abstract

The article discusses the process of organizing the educational process with the use of various educational technologies that contribute to the achievement of effective interaction between students and between students and the teacher. The purpose of the article is to present the experience of using methods and means of implementing interaction technologies in higher education. The goal implies that educational technologies are one of the key elements in the preparation of students of higher schools. They allow forming professional competence of students, emphasizing the leading role of their independence, activity in the consulting role of the teacher. The analysis of the educational process with the application of modern educational technologies given in the article allowed to reveal some features in which appearance is caused by the specificity of the realization of technologies. Modern methods and means of their implementation contribute to the guaranteed achievement of educational goals, the interaction of students becomes more coherent and acquires a new, productive character. Of particular importance are educational technologies for students of pedagogical universities, as their future professional activity is directly related to the use of methods and means

Аннотация

В статье рассматривается организация учебного процесса с использованием различных образовательных технологий, способствующих достижению эффективного взаимодействия между обучающимися, а также между обучающимися и преподавателем. Цель статьи - представить опыт использования методов и средств внедрения технологий взаимодействия в высшем образовании. Образовательные технологии являются одним из ключевых элементов подготовки студентов вузов. Они позволяют формировать профессиональную компетентность студентов, при консультативной роли преподавателя. Приведенный в статье анализ образовательного процесса с применением современных образовательных технологий позволил выявить особенности, возникновение которых обусловлено спецификой реализации технологий. Современные методы и средства их реализации способствуют гарантированному достижению образовательных целей, взаимодействие учащихся становится более согласованным и приобретает новый, продуктивный характер. Особое значение имеют образовательные технологии для

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of their implementation. The article presents the experience of implementing interaction technologies at the University of Minin in the discipline "Pedagogical technologies". As practice shows, such methods as brainstorming, a round table, a case method allow you to teach students how to conduct a dialogue, develop students' interest and motivation to study the discipline, and thereby allow them to form their competence. The results of the implementation of methods and means of implementing interaction technologies showed that having an understanding of educational technologies at the initial stages of training and forming the skill of interaction under their influence throughout the training period, students have the opportunity to form professional competence and organize their professional activities at a high level.

Key Words: Educational technologies, interaction technologies, interaction, methods, means.

студентов педагогических вузов, так как их будущая профессиональная деятельность напрямую связана с использованием методов и средств их реализации. В статье представлен опыт реализации технологий взаимодействия в Мининском университете на дисциплине "Педагогические технологии". Как показывает практика, такие методы как мозговой штурм, круглый стол, кейс-метод позволяют научить студентов ведению диалога, развивают интерес и мотивацию студентов к изучению дисциплины и тем самым позволяют формировать их компетентность. Результаты внедрения методов и средств реализации технологий взаимодействия показали, что понимание сущности образовательных технологий на начальных этапах обучения, формирование навыков взаимодействия под их влиянием на протяжении всего периода обучения, позволяет студентам сформировать профессиональную компетентность и организовать свою профессиональную деятельность на высоком уровне.

Ключевые слова: взаимодействие, методы, образовательные технологии, средства, технологии взаимодействия.

Introduction

Currently, vocational education emergence of a technological approach in domestic education marked new ways of development of the professional educational system as a whole. The changing educational goals required a restructuring of the learning process and the introduction of methods and means that meet modern trends. To date, there are many new educational elements that have recently gained popularity in Russia, and familiar, however, have received a new meaning. Educational technologies are not fundamentally new elements, however, with the advent of the competence approach, they have become more important and their use in the educational process has become necessary and integral. If earlier educational institutions actively used techniques, new technologies come to the fore, since the main difference of the second concept is the achievement of guaranteed results, which are presented in the form of competencies and competencies. Modern educational technologies provide ample opportunities for the training of specialists who meet the requirements of the state and society. Methods and tools to implement interaction technologies prepare the student for effective professional activity. Technologies allow establishing interaction thanks to which these results are achieved more quickly. Thus, we cannot ignore the spread of educational technologies and not to mention their powerful functionality for the preparation of students. Thanks to educational technologies, we can involve students in the process of active interaction, where modern methods and means are implemented, allowing to form the professional competence of the teacher of vocational training (Koshechko, et al 2018). In this process, the main share of activity belongs to the student; the teacher performs a consulting, guiding role (Markova, et al 2018).

Theoretical framework

Interaction in the framework of professional education is defined as the process that occurs between students and between students and the teacher in the course of educational activities aimed at the development of the student's personality, the formation of his competence. The use of interactive technologies in the training of teachers of vocational training is a condition for the effectiveness of its future professional and pedagogical activity (Bulaeva et al., 2018).

Interaction is, firstly, an activity in which students acquire the necessary competencies during their studies, and secondly, an activity that is an integral part of their profession (Ihnatenko et al., 2018). Having learned competent interaction, teamwork, students form professional competence (Ilyashenko et al., 2019a). Mastering these technologies allows realizing pedagogical skills and methods of realization of pedagogical influence and interaction in the future (Ilyashenko et al., 2019b). Professional-pedagogical interaction has been studied by many researchers. Interaction, according To V. p. Bespalko, is open, scattered, cyclic, directed and automated. At open interaction activity of the trained is not corrected and is not controlled by the teacher. The scattered interaction is frontal. Cyclic interaction involves mutual control of the teacher and the student, as well as self-control of the student. Directed interaction individually. Automated – using training tools. These characteristics of interaction allow us to speak about the importance of each of them. Interaction in the framework of professional education allows to develop the student's ability to use the basics of communication at the cultural and psychological levels, to work in small groups and teams, the ability to be responsible for decisions and their consequences, forms the ability to effectively negotiate, communicate in the future with management and their colleagues. management of the educational process (Garnevska et al., 2018). Educational technologies are an integral element of modern professional education. They perform many functions, among them: the strengthening of motivation of cognitive activity, development of independence with elements of creativity, developing the ability to work in a team, be a leader and interact within the group or subgroup, formation of own reasoned point of view, the development of reflection skills, ability to make decisions under conditions of lack of information, development of ability of critical evaluation of different points of view (Ivanova., et al 2019). Research in the field of educational technologies has been carried out for several decades (since the 50s of the XX century). Among the most significant works devoted to the theory of pedagogical technologies are the works of leading Russian and foreign scientists: G. K. Selevko, V. p. Bespalko, M. A. Choshanov, V. A. Slastenin, VM. Monakhov, P. I. Pidkasistogo, V. V. Guzeeva, E. F. Zeer, I. A. Zimney, L. Anderson, E. S. Polat. However, to date there is no single definition of the concept of "Educational technology". Some define it as a meaningful technique necessary for the qualitative management of educational activities of students, others as the scientific application of certain pedagogical actions and their exact design, guaranteeing success in the active interaction of the subjects of the educational process. It is possible to allocate such definition as the direction of development of pedagogics, as the area allowing to design rational systems of training. Educational technology is also defined as a set of interrelated elements, methods for diagnosing the condition of students, search criteria and application of effective models of educational activity within the specified conditions aimed at achieving specific results. It can be said that educational technology is a special category of pedagogical theory and practice. Based on the definitions given by scientists, we can distinguish a common idea among their opinions. Educational technology is a set of educational elements, including technical, human resources and their interaction, contributing to the creation and development of the entire educational process to achieve specific educational goals (Kamenez et al., 2019).

Ideas of modern scientists concerning methods and means of realization of technologies of interaction were developed in the context of the competence approach which the main purpose allocates formation of competence therefore both methods and means are focused on the improvement of this process (Markova et al., 2019). They should form a positive motivation of students to study disciplines, a steady interest and desire for self-education, the formation of a new type of thinking that contributes to the development of active, creative independent activity (Denysenko et al., 2018).

Among interaction technologies, researchers often distinguish group interaction technologies, game technologies, discussion learning technologies, project learning technologies (Myalkina et al., 2018). Each of them is aimed at organizing interaction between students to achieve a common result (Nikonova et al., 2019a). Although the result is General, each of the students makes an individual contribution that can be assessed separately (Nikonova et al., 2019b). So students develop independence, learn to take responsibility for their activities, as the achievement of the goal depends on the work of each student (these technologies create conditions of interdependence of students, in which an understanding of the dependence of the success of each participant on the success of others). Thus, students in subgroups control their activities and the intervention of the teacher in it is minimal.

The principles on which the implementation of educational technologies is based were considered by G. p. Shchedrovitsky, T. Akbashev, A. G. Rivin. Among the many principles identified by researchers, we distinguish: the principle of individual contribution (the solution of educational tasks is carried out on the basis of complementarity, mutual enrichment of participants); positional principle (based on the identification and collision of different points of view, positions of students and their views on the problem, the ability to build a reasoned opinion and listen to the opinion of opponents); the principle of developing cooperation (allows a joint search for solutions to each time more complex problems, promotes the transition of students ' interaction from one qualitative level to another due to constant reflection and the transition to new ways of cooperation).

When implementing these technologies, such methods and tools as audio and video materials, handouts, task cards, layouts, slides, presentations, drawings, forms, and regulatory documents can be used.

Technology group interaction is carried out by enabling each student to be active in the process which formed an interpersonal relationship, willingness to cooperate, is mastering the methods of organization of joint activity, and forming of active position of students, positive interdependence and joint elaboration of norms and principles of group interaction (Rakhimbaeva et al., 2019).

Game technologies allow immersing students in conditions close to professional. Students, being divided into subgroups, distribute among themselves roles which functional imposes on them a certain share of responsibility. Students solve problems that may arise in real conditions. Interaction and mutually beneficial cooperation begins with the distribution of roles within each subgroup of students, but does not end with the completion of the game.

Discussion learning technologies are also implemented through student interaction (Sedykh et al., 2019). By submitting a question for discussion, the teacher motivates students to Express their opinions. Students from the skill of argumentation, the ability to listen and listen to the opinions of opponents, discuss and put forward various hypotheses.

Technologies of project training include research activity of students, construction of hypotheses by them, implementation of the analysis. The implementation of the project is a special kind of activity where students, together develop the creative component. The project is a unity of creative, educational, cognitive and research activities of students. The purpose of the project technology is to organize independent cognitive and practical activities; formation of personal results, and the result-the mastery of the algorithm and the ability to perform project work contributes to the formation of cognitive interest; the ability to speak and defend their position, independence and self-organization of educational activities; the realization of creative potential in research activities.

To implement each of the technologies, the teacher selects the appropriate methods and means for achieving the best results.

Methodology

In the process of implementing educational technologies, teachers actively introduce research, partially search, problem methods into the work of students, Moodle tools are used, including audio and video materials, lectures, chats and wikis, more traditional options are also used – task cards, forms, manuals, normative documents, additional literature. The analysis of the educational process with the application of modern educational technologies given in the article allowed to reveal some features in which appearance is caused by the specificity of the realization of technologies. The study involved students from two groups who studied the discipline of "Pedagogical technology." The first group studied the discipline using methods and means of implementing interaction technologies. The group used Moodle for file sharing. The second group was trained using traditional methods and tools. At the end of the study of the discipline, a control measure was carried out, which showed that the results of the first group are much higher than the results of the second group of students. Modern methods and means of their implementation contribute to the guaranteed achievement of educational goals, the interaction of students becomes more coherent and acquires a new, productive character.

Results and discussion

Below we present the process of using methods and means of implementing interaction technologies in the Nizhny Novgorod State pedagogical University named after Kozma Minin in the study of the discipline "Pedagogical technologies". In the process of implementing

educational technologies, teachers actively introduce research, partially search, problem methods into the work of students, Moodle tools are used, including audio and video materials, lectures, chats and wikis, more traditional options are also used – task cards, forms, manuals, normative documents, additional literature. Detailed use of methods and means we will consider below.

The discipline "Pedagogical technologies" is one of the fundamental disciplines in the formation of professional competence of teachers of vocational training, through which students form basic knowledge about pedagogical technologies (Abramova et al., 2018).

We conducted a study in which two groups of students took part. The first group studied the discipline using methods and means of implementing interaction technologies. Moodle tools were actively used in their preparation, thanks to which they could exchange files and perform group tasks remotely. In their training problematic, game situations were used. The second group was trained using traditional methods and tools. Upon completion of the study of the discipline "Pedagogical technology", testing was conducted, the results of which are presented in Figure 1.
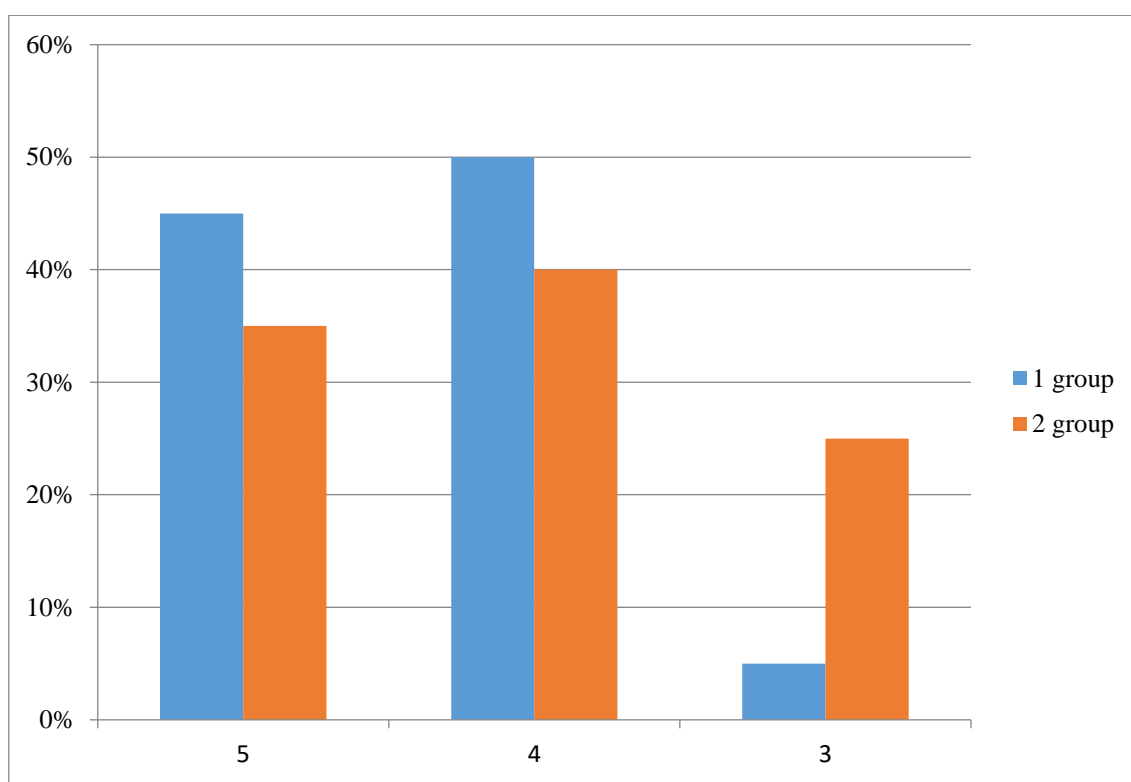

Fig. 1. Results of testing of the first groups

The percentage of positive ratings in the first group is much higher than in the second.

Creating a situation of success in the study of the discipline is one of the key tasks facing teachers implementing interaction technologies. When using technologies of discussion training, brainstorming methods and case-method are actively used. The study of the discipline "Pedagogical technologies" takes place with the use of multimedia. The screen captures the studied topic "Classification of pedagogical technologies", "Types of pedagogical

technologies" and the discussion question, the existing opinions and ideas of researchers who developed this topic. Students can rely on one of them or offer their own idea. In the initial stages of the discussion, none of the students ' ideas are criticized (Chirva et al., 2018). In the process of discussion, as practice shows, students themselves come to the right decision, determine the viability of an idea. The case-method involves the use of cards by students, on which the instruction to perform the task on the topic "The Concept of pedagogical technology, subject, object, a result of

implementation" is written (Bartkiv et al., 2018). They can use additional literature. In the process of implementation of discussion technologies, the round table method is used. The round table is often used in the study of the topic "Designing a system of learning objectives". Here students discuss fundamental issues that will help them to master the material deeper, prepare for independent activity and reasoned defense of their position. The purpose of this discussion is to teach students constructive dialogue. The role of the teacher is to note the activity of the participants in the discussion, the reasonableness of the answers, the interaction in the team. Within the framework of discussion technologies, students independently select information for training (Smirnova et al., 2019). These technologies motivate communication and exchange of opinions. The teacher can determine how carefully the student prepared for the lesson, based on his answers and the arguments he gives. Studying the discipline "Pedagogical technologies", students find and resolve the contradictions between the newly acquired and existing knowledge (Vaganova et al., 2019f).

Technologies of group interaction develop increased interest and motivation of students due to the rapid pace of problem-solving, the ability to apply the knowledge in practice among students. In the process, students begin to realize that success depends on the quality of the work done together. When studying the topic "History of pedagogical technologies" students prepare presentations. For the presentation of primary information to the students, the teacher uses the video content (Vaganova et al., 2019e).

In the process of implementation of game learning technologies, students are not just divided into subgroups, but also distribute roles among themselves, independently control the implementation of tasks, discuss issues within the group (Vaganova et al., 2019b). The game in the framework of the study of "Pedagogical technologies" on the theme "Designing a system of methods and means in training" is held for several sessions and takes place in several stages, which are goal-setting, planning, analysis of the results (Pometun et al., 2018). At the first (preparatory) stage, students receive a task from the teacher, the method of instruction is used, the cognitive task is formulated, clarifying questions are asked, the teacher gives appropriate comments (Vaganova et al., 2019c). During the game, students use such tools as textbooks, electronic learning tools, and regulatory documentation (Vaganova et al., 2019d). The structure of the game includes roles, game actions, through which roles are realized, the game use of objects (replacing real things with game), the real relationship between the players, the plot, which reflects the content of the game (Vaskovskaya et al., 2018). Students assign roles and tasks. The teacher demonstrates examples of works that should be guided in preparation for the game (Klinkov et al., 2018). At the second stage, to collect additional information and communication, students use the electronic system Moodle, where lectures on a given topic, organized a chat on the subject. The collected information is analyzed for relevance; the most important and necessary is selected (materials that can be relied upon in the selection of appropriate arguments when answering questions). At the third stage, the participants of the game make out the collected materials, prepare a presentation and at the final lesson demonstrate the received materials. The game in the training of teachers of vocational training performs a communicative function, self-realization (acquisition of practical skills), diagnostic (self-knowledge in the game, identifying gaps in knowledge); correctional function (changes in the educational trajectory of the game).

Technologies of project training include educational cooperation and educational dialogues, various group forms of work (Vaganova et al., 2019a). The project allows developing research and communication skills, which are a part of developing training, allow them to carry out independent search and systematization of knowledge.

One of the main means of implementing educational technologies is the electronic system Moodle, which in turn includes such tools as a wiki, chat, forum, lectures, video and audio materials. A wiki is a web page that can be added or edited by anyone who has access to it. Thus, collective work on documents is performed, which does not require personal presence. Chat organizes synchronous text interaction, supports pictures, so students can also exchange graphic information. In addition, chat sessions are saved for the next viewing in order to return to previously unresolved issues. Forum in the preparation of teachers of vocational training is used of different types. It can be a simple discussion where students solve individual questions; a General discussion; a question-and-answer. Discussions carried out within one forum move between other forums if necessary (for example, students of two different groups have the same question, moving the discussion helps to unite efforts and solve the problem more quickly). This is how training is implemented in cooperation with the help of electronic means.

These technologies allow improving the ability to ask questions and argue their agreement/disagreement, the ability to listen and understand, to form the needs for the development of new knowledge, skills and independent

implementation of research. These skills are indicators of the successful application of group work. Among the main advantages of technology, we highlight the independence of students in the process of finding the necessary information, the development of critical thinking in the course of self - assessment of the results achieved and creativity, improving communication activities, increasing purposefulness.

Conclusions

The use of methods and means of implementing various technologies of interaction in the training of teachers of vocational training allows to make the process more active, to involve more students in it, to motivate them to participate. Moodle tools enable students to carefully organize interaction, be prompt in completing tasks, fill gaps in knowledge in a timely manner and carry out reflection.

The presented experience of implementation of methods and means in the Nizhny Novgorod State pedagogical University named after Kozma Minin in the study of the discipline "Pedagogical technologies" shows that students show great interest in the development of educational technologies through direct participation in classes using various methods and means of implementation of educational technologies and, according to the teachers, show themselves in this process as active participants. The results of the study showed the effectiveness of interaction technologies. Students 'assessments, in the preparation of which modern methods and means of implementing interaction technologies were implemented, turned out to be significantly higher than students' assessments in whose training traditional methods and means were used. Educational technologies are an important component of the process of training teachers of vocational training, methods and tools used in the process of their implementation that contribute to the formation of professional competence.

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.).

Bartkiv, O. S., Durmanenko, E. A. (2018). Interactive methods in the process of future teachers' training for the higher education institutions modeling. *Humanitarian Balkan Research,* 1, 30-32.

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. (2018). The specificity of manifestation of pedagogical communication as a special construct. Scientific Vector of the Balkans, 1, 51-52.

Koshechko, N.V. (2018). Innovations from educational discipline "Pedagogical conflictology" in professional preparation of students. *Scientific Vector of the Balkans,* 1, 59-63.

Makhometa, T.M., Tiahai I.M. (2018). The use of interactive learning in the process of preparing future math teachers. *Balkan Scientific Review,* 1, 48-52.

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.

Markova, S.M., Narcosiev, A.K. (2018). Professional education of vocational school students. *Vestnik Mininskogo universiteta (Vestnik of Minin University),* 6, (3), 3. (in Russ.). DOI: 10.26795/2307-1281-2018-6-3-3.

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., Smimova, 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.

Pometun, O.I., Gupan, N.M. (2018). Studying history as an educational space of students'critical thinking development. *Humanitarian Balkan Research,* 1, 60-63.

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.