Improving Monitoring and Evaluation Activities in High Education

I.K. Kirillova, O.P. Denisova, Z. V. Smirnova, O.I. Vaganova, M.N. Bulaeva, S.N. Kaznacheeva, E.A. Chelnokova

At present, global changes are taking place in the system of high education. They are the result of, firstly, serious socio-economic transformations in society, and secondly, integration processes that have occurred in the European educational space. Under these conditions, the issue of the quality of education did not lose its relevance, but also acquired new facets. The level of students' training in high educational institutions requires an objective assessment at high level. Since modernization of educational space is a difficult and long process, high education institutions must constantly look for new tools, methods and technologies for evaluating the results of educational activities. Professional and pedagogical competence of teachers in the framework of modern system of high education requires constant improvement. The argument for using new methods is that they comprehensively assess emerging competencies. In turn, for the most efficient use of the methods traditionally used, it is necessary to carry out a phased improvement of traditional means of control. To this end, the authors investigated the issue of improving control and appraisal activities in Nizhny Novgorod State Pedagogical University named after Kozma Minin. The aim of the work is to develop a model of teacher's control and assessment activity in the context of competence approach implementation. The verification of the model was carried out with the help of the research of completion level of qualifying work done by students. The verification was carried out in two stages: before the introduction of the model in 2017 and after the introduction of the model in 2018. The main results and conclusions of the work can be used in development of control and assessment tools for mastering competencies of students of high educational institutions.

***Index Terms*: teacher, higher education institution, control and appraisal activities, the educational process, the level of training of students.**

I. INTRODUCTION

Control and appraisal activity is one of the most important parts of educational process. Effectiveness of a graduate's competencies development and education quality in general should be constantly improved. The federal state educational standard of high education provides for competencies of both professional and general cultural nature. They are a key factor in the evaluation of educational results by a teacher. The mentioned competences are the ability to apply knowledge, skills and abilities of students, as well as a person's private competences. Their correct assessment speaks about the teacher's professionalism. A typical scheme of comparative characterization and evaluation of education quality is implemented in educational organizations' performance through a combination of tools and methods of evaluation practice. Evaluation criteria can be the results of solving problems of various degrees of complexity: from those that have a unique solution, to those that involve many solutions, or those that do not have a single answer. The current monitoring of educational results of students takes place during the semester and during the periods of intermediate certification for each educational discipline which is included in the main professional curriculum. Current monitoring of students' academic progress is carried out within the time limits of study which is devoted to the study of the course and includes: assessment related to assimilation of theoretical material; assessment related to implementation of various kinds of practical tasks and research works. [2] The key tasks of the teacher's assessment and assessment activities are: to determine how well students mastered the material, whether they can, at the required level, master the competencies that are envisaged by the curriculum used in a particular discipline; to teach students to control their activities and each other's activities in a reciprocal manner to form their need to use such control methods which allow them to cultivate responsibility, high level discipline and initiative. [9] If the above tasks of the teacher's assessment and assessment activities are successfully implemented, then we can fully speak about such control functions as the control function, teaching and education function, the diagnostic function, the forecast function, the development function, the orientation function and direction and the parenting function. [1] The control function is the use of methods of control and assessment activities. The teacher identifies the level of educational material development by students to see the state of their knowledge and skills. The teacher also studies the extent to which students have learned the methods and ways of learning, the skills of educational work. Methods of control and assessment activities in this case are extremely important, as they allow you to determine a certain initial level of education of students in order to understand which educational path should be chosen in the future. It also uses a comparative description of the results that

Revised Manuscript Received on July 06, 2019.

I.K. Kirillova, Moscow State University of Civil Engineering, Moscow, Russian Federation.

O.P. Denisova, Federal State Budget Educational Institution of Higher Education «Togliatti State University», Togliatti, Russian Federation.

Z. V. Smirnova, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russian Federation.

O.I. Vaganova, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russian Federation.

M.N. Bulaeva, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russian Federation.

S.N. Kaznacheeva, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russian Federation.

E.A. Chelnokova, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russian Federation.

have already been achieved, and the results that are planned to be achieved, which indicates the degree of effectiveness of educational activities. The function of training and education - using the methods of control and assessment activities, the teacher improves the knowledge base of students, as well as their skills in the framework of the educational process. Students are checked to further remember their educational material. [4] They do not just memorize the material given to them in the educational organization, but also apply their knowledge in a new setting and situations of various kinds. They highlight in their knowledge the most important and useful for themselves to effectively use them. Control, in its turn, also performs the function of generalization and systematization of knowledge. Diagnostic function is the use of monitoring and assessment activities methods, the teacher learns about how often students make mistakes in assignments, what gaps and shortcomings they have in educational work, which to some extent often causes difficulties for them in mastering educational material. [5] The teacher should also examine the number and nature of the errors. The results of such inspections provide an opportunity to choose the necessary educational methodology, as well as to clarify the educational trajectory for further improving the efficiency and improving the content of methods of control and assessment activities. [6] The function of the forecast is the use of methods of control and assessment activities, the teacher receives leading data on the educational process of their students. [16] Verification is necessary to obtain the necessary grounds to conduct such verification in the future. Thus, the teacher seeks to obtain data on how the educational process of his students is going on, namely whether they have the necessary competencies, as well as the skills and abilities that are needed to master the provided educational material. This allows you to create a model of the future student, more precisely, his behavior and further activities so that he does not make such mistakes in the future and does not have training gaps that he had before the test. [7] Development function is the use of methods of control and assessment activities, the teacher stimulates cognitive activity from their students. [8] Currently, there is a tendency in which teachers are to some extent prepared for the paradigm of evaluating educational results to change, but they still have insufficient information about how the current reality is evaluated using modern methods. Today, there are no clearly and regulatedly prescribed methodologies for testing the degree of formation of competence, and Russian practice justifies the fact that at present it is no longer possible to assess students' competence using traditional assessment methods, such as tests. [3] Consequently, new methods of assessment should be developed, which should take into account: key terms and approaches of modern pedagogy (taxonomy of educational goals, results of education, summing up and formative assessment); key principles of curriculum development depending on the targets; key concepts of assessment (educational results, feedback, control methods, and others); features of the educational activities of students. [12] The function of orientation and orientation is the use of methods of control and assessment activities, the teacher obtains the necessary data on how successfully a particular student or the entire study group as a whole copes with the curriculum, in order to further direct them in the right direction to avoid future errors before they occur. [11] To do this, the teacher should understand whether the students have learned the material sufficiently, and whether it was learned quite deeply. [10] Carrying out the autopsy of the mistakes and shortcomings of the students, the teacher guides the students and tells them where to apply the strength to improve all their knowledge and skills. [14] Control contributes to the learner himself, assessing their knowledge and capabilities. [15] The function of education is the use of methods of control and assessment activities, the teacher educates students in responsible behavior, which consists in the correct attitude to learning, discipline, accuracy, and honesty. The teacher tries to encourage students to take the learning process more seriously, regularly attend all classes, perform effective theoretical and practical tasks, monitor themselves and each other as a cohesive team, and be persistent in their work. [13] The use of control and assessment activities by a teacher is very important for the educational process, in particular, the use of control should be carried out in varying degrees and different combinations with other methods that can contribute to improving the effectiveness of the educational process.

II. LITERATURE REVIEW

The problem of control and appraisal activities arrangement has been studied in detail in domestic and foreign psychological and pedagogical literature. Of great importance in solving the problem of pedagogical evaluation were the studies of Yu.K. Babansky and P.I. Pidkasistogo of the assessment process itself, the problems of qualimetry of knowledge A.I. Subetto, O.V. Lyubimova, V.S. Cherepanova, research V.P. Bespalko, Yu.G. Tatur, which presents methods for assessing the quality of learning material, the study of psychological and pedagogical requirements for the organization of assessment situations E.D. Bozovic. Of interest are the studies of evaluation technologies in D.V. Chernilevsky and OK Filatov, rating control A.V. Artyomova, I.N. Pavlova and T.P. Sidorova, historical aspects of the problem presented in the work of S.I. Denisenko, Yu.S. Rudenko. Many Russian teachers and researchers have discovered a competence approach to control and assessment activities in their work. [20] Among them are I.A. Winter, A.K. Krupchenko, I.A. Novikova, A.V. Farmhouse. [17] Despite extensive and multifaceted research in this area, there are still issues related to the study of the problem of controlling educational activities in today's institutions of higher education that require improvements. [19] Among such issues, we highlight the need to rebuild technological and methodological aspects of control and assessment activities of teachers in accordance with the competence approach. [21] In this case, the teacher should have evaluative competence which is manifested in his readiness for continuous improvement of his own knowledge, renewal of his own competencies and continuous development of professional skills. [18] Most scientists note the development of interconnection process at all stages of students' educational activities. The result of the control and assessment stage

of the teacher's activities in this approach is assessment of students 'competencies. In the works of such researchers as Sh.A. Amonashvili, L.I. Bozovic, G.Yu. Ksenzova, V.M. Polonsky, N.V. Seleznev et al., accompaniment of the process of knowledge assessment, as well as the independent activity of the teacher, with his professional activity is described. Academics in the field of pedagogy describe such activities in different ways. So, V.M. Polonsky notes that the teacher's control and assessment activity is a systematic determination of the relevance of existing knowledge, as well as the necessary skills. Carrying out the disclosure of assessment process essence, scholars in the field of pedagogy note that it consists in defining educational process goals choosing control tasks that check the achievement of goals, marking or other methods of expressing performance. N.V. Seleznev says that the main characteristic of the teacher's control and assessment activity is a bilateral one, which consists in the fact that the assessment activity takes place both in the teacher and in the students. Thus, the control and appraisal activity of the teacher and the students in their interaction is a necessary part of absolutely all stages of the educational and educational process, and not just its final stage. The result of the teacher's control and assessment activity is manifested in the student evaluation culture, which aims to correctly determine the results necessary for the assignment of values. There is also a different view on the definition of the concept of the evaluation activity of a pedagogical worker. As well as N. V. Seleznev, V.I. Zhernov and I.S. Lomakin say that the characteristic feature of the control and appraisal activity is the nature of its bilateral nature. the result of the teacher's control and appraisal activity in this case is the assessment of their activities by the students. As well as N.V. Seleznev, G.Yu. Xenzov in his study also uses the term control and assessment activities of the teacher. She underlines special function of the teacher's control and assessment activity naming it as regulative. The academician also turns his attention to the existence of a close connection between control and assessment activity of a teacher and the technology of training used by him.

III. METHODOLOGY

We have developed a model of teacher assessment and control activities in the context of the implementation of competence approach. Verification of the model was carried out with the help of conducting a study of the level of completion of final qualifying work by students. We identified the level of results of the implementation of the students of final qualifying work before the introduction of the model developed by us (in 2017) and after (in 2018). The study involved two groups of graduates of Nizhny Novgorod State Pedagogical University (45 people). In 2017, for each criterion, students showed fairly low results. The low level of study of the material, the novelty of the applied methods is practically absent. After the introduction of teacher's assessment and assessment activities in the context of implementation of competence-based approach, the results of the students have become significantly higher. Especially the level of novelty of the methods used is worth noting, which has risen from 30% to 70%.

IV. ANALYSIS AND DISCUSSION

The key shortcomings of modern control systems are: teachers have a subjective opinion in the implementation of work evaluation; teachers check too large sections of the material; control measures are only sporadic; didactic and organizational techniques for using computer tools to implement control are not sufficiently developed; the ability to fully take into account the features of the controlled are absent in the current situation. The resolution of the above problems in the system of control and appraisal activities can be based on the following principles of competence approach: the principle of open and accessible assessment criteria; the principle of objectivity (evaluation criteria are known in advance); the principle of purposeful control of the implementation of the goal; the principle of regular checks and evolution of control methods; the principle of reverse engineering educational programs (from the stated educational goals); the principle of student-centeredness (an assessment of what the student can do now, and not an estimate of the amount of learning material learned). The quality management system for students at the University of Minin is based on the developed Regulation on the system of internal independent assessment of the quality of education at the University of Minin. [22], [24] The quality of the development of educational programs is assessed through ongoing monitoring of progress, intermediate and state final certification of students. [23] The evaluation of the quality of students' training is carried out according to two criteria: assessment of the degree of mastering by students of educational courses and academic disciplines; assessment of the degree of formation of students' competencies. In addition to the mandatory criteria for assessing the performance of students, the components of the system also include: assessment of the rating nature of students' activities; rating assessment of the activities of teachers, as well as heads of departments, deans. The University of Minin is actively involved in managing the quality of student training. The analysis showed that for this purpose, all the necessary arsenal of tools and subjects are involved, such as employees of the center for quality management of education, authorized by quality, members of the Council of students for quality of education. The results of the evaluation of the quality of training of students are considered at meetings of faculty councils, administration, the Academic Council of the University. To implement the most effective process of monitoring that educational standards meet the requirements for qualifications and competencies of teachers, the Regulation "On the ongoing monitoring of progress and intermediate certification of students in educational programs of higher education and secondary vocational education" was adopted. Current control includes certain activities that are included in the programs of educational disciplines. Such activities include seminars, workshops, laboratory classes, and other types of events. They are held throughout the semester, which corresponds to the curriculum of the university. Intermediate control includes term papers and projects, examinations and tests. Exam is the last step in the study of academic

discipline. The purpose of the exam is to test students' knowledge of theoretical and practical aspects of educational activities, as well as students' skills in their work with educational and scientific materials. The test is a type of verification of the level of assimilation of information by students, which they received at workshops and seminars. The number of current as well as intermediate types of control means of students' educational activities must fully comply with the curriculum and the requirements of the Federal State Educational Standard. The requirements that students face during a comprehensive exam meet the requirements of the basic vocational curriculum as well as educational-methodical complexes. Also in this case, it is important to note electronic complexes of educational and methodological nature which should contribute to improving the level of training of a qualified specialist. In order for the control in higher education to be carried out at a high level, we have developed a model of the teacher's control and assessment activities in the context of the implementation of the competence approach. Its structure is represented by a number of components: target (strategic goal, principles of control and appraisal activity); substantive and procedural (methods, means of control and appraisal activity); psychological and pedagogical component (development of motivation of personal self-actualization in the field of building an individual assessment system that meets the requirements of competence-oriented learning; work based on acmeologically-oriented programs of intra-university training; development of a reflexive position); effective component (improved control and assessment activities of the teacher in the context of the implementation of the competence approach). When building a model of teacher assessment and assessment activities, the following approaches should be taken into account: systemic; competence; personal-activity approaches. If we talk about methods, then we should say that among them we also take into account the method of direct assessment (written examinations, project works, portfolios, cases, tests, group and mutual evaluations) and the method of indirect assessment (employer survey, comparison with other universities, 7 Means: innovation and activity, training and games, reflexive tasks. The control and appraisal activity has several functions that determine the nature of the relationship and interaction of participants in the monitoring and evaluation process. We have identified: managerial, motivational and value, information-analytical, planning and prognostic, organizational-performing, reflexive. Methodological foundations of the formation of the fund of valuation assets include: the use of traditional and innovative types and forms of control; the maximum approximation of the system of assessment and control of students' competencies to the conditions of their future professional activity; participation in the assessment of the competencies of external expert students. The psycho-pedagogical component contains the development of the motivation of personal self-actualization in the area of building an individual assessment system that meets the requirements of competence-based learning; c2 work based on acmeologically-oriented programs for internal university education; development of a reflexive position. The effective component reflects the activity of the teacher aimed at assessing the development of students' competencies in the context of the implementation of the competence approach. We have also developed recommendations for the formation of funds of valuation funds. The design of the fund of assessment tools must be based on sufficiently clear and understandable positions: the results of the assessment of competencies, the results of the assessment of student knowledge, the student's personal qualities are completely different indicators; the teacher must assess the competencies that are spelled out in the state standard; tasks, as well as criteria for evaluating educational results, should reflect, first of all, students' readiness to effectively carry out their activities within the framework of their future profession; the level of development of student competencies and the willingness of students to effectively carry out their activities within their profession are different indicators. These concepts should not be replaced. The system of evaluation of educational results should also include assessment materials that fully correspond to the list of key types of future students' professions, as well as a set of necessary competencies. From the list of principles for the creation of control materials, as well as measurement materials, the following can be singled out: the most important final test of the degree to which students have common cultural and professional competencies is the diagnosis of knowledge and skills; types of educational activities of students assessed correspond to the required content of control materials; In order to most effectively measure the results of students' educational activities, quantitative and qualitative indicators should be used. In order to measure the level of development of competencies, it is necessary to determine the rank of criteria and parameters, as well as to carry out the design of assessment scales On the basis of the developed model, we developed a program of state final attestation. The task of the final state certification is to assess the degree and level of mastering the educational program by the student, which characterizes his readiness for independent performance of certain types of professional activity. Mandatory form of state final certification is final qualifying work (WRC). Performed according to the schedule of the educational process.

Table 1 About professional competencies formed by a graduate in the framework of the implementation of graduation qualification work

Cipher competency	Interpretation of competence	The degree of formation of competencies		
		Elevated	Threshold	
		Optimal	Valid	Critical
Professional Competence (PC)				
PC-1	Ability to use current techniques and methods of organizing educational activities, analyzing and assessing the quality of the educational process for various curricula and educational courses	The ability to independently use relevant techniques and methods of organizing educational activities, analyzing and assessing the quality of the educational process for various curricula and educational courses	Able to apply relevant techniques and methods of organizing educational activities, analyzing and assessing the quality of the educational process for various curricula and educational courses	Knows the current methods and ways of organizing educational activities, analyzing and assessing the quality of the educational process for various curricula and educational courses
PC-3	Ability to manage student research activities	Has the skill of self-directed research activities of students.	Able to lead the research activities of students	Has the knowledge necessary to guide the research activities of students
PC-4	Willingness to create and use methods, technologies and methods of teaching, to characterize the results of their use in educational organizations	Able to independently create and use methods, technologists and teaching methods, to characterize the results of their use in educational organizations	Able to create and use methods, technologists and teaching methods, to characterize the results of their use in educational organizations	Has the necessary knowledge to use the methods, technologies and methods of training, to the characteristics of the results of their use in educational organizations

Therefore, we have developed a program of final state certification for students of the University of Minin, enrolled in the direction of training "Pedagogical education." In the article we will reflect the criteria for evaluating the results of the implementation of final qualifying work. Among the criteria: compliance with the implementation of the work schedule; research character of the work; the degree of compliance with the work of the requirements of the state standard; depth of study of the theoretical material; novelty of the applied methods. We conducted a study. We identified the level of results of the implementation of the students of final qualifying work before the introduction of the model developed by us (in 2017) and after (in 2018). The study involved two groups of graduates of the Nizhny Novgorod State Pedagogical University (45 people).

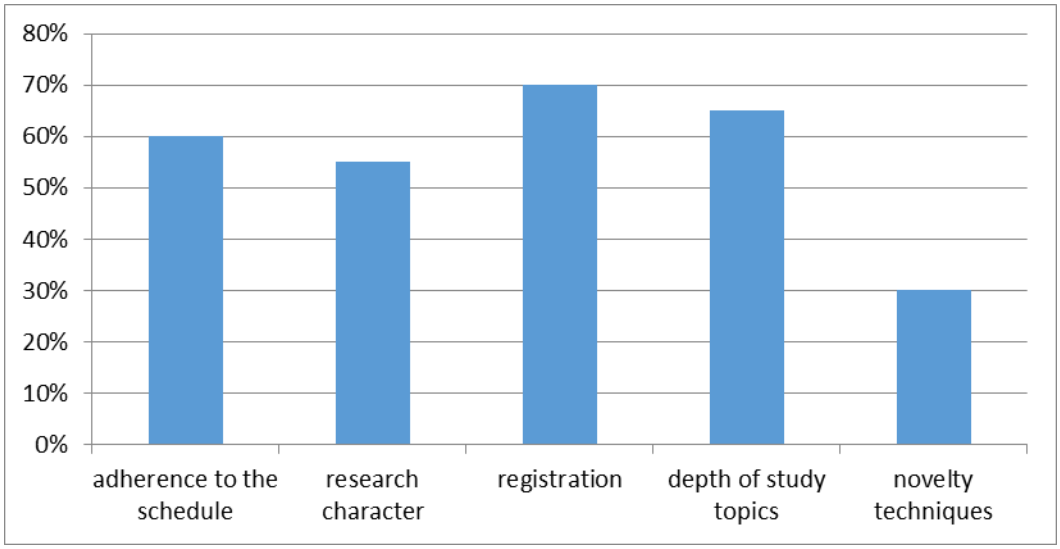

Figure 1 The results of the implementation of final qualifying work in 2017.

As we can see, for each criterion, students show rather low results. The low level of study of the material, the novelty of the applied methods is practically absent.

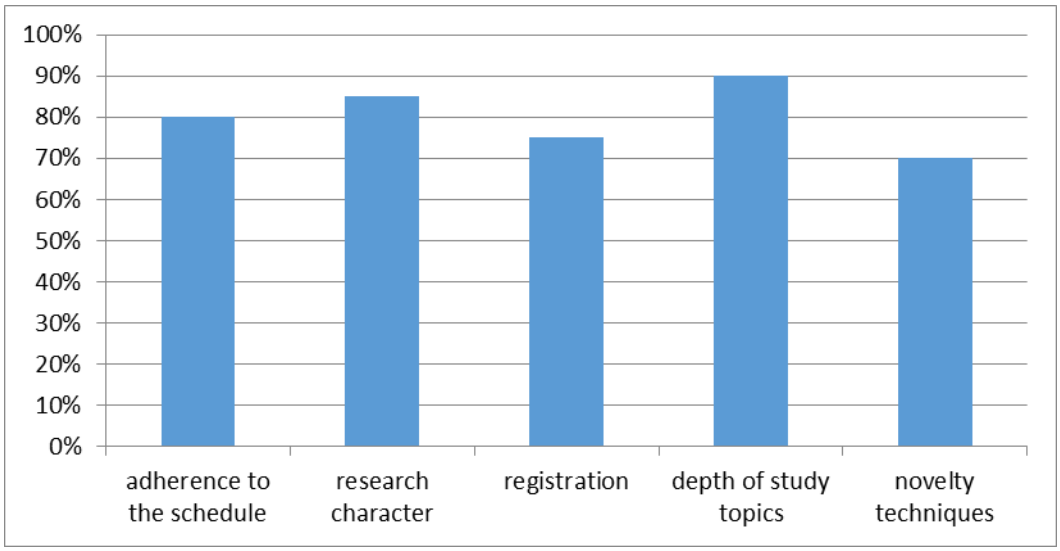

Figure 2 The results of the implementation of final qualifying work in 2018

After the introduction of the teacher's assessment and assessment activities in the context of the implementation of the competence-based approach, the results of the students have become significantly higher. Especially worth noting is the level of novelty of the methods used, which has risen from 30% to 70%. Consequently, the model developed and introduced by us enhances the level of students' training and allows them to master necessary set of competencies.

IV. CONCLUSION

Control and appraisal activity of a teacher of an educational organization of high education is an integral component of holistic educational process, the key goal of which is the ability to monitor, analyze and assess the quality of students' mastering of specific educational disciplines, modules, practical training and performance of various kinds of educational and research work. In the context of a competence-based approach implementation, there is a need for a more structured model of control and appraisal activities which takes into account all the changes taking place in the field of education. We have developed a model that has as its goal the activity of a teacher aimed at assessing the development of students' competencies in the context of the implementation of the competence approach. Verification of the model was carried out with the help of conducting a study of the level of completion of final qualifying work by students. After the introduction of the model of the teacher's control and assessment activities in the context of implementation of the competence-based approach, the results of the students have become significantly higher which gives grounds to assert the effectiveness of the implemented model.

REFERENCES

1. M.N. Bulaeva, O.I. Vaganova, M.I. Koldina, A.V. Lapshova, A.V. Khizhnyi (2018) Preparation of bachelors of professional training using MOODLE. Popkova E.G. (ed.) The Impact of Information on Modern Humans. Springer, Vol. 622, pp. 406-411. https://doi.org/10.1007/978-3-319-75383-6_52
2. A.A. Fedorov, G.A. Paputkova, E.Y. Ilaltdinova, I.F. Filchenkova, M.Y. Solovev, (2017) Model for employer-sponsored education of teachers: Opportunities and challenges. Man in India, 97 (11), pp. 101-114.
3. E.P. Garina, V.P. Kuznetsov, A.O. Egorova, E.V. Romanovskaya, A.P. Garin, (2017) Practice in the application of the production system tools at the enterprise during mastering of new products. *Contributions to Economics*, (9783319606958), pp. 105-112.
4. E.P. Garina, V.P. Kuznetsov, E.V. Romanovskaya, N.S. Andryashina, A.D. Efremova, (2018) Research and generalization of design practice of industrial product development (by the example of domestic automotive industry. *Quality - Access to Success*, Vol. 19 (S2), pp. 135-140.
5. L.K. Ilyashenko, M.P. Prokhorova, O.I. Vaganova, Z.V. Smirnova, E.A. Aleshugina (2018) Managerial preparation of engineers with eyes of students. *International Journal of Mechanical Engineering and Technology*, Volume 9, Issue 4, pp.1080-1087.
6. L.K. Ilyashenko, Z.V. Smirnova, O.I. Vaganova, M.P. Prokhorova, N.S. Abramova (2018) The role of network interaction in the professional training of future engineers. *International Journal of Mechanical Engineering and Technology*, Volume 9, Issue 4, pp. 1097-1105.
7. L.K. Ilyashenko, O.I. Vaganova, Z.V. Smirnova, M.L. Gruzdeva, A.V. Chanchina (2018) Structure and content of the electronic school-methodical complex on the discipline "mechanics of soils, foundations and foundations". *International Journal of Mechanical Engineering and Technology*, Vol. 9 (4), pp. 1088-1096.
8. M.M. Kutepov, O.I. Vaganova, A.V. Trutanova, (2017). Possibilities of health-saving technologies in the formation of a healthy lifestyle. *Baltic Humanitarian Journal*, Vol. 6(3), 210-213.
9. V.P. Kuznetsov, E.V. Romanovskaya, A.O. Egorova, N.S. Andryashina, E.P. Kozlova, (2018) Approaches to developing a new product in the car building industry. *Advances in Intelligent Systems and Computing*, Vol. 622, pp. 494-501.
10. L.K. Ilyashenko (2018) Pedagogical Conditions of Formation of Communicative Competence of Future Engineers in the Process of Studying Humanitarian Disciplines, *International Journal of Civil Engineering and Technology*, Vol. 9(3), pp. 607-616.
11. S.M. Markova, E.P. Sedykh, S.A. Tsyplakova, V.Y. Polunin (2018) Perspective trends of development of professional pedagogics as a science. *Advances in Intelligent Systems and Computing*, Vol. 622; pp. 129-135.
12. A. Pavlov, A. Kindaev, I. Vinnikova, E. Kuznetsova, (2016). Crop insurance as a means of increasing efficiency of agricultural production in Russia. *International Journal of Environmental and Science Education*, Vol. 11(18), pp. 11863-11868.
13. T.V. Perova, E. A. Kuznetsova, I. S. Vinnikova, S.N. Kaznacheeva, E.A. Chelnokova (2017). Essence of the role and characteristics of the operating conditions of enterprises before and after the transition to market relations from a macroeconomic position. *International Journal of Applied Business and Economic Research*, Vol. 15(12), pp. 103-112.
14. Y.S. Potashnik, E.P. Garina, E.V. Romanovskaya, A.P. Garin, S.D. Tsymbalov, (2018) Determining the value of own investment capital of industrial enterprises. *Advances in Intelligent Systems and Computing*, 622, pp. 170-178.
15. Z.V. Smirnova, M.L. Gruzdeva, O.G. Krasikova (2017) Open electronic courses in the educational activities of the university. *Vestnik of Minin University*, no. 4(21), p. 3.
16. Z.V. Smirnova, O.G. Krasikova (2018) Modern tools and technologies for assessing learning outcomes. *Vestnik of Minin University*, Vol. 6, no. 3. P. 9.
17. Z.V. Smirnova, O.I. Vaganova, A.V. Trutanova (2017) Final state certification as a way to comprehensive assessment of competences. *Karelian Scientific Journal*, Vol. 6, no. 3(20), pp. 74-77.
18. Z.V. Smirnova, M.V. Mukhina, L.I. Kutepova, M.M. Kutepov, O.I. Vaganova (2018) Organization of the research activities of service majors trainees. *Advances in Intelligent Systems and Computing*, Vol. 622, pp. 187-193.
19. S.A. Tsyplakova, M.N. Grishanova, E.A. Korovina, N.M. Somova (2016) Theoretical bases of designing of educational systems. *Azimuth of Scientific Research: Pedagogy and Psychology*, Vol. 5. No. 1 (14). Pp. 131-133.
20. O.I. Vaganova, L.K. Ilyashenko (2018) The main directions of implementation technologies of student-centered education in high school. *Vestnik of Minin University*, Vol. 6, no. 3. p.2.
21. O.I. Vaganova, M.I. Koldina, A.V. Trutanova (2017) Development of the content of vocational and pedagogical education in the context of the implementation of the competence approach. *Baltic Humanitarian Journal*, vol. 6, no. 2(19), pp. 97-99.
22. O.I. Vaganova, Z.V. Smirnova, A.V. Trutanova, (2017). Organization of research activities of bachelor of professional education in electronic form. *Azimuth of Scientific Research: Pedagogy and Psychology*, 6(3), 239-241.
23. S.N. Yashin, N.I. Yashina, M.V. Ogorodova, Z.V. Smirnova, S.N. Kuznetsova, I.N. Paradeeva, (2017) On the methodology for integrated assessment of insurance companies' financial status. *Man in India*, Vol. 97 (9), pp. 37-42.
24. O.I. Vaganova, Zh.V. Smirnova, S. M. Markova, Zh. V. Chaikina, M. N. Bulaeva, (2019). Organization of partnerships for additional educational services on the example of the interaction of the educational institution with the health and cultural centre. *Perspektivy nauki i obrazovania – Perspectives of Science and Education*, 39 (3), pp. 500-514