

NININS 2020**International Scientific Forum «National Interest, National Identity and National Security»****PREPARATION OF TEACHER FOR INNOVATIVE ACTIVITIES
IN THE CONTEXT OF GLOBAL CHANGES**

Marina V. Tsiulina (a)*, Gulsina Ya. Grevtseva (b), Natalia S. Kasatkina (c), Elena Yu. Nemudraya (d), Natalia S. Shkitina (e)

*Corresponding author

(a) South Ural State Humanitarian and Pedagogical University, 69, Lenina Ave., Chelyabinsk, Russia, ciulinamv@cspu.ru

(b) Chelyabinsk State Institute of Culture, 36-a, Ordzhonikidze str., Chelyabinsk, Russia,
yakupovna@rambler.ru

(c) South Ural State Humanitarian and Pedagogical University, 69, Lenin Ave., Chelyabinsk, Russia, kasatkinans@cspu.ru

(d) South Ural State Humanitarian and Pedagogical University, 69, Lenin Ave., Chelyabinsk, Russia, nemudrayaeu@cspu.ru

(e) South Ural State Humanitarian and Pedagogical University, 69, Lenin Ave., Chelyabinsk, Russia, shkitinans@cspu.ru

Abstract

The relevance of the problem of preparing a future teacher for innovation is due to socio-economic changes, in connection with which there was a revision of the main positions of higher pedagogical education. The article presents the author's definitions of the "innovative competence of a teacher", which is understood as the willingness and ability to carry out innovative activities in a constantly updated professional environment, reflecting personal, theoretical and practical readiness to introduce innovations, that is, the ability to design and introduce a new product, introduce new technologies and methods in training and education of students in educational organizations of various types. "The formation of the teacher's innovative competence" is a continuous process of quantitative and qualitative changes in all components (motivational, cognitive, active, personal and reflective), which has a naturally artificial nature, carried out under the influence of external conditions, professional activity and personal efforts of the individual. In the framework of this study, a model has been developed for preparing a future teacher for innovative activity in various types of educational organizations, which consists of targeted, substantive, procedural and effective components, as well as the conditions for its effective functioning. The theoretical and methodological foundations of the model are determined: systemic, personality-activity, competency-based approaches. The essence of the teacher's innovative competence, its structure, components, as well as criteria and levels of formation are disclosed. The formation stages of innovative competence of students are presented.

2357-1330 © 2021 Published by European Publisher.

Keywords: Innovative competence, preparation for innovation



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

The current socio-economic situation in the country requires changes in all areas of public life, including education. The main requirements for the education system are formulated in the Law “On Education in the Russian Federation”, the Strategy for Innovative Development of the Russian Federation, and the Concept of the Federal Target Program for the Development of Education, where one of the main tasks facing modern education is to stimulate and develop innovative processes. In this regard, the socio-pedagogical aspect of the relevance of the study is associated with the need to improve the quality of pedagogical education, to further improve the training process of future teachers. The scientific and theoretical aspect of relevance is associated with the theoretical justification of preparing a future teacher for innovative activities in educational organizations. The scientific and methodological aspect of the study relevance is due to the need to develop a model for preparing a future teacher for innovative activity in various types of educational organizations.

2. Problem Statement

The transformations taking place at the present stage in the education system have led to the emergence of a new social order for the preparation of a future teacher capable of implementing innovative activities (Sultanova, 2016). We have identified three groups of factors that determine the need to review national priorities in the teacher training system.

The first group of factors is associated with global changes in the system of Russian education: the introduction of a new educational paradigm, new federal state educational standards, the transition of high school to specialized education. The success of the reform of the education system at the present stage is determined, first of all, by the personal attitude of the teacher to innovation, as well as to innovative activity.

The second group of factors is associated with the challenges facing national educational systems, which should become innovative, and students should be prepared for an innovative lifestyle. Under these conditions, the readiness of the future teacher for innovation in educational organizations of various types is of particular importance.

The third group of factors is related to the fact that, in accordance with the regulatory documents of the modern education system, each teaching staff has the right to innovative activity, but in this case, it must take responsibility for the preparation and organization of innovations, so each teacher must be ready to constantly improve their professionalism and increase their competence.

Thus, a modern teacher should be ready for innovative activity in educational organizations of various types, in other words, should have innovative competence (Surkhaev et al., 2015). Consequently, in the process of training the future teacher in the system of higher professional education, it is necessary to form innovative competencies with him.

3. Research Questions

- 3.1. The formation of the teacher's innovative competence is a continuous process of quantitative and qualitative changes in all components (motivational, cognitive, active, personal and reflective), which has a naturally artificial nature, carried out under the influence of external conditions, professional activity and personal efforts of the individual.

4. Purpose of the Study

The purpose of the study is to determine the totality of methodological approaches to solving the problem under study, on the basis of which to develop a model for preparing students – future teachers for innovation in educational institutions of various types, to identify a set of conditions for the effective functioning of the model.

5. Research Methods

Using the conceptual and terminological analysis, the basic concepts of the problem were identified: the innovative competence of teachers and its formation.

By means of theoretical and methodological analysis, approaches to the problem under study are defined: systemic, personal-active, competence-based.

The modeling method made it possible to develop a model for preparing future teachers for innovative activity in various types of educational organizations, which consists of targeted, substantive, procedural, and effective components.

As a result of the content analysis, the main components of innovative competence of future teachers are identified: motivational, cognitive, active, personal and reflective.

6. Findings

In order to display and reproduce the structure, properties, relationships and relationships between the elements of the process of preparing a student of a pedagogical university for innovative activity in educational organizations of various types, it is necessary to develop a model. The model is developed on the basis of Dolgova and Tkachenko, (2012); Mendybaeva and Dyusembaeva, (2016); Palkina and Palkin, (2016). Theoretical and methodological foundations of the model are systemic, personality-activity and competency-based approaches. Studying the process of preparing future teachers from the perspective of a systematic approach involves considering it as a system that has all the necessary attributes: purpose, content, organizational forms and methods, as well as conditions.

The significance of the systematic approach in our study considers the process of preparing a future teacher for innovation in educational institutions of various types as a complex organization, as an integrated system (Kotlyarova & Maine, 2015); highlights the system-forming factor in the process of preparing a future teacher for innovation in educational organizations of various types – the goal; constructs a model for preparing a future teacher for innovative activity in educational organizations of

various types and identifies its components, their place and importance, reveals the dialectic of their relationship; introduces the results into practice of the higher professional education system.

Thus, a systematic approach involves the study of the process of preparing future teachers for innovation in educational organizations of various types as a dynamic system.

The personal-activity approach in terms of our research is that it: acts as a factor in the development of the personality of the future teacher; builds educational as a change in activities and gives its management a coordinating and motivational character; allows switch from orientation to the reproduction of knowledge to its application; organizes the pedagogical process in accordance with the component structure of human activity; provides the development of creative abilities of an individual, the independence of thinking, the formation of certain personal qualities; allows teach activities – this means making the process motivated, learning to set a goal on your own and find ways, means, its achievements (that is, optimally organize your activities), help to develop reflective skills in yourself.

The application of the competency-based approach is to ensure the quality of preparing future teachers for innovative activity, as well as in the formation of innovative competence (Lukyanova et al., 2018; Osipova et al., 2017). A competency-based approach will make it possible to develop the components of the teacher's innovative competence.

So, on the basis of a systematic, personal-activity and competency-based approach, we have developed a model for preparing future teachers for innovative activity in educational organizations of various types, which consists of targeted, substantive, procedural and effective components.

The target component of the model is represented by the goal and objectives. The main goal of preparing future teachers for innovation in educational institutions of various types is the formation of innovative competence. This goal is concretized in the tasks: formation of motives for innovative activity; the formation of knowledge systems about the essence of the innovative activity of a teacher; formation of a way of innovation; the formation of personal qualities necessary for effective innovation; the formation of reflective skills.

The substantial component of the model is represented by the formation components of the innovative competence of future teachers: motivational, cognitive, active, personal and reflective (Popova & Lobut, 2015; Panfilova, 2017; Rustamova, 2013). Motivational component is the sustainability of interest in innovation, the presence of a motive for self-education, and the desire for professional growth. The cognitive component is represented by knowledge in pedagogical innovations, innovative processes in education. The active component is the abilities to participate in solving problems of innovative development, to design innovative processes and to form an educational environment for innovation. The personal component is activity and pedagogical initiative, the ability to navigate and adapt in an innovative, transforming educational space, leadership qualities. The reflective component is the possession of reflective skills that allow analyze the impact of innovation on the educational process.

The procedural component of the model is represented by the formation stages of innovative competence of future teachers, on each of which different tasks are solved.

The first stage is informational and cognitive. The basics of the methodology of scientific knowledge, pedagogical research is mastered. An introduction to innovative pedagogy takes place. Students get acquainted with the social and scientific prerequisites for the emergence of innovations and

the basic concepts of innovative pedagogy. They creatively interpret approaches to organizing innovative activities, study the main sources of innovations in educational organizations, get acquainted with various types of innovative educational institutions, etc. This stage is aimed at students mastering the knowledge system necessary for the implementation of innovative activities in educational organizations of various types.

The second stage is a motivational-semantic one. The development of a creative individuality, the ability to identify, formulate, analyze and solve creative pedagogical problems, as well as the development of a common technology for creative search take place: the independent transfer of previously acquired knowledge and skills to a new situation, the vision of a problem in a familiar situation, the new function of the object, the definition of the object structure, the vision of an alternative to solving the problem, the combination of previously learned methods of activity in the new as applied to the problem that has arisen, the development of critical thinking. This stage is aimed at deepening the theoretical concepts in innovation and developing skills to ensure its implementation.

At the third professional and practical stage, students master the technology of innovative activity, get acquainted with the methodology of compiling the author's program, the stages of the experimental work. They participate in creative groups in the development of the author's program, analyze and predict the further development of the innovation, as well as the difficulties of its implementation in the pedagogical process. This stage is aimed at students gaining experience in innovation, in the framework of which their professional qualities are developed, as well as further improvement of professional knowledge and skills.

At the fourth professional-innovative stage, practical work is underway to introduce innovations into the pedagogical process as part of production practice. The correction is being carried out. The results of activities are monitored, and self-analysis of professional activities is carried out. At this stage, the innovative competence of future teachers is finally formed as the ability to carry out innovative activities in various types of educational organizations in a constantly updated professional environment.

It should be noted that each stage is characterized by substantial structural autonomy and performs only its inherent tasks, and the achievement of the main goal, i.e. the formation of innovative competence of students, is possible only if all stages are integrated.

The productive component of the model assumes the existence of an end result. The final result will be the innovative competence formed by students. Therefore, the effective block includes components, criteria and formation levels of innovative competence.

To assess the level of formation of students' innovative competence, we examined the levels of development of various components of pedagogical activity, which were studied by Abramova (2019); Ilyina (2014); Slastenin & Podymova (1997); Voropaeva (2014) and other researchers.

Taking into account the general principles of pedagogical theory and relying on the theory of a level approach, our own work experience, and also the specifics of the studied competence, we distinguished three levels of students' innovative competence formation: reproductive, productive, and creative.

The allocation of these levels is relative, since they are in mutual influence. A lower level determines the development of the subsequent one, as a result of which students may be at an

intermediate development stage of one or another level. Moving from a lower level to a higher level of formation of innovative competence allows talk about the effectiveness of the formation process of innovative competence of students.

The characteristic features of the presented conceptual model are systematic (interconnection between components); flexibility (adaptation to the features of the interaction between the subjects of the educational process), dynamism (the possibility of qualitative changes in the components of the model, their interconnections) (Bolshakova et al., 2018).

The model of preparing future teachers for innovation in educational institutions of various types can successfully function only under a certain set of conditions. Based on the foregoing, we believe that the following are effective conditions for preparing future teachers for innovation in educational institutions of various types:

1. Stimulation and motivation of students to innovative activity in educational organizations of various types.
2. Formation of a team of like-minded people in innovation.
3. Formation of students of pedagogical design skills as an important component of innovation.

7. Conclusion

The results of the study can serve as the basis for improving the process of preparing students of pedagogical universities for innovative activities in educational institutions of various types. It is determined by: a) the understanding of systemic, personal-activity, and competency-based approaches in relation to the process of preparing students of pedagogical universities for innovative activity in educational organizations of various types; b) the implementation in practice of a model for preparing future teachers for innovative activity in educational organizations of various types; c) the definition and characteristics of the criteria and levels of formation of innovative competence of students.

Acknowledgments

The article is a part of the Comprehensive Program and Plan for the Research, Design and Scientific and Organizational Activities of the Scientific Center of the Russian Academy of Education on the basis of the South Ural State Humanitarian and Pedagogical University for 2018–2020.

8. References

- Abramova, N. A. (2019). Readiness for innovation is a prerequisite for a successful professional start. *Manag. of a preschool ed. institute.*, 9, 48–54.
- Bolshakova, Z. M., Gnatyshina, E. V., Nemudraya, E. Yu., Tsiulina, M. V., & Shkitina, N. S. (2018). Managing Pedagogical University Master Students' Empathic Training. *Modern J. of Lang. Teach. Methods (MJLTM)*, 8(5), 16–28.
- Dolgova, V. I., & Tkachenko, V. A. (2012). Management of innovative processes in education: essence, patterns and trends. *Sci. and Busin.: Ways of Development*, 7(13), 17–22.
- Ilyina, N. F. (2014). *The formation of innovative competence of a teacher in the regional space of continuing education* [Doct. Dissertation]. Krasnoyarsk.

- Kotlyarova, I. O., & Maine, S. (2015). The study of the formation of students' readiness for innovation from the perspective of a systematic approach. *Scientific support of the continuing education system*, pp. 18–21.
- Lukyanova, M. I., Shustova, L. P., & Danilov, S. V. (2018). The development of teachers' competencies in the context of the implementation of modern scientific approaches in the innovative activities of an educational organization. *News of Saratov Univer. New Ser. Ser. Acmeol. Ed. Developmental Psychol.*, 2(26), 58–64.
- Mendybaeva, M. M., & Dyusembaeva, T. K. (2016). Pedagogical design: essence, stages, forms. *Innovative pedagogical technologies*, pp. 89–91.
- Osipova, S. I., Gafuarova, N. V., Bogdanova, A. I., Nordin, E. I., & Karaseva, I. O. (2017). *Productive practices of the competency-based approach in education* Monograph. Krasnoyarsk: Siber. Fed. Univer.
- Palkina, M. V., & Palkin, A. Yu. (2016). The concept of the innovation system of the municipality. *Bull. of ASTU. Ser. Econ.*, 1, 82–88.
- Panfilova, N. G. (2017). The innovative activity of the teacher in the context of the requirements of educational and professional standards. *Man and Ed.*, 3(52), 82–86.
- Popova, N. E., & Lobut, A. A. (2015). On the issue of innovation as the basis for the qualitative development of an educational institution. *Pedag. Ed. in Russ.*, 9, 23–27.
- Rustamova, S. U. (2013). Formation of readiness of teachers of a comprehensive school for innovative activity. *Municipal format.: innovate. and experim.*, 3, 57–61
- Slastenin, V. A., & Podymova, L. S. (1997). *Pedagogy: innovative activity*. Moscow: Magistr.
- Sultanova, T. A. (2016). School development as an innovative process. *Baltic J. of Human.*, 3(16), 199–202.
- Surkhaev, M. A., Nimatulaev, M. M., & Magometov, R. M. (2015). Innovation in the work of a modern teacher. *Territory of Sci.*, 3, 17–22.
- Voropaeva, E. E. (2014). The structure and criteria for the formation of teacher readiness for innovation. *Modern probl. of sci. and ed.*, 4, 28.