

Development of Pedagogical Creativity of Future Teachers of Primary School By Means of Innovative Education Technologies

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Abstract: In the higher education system, the development of students' creative abilities is one of the most pressing problems. The problem of pedagogical creativity of future teachers of primary school is examined in the article. The pedagogical creativity of the elementary school teacher as an integral personal and professional quality, which consists in the ability to pedagogical creativity, original solution of pedagogical problems, active use and improvement of innovative teaching technologies is characterized. The article identifies the features of pedagogical creativity and characterizes the specific pedagogical creativity of elementary school teachers. The experience of interconnecting pedagogical creativity and innovative processes in education has allowed us to determine the basis of the benefits of innovative learning for the development of students' personal and professional qualities. Therefore, in the opinion of the author, the development of pedagogical creativity will be effective provided that innovative educational technologies are implemented into the educational process. Mathematical data processing methods and Statistica software package were used to analyze the results obtained and to objectively consider the dynamics of changes in active, cognitive, motivational, emotional and personal components. The conducted research showed the effectiveness of the use of innovative teaching technologies for the development of all components of pedagogical creativity of future primary school teachers. The author came to the conclusion that the following innovative technologies have the greatest didactic potential for the development of pedagogical creativity: situational learning technology; game technology; project technology; problem-based learning technology; information and communication technology; inventive problem solving technology, portfolio.

Keywords: *vocational education; training of future teachers; future elementary school teachers; pedagogical creativity; innovative teaching technologies.*

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1. Introduction

The values of each historical epoch are determined by its socio-economic, cultural and scientific determinants. Contemporary world trends, namely: the spread of information freedom, the development of democracy and humanistic values, the intensification of intercultural interaction - are the main features of the "creatogenic era" (Arieti, 1981; Csikszentmihalyi, 1988; Simonton, 1984), whose essence is determined by the identity that is its generating center, the semantic determinant, the highest criterion and the aim of continuous social development.

Creativity-related social development is important in all areas of society, including education. An important role in the formation of the younger generation is played by the elementary level of education. The first-grade school serves as the foundation that forms the core competencies of younger schoolchildren. Due to socio-economic transformations, today's younger schoolchildren are significantly different from their peers in previous decades. It is the responsibility of the primary school teacher to develop the pupil's creative personality, to show his / her abilities, to create a favorable atmosphere in the lessons, to form a system of moral and ethical values. Pupils need creative teachers who will understand and teach them creatively. However, practice shows that most teachers do not show creativity, but use mostly traditional methods of organizing elementary school lessons.

In this context, the problem of the development of pedagogical creativity, which will enable the future teacher to originally solve professional tasks, to improve the process of teaching and upbringing of pupils, becomes more relevant; provide motivation for self-improvement, self-development and self-realization of personality.

The purpose of this research is to substantiate and experimentally test the effectiveness of the use of innovative educational technologies for the development of pedagogical creativity of future primary school teachers.

The main issues that arise from the relevance of the topic being raised and which need to be resolved are:

1. Is the strategy of innovative educational technologies effective in the development of pedagogical creativity of the future primary school teacher?
2. What kinds of innovative pedagogical technologies are the most effective for the development of pedagogical creativity?
3. Will the introduction of innovative educational technologies in the process of professional education of future primary school teachers

influence the growth of quality indicators of pedagogical creativity of students?

2. Literature review

The problem of development of pedagogical creativity of future teachers is widely researched in modern pedagogical discourse. In particular, the problem of research focuses on finding ways to overcome the contradictions between emerging public demand for creatively active educators and teaching stereotypes in higher education (Zivitere et al., 2015; Ibragimkyzy et al., 2016). Researchers Mark Selkrig & (Ron) Kim Keamy (2017) point out that within the framework of creative pedagogy, the concept of teacher creative learning is largely ignored in the discourses of teacher training.

An analysis of previous studies on student creativity development has revealed that researchers have developed and used different models of student creativity development, namely: WEB-based instructional model based on Brain-based learning process (Prompan, 2007), collaborative learning and synectics instruction (Chuathong, 2011), a six-thinking-hats technique (Aulpaijikul, 2011), and a blended learning model (Kanchanachaya, 2012).

In the scientific discourse, the studies on the development of different types of creativity: technical (Byvalkevych et al., 2020), social creativity (Mouchiroud & Lubart, 2002), entrepreneurial (Petrakis & Kafka, 2016) and others are conducted. The basis of classifications is the sphere of foundation of creative ideas. Growing demands on the personality of the future teacher lead to the need to explore pedagogical creativity – the ability of teachers to quickly solve problems in the original way, improve the educational process, generate new pedagogical ideas and create methodological innovations.

Also in the field of scientific search, the problem of the development of creativity of primary school teachers remains poorly studied, in particular research focused mainly on representatives of the creative professions: future music teachers (Abramo & Reynolds, 2015), designers (Tu et al., 2018), and practicing teachers (Morais, & Azevedo, 2011).

Creativity can be formed, developed due to environmental factors (De Bono, 1992; Sternberg, 2002). However, traditional learning cannot fully support the development of students' creativity (Soh, 2018); however, the innovative learning is aimed at the process that leads to creative learning, the introduction of new methods, tools and content that can benefit students

and develop their creative potential (Ferrari et al. 2009). Innovative learning involves the implementation of innovative pedagogical technologies – purposeful, systematic and consistent implementation of the original, innovative ways, techniques, pedagogical actions and tools that cover the holistic educational process from the determination of its purpose to the expected results (Dichkivska, 2015). Therefore, the experience of introducing innovative educational technologies for the development of pedagogical creativity of future primary school teachers is not accumulated in the pedagogical discourse, so our article will help to try to resolve this issue.

3. Methods and materials

Subjects of the research were students of specialty 013 "Primary education" 18-20 years of age, who study in the 1st and 2nd courses. The Institute of Pedagogical Education of the Higher Education of the International Economic and Humanities University named after Academician Stepan Demianchuk was chosen as the experimental base of the research. Students of the Institute made up a total of 350 people. After calculating the size of the required (representative) sample using an online calculator (with parameters: 95% confidence, error – 5%), the valid sample size was 183 persons. This number was the starting point for the formation of the experimental group (EG) ($n = 92$) and the control group (KG) ($n = 91$).

Experimental research was conducted during the study of the subjects of vocational training "Theory and methodology of education", "Information technology of teaching", "Pedagogical technologies in elementary school", which were improved by innovative pedagogical technologies. The study was organized in three stages during 2017–2019:

The tasks of the (preparatory) first stage were:

- to carry out the analysis of scientific literature on problems of development of creativity and introduction of innovative technologies of training, curricula, work programs of educational disciplines, normative documents;
- to define criteria and indicators of levels of pedagogical creativity development;
- to develop a set of diagnostic tools, determine the sample size;
- to develop and improve the bulk courses in innovative teaching technologies.

The tasks of the second (main) stage were:

- pre-experimental measurement;
- experimenting with innovative learning technologies;
- conducting post-experimental measurements.

The tasks of the third (final) stage were:

- to process pre-experimental and post-experimental data;
- to interpret statistics;
- to carry out the analysis and formulate the results of the research;
- to develop recommendations for the progress of pedagogical creativity of future primary school teachers.

According to the tasks of each stage, we used the following research methods:

- *theoretical*: analysis, synthesis, induction, deduction, analogy, abstraction, concretization, modeling, idealization, generalization – to find out the essence, features, structure and characteristics of the levels of pedagogical creativity development and to define and substantiate the research hypothesis;

- *empirical*: questioning, testing, interviewing, conversation, projective techniques, pedagogical observation – to determine the state and dynamics of pedagogical creativity development of future primary school teachers;

- *pedagogical experiment* (piloting, ascertaining, forming) to test the effectiveness of the hypothesis;

- *statistical*: χ^2 – K. Pearson criterion – for processing, interpretation and assurance of the results of the experimental work. Statistica software package was used to analyze the quantitative data.

According to the tasks of the first stage, the pedagogical creativity of the elementary school teacher as an integral personal and professional quality, consisting in the ability to pedagogical creativity, original solution of pedagogical problems, active use and improvement of innovative technologies of teaching and learning in elementary school was characterized.

The features of pedagogical creativity are: developed complex of individual qualities (communicative, intellectual, volitional, emotional, moral, etc.); ability to see and originally solve pedagogical problems (communicative, organizational, methodical); pedagogical orientation of thinking; the desire to show their own personality; ability to overcome stereotypes, rejection of "pattern" thinking; the desire to create new ideas and bring them to life; ability to implement innovative learning technologies.

The pedagogical creativity of the elementary school teacher is reflected in the specifics of his professional activity, namely: *taking into account the age characteristics of younger pupils*, which is manifested in the selection and organization of educational and disciplinary work, taking into account the needs and interests of pupils; *peculiarities of teaching subjects in elementary school*, which find expression in the optimal selection of methods and training techniques for the most effective assimilation of educational material, its accessible presentation, ability to interest pupils with the subject, to motivate them to assimilate knowledge; *the versatility of a primary school teacher*, which requires a rapid switch from one activity to another, the ability to generate many ideas, the ability to organize their activities for the most effective result, and so on.

The following criteria of pedagogical creativity of future elementary school teachers are distinguished: *cognitive* (reflects the set of professional knowledge of the future elementary education specialist), *personal* (represents a system of personal creative qualities), *motivational and emotional* (represents student's motivation and emotionality for the development of pedagogical creativity, awareness of its importance), *active* (outlines the realization of the student's acquired creative skills).

Indicators of cognitive criterion are: general professional knowledge of pedagogical creativity, competency of innovative technologies for teaching younger pupils. *The personal criterion covers the following indicators:* divergent thinking, developed creative qualities (perseverance, openness to the new, self-confidence, ingenuity, rejection of stereotypes, pattern, insight, independence, associative thinking, developed intuition), adequate perception of criticism from teachers (friends, family). *Indicators of motivational and emotional criterion are:* intrinsic motivation for self-improvement, professional realization; positive attitude to the development of pedagogical creativity; desire to involve others in creativity, to develop their creative abilities; aspiration to apply innovative methods and training techniques in the future professional activity. *The active criterion combines indicators:* the ability to implement creative solutions of pedagogical problems; discovering creativity in preparation for the lesson, extracurricular work; developed communication skills (ability to communicate with younger pupils, their parents; solve problematic communication situations); the ability to improvise.

Three levels of development of pedagogical creativity of future primary school teachers are distinguished: low, medium, high and the characteristic of each level is defined.

In order to determine the levels of development of motivational and emotional, active, cognitive and personal components of pedagogical creativity, different diagnostic methods were used in the research, taking into account the structure of the phenomenon under study. Thus, the level of formation of the personal component was determined by the test of divergent (creative) thinking of F. Williams (Modified and adapted test of E. Tunick) (2003); test of verbal creativity of S. Mednik (adaptation by Voronin & Galkin, 1994); test "How do you feel about criticism?" (Kashapov, 2002).

The motivational and emotional component was diagnosed with the help of the method "Teacher's abilities to creative self-development" (Nikishina, 2009) and methods of diagnostics of students' educational motivation (Badmaeva, 2004). The active component was diagnosed using the questionnaire "Determinant of the dominant level of difficulty in the process of solving pedagogical problems" (Kashapov, 2006). The cognitive component was determined by the results of the final test control during the exam sessions.

An important stage of our research at the preparatory stage was the development of courses in the disciplines "Theory and Methods of Education", "Information Technology Learning", "Pedagogical Technology in Primary School" using innovative teaching methods. In our study, we will use the classification of S. Shevchuk (2009), which identified the most widespread innovative teaching technologies in pedagogical practice. There are: situational learning technology (case method); game technology; project technology; problem-based learning technology; information and communication technologies (ICT); inventive problem solving technology, portfolio. According to this classification and the defined essence and specificity of the pedagogical creativity of the future elementary school teacher, we have determined the didactic potential of innovative teaching technologies (Table 1). According to the identified potential, the most effective technology was selected according to the purpose and objectives of each topic of the discipline.

Table 1. Didactic potential of innovative teaching technologies for the development of pedagogical creativity

Innovative technology	The potential of technology for the development of pedagogical creativity
Game technology	Game technology helps to create an atmosphere for displaying creative abilities, activates interest in the profession, creative professional activity. The acquisition of professional values and skills in the application of this technology is indirect. This technology helps to illuminate the positive and negative factors or actions of pedagogical activity, thereby focusing on them; improves skills of pedagogical improvisation, communicative component of teacher's profession (pedagogical story, ethics of pedagogical communication, solving conflict situations, etc.).
Problem technology	Problem technology promotes interest in problems, phenomena, contradictions; strengthens the desire to find the truth, therefore activates the motivational component of learning, prepares future educators to acquire knowledge independently. It has a positive effect on the development of deep analysis skills, highlighting the kernel of information, seeing the problem and finding the right solutions.
IPST	Inventive problem solving technology develops personal creative abilities (ability to organize information, find contradictions, anticipate consequences, etc.); increases interest in the development of creative abilities, promotes the disappearance of psychological inertia, various kinds of situational and personal factors that impede the development of creativity.
Situational learning technology	The case method develops the ability to implement creative solutions to pedagogical problems; promotes the application of acquired knowledge and experience into practice; implements the principle of co-creation, promotes awareness of the creative essence of the teaching profession, develops communication skills (the ability to present, argue their ideas and assumptions; to debate, respond to criticism, etc.).

Project technology	Project technology helps future teachers to be constantly involved in the creative process, to realize their potential, to evaluate the results of their work. The aforementioned technology promotes the desire for self-improvement of their skills, allows students to engage their creative abilities, improves the skills of individual or group work, the ability to work on themselves, to use time rationally, to plan their activities.
ICT	Information and communication technologies of education increase the cognitive activity of students, produce a creative atmosphere in the classroom, help visually demonstrate examples of creative behavior or creative products of pedagogical activity. The learning process becomes more diverse, interesting, which increases motivation.

4. Results

The next task of our research was to perform pre-experimental measurements. In order to check the effectiveness of the methodology, it was necessary to determine the initial levels of development of pedagogical creativity of future primary school teachers according to the questionnaire and tests specified in the methodological base of the research. The data obtained during this diagnosis are presented in Table. 2.

Table 2. Results of division of future primary school teachers by levels of pedagogical creativity development (pre-experimental measurement)

Criteria	Levels	Pre-experimental measurement (%)	
		CG	EG
Motivational and emotional	High	14.1	12.8
	Average	53.1	61.9
	Low	32.8	53.3
Active	High	18.4	17.5
	Average	54.4	53.9
	Low	27.2	28.6
Cognitive	High	21.2	23.4
	Average	59.7	58.2
	Low	19.1	18.4
Personal	High	25.7	24.8
	Average	57.8	60.4
	Low	16.5	14.8

As we can see, the experiment and the control group are quite similar to the main indicators of pedagogical creativity development. According to the indicators of the motivational and emotional component of pedagogical creativity development, most students showed an average level (53.1% and 61.9% respectively). The low level is found in approximately one third of students: 35.3% of students in the experimental group and 32.8% in the control group. High levels of the motivational and emotional component indicate that these groups are approximately the same: 12.8% of those interviewed in the experimental group and 14.1% in the control group.

According to the indicators of the active component of pedagogical creativity development, both in the experimental and in the control group the highest proportion was made by students with average level (53.9% and 54.4% respectively). 28.6% of future teachers in the experimental group and 27.2% of the control group have a high level of development of the active component. 17.5% – in the experimental group, 18.4% – in the control group of the respondents showed a low level of pedagogical creativity development by the described component.

According to the indicators of the cognitive component of pedagogical creativity development in both groups the high level was 23.4% of the interviewed students in experimental and 21.2% in the control group. The highest proportion – 58.2% in the experimental and 59.7% in the control group - showed students with an average level of formation of this characteristic. The low level of pedagogical creativity development was found in 18.4% of students of experimental group and 19.1% of students of control group.

According to the results of diagnostics of the personal component, it was found that 57.8% in the control, 60.4% in the experimental group of students have an average level of development of pedagogical creativity in the personal component. A low level is observed in 16.5% of control students and 14.8% of the experimental group. A high level is found in about a quarter of students (25.5% in the control group, 24.8% in the experimental group).

Thus, we can conclude that the two groups are approximately the same in division, the students are dominated by the average level of development of pedagogical creativity.

The experiment on the introduction of innovative learning technologies took place in three stages.

The purpose of the initial *value-motivational stage* was to increase the level of pedagogical creativity by the motivational and emotional component. At this stage, preference was given to problem and game

technologies, non-traditional forms of classroom organization were used, namely: problem lecture, problem seminar, lecture-visualization, lecture with predetermined mistakes, round table. The content load of professional disciplines was taken into account for the future teachers' awareness of pedagogical creativity elementary school and its importance in all spheres of professional activity. The result of this stage was: acquainting students with pedagogical creativity, its features, place in the teacher's quality system; readiness for creativity and co-creation; mastering knowledge concerning the relevance of innovative technologies in the future profession; positive attitude of future teachers to the development of pedagogical creativity.

The main *creative and active stage* was aimed at the development of cognitive, personal and active components of pedagogical creativity, so the students were involved in creative and intellectual activity. During this period, preference was given to the technology of situational learning, the solution of inventive tasks, the independent work was enhanced by creative tasks. Upon completion of the main stage, future teachers acquired knowledge concerning the pedagogical creativity, innovative teaching technologies for younger students; motivation to implement a creative approach in future teaching activities has increased.

Reflection and evaluation stage contributed to the awareness of the importance of pedagogical creativity, the desire to develop it in the future, understanding of their own creative potential, consolidation of the acquired knowledge and skills; in this regard, preference was given to project-based learning technology. The implementation of the structural and functional model was carried out on the basis of acmeological, personality-oriented, competence and synergistic approaches, as well as based on general didactic and specific principles.

After the introduction of innovative technologies in the educational disciplines "Theory and methodology of education", "Information technologies of teaching", "Pedagogical technologies in elementary school", repeated measurements were made into the educational process. Their results are shown in Table. 3.

Table 3. Results of division of future primary school teachers by levels of pedagogical creativity development (post-experimental measurement)

Criteria	Levels	Post-experimental measurement (%)	
		CG	EG
Motivational and emotional	High	17.1	33.1
	Average	52.8	45.8

	Low	30.1	21.1
Active	High	24.6	29.6
	Average	51.9	52.1
	Low	23.5	18.3
Cognitive	High	24	28.6
	Average	58.9	59.5
	Low	17.1	11.9
Personal	High	28.2	38.4
	Average	55.7	49.9
	Low	16.1	11.7

Comparison of indicators of table 3 shows that positive changes have occurred in all components of pedagogical creativity development of future primary and secondary school teachers of experimental and control groups. The following changes occurred in the motivational and emotional component in the experimental group: low-level students decreased by 14.2%, high-level students increased by 20.3%, students with average levels decreased by 16.1%. The control group also experienced positive pictures, but not so significant: students with low levels decreased by 2.7%, and with high increases by 3%, respectively, the difference between pre-experimental measurements in the indicators of the average level is 0.3%.

In the indicators of active component in the experimental group we observe the following changes: the number of students with high level increased by 12.1%, students with low level decreased by 10.3%. Average-term indicators decreased by 1.8% due to the transition to a higher level of creativity development. The control group does not observe such significant changes: the number of respondents with a high level increased by 6.2%, with an average – by 2.5%, the number of students with a low level decreased by 3.7%, respectively.

Positive results are observed in indicators of the cognitive component. Thus, in the experimental group, the indicators of high level of development of pedagogical creativity increased by 5.2%, the average by 1.3%, and the low decreased by 11.9%. At the same time, in the control group, the indicators of high levels of formation increased by 2.8%, the average decreased by 0.8% and the low – by 2%.

The analysis of indicators of development of the personal component of pedagogical creativity development of future teachers of the experimental group shows an increase of indicators of high level by 13.6%, low decreased by 3.1%, and average by 10.5% respectively. At the same

time, changes in the high-level indicators increased by 2.5%, the average by 2.1% and the low by 0.4%.

In general, it can be noted that the changes in the control group have occurred, but are not so significant.

The use of innovative pedagogical technologies in the experimental group was, in our opinion, the reason for the increase of indicators of high level of development of pedagogical creativity and transition of students with low level to the group of average level.

To determine whether there are differences in the division of students in the experimental and control groups after the experiment by levels of development of pedagogical creativity, the criterion χ^2 was used. A hypothesis was formulated:

H_0 – the level of development of pedagogical creativity before and after the experiment in the control and experimental group is the same;

H_1 – the level of development of pedagogical creativity after the experiment is higher in the experimental group than in the control group.

The obtained value of $\chi^2_{Emp}=12.2$ is more critical, which for the significance of $p = 0.95$ and the number of degrees of freedom $C=2$ is equal to $\chi^2=5,991$. Therefore, the hypothesis H_0 is rejected, the hypothesis H_1 is accepted. The results of the development of pedagogical creativity after the formative stage of the experiment of the future teachers of elementary school KG and EG are different, the difference between the division is statistically significant. Thus, the introduction of innovative learning technologies into the educational process has given a positive result, the conducted research was effective.

Answering the questions of our research, it was noted:

1. The experimental research confirmed that the strategy of innovative educational technologies is effective in the development of pedagogical creativity of the future elementary school teacher. Innovative learning has several advantages: it encourages students to take initiative, creativity and an active position in all types of learning activities; involves not obtaining, but acquiring, creating, constructing competencies by the student himself, that significantly increases the effectiveness of learning. Innovative learning is focused on the development of each student's personality, the formation of his / her readiness for real life and professional activity, for continuous mastering of new types of activity. Promoting and supporting of student initiative, rethinking the role of the teacher in the learning process, and a high level of student activity are important in the process of innovative learning.

2. Situational learning technology (case method); game technology; design technology; problem-based learning technology; information and communication technologies; inventive problem solving technology, portfolio are the most effective in the process of pedagogical creativity development according to the results of the research.

Situational learning technology is effective because it aims at mastering the skills of solving problematic professional situations, transforming the acquired knowledge into practical pedagogical skills. This technology helps to develop one of the important characteristics of pedagogical creativity for the future specialist – the original solution of pedagogical tasks, and also helps to form readiness for innovation, practical application of information in future pedagogical activity.

Game technologies help to break down psychological barriers that hinder the activation of creativity, create a relaxed atmosphere (or vice versa – an atmosphere of rivalry), promote the development of personal qualities, improve practical professional skills, develop intelligence.

Project technology requires a future teacher to use their own creativity. During the development of the project, the student performs this work creatively, attracts all the acquired abilities and information resources. This technology is creative, because to make a project you need to apply creative methods, the process of working on the project is a creative act, and the finished project is a creative "product".

Problem-based learning technology is an effective tool for developing creativity, as it helps in the learning process to apply the intellectual resources of the future teacher, to acquire knowledge independently, to abandon stereotypes and pattern thinking, enhances the motivational component to learning.

The technology of solving inventive tasks contributes to the formation of systemic, dialogical thinking, the development of creative imagination, ingenuity, intelligence. The techniques used in this technology develop such cognitive and creative abilities as the ability to establish cause-and-effect relationships, draw conclusions, interpret and synthesize information, analyze situations, anticipate consequences, hypothesize, apply new ideas and methods for solving problems in practice.

The method of portfolio helps to track the development of pedagogical creativity, to carry out self-assessment of own achievements, noted positive accents, own achievements, to draw conclusions on the further development of pedagogical creativity. The application of this method helps to activate cognitive activity of students, serves as a means of

additional diagnostics and timely correction of the organization of the experiment. This method is also an effective means of student motivation.

3. Introduction of innovative educational technologies in the process of professional preparation of students of specialty 013 "Primary education" has positively influenced the growth of qualitative indicators of pedagogical creativity development. The most significant changes occurred in the indicators of personal and motivational components. A smaller increase in active and cognitive components is attributable to the limiting factors of the study. Namely, the fact that the experimental work was carried out only during the study of the disciplines "Theory and methodology of education", "Information technology of teaching", "Pedagogical technology in elementary school" in the first and second year of study.

5. Discussion

The main limiting factors of the research are that the experimental work was conducted for first and second year students, as well as during the study of certain disciplines: "Theory and methods of education", "Information technology", "Pedagogical technologies in primary school". Limiting factors of the study are also the heterogeneous level of preparedness of teachers to use innovative learning technologies in the teaching process.

The analysis of the results of the research made it possible to identify the main proposals for public policy in the field of higher pedagogical education. In order to improve the system of training future primary school teachers and develop their pedagogical creativity, we offer:

1. To introduce advanced training courses for teachers of pedagogical institutions of higher education in the field of using innovative teaching technologies and techniques for developing students' creativity, involve leading teachers in conducting master classes at regional and national levels.

2. To create an Internet platform for the exchange of advanced pedagogical experience in the development of pedagogical creativity of future teachers of various specialties, which will be useful for teachers and students. On the basis of the platform to conduct trainings and conferences, to involve foreign specialists in filling the platform.

3. To introduce competitions of pedagogical creativity among teachers in order to stimulate the latter to implement creative pedagogical ideas and improve the educational process in primary school.

6. Conclusions

In today's social context, there is a need to form a new generation of elementary school teachers, namely, professionals with high levels of pedagogical creativity who are able to depart from traditional methods of organizing the educational process. Nowadays, creativity is considered not only as a personal formation but also an important professional quality, which is necessary for a specialist for successful continuous self-development and competitiveness. In this pertinence, there is a need to develop creativity in a professional context.

The search for effective ways of developing pedagogical creativity has made it possible to establish that innovative technologies have a wide potential for the development of pedagogical creativity. The distinguished potential of innovative technologies helps to develop pedagogical creativity more rationally and effectively in the educational process of a higher education institution, to optimally select teaching methods, as well as topics and tasks that should be paid attention in the teaching process for the development of pedagogical creativity of students.

After completing the experimental work, we have identified the following methodological guidelines for the development of pedagogical creativity. It was recommended to: develop the skills of pedagogical improvisation, promote the formation of assertive behavior; to conduct trainings aimed at actualization of creative potential, interactive discussions, round tables, press conferences, joint lessons with teacher-practitioners, pedagogical workshops, competitions of pedagogical creativity, "creative fights"; to use group forms of work, pedagogical cases of different level of complexity; to apply non-traditional forms of organization of educational classes, pedagogical, role-playing games, creative projects (group, individual), method of portfolio; to introduce in the educational process the workbooks from the professional disciplines as a component of educational and methodological support for the development of pedagogical creativity; to organize work of circles, problem groups.

Solving the problem of developing pedagogical creativity of future teachers in the process of research and practical training needs further scientific search.

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