

**PEDAGOGICAL CONDITIONS OF FORMATION OF THE READINESS OF FUTURE MASTERS  
OF PRIMARY EDUCATION FOR INNOVATION ACTIVITY**

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**Abstract**

The article focuses on the importance of pedagogical conditions in forming the readiness of future masters of primary education for innovations in higher education institutions. The purpose of the article is to substantiate and test the pedagogical conditions for forming the readiness of future masters of primary education for *innovation activity* on the basis of generalization of theoretical and practical principles of their professional training. The pedagogical conditions of forming the readiness of future masters of primary education for *innovation activity* in the process of their professional training are substantiated and characterized: the formation in the future masters of primary education values-based attitude to professional activity; activation of positive motivation of graduate students for *innovation activity*, taking into account an innovative educational environment of a higher education institution; substantiation of the content, forms, methods and means of professional training of future masters of primary education for innovations in higher education

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institutions; creative implementation of innovative technologies in the educational process, aimed at forming the readiness of future masters of primary education for innovations. The influence of certain pedagogical conditions on the formation of the readiness of future masters of primary education for *innovation activity* is determined.

**Keywords**

*Innovation Activity* – Vocational Training – Professional Competence

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## Introducción

Today, the improvement of the quality of the professional education of teachers is an important condition for the modernization of education. After all, globalization and the transience of changes in modern society require a new generation of specialists who: are capable of quickly mastering and effectively utilizing the latest advances in science and technology that are constantly and rapidly evolving; are able to solve non-standard problems that arise in the course of their professional activity and improve their professional qualities. The “National Strategy for the Development of Education in Ukraine until 2021” states that the country’s integration into the global educational space requires continuous improvement of the national education system, the search for effective ways to improve its quality, testing and introduction of innovative pedagogical systems, modernization of the content of education and its organization in accordance with global trends and requirements of the labor market<sup>1</sup>.

As practice shows, today a teacher must be able to take into account social changes in a timely manner, be ready to re-orient his own thinking, to realize the new requirements for innovative pedagogical activity.

The strategic directions of innovation transformations in the field of education are defined in the Laws of Ukraine “On education” (2017), “On higher education” (2014), “On *innovation activity*” (2015), National doctrine of the Development of Ukraine’s Education in the 21st Century (2002), National strategy for the development of education in Ukraine for 2012-2021 (2014); Concept of the New Ukrainian school (2016), State standard of primary education (2018), order “On amendments to the regulations on the procedure for the implementation of *innovation activity* in the Ukrainian education system” (2015).

The urgency of the problem under study is due to a number of factors. First, updating the content of education, rethinking of education and upbringing technology. Secondly, the professional functions of the teacher of the New Ukrainian School have substantially expanded. He now must change the approach to learning, to propose a model that will contribute to the development of the competencies required by modern realities. The subject of his professional activity is the upbringing of a school graduate – a personality, an innovator, a patriot – on the bases of an innovative upgrade and a humanistic paradigm. Thirdly, the innovative activity of both elementary school teachers and the teacher of higher education institutions is the continuous improvement of labor, the search for new innovative forms and methods of teaching and education, on which the main directions of modernization of education are oriented; the ability to construct conceptual foundations of pedagogical innovations, which include diagnostics, forecasting, correction and reflection of innovative actions. After all, the future teacher will study the age peculiarities and individual characteristics of the students, the intellectual level of their development, will organize an examination based on his pedagogical work. Fourthly, learning through research should replace the explanatory and illustrative type. Future specialist should involve young people in search activity, learn to observe, experiment, and

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<sup>1</sup> B. V. Kovalchuk y L. O. Kovalchuk, “Pedagogical conditions of introduction of innovative technologies of teaching in high school. Innovative processes and technologies in modern university”. Scientific works collection of the Ukrainian theoretical and practical conference, April 22, Donetsk national university. (Donetsk: DonNU, 2009) y I. M. Vizniuk y A. S. Polishchuk, “The level of psychological resilience of a student in conditions of distance learning”, Insight: the psychological dimensions of society, num 3 (2020): 57-68.

make grounded conclusions. In institutions of higher education, appropriate pedagogical conditions should be created for the training of a competent specialist focused on *innovation activity*, constant professional development, which will ensure in the future a high level of competitiveness, productivity of professional activity and, consequently, career growth and self-realization. Only in the conditions of an innovative educational environment, it is possible to form a teacher-scientist, teacher-researcher, teacher-innovator. At the same time, it becomes important to determine the effective pedagogical conditions for the formation of the readiness of future masters of primary education for *innovation activity* in higher education institutions.

The purpose of the article is to substantiate and test the pedagogical conditions for forming readiness of future masters of primary education for *innovation activity* on the basis of the generalization of theoretical and practical principles of their professional training.

### Tasks of the research

1) To clarify the content of the concept “pedagogical conditions for the formation of the readiness of future masters of primary education for *innovation activity*” and to define them.

2) To develop components, criteria and levels of readiness of future masters of primary education for *innovation activity*.

3) To diagnose the readiness of future masters of primary education for *innovation activity* and to check the effectiveness of pedagogical conditions.

### Methodology and methods

The methodological starting points of our research in the context of Pedagogical Conditions of Formation of the readiness of future masters of primary education for *innovation activity* are an approved methodological complex using psycho-diagnostic tools. This methodology has been tested by researchers in the study of adaptation<sup>2</sup>, anxiety<sup>3</sup>, innovative activity<sup>4</sup>, corporate culture of a higher education institution<sup>5</sup>.

<sup>2</sup> O. Blynova; I. Chervinska; V. Kazibekova; H. Bokshan; S. Yakovleva; O. Zaverukha y I. Popovych, “Social and Psychological Manifestations of Professional Identity Crisis of Labor Migrants”, Revista Inclusiones, Vol: 7 num 3 (2020): 93-105; A. Halian; I. Halian; I. Burlakova; R. Shevchenko; V. Lappo; I. Zhigareno y I. Popovych, “Emotional Intelligence in the Structure of Adaptation Process of Future Healthcare Professionals”, Revista Inclusiones, Vol: 7 num 3 (2020): 447-460 y I. Halian; N. Machynska; S. Lozynska; L. Nos; Yu. Derkach; M. Prots y I. Popovych, “Tolerance of uncertainty as a component of the process of life-creation of future educators”, Revista Inclusiones, Vol: 7 num Especial (2020): 512-528.

<sup>3</sup> O. Kononenko; A. Kononenko; V. Stynska; O. Kachmar; L. Prokopiv; H. Katolyk y I. Popovych, “Research of the factor structure of the model of world view settings at a young age”, Revista Inclusiones, Vol: 7 num 3 (2020): 98-116; K. V. Klenina, “Theoretical and methodological analyzing of content characteristics of an individual’s perfectionism”, Insight: the psychological dimensions of society, num 1 (2019): 84-89 y A. V. Shevchenko, “Research on the correlation between social desirability and value orientations in adolescence”, Insight: the psychological dimensions of society, num 1 (2019): 90-94.

<sup>4</sup> I. M. Halian; O. I. Halian; L. Ye. Gusak; H. I. Bokshan y I. S. Popovych, “Communicative Competence in Training Future Language and Literature Teachers”, Revista Amazonia Investiga, Vol: 9 num 29 (2020): 530-541; I. Popovych; G. Laliuk; M. Aleksieieva; A. Popovych; V. Bondarenko; O. Kovtun y O. Tsiuniak, “Sociocultural metrics of the personal paradigm of orphans’ upbringing in pedagogical theory and practice of Ukraine”, Revista Inclusiones, Vol: 7 num 3 (2020):

All these experimental and empirical studies contained elements of the research of innovative activity.

## Participants

It was examined of the first-fourth year students (n=180, age of 21-25 years) of Vasyl Stefanyk Precarpathian National University (Ivano-Frankivsk, Ukraine). All the student's study at the Faculty of Primary Education and pursue a degree in the areas of study "Masters of Primary Education". Participation in research does not violate rights and does not endanger students' wellbeing. The research is conducted according to ethical standards of committee on the rights of experiments of Helsinki declaration of 2013<sup>6</sup>.

## Organization of research

To solve the problems, the following theoretical methods were used: analysis and systematization of psychological and pedagogical and educational-methodical literature in order to determine the state and theoretical substantiation of the problem of forming the readiness of future masters of primary education for *innovation activity*. Methods of empirical research used in the study: pedagogical observation, interviews, questionnaires, testing, pedagogical experiment (summative and formative assessment) in order to implement pedagogical conditions for the formation of the readiness of future masters of primary education for *innovation activity*.

## Statistical analysis

Statistical processing of the empirical data was performed by means of the statistical program "SPSS" v. 23.0 and "MS Excel". Spearman's correlation coefficients ( $r_s$ ) were used to find and determine the correlation between the indexes obtained; to prove the statistical difference between the groups the criterion  $\varphi$  of Fisher's angle-transformation is applied.

## Results of theoretical research

Integration of Ukrainian pedagogical education into the European and global educational space prompts awareness of the fundamentals of modern professional training of future masters of primary education in higher education institutions. In Article 5 of the Law of Ukraine "On Higher Education" (No. 2233-VIII with amendments from 07.12.2017) the term "Master" is given as the educational and qualification level of higher education of a person who, on the basis of the educational qualification level, obtained a full higher

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343-356 y O. Tsiuniak; A. Pyslar; G. Lialuk; V. Bondarenko; O. Kovtun; O. Los y I. Popovych, "Research of interdependence of variables and factor structure of masters' readiness for innovative pedagogical activity", *Revista Inclusiones*, Vol: 7 num 3 (2020): 427-452.

<sup>5</sup> O. Ye. Blynova y K. O. Kruglov, "The value of social capital for the psychological well-being of employees", *Insight: the psychological dimensions of society*, num 1 (2019): 72-78; O. Blynova; V. Lappo; V. Kalenchuk; O. Agarkov; I. Shramko; L. Lymarenko y I. Popovych, "Corporate Culture of a Higher Education Institution as a Factor in Forming Students' Professional Identity", *Revista Inclusiones*, Vol: 7 num Especial (2020): 481-49 y Ma Feng; R. P. Shevchenko y N. V. Karhina, "Student youth representation of psychological well-being: results of content analysis of works", *Insight: the psychological dimensions of society*, num 3 (2020): 44-55.

<sup>6</sup> WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. (2013).

education, sufficient for performing professional tasks and duties (works) of an innovative nature of a certain level of professional activity, provided for primary positions in a certain type of activity. The master's level of higher education involves gaining by a person of in-depth theoretical and practical knowledge, skills, abilities in the chosen specialty (or specialization), general principles of the methodology of scientific and professional activity, and competences sufficient for the effective performance of tasks of an innovative nature of the corresponding level of professional activity<sup>7</sup>.

The need to update the professional training of future masters of primary education is due not only to the formation of a high level of their professional competence, but also to the formation of readiness for innovation, the introduction and implementation of educational innovations in their own activities. It should be noted that a modern teacher is at the same time a teacher, educator, organizer of activities, an active participant in communication with students, parents, colleagues, researcher of the pedagogical process, consultant, public figure. In the light of the new requirements for a graduate student of higher education, the following qualities should be prioritized: competence, innovation, mobility, individuality, constructiveness.

Competency approach is considered to be the key innovative idea of modern education. Experts of the European Union define the concept of competence as “the ability to apply knowledge and skills”, which ensures the active use of learning achievements in new situations. In the UNESCO publications, the concept of competence is interpreted as a combination of knowledge, skills, values and attitudes applicable in everyday life. At the international conference held with the participation of UNESCO, the Ministry of Education of Norway (Department of Technical Education and Training) in 2004, there was agreement in the interpretation of the concept of competence as: the ability to apply knowledge and skills effectively and creatively in interpersonal relationships – situations that provide interaction with other people in the social context as well as in professional situations. Competence is a concept logically derived from attitudes to values, and from skills to knowledge. The consideration of the concept of “competence” by the International Commission of the Council of Europe, which formulated a list of key competencies using a logically defined series: to study – to seek – to think – to cooperate – to act – to adapt is characterized by a thorough scientific approach<sup>8</sup>.

In higher education, the transition to a competent approach, according to the unanimous opinion of scholars and practitioners, means the reorientation from the process to the result of education in the activity dimension, consideration of this result in view of the needs of society, ensuring the capacity of the graduate of higher education institution to meet the new demands of the labor market, have the appropriate potential for practical solutions to life problems. In this regard, it is worthwhile to talk about the new role of the teacher – not as the only mentor and source of knowledge, but as a coach, facilitator, tutor, moderator in the individual educational trajectory of the child<sup>9</sup>.

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<sup>7</sup> Concept of the New Ukrainian School. (Kyiv: Osvita. 2017).

<sup>8</sup> J. Spector y T. I. Michaeldele, “ERIC Clearinghouse on Information and Technology in Syracuse NY”. Competencies for Online Teaching. ERIC Digest. Competence, Competencies and Certification, (2018): 1.

<sup>9</sup> N. O. Razina, “Academic approach to the development of professionalism of a modern teacher in the innovative educational environment of high school”, Herald of the Academic School of Teachers, num 3 (2009): 34-43.

The concept of “*innovation activity*” has been actively used since the 1970’s. First it was used with regard to economic science, and then to other spheres of human life. Its interpretation is not limited only to the narrow meaning associated with the concept of “the creation, implementation and dissemination of the new”. It has a number of additional shades, in particular: the *innovation activity* is characterized by the integrity, magnitude, globalization of the innovation being introduced; *innovation activity* must have a permanent, inexhaustible updates and transformations; *innovation activity* is an evolutionary process in a particular industry, since the creation of a new one is always based on a certain foundation that was in practice. It should be noted that the features of the concept of “innovative activity” are revealed not only through the aspects of updating the traditional system of learning, but through the characteristic of the individual style of the activity of the innovator. A teacher who is prepared for innovation professional activity has the following professional and personal qualities: awareness of the goals of educational activity in the context of pressing pedagogical problems; pedagogical position, comprehended in the context of the present, ability to formulate the educational goals of the subject, a certain methodology in a new way, to achieve and optimally rethink them during the study, the ability to build a coherent educational curriculum of education and training that takes into account an individual approach to children, educational standards, new pedagogical guidelines; skillful combination by a teacher of modern reality with the requirements of personality-oriented education, adjustment of educational process according to criteria of *innovation activity*, ability to see individual abilities of children and to teach in accordance with their features; ability to productively organize the educational process, ensuring the development of creativity of students through the use of innovative technologies; ability to use forms and methods of innovative learning, which involves taking into account the personal experience and motives of the pupils; ability to analyze changes in educational activities. Readiness for innovative pedagogical activity is a special personal condition, which involves the presence of a teacher’s motivation-value relation to professional activity, possession of effective means and ways of achieving pedagogical goals, ability to creativity and reflection<sup>10</sup>.

I. Dychkivska suggests to define readiness for innovative pedagogical activity according to the following indicators: awareness of the need for the introduction of pedagogical innovations at the level of their own pedagogical practice; awareness of the latest pedagogical technologies, knowledge of innovative methods of work; orientation on creation of own creative tasks, methods, carrying out of experimental work; readiness to overcome the difficulties associated with the content and organization of innovation activities; possession of practical skills in the development of pedagogical innovations and the creation of new ones<sup>11</sup>. The research on formation of professional readiness of future preschool teachers for pedagogical creativity is of great interest, it was established that the readiness of future preschool teachers for pedagogical creativity depends on professional motivation, development of such qualities of the personality as initiative, activity, creativity, mobility, openness to everything new. In the course of the study, it was proved that the innovative acmesynergetic learning technologies aimed at creating creativity, creative competence, professional creative thinking, pedagogical technique, updating the

<sup>10</sup> B. V. Kovalchuk y L. O. Kovalchuk, “Pedagogical conditions... y N. Machynska, Pedagogical education of undergraduates of higher educational institutions of non-pedagogical profile (Lviv: LSUIA, 2013).

<sup>11</sup> I. M. Dychkivska, Innovative pedagogical technologies (Kyiv: Akademvydav, 2012) y V. Styns’ka, “Social and Pedagogical Support for Maternity and Childhood in Ukraine (the 20<sup>th</sup> – early 21<sup>st</sup> centuries). (Ivano-Frankivs’k: Suprun VP. 2018).

intellectual and creative potential of future specialists in preschool education have the greatest influence on the development of pedagogical creativity of future preschool teachers<sup>12</sup>.

Summarizing the results of the analysis of scientific literature, under the pedagogical conditions, in the context of our study, we understand the combination of external and internal circumstances, the introduction of which in the process of professional training of future masters of elementary education will ensure the effective formation of a high level of professional competence necessary for innovation.

It should be noted that the main pedagogical conditions of forming the readiness of future masters of primary education for *innovation activity* are: formation in the future masters of primary education of values-based attitude to professional activity; activation in masters of positive motivation to *innovation activity*, that is, understanding of the necessity of using innovative ideas, innovative methods and technologies of training, the desire to succeed in innovation activities, etc., taking into account the innovative educational environment of the higher education institution (availability of appropriate material and educational-methodical basis, reflection of ideas on the use of pedagogical innovations in the teaching methodology of educational disciplines, etc.), substantiation of the content, forms, methods and means of professional training of future masters of primary education for innovation activities in higher education institutions; creative implementation in the educational process of innovative technologies, aimed at forming the readiness of future masters of primary education for innovation.

The professional training of future masters of primary education for innovation should begin with the formation of their values-based attitudes to their future professional activities, the presence of appropriate motives, individual personal and socio-cultural factors, the development of personal and scientific and pedagogical outlook, the proficiency in scientific and innovative methods, the awareness of their professional uniqueness, the desire to transfer experience to others, the ability to integrate scientific knowledge, the working knowledge of one foreign language at least, the participation in international research projects, the purpose of which is a comprehensive and thorough understanding of the educational experience and best practices in the field of European integration studies in Ukraine. The appropriate conditions for the training of a competent specialist focused on innovation, ongoing professional development, which will ensure a high level of competitiveness, professional productivity and, as a result, career growth and self-realization, should be created in all institutions of higher education<sup>13</sup>.

In addition to their willingness and desire to introduce innovations, the participants of the innovation process must be properly qualified to exercise their responsibilities fully, meet the social expectations and queries of today<sup>14</sup>.

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<sup>12</sup> S. M. Havryliuk; S. I. Semchuk; S. S. Popychenko; A. M. Zalizniak y O. V. Loiuk, "Formation of professional readiness of future preschool teachers for pedagogical creativity", *Astra Salvensis*, Vol: 1 num Supplement (2019): 335-353.

<sup>13</sup> M. Diachenko-Bohun; N. Hrytsai; M. Grynova; I. Grygus y W. Zukow, "The readiness formation of future biology teachers for healthcare-safety technologies realization in professional activity", *Education and Information Technologies*, num 24 (2019): 679-691.

<sup>14</sup> I. S. Popovych, *Psychological dimensions of social expectations of personality* (Kherson: KTPH, 2017).



## The results of empirical research

The theoretical analysis of the problem under study<sup>15</sup> allowed us to identify the following main components of the readiness of future masters of primary education for innovation: the value component (system of values), the motivational component (motivation for professional activity), and the personal component (ability for creative self-development).

The value orientation system is the criterion of the value component. As you know, the orientation of modern pedagogical education to the education of professionals requires not only thorough professional training, but also a broad outlook, professional thinking, high education, individual awareness of the importance of human and pedagogical values. In our opinion, the significance of forming a value orientation system in future masters of primary education is due to the fact that they are an example for learners, students, colleagues, a model of high intellectual, spiritual and aesthetic and moral perfection. We used the method of “Value Orientations” (according to M. Rokych), which is based on a direct ranking of the list of values: terminal and instrumental, to define the indicator “value orientations”.

The motivation to professional activity is the criterion of the motivational component. The professional motives of future masters of primary education are understood as the conscious inner impulses that encourage them to active professional activity and attentive attitude to their professional duties. It is important that such motives as a sense of professional and civic duty, awareness of the high mission of the teacher, possession of competencies should prevail at the very beginning of the educational process of masters of primary education. Professionally significant qualities, such as creative thinking (developed pedagogical thinking; independent thinking; critical thinking; creativity, observation); communicative qualities (sociability, communicability; culture of professional behavior, information culture; pedagogical tact and tolerance) expressive qualities (emotional and volitional stability; optimism, emotional susceptibility, endurance, self-control), organizational skills (responsibility, exactingness, initiative, accurateness, diligence, firmness) personality-pedagogical self-control (self-discipline, self-criticism, objective self-assessment), are necessary for the successful forming of readiness of future masters of primary education to innovate. We used the method of “Motivation of professional activity” (K. Zamfir in the modification of A. Rean).

The next component of the readiness of future masters of primary education to innovate is the personal component, the criterion of which is the ability to creative self-development. An effective solution to educational tasks depends on the level of development of abilities, which subsequently will be used in future professional activities. Therefore, it is understandable that the training of future masters of elementary education for innovation activities is impossible without mastering the abilities that are the key to successful professional activities. Each future master of primary education must develop abilities, manage personal development and improvement of others, provide the prospect of internal growth, creatively approach the solution of complex professional situations and demonstrate the ability to act not on a model, but in an original way, provide novelty in making decisions, and be able to realize his/her creative potential. We used the method of “The ability of the teacher to creative self-development” (I. Nikishyna) to determine the abilities of future masters of primary education to creative self-development.

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<sup>15</sup> M. Diachenko-Bohun; N. Hrytsai; M. Grynova; I. Grygus y W. Zukow, “The readiness...  
DR. IHOR POPOVYCH / PH. D. (C) OKSANA TSIUNIYAK / DR. NATALIA MACHYNSKA / PH. D. HALYNA BOKSHAN  
PH. D. MARIYA ALEKSIEIEVA / PH. D. (C) OKSANA LOS / DR. LEILA SULTANOVA

The analysis of scientific and pedagogical research, own observations allow us to determine two levels of professional culture: sufficient and high.

Our sample group (the required number of masters for the experiment) consisted of the master's students at the pedagogical faculty of Vasyl Stefanyk Precarpathian National University. To achieve the reliability of the research results, we determined the minimum required number of masters involved in the pilot study. Before the beginning of the questionnaire, we divided master's students into two groups – Control (CG) and Experimental (EG).

The results of the ascertaining stage of the pedagogical experiment allowed us to make a general conclusion that there is a need to improve the level of readiness of future masters of primary education for innovative activities. According to the results of the ascertaining experiment, we determined two levels of readiness: sufficient and high (see Tabl. 1).

Groups of master's students	Levels	Criteria					
		System of value orientations		Motivation for professional activity		Ability to creative self-development	
		number	%	number	%	number	%
CG, n <sub>1</sub> =92	High	38.0	41.3	63.0	68.5	23.0	25.0
	Sufficient	54.0	58.7	29.0	31.5	69.0	75.0
Total		92.0	100.0	92.0	100.0	92.0	100,0
EG, n <sub>2</sub> =88	High	58.0	65.9	63.0	71.6	65.0	73.9
	Sufficient	30.0	34.1	25.0	28.4	23.0	26.1
Total		88.0	100.0	88.0	100.0	88.0	100.0

Note: CG – control group, EG – experimental group.

Table 1

General characteristics of readiness levels of future Masters of Primary Education (CG and EG) to innovation at the stage of the ascertaining experiment

Thus, the majority of master's students are aware of the need to develop professional competence, which will contribute to the formation of readiness for innovative activities. However, the current state of the organization of the educational process in higher education institutions is not yet aimed at systematic work on the formation of readiness for innovative activities. Therefore, there is a need to create pedagogical conditions that ensure this process. So, the analysis of the problem allowed us to determine the main stages of the forming experiment.

The main stages of the forming experiment were: prognostic, organizational and practical. The prognostic stage involved a theoretical justification of the orientation of the educational process towards forming the readiness of future masters of primary education for innovative activities at graduate determining and coordination of scientific approaches to the organization of the educational process, familiarization with the forms of training sessions and teaching methods. At the organizational stage we mainly focused on the substantiation and selection of the appropriate logistical and methodological support of the experiment. The practical stage of the forming experiment was carried out on the basis of the developed educational-methodical complex, which involved the personality-oriented forms of teaching of theoretical material (lecture-discussion, lecture-press conference, lecture-dialogue) practical classes in which innovative teaching methods were introduced (Seneca's method, a specific situation method, a case study method, a brainstorming

method, a method of creating a situation of interest), independent work (preparation of multimedia presentations, diverse types of scientific papers, etc.). Problem pedagogical situations were solved, and psychological and pedagogical trainings were used at this stage.

A special course of “Fundamentals of innovation activities of future masters of primary education” have been proposed. We consider it expedient for future masters to study such pedagogical issues as: “The essence of *innovation activity*”, “Components, criteria and readiness levels of future masters of primary education for *innovation activity*”, “Pedagogical conditions for the development of innovative activity for future masters of primary education in institutions of higher education” “Pedagogical practice as a means of the formation of readiness of future masters of primary education to innovate”.

It should be noted that after the forming experiment, the number of complete answers on the definition of the essence of the concept of “*innovation activity*” has significantly increased, which indicates the correctness of the tools chosen for the experiment, methods and methodological practices that influence the formation of readiness of future masters of primary education to *innovation activity*.

The results of the forming stage of the pedagogical experiment are presented in Table 2.

Groups of master's students	Levels	Criteria					
		System of value orientations		Motivation for professional activity		Ability to creative self-development	
		number	%	number	%	number	%
CG, n <sub>1</sub> =92	High	43.0	46.7	71.0	77.2	13.0	14.1
	Sufficient	49.0	53.3	21.0	22.8	79.0	85.9
Total		92.0	100.0	92.0	100.0	92.0	100.0
EG, n <sub>2</sub> =88	High	69.0	78.4	82.0	93.2	81.0	92.0
	Sufficient	19.0	21.6	6.0	6.8	7.0	8.0
Total		88.0	100.0	88.0	100.0	88.0	100.0

Note: CG – control group; EG – experimental group.

Table 2

General characteristics of readiness levels of future Masters of Primary Education (CG and EG) to innovation at the stage of the forming experiment

Analysis of the results of the forming experiment showed that in the experimental group compared with the ascertaining experiment, the number of future masters of primary education with a high level of value orientations significantly increased from 58 (65.9%) to 69 (78.4%) people. The number of master's students with a sufficient level decreased from 30 (34.1%) to 19 (21.6%) persons. The number of master's students with a high level of professional motivation increased from 63 (71.6%) to 82 (93.2%) undergraduates. The number of master's students with a sufficient level decreased from 25 (28.4%) to 6 (6.8%) students. The number of master's students with a high level of creative self-development abilities increased from 65 (73.9%) to 81 (92.0%); with a sufficient level decreased, respectively, from 23 (26.1%) to 7 (8.0%) persons.

We used the Fisher multifunctional criterion to compare the final results of the identified levels of formation of the professional culture of future masters of primary education. Thus, the indicators  $\phi_{emp}$  ( $p < .05$ ) of a sufficient and high levels of the system

of value orientations, motivation for professional activity, abilities for creative self-development of the experimental group after the forming experiment are respectively  $\varphi_{emp.} = 2.94; 3.95; 3.31$ , which is more than the critical value ( $\varphi_{critical} = 2.31$ ) of the level of statistical significance adopted in the psychology.

This allows us to conclude that the effectiveness of the proposed pedagogical conditions has been proved experimentally, since as a result of the conducted pedagogical research, there have been significant changes in the levels of readiness of future masters of primary education for innovative activities.

On this basis, we can conclude that the pedagogical conditions of this process can be considered the basis for the formation of readiness of future masters of primary education for innovation. Most future masters of primary education are aware of the need to develop their own professional competence.

## Conclusions

Pedagogical conditions are defined as a set of external and internal circumstances, the introduction of which in the process of professional training of future masters of primary education will ensure the effective formation of a high level of professional competence necessary for the implementation of innovative activities. The main pedagogical conditions for the formation of the readiness of future masters of primary education for innovation are: the creation of their value attitudes to their future professional activities; the presence of positive motivation for innovation, that is, an understanding of the need to use innovative ideas, innovative methods and technologies of training, the desire to succeed in innovation, etc.; the consideration of the innovative educational environment of the institution of higher education (the presence of an appropriate material and educational base, the realization of ideas on the use of pedagogical innovations in the teaching of academic disciplines, etc.); the justification of the content, forms, methods and means of training of future masters of primary education for innovative activities in institutions of higher education; the creative implementation of innovative technologies aimed at forming the readiness of future masters of primary education to innovate in the educational process.

Prospects for further research in this area are seen in the development of innovative methods for the efficient implementation of certain pedagogical conditions.

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