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## MONITORING OF FUTURE PRESCHOOL TEACHERS' READINESS FOR INNOVATIVE ACTIVITY

Abstract

Modernization of the education system presupposes the process of introducing innovations and the teacher is the main figure in any transformations. The innovative activity of any educational institution, including preschool organizations, is directly related to the teacher's readiness to develop and implement pedagogical innovations in the educational process. Based on the psychological—pedagogical literature review, the definitions of innovative activity, the readiness of future teachers of preschool teachers for innovative activities are presented; its structure is developed as an integrative characteristic of the personality of teachers, including motivational, cognitive and activity—based components, and the levels of teachers' readiness for innovative

activity. The developed diagnostic tools (criteria, levels and diagnostic techniques) were tested in practice in order to identify the levels of readiness for innovative activity among preschool teachers of the initial stage of education.

**Keywords:** pedagogical innovations, innovative activity, future preschool teachers, readiness, components, levels, diagnostics.

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### МОНИТОРИНГ ГОТОВНОСТИ БУДУЩИХ ПЕДАГОГОВ ДОШКОЛЬНОГО ОБРАЗОВАНИЯ К ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ

#### Аннотация

Модернизация системы образования предполагает процесс внедрения инноваций, а педагог является главным действующим лицом любых преобразований. Инновационная деятельность любого образовательного учреждения, в том числе и дошкольных организаций непосредственно связана с готовностью педагога к разработке и внедрению педагогических нововведений в учебно-воспитательный процесс. В данной статье, на основе анализа психолого-педагогической литературы, представлены определения инновационной деятельности, готовности будущих педагогов дошкольных организаций к инновационной деятельности, разработана ее структура как интегративной характеристики личности педагогов, включающей мотивационный, когнитивный и деятельностный компоненты, а также определены и описаны уровни сформированности готовности педагогов к инновационной деятельности. Разработанный диагностический инструментарий (критерии, уровни и диагностические методики) апробировались в практической деятельности с целью выявления уровня сформированности готовности к инновационной деятельности у педагогов дошкольной ступени образования.

**Ключевые слова:** педагогические инновации, инновационная деятельность, будущие педагоги дошкольного образования, готовность, компоненты, уровни, диагностика.

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# МЕКТЕПКЕ ДЕЙІНГІ БІЛІМ БЕРУДІҢ БОЛАШАҚ ПЕДАГОГТАРЫНЫҢ ИННОВАЦИЯЛЫҚ ҚЫЗМЕТКЕ ДАЙЫНДЫҒЫНЫҢ МОНИТОРИНГІ

#### Андатпа

Білім беру жүйесін модернизациялау инновацияларды енгізу процесін қамтиды, ал мұғалім кез-келген қайта құрудың басты кейіпкері болып табылады. Кез-келген білім беру мекемесінің, оның ішінде мектепке дейінгі ұйымдардың инновациялық қызметі мұғалімнің оқу-тәрбие процесіне педагогикалық жаңалықтарды әзірлеуге және енгізуге дайындығымен тікелей байланысты. Бұл мақалада психологиялық-педагогикалық әдебиеттерді талдау негізінде инновациялық қызметтің анықтамалары, мектепке дейінгі ұйымдардың болашақ мұғалімдерінің инновацияға дайындығы ұсынылған, оның құрылымы мотивациялық, танымдық және белсенділік компоненттерін қамтитын мұғалімдердің жеке басының интегративті сипаттамасы ретінде жасалынған, сонымен қатар мұғалімдердің инновациялық қызметке дайындығының қалыптасу деңгейлері анықталған және сипатталған. Әзірленген диагностикалық құралдар (критерийлер, деңгейлер және диагностикалық әдістер) мектепке дейінгі білім беру сатысының мұғалімдерінде инновациялық қызметке дайындықтың қалыптасу деңгейін анықтау мақсатында практикалық қызметте сыналды.

**Түйін сөздер**: педагогикалық инновациялар, инновациялық қызмет, мектепке дейінгі білім берудің болашақ педагогтары, дайындық, компоненттер, деңгейлер, диагностика

**Introduction.** At the beginning of the XXI century, impressive changes are taking place in the Kazakhstani's education system, which entailed significant innovative processes that determined the active participation of teachers in them. Today, the key feature of a modern school is teachers who are open to everything new. Society and the circumstances of life in recent years (problems of Covid-19) impose new requirements on a graduate of a pedagogical university, a future teacher, leading to a revision of the directions, conditions and methods of teaching that determine the development of personality and innovative abilities of a modern specialist. Under the influence of innovative processes, not only individual components of education change, such as goals, content, methods and technologies of teaching, but, above all, the teacher himself. The modern teacher is constantly in a non–stop mode of "innovative search" associated with changing approaches to the construction of the educational process. According to V.A. Slastenin and L.S. Podymova, it is innovation activity, being a socio–pedagogical phenomenon, that is the most important feature of pedagogical work and characterizes the complex essential relationship of the teacher's general culture, his creative potential and professional orientation [1].

The analysis of scientific literature suggests that, in general, the development of innovative activity of teachers is one of the most significant and strategic directions in education. Innovative activity in modern conditions is the subject of research interest of many scientists. The scientific and pedagogical literature reflects various directions of research of innovative activity: the features of this activity as creative are considered in the works of V.I. Zagvyazinsky, A.K. Markova, N.D. N.N. Nikitina, N.R. Yusufbekova [2-5]. Of particular importance for our research are the works [6–10] on the problems of the organization of innovative activity of the teacher in the conditions of educational institution (G.T. Musabekova, others; K.Yu. Belaya; M.B. Balikaeva; A.V. Khutorskoy).

Despite the variety of theoretical studies, the problem of scientific and methodological substantiation in the process of forming teachers' readiness for innovation in preschool conditions remains insufficiently developed. The formation of readiness for innovative activity, especially in the conditions of preschool pedagogical education, is not sufficiently reflected in previous works and has not been included in the target settings of future teacher training process.

Our study of the existing experience of the readiness of future teachers to innovate in preschool conditions led us to the conclusion that graduates of pedagogical universities, for the most part, do not always have professional training for active participation in innovation processes.

Hence, the topicality of our article is due to the contradiction between the need of a modern school for a teacher able of implementing innovative educational activities, and the lack of development of organizational and pedagogical conditions for scientific and methodological support of the process of forming the readiness of primary school teachers for innovation.

The revealed contradiction caused the problem statement: "Monitoring of future preschool teachers' readiness for innovative activity".

The purpose of the article is to provide theoretical justification and testing of organizational-pedagogical conditions for the development of future preschool teachers' readiness for innovative activity.

In accordance with the set purpose, the following objectives were identified:

- 1. Determine the structure of the teacher's readiness for innovation.
- 2. Develop structural and substantive conditions for the development of the readiness of future preschool teachers for innovative activity.
- 3. To identify and scientifically substantiate the criteria and indicators of the future preschool teachers' readiness for innovation.

**Material and methods.** In scientific literature, the concept of "innovation" originated at the end of the nineteenth century in the studies of culturologists who used it to designate introducing elements of one culture into others. Innovative pedagogical processes they became the subject of special research in the late 50-s of the last century. The concept of "innovation" means not only the creation of something new, but also characterizes the rethinking of the teacher's own activity. Translated from Latin, innovation means change, renewal.

Innovations can be presented in the form of:

- absolute novelty (absence of analogues and prototypes in this field);
- relative novelty (making some changes to existing practice).

The following types of innovations in the field of education are distinguished in the pedagogical literature: the first type is innovations that occur largely spontaneously, without taking into account the generating need itself or without realizing the conditions, means and ways of implementing the innovation process. These innovations are carried out at the empirical level, under the influence of situational requirements, are not always associated with the completeness of scientific justification. An example of this type of innovation is the activity of advanced teachers, enthusiastic teachers, who have implemented numerous innovative processes in education. The second type is innovations in the education system, consciously, purposefully developed by teachers—innovators, teachers—researchers who are inclined to constant study, analysis of the facts of pedagogical reality.

Correlating the concept of "innovation" with the pedagogical process, the term innovation means the introduction of fundamentally new goals, content, methods and forms of educational activity. V.S. Lazarev emphasizes that innovation in pedagogy is "an innovation carried out at three levels: firstly, innovations affect changes in the entire education system and lead to a change in its paradigm, and secondly, innovations are aimed at changing a specific educational institution and, thirdly, innovations are aimed at changing or creating new forms, methods and means used in educational activities" [11].

In modern pedagogical research (V.A. Slastenin, L.S. Podymova), innovative activity is considered as "a purposeful pedagogical activity based on understanding (reflection) of one's own practical pedagogical experience by comparing and studying, changing and developing the educational process in order to achieve better results, gain new knowledge, and qualitatively different pedagogical practice" [1].

V.A. Slastenin and L.S. Podymova [1], distinguish the following main components of innovative activity:

- *motivational* (acquisition by the subject-teacher of an adequate personal meaning of professional activity in the system of other types);
- creative (development of activity from imitation-copying through creative imitation and imitative creativity to genuine creativity);
- operational (includes familiarization with the innovation, making a decision on the use of the new, introducing innovations into the educational process, monitoring and evaluation of the results of the work done):
  - reflexive (cognition and analysis of professional activity) [1].

So, we define *the innovative activity* as a set of procedures and means by which pedagogical innovations are mastered by the pedagogical community and effectively used in practice on a scientific basis.

One of the most important theoretical and methodological issues of studying innovative processes in modern education is the issue of the teacher as a subject of innovation and its organizer, since the innovative activity of an educational institution is directly related to the *teacher's readiness* to develop and implement pedagogical innovations in the educational process.

The teacher's readiness to innovative activity entails a desire for novelty and a constant search for perfect ways of working. At the same time, the teacher should form a positive perception of innovations and develop the ability to act in a new way.

By the readiness to innovative activity, S.B. Kulikov understands "the inner strength that forms the innovative position of a teacher. Readiness to innovative activity is a prerequisite for the effective activity of a teacher, the maximum realization of his abilities, the disclosure of creative potential". [12].

The teacher's readiness to innovative activity includes *personal qualities* (striving for creative achievements, initiative, efficiency in creative activities, etc.) and *special qualities* (knowledge of current teaching techniques, knowledge of modern pedagogical tools, the ability to develop innovations, the ability to analyze and identify the causes of shortcomings).

K.Y. Belaya in the structure of the teacher's readiness for innovative activity includes such components as: *motivational* (the presence of a motive for the inclusion of a teacher in innovative activity), *cognitive* (knowledge of modern educational techniques and requirements for the outcomes of educational activity, knowledge of pedagogical tools, as well as knowledge of ways to solve problems of innovative activity that should be mastered by the teacher) [8].

V.S. Lazarev [11] identifies the following components of a teacher's readiness for innovation:

The first component of a teacher's readiness for innovative activity is the presence of a motive for inclusion in this activity. Any specialist in his professional activity will be able to achieve ever higher levels of skill, only by changing, only by mastering new ways of activity and solving more and more complex problems.

*The second component* of the readiness under consideration is a set of knowledge about modern requirements for learning outcomes, use of innovative pedagogical techniques and ICT.

The third component of a teacher's readiness for innovation is a set of knowledge and methods that the teacher possesses, i.e. competence in the field of pedagogical innovation. A teacher who is well prepared for innovation:

- knows a complex of concepts of pedagogical innovation;
- understands the place and role of innovation activity in an educational institution, its connection with educational activity;
  - knows the main approaches to the development of pedagogical systems of the school;
  - − is able to study the experience of innovative teachers;
  - is able to critically analyze pedagogical systems, curricula, technologies and didactic teaching tools;
  - is able to develop and justify innovative proposals for improving the educational process;
  - is able to develop projects for the introduction of innovations;
  - knows how to set goals for experimental work and plan it;
  - is able to analyze and evaluate the school's innovation system;
  - is able to analyze and evaluate himself as a subject of innovative activity [11].

Thus, literature review and the analysis of a number of psychological-pedagogical studies allows us to conclude that the teacher's readiness for innovative activity can be defined as an integrative personal manifestation, including knowledge of the methodology, theory and practice of pedagogical innovation, determination of optimal levels, criteria and components of innovative pedagogical activity, assessment of their own abilities to achieve high results of professional activity.

**Research result.** After analyzing psychological-pedagogical theory and practice, we have identified the main criteria and levels of the teacher's readiness for innovative activity. By *level* we mean the measure of quantitative and qualitative manifestations of all signs of readiness.

- 1) **Motivational criterion** of the teacher's readiness for innovative activity is manifested in the teacher's awareness of the need to update the ways and means of carrying out pedagogical activity and focus on creative self–realization in professional activity. In addition, the motivational component includes the need for intellectual self–development and self-expression, and personal and professional growth in order to achieve success; a need in the creative transformation of the educational process and to systematically increase its efficiency in terms of cooperation with creatively working teachers; an interest in finding new ways and means of development of student's personality, as well as increasing his interest in educational activities; interest in the use and creation of individual educational innovations.
- 2) **Cognitive criterion** of the teacher's readiness for innovative activity is determined by the level of the teacher's general ideas about innovation activity, knowledge of the features of innovation activity; knowledge of modern technologies, methods, diagnostic techniques and tools for researching the results of their own innovation activity. That is, in other words, the cognitive component includes knowledge about the essence and specifics of innovations, their types and features; knowledge about the essence of pedagogical project-based learning and the logic of constructing its stages, integration and transformation of own and others' teaching experience, knowledge of ways to design new educational outcomes.
- 3) **Activity–based criterion** of the teacher's readiness for innovative activity is determined by problem-solving of pedagogical situations in an original way; the ability to create a new, author's educational product and also conduct research activities.

In addition to the selected components, we identified the levels (*high, average, low*) of future preschool teachers' readiness for innovative activity, which are presented in Table 1.

The levels of future preschool teachers' readiness for innovative activity

Table 1

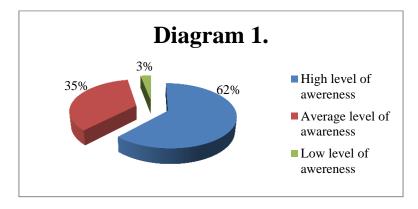
Criteria	The levels of readiness for innovative activity of future preschool teachers		
Motivational	High	Average	Low
	possession of high moti-	there is not a steady	lack of cognitive interest,
	vation, fluency and crea-	interest in innovative	unstable interest in inno-
	tive use of knowledge	activity, there is not a	vative activity, lack of
	about innovative techno-	fully formed system of	need for the development
	logies, the presence of	knowledge about inno-	and implementation of
	creative activity in the	vative technologies in	innovations, there are no

	teacher, cognitive inte-	the chosen specialty and	clearly formed goals of
	rest; the need to develop	own innovative poten-	their own innovative
	and implement innova-	tial; unsystematic imple-	activity; there is no
	tions; goals settings of	mentation of innovative	receptivity to innova-
	one's own innovative	activity, insufficiently	tions, a fragmented sys-
	activity; the presence of	expressed individual	tem of knowledge about
	a high level of recepti-	style of innovative acti-	innovative techno-logies
	vity to innovations; the	vety of the teacher,	and their own innovative
	desire to participate in	understanding of the	potential; there is no
	the creation, implement-	need to participate in the	desire to participate in
	tation and dissemination	creation, implementation	the creation, imple-men-
	of pedagogical innova-	and dissemination of	tation and dissemination
	tions.	pedagogical innovations.	of pedagogical inno-
			vations, elements of an
			individual style of acti-
			vity are poorly present in
			the work.
Cognitive	knowledge of the goals	a general idea of the	there is no general idea
_	and objectives of the	goals and objectives of	of the goals and ob-
	Concept of preschool	the Concept of preschool	jectives of the Concept
	education development,	education development,	of preschool education
	forms and methods of	forms and methods of	development, forms and
	work aimed at imple-	work aimed at imple-	methods of work aimed
	menting the Concept of	menting the Concept of	at implementing the
	preschool education de-	preschool education de-	Concept of preschool
	veloppment.	velopment.	education development.
Activity-based	the presence of con-	the partial presence of	constructive and design
	structive and design	constructive and design	skills are very poorly
	skills, organization, kno-	skills, weak organization,	expressed, disorgani-
	wledge and skills to	insufficient knowledge	zation, inability to apply
	apply in practice inno-	and skills to apply in	in practice innovative
	vative forms and me-	practice innovative for-	forms and methods of
	thods of professional	ms and methods of	professional activity ai-
	activity aimed at solving	professional activity ai-	med at solving the
	the problems of the	med at solving the	problems of the Concept
	Concept of preschool	problems of the Concept	of preschool education
	education development.	of preschool education	development.
		development.	

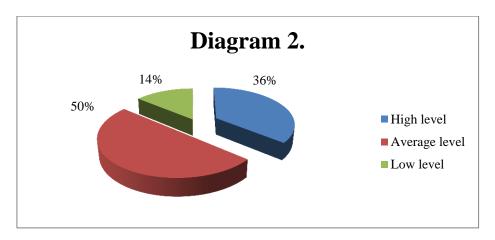
Thus, the system of components and levels of readiness and the possibility of the teacher's participation in innovative activities presented by us includes: a personal attitude to innovations introduced in a preschool organization, their own role in their development, susceptibility to innovations.

**Discussion.** Based on the above literature review, as well as the need for the innovative activities' development of the preschool organization, we carried out a diagnosis of the teaching staff's readiness for innovative activities. The purpose of this diagnosis was to determine the degree of teachers' awareness about the innovations implemented in the preschool educational organization. To identify the attitude of preschool teachers to innovative activities as a component of their professionalism, a questionnaire was carried out. 24 teachers took part in the survey.

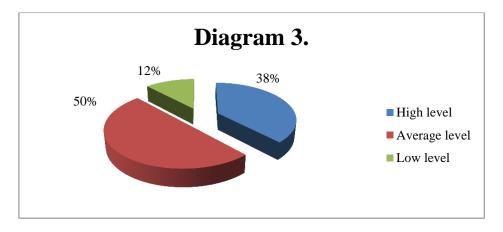
Analysis of the results of this diagnosis represented that 62% of teachers showed a high level of awareness of teachers about the innovations implemented in this preschool educational organization; the acceptable level of teachers' awareness of innovations was shown by 35% of teachers; the low level of teachers' awareness of innovations was shown by 3% of teachers (diagram 1).



Also, diagnostics of the teaching staff was carried out in order to determine the degree of readiness of the teaching staff for innovative activities. It follows from the diagnostic results that 36% of teachers who participated in the survey showed readiness at a high level. 50% of the teaching staff has an average level of readiness for innovation. 14% of teachers have a low readiness to innovative activities (diagram 2).



The next criterion that has been evaluated is creativity. Creativity in 50% of teachers is at an average level. 38% of the teaching staff assess themselves as highly creative individuals, 12% of the teaching staff consider themselves non–creative individuals (diagram 3).



Thus, based on the analysis of the results of the diagnosis, it can be concluded that the teaching staff of the preschool institution is well aware of the innovations introduced by the educational organization and has a positive attitude towards them. However, the readiness of educators to participate in innovative activities is at an average level. This can be due to the insufficiently high self-esteem of teachers' professional abilities for innovation, which is expressed in low self-confidence, efficiency in creative activity, as well as inability to plan an experimental work.

In general, the data obtained during the diagnostics indicate a positive dynamics of the level of readiness for innovative activity of preschool organizations' teachers in compliance with the organizational–pedagogical conditions identified by us.

**Conclusion.** Based on the materials obtained in the course of theoretical research and diagnostic work, we came to the following conclusions:

- 1) The innovative activity is a set of procedures and means by which pedagogical innovations are mastered by the pedagogical community and effectively used in practice on a scientific basis.
- 2) The teacher's readiness for innovative activity can be defined as an integrative personal manifestation, including knowledge of the methodology, theory and practice of pedagogical innovation, determination of optimal levels, criteria and components of innovative pedagogical activity, assessment of their own abilities to achieve high results of professional activity.
- 3) The structure and content of the readiness of future teachers for innovative activity as a complex psychological–pedagogical system is characterized by the unity of content components: motivational, cognitive and activity–based. The parameters of the structure and content of the future teacher's readiness for innovative activity include the following levels: high, average and low.
- 4) The purpose of the article was achieved, a comparative analysis was carried out and the levels of readiness for innovative activity of preschool teachers were determined.

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## ЖОҒАРЫ ДЕҢГЕЙДЕГІ ОЙЛАУ ҚАБІЛЕТТЕРІН ҚАЛЫПТАСТЫРУДА БІЛІМ АЛУШЫЛАРДЫҢ ЭЛЕКТРОНДЫҚ ОҚЫТУ МОДЕЛІН ҚОЛДАНУ МҮМКІНДІКТЕРІ

#### Аңдатпа

Бұл мақалада білім алушылардың ХХІ ғасырдағы оқыту жүйесінде өзекті болып табылатын жоғары ретті ойлау дағдыларын және цифрлық құзыреттілікті электронды оқыту моделі арқылы жүзеге асыру мүмкіндіктері қарастырылады. Жоғары деңгейдегі ойлау қабілеттерін дамытуға негізделген білім алушылардың өзіндік әрекетке дайындығының моделін, өз бетінше танымдық іс-әрекетті бақылау жүйесін, танымдық белсенділікті қалыптастыруды бағалау критерийлерін, сонымен қатар тұлғаның әртүрлі іс-әрекеттерге дайындығын қалыптастыру мәселелерін ұсынылады. Электронды оқыту циклінің оқыту моделін жүзеге асыруда түрлі гаджеттерді қолдану білім алушылардың жоғары деңгейлі ойлау дағдыларын дамытуға айтарлықтай әсер ететіндігі зерттеу нәтижесі арқылы талданады. Сонымен қатар, электронды оқыту моделінің, соның ішінде білім беру платформаларын пайдалану білім алушылардың қызығушылығын арттырудағы оңтайлы әсері, электронды оқыту моделінің кезеңдерінде білім алушылардың үлгерімін жақсарту, оқу іс-шараларын әзірлеу, оқытуды бағалау және ілгерілету үшін жүйелі мүмкіндік беретіндігі талқыланады.

**Түйін сөздер:** Электрондық білім беру моделі, жоғары деңгейдегі ойлау қабілеті, логикалық ойлау, геймификация, цифрлық құзыреттілік