

Мандаева Айжан Ерикбаевна\* – докторант, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000 г. Павлодар, улица Олжабай батыра 60, тел.: +77054646811, e-mail: [mandaeva.aizhan@gmail.com](mailto:mandaeva.aizhan@gmail.com), ORCID: <https://orcid.org/0009-0003-0972-3360>.

Аплашова Арна Жартаевна – кандидат психологических наук, профессор, Торайгыров университет, Республика Казахстан, 140000 г. Павлодар, улица Ломова 64, e-mail: [aplashova.arna@mail.ru](mailto:aplashova.arna@mail.ru), ORCID: <https://orcid.org/0000-0002-5736-6199>.

Нурғалиева Акмарал Кажмуратовна – кандидат педагогических наук, ассоциированный профессор высшей школы педагогики, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000 г. Павлодар, улица Олжабай батыра 60, e-mail: [aknurgalieva@mail.ru](mailto:aknurgalieva@mail.ru), ORCID: <https://orcid.org/0009-0004-0707-0017>.

Жанатова Гульмира Аманғалиевна – PhD, преподаватель-эксперт высшей школы педагогики, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000 г. Павлодар, улица Олжабай батыра 60, e-mail: [Suleimenova\\_gulmira@teachers.ppu.edu.kz](mailto:Suleimenova_gulmira@teachers.ppu.edu.kz), ORCID: <https://orcid.org/0000-0003-1597-8186>.

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### INNOVATIVE SYSTEM OF TEACHER TRAINING AS A CONDITION FOR EFFECTIVE SUPPORT FOR GIFTED CHILDREN IN KAZAKHSTAN

Matayev B.A.\* – PhD, Associate Professor of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Pavlodar, Republic of Kazakhstan.

Mukhametkairov A.Y. – Master of Pedagogical Sciences, Lecturer of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Pavlodar, Republic of Kazakhstan.

Makhmetova N.K. – Master of Pedagogical Sciences, Senior Lecturer of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Pavlodar, Republic of Kazakhstan.

Utegenova M.S. – PhD, Senior Lecturer of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Pavlodar, Republic of Kazakhstan.

The relevance of this research lies in the growing importance of effectively supporting gifted children in Kazakhstan. Professional teacher education in this field requires the integration of innovative approaches that meet current needs and global competition, emphasizing the development of unique human capital essential for national progress. This study aims to substantiate the need to create an innovative system for training pedagogical personnel to work with gifted children in Kazakhstan. The research objectives included defining key concepts and principles, analyzing international experience, assessing the effectiveness of teacher training and psychological-pedagogical support for gifted children, and developing an optimal model of an innovative training system with criteria for selecting and evaluating professional competencies. A comprehensive methodology combining theoretical and empirical methods was applied. The research revealed that the current system of teacher training in Kazakhstan cannot ensure the required competencies for working with gifted children, mainly due to insufficient professional training and the lack of specialized innovative programs in higher education. The research findings confirm the need to transit toward an innovative model of teacher education focused on developing specific competencies required for supporting gifted learners. A professional development model was designed, along with criteria for teacher selection and evaluation. This research expands knowledge in gifted education by emphasizing the creation of an effective innovative system for teacher training. Its practical significance lies in the potential use of the results and recommendations by educational authorities and pedagogical universities in developing and implementing new programs.

**Key words:** gifted children, psychological and pedagogical support, teacher training, innovative system, teachers, students.

### ҚАЗАҚСТАНДА ДАРЫНДЫ БАЛАЛАРДЫ ТИІМДІ ҚОЛДАУДЫҢ ШАРТЫ РЕТІНДЕ ПЕДАГОГ МАМАНДАРЫН ДАЯРЛАУДЫҢ ИННОВАЦИЯЛЫҚ ЖҮЙЕСІ

Матаев Б.А.\* – философия докторы (PhD), педагогика жоғары мектебінің қауымдастырылған профессоры, Ә.Марғұлан атындағы Павлодар педагогикалық университеті, Павлодар қ., Қазақстан Республикасы.

Мухаметкаиров А.Е. – педагогика ғылымдарының магистрі, педагогика жоғары мектебінің оқытушысы, Ә.Марғұлан атындағы Павлодар педагогикалық университеті, Павлодар қ., Қазақстан Республикасы.

Махметова Н.К. – педагогика ғылымдарының магистрі, педагогика жоғары мектебінің аға оқытушысы, Ә.Марғұлан атындағы Павлодар педагогикалық университеті, Павлодар қ., Қазақстан Республикасы.

Утегенова М.С. – философия докторы (PhD), педагогика жоғары мектебінің аға оқытушысы, Ә.Марғұлан атындағы Павлодар педагогикалық университеті, Павлодар қ., Қазақстан Республикасы.

Зерттеу тақырыбының өзектілігі Қазақстандағы дарынды балаларды тиімді қолдау мәселелерінің барған сайын маңызды бола түсуімен айқындалады. Осыған байланысты бұл бағыттағы кәсіби педагогикалық білім беру жүйесіне заманауи инновациялық тәсілдерді енгізу қажеттігі туындап отыр. Бұл елдің бірегей адами капиталын дамытуға бағытталған өзекті қажеттіліктер мен бәсекелестік талаптарымен түсіндіріледі. Зерттеу жұмысының мақсаты – Қазақстан Республикасында дарынды балалармен жұмыс істейтін педагог кадрларды даярлаудың инновациялық жүйесін құрудың қажеттілігін ғылыми тұрғыда негіздеу болып табылады. Зерттеудің негізгі міндеттеріне келесілер кіреді: негізгі ұғымдар мен тұжырымдарды анықтау; педагогтарды даярлаудың халықаралық тәжірибесін талдау; педагогикалық кадрларды даярлау мен дарынды балаларға психологиялық-педагогикалық қолдау көрсету тиімділігін бағалау; педагогтарды даярлаудың инновациялық жүйесінің оңтайлы моделін, сондай-ақ кәсіби құзыреттілікті іріктеу және бағалау критерийлерін әзірлеу. Қойылған міндеттерді шешу үшін теориялық және эмпирикалық әдістерді қамтитын кешенді әдіснама қолданылды. Зерттеу нәтижелері көрсеткендей, Қазақстандағы қазіргі педагогтарды даярлау жүйесі дарынды балалармен жұмыс істеуге қажетті құзыреттер деңгейін қамтамасыз етпейді. Бұл педагогтардың дайындық деңгейінің төмендігімен және жоғары оқу орындарында мамандандырылған инновациялық бағдарламалардың жеткіліксіздігімен байланысты. Алынған нәтижелер педагогтарды даярлаудың инновациялық моделіне көшудің қажеттілігін дәлелдейді. Мұндай модель дарынды балалармен жұмыс істеуге бағытталған ерекше кәсіби құзыреттерді дамытуға негізделуі тиіс. Зерттеу барысында педагогтардың біліктілігін арттырудың үлгісі әзірленіп, олардың іріктеу мен бағалау критерийлері ұсынылды. Бұл жұмыс дарындылық мәселесі жөніндегі ғылыми білімді кеңейтіп, дарынды балалармен жұмыс істейтін педагогтарды даярлаудың тиімді инновациялық жүйесін қалыптастыруға назар аударады. Зерттеудің практикалық маңызы зор, өйткені оның нәтижелері мен ұсыныстарын білім беру саласын басқару органдары мен педагогикалық жоғары оқу орындары жаңа білім беру бағдарламаларын әзірлеу және енгізу барысында пайдалана алады.

**Түйінді сөздер:** дарынды балалар, психологиялық-педагогикалық қолдау, педагогтарды даярлау, инновациялық жүйе, педагогтар, студенттер..

#### ИННОВАЦИОННАЯ СИСТЕМА ПОДГОТОВКИ ПЕДАГОГОВ КАК УСЛОВИЕ ЭФФЕКТИВНОГО СОПРОВОЖДЕНИЯ ОДАРЁННЫХ ДЕТЕЙ В КАЗАХСТАНЕ

Матаев Б.А.\* – доктор философии (PhD), ассоциированный профессор высшей школы педагогики, Павлодарский педагогический университет им. Ә. Марғұлан, г. Павлодар, Республика Казахстан.

Мухаметкаиров А.Е. – магистр педагогических наук, преподаватель высшей школы педагогики, Павлодарский педагогический университет имени Ә. Марғұлан, г. Павлодар, Республика Казахстан.

Махметова Н.К. – магистр педагогических наук, старший преподаватель высшей школы педагогики, Павлодарский педагогический университет имени Ә. Марғұлан, г. Павлодар, Республика Казахстан.

Утегенова М.С. – доктор философии (PhD), старший преподаватель высшей школы педагогики, Павлодарский педагогический университет имени Ә. Марғұлан, г. Павлодар, Республика Казахстан.

Актуальность темы исследования заключается в том, что вопросы эффективного сопровождения одарённых детей в Казахстане приобретают всё большую значимость. В этой связи профессиональное педагогическое образование в данной области требует внедрения современных инновационных подходов, что обусловлено актуальными потребностями и вызовами конкуренции, направленными на развитие уникального человеческого капитала, необходимого стране. Настоящее исследование проведено с целью обоснования необходимости создания инновационной системы подготовки педагогических кадров для работы с одарёнными детьми в Республике Казахстан. Основные задачи исследования включали: определение ключевых понятий и положений, анализ международного опыта подготовки педагогов, оценку эффективности подготовки педагогических кадров и организации психолого-педагогического сопровождения одарённых детей, разработку оптимальной модели инновационной системы подготовки педагогов, а также критериев

*отбора и оценки профессиональных компетенций. Для решения поставленных задач была использована комплексная методология, включающая как теоретические, так и эмпирические методы. В ходе исследования установлено, что существующая система подготовки педагогов в Казахстане не обеспечивает необходимого уровня компетенций для работы с одарёнными детьми. Это связано с низким уровнем подготовки педагогов и недостатком специализированных инновационных программ в системе высшего образования. Полученные результаты подтверждают необходимость перехода к инновационной модели подготовки педагогов, ориентированной на развитие специфических компетенций, необходимых для работы с одарёнными детьми. В рамках исследования была разработана модель повышения квалификации педагогов и предложены критерии их отбора и оценки. Настоящая работа расширяет знания в области одарённости, акцентируя внимание на создании эффективной инновационной системы подготовки педагогов для работы с одарёнными детьми. Исследование имеет практическую значимость, так как его результаты и рекомендации могут быть использованы государственными органами управления образованием и педагогическими вузами при разработке и внедрении новых образовательных программ.*

**Ключевые слова:** одарённые дети, психолого-педагогическое сопровождение, подготовка педагогов, инновационная система, педагоги, студенты.

**Introduction.** The effectiveness of teacher training in the context of psychological and pedagogical support for gifted children in the modern development of the Republic of Kazakhstan is becoming increasingly important. In this regard, the introduction of innovative approaches to professional teacher education is driven by the need to meet the high standards of both the national and international education systems, as well as modern competitive challenges.

The relevance of the research topic lies in the fact that the role of teachers is not only to impart knowledge to gifted children in educational subjects established by state standards, but also to form and develop competencies in them that meet the requirements of modern society. The relevance is also determined by the fact that there is an insufficient methodological and technical level of organization of the educational process, as well as low qualifications of specialists in the field of working with gifted children, which creates risks of losing the unique human capital necessary for the development of each country. Educational institutions are in dire need of teachers who are able to create a comfortable educational environment that promotes the development of creative potential and talents, especially in children with pronounced giftedness.

The problem with this research is that many teachers face practical problems due to insufficient professional competence in teaching academic subjects, the psychology of gifted children, the diagnosis of abilities and motivation, and the design of individual development trajectories for gifted children. These problems can only be solved by creating a specialized system for training and retraining teaching staff that is highly flexible and innovative, which will make it possible to effectively solve the tasks facing the education system in the context of working with gifted children.

**The aim of this research** is to substantiate the urgency of establishing a novel, forward-thinking framework for the professional preparation of educators in Kazakhstan, tailored specifically to meet the educational needs of gifted students. Additionally, the study seeks to formulate strategic recommendations for effectively supporting the academic and developmental pathways of exceptionally talented learners.

To realize this aim, the investigation sets out the following **specific objectives**:

1. To clarify and reinterpret key theoretical constructs and foundational principles within the disciplines of pedagogy and the psychology of giftedness.
2. To explore and synthesize global best practices in the training of educators for gifted education.
3. To critically assess the current innovative teacher preparation approaches in Kazakhstan and to analyze the practical outcomes of pedagogical support mechanisms implemented for gifted children.
4. To design a refined conceptual model for progressive teacher education, accompanied by a clear framework for selecting and appraising teacher competencies required for working with high-potential learners.

Despite the rising importance of specialized educator training systems to support gifted students in Kazakhstan, scholarly attention to this particular domain remains limited. Existing academic discourse predominantly concentrates on general pedagogical and psychological themes, offering minimal insight into the specific instructional strategies necessary for gifted education. Consequently, detailed methods and adaptable practices suitable for the national context are insufficiently explored, and there is a noticeable absence of empirical studies validating the effectiveness of the proposed educational innovations.

Meanwhile, international experience demonstrates successful examples of building innovative teacher training systems, such as the Teacher of the Future project in Finland, the Talents of Great Britain program, and the Talent Development system in the United States. At the same time, domestic research is aimed at adapting global practices to Kazakhstani conditions, but this issue remains understudied and requires more detailed study.

The practical significance of the study lies in the fact that the results and recommendations obtained can be used in the practical activities of relevant ministries and pedagogical universities. They can also serve as a basis for further improvement of innovative training and retraining programs for modern teaching staff, which is an important step in improving the quality of education and working effectively with gifted children.

**Materials and methods.** The study was conducted comprehensively using various scientific methods in accordance with the aims and objectives of this research. Both theoretical and empirical methods were used to achieve the set goals.

The theoretical analysis of scientific literature was carried out using methods of synthesis, analysis, systematization, and generalization of theoretical material. The research materials included scientific works by domestic and foreign authors related to teaching gifted schoolchildren, pedagogical psychology, and the theory of educating gifted children, as well as scientific and other publications in the field of innovative approaches used in teacher training. This approach is aimed at identifying the key concepts, provisions, and practices necessary for the development of an innovative system for training teaching staff that will contribute to improving the psychological and pedagogical support of gifted children.

Empirical methods were used to assess the current state of professional training of teachers at pedagogical universities and teachers working with gifted children. One such method was a questionnaire survey.

The first study was aimed at evaluating an innovative system for training teaching staff to work with gifted children. For this purpose, a questionnaire was compiled, including the following questions:

1. How satisfied are you with the current system of training teachers to work with gifted children?
2. Do you feel the need to introduce an innovative system of training teachers focused on working with gifted children?
3. Assess your own level of training in working with gifted children.
4. How often do you encounter difficulties in working with gifted children due to insufficient training?
5. Would you like to improve your qualifications or undergo additional training in working with gifted children?

The survey was conducted among future teachers (40 people), current teachers (20 people), and heads of educational institutions (20 people). A total of 80 people were surveyed.

The second study was aimed at assessing the effectiveness of psychological and pedagogical support for gifted children in Kazakhstan.

The survey participants were: parents of gifted children (20 people), teachers (20 people), and heads of educational institutions (20 people).

Survey Prompts:

- To what extent are you satisfied with the qualifications of educators at your institution regarding their ability to assist gifted learners?
- Do instructors possess adequate preparation for engaging with high-ability students?
- During your university education, were you (as a teacher) introduced to specialized strategies for nurturing gifted individuals?
- What are the primary challenges encountered in working with gifted students?
- What actions should be prioritized to enhance the success of support systems for talented learners?

The modeling techniques employed are focused on constructing an ideal framework for a next-generation teacher education system tailored to the needs of gifted students. This structure is being devised through the integration of theoretical insights and lessons drawn from both global and local educational practices. The modeling process also seeks to define standards for identifying and assessing the essential skill sets of prospective educators working with gifted youth, while simultaneously generating actionable guidelines for structuring the professional development process within teacher education programs.

Mathematical statistics methods are used for statistical processing of the empirical data obtained. Regression analysis is used to assess the impact of such independent variables as "level of teacher training" and "satisfaction with the quality of support" on the dependent variable "desire to introduce an innovative training system" (InnovationNeed).

Analytical methods are used to draw conclusions and develop recommendations.

**Results and Discussions.** An analysis of psychological and pedagogical literature highlights various approaches to understanding the term "giftedness." Some of these are presented in the methodological recommendations "Gifted Children: Problems of Identification, Development, and Psychological and Pedagogical Support in the General Education System." In particular, giftedness is viewed as an individual's general ability; as a concept associated with the high development of intellectual and special abilities; as a manifestation of natural predispositions that serve as the basis for abilities; as a unique combination of abilities that ensures success in a specific activity; as a reflection of the internal resources of the personality that are important for high achievements; as an integrated personality trait manifested in creative activity; as a creative beginning and individual characteristics of a personality [1].

Psychological encyclopedias offer various definitions of giftedness, for example, T. Weyns, F. Preckel, [2], as well as domestic authors such as E. Kuznetsova [3] and A. V. Kandaur [4]. In their works, giftedness is viewed as a unique combination of abilities that determines the success of actions; as a general ability that expands a person's capabilities in various types of activities; and as a characteristic associated exclusively with intelligence.

Some scientists, such as J. VanTassel-Baska, consider giftedness to be innate natural predispositions [5], while others, such as M. Wellisch, define it through the concept of talent, as the presence of internal potential for exceptional success [6].

Based on various approaches, a comprehensive definition of giftedness in children can be formulated as a complex phenomenon that includes unique abilities, talents, internal predispositions, and creative potential that enable a child to achieve outstanding results in a chosen field of activity.

According to R. Renati, include curiosity, a high level of interest in a specific type of activity, hypersensitivity, self-discipline, and the ability to self-learn [7]. A number of factors influence the development of giftedness in children, such as personal qualities, family influence, and relationships with adults, as noted by M.A. Zanetti and F. Sangiuliano Intra [8].

Psychological and pedagogical support for gifted children in the educational process is understood as a system of activities aimed at creating conditions of a socio-psychological nature that ensure successful learning, socialization, adaptation of the child, and his or her further development [9].

D. Papadopoulos highlights that the educator assumes a central position in the developmental support of gifted learners. The teacher's responsibilities encompass a variety of roles: encouraging students to engage in intellectually stimulating activities; collaborating with families to exchange insights regarding the child's traits and progress; coordinating efforts among fellow educators involved in the student's educational journey; fostering a relationship of mutual trust with the learner; crafting personalized academic trajectories aligned with the student's interests and aptitudes; and organizing supplemental learning opportunities beyond the standard curriculum, with consideration for the learner's psychological profile [10].

Such a multifaceted pedagogical approach to guiding gifted students is also observable within Kazakhstan's educational landscape. L. Iskakova notes the applicability of these practices in the national context [11], a point reinforced by the implementation of a specialized educational framework for working with gifted children [12].

Globally, innovative strategies in preparing teachers for gifted education have been deemed essential. Back in 1991, the IX World Conference on Gifted and Talented Children identified this concern as a strategic priority for the evolution of teacher education. Later, the 5th European Council for High Ability (ECHA) Conference formally established a conceptual foundation that combined research and practice to enhance teacher preparation for gifted education [13].

This paradigm draws upon earlier scholarly contributions. For example, K. Daniel, in his work *Teaching Gifted Children*, asserts that such students require targeted, stimulating educational interventions. He contends that the most effective educators for gifted learners are those who teach with energy and adaptability, successfully inspiring motivation [14]. Similarly, E. Garzón Artacho observes that, in contrast to their peers, gifted learners often need intensified support during instruction, which underscores the necessity for educators with advanced professional expertise in this domain [15].

The main international approaches and experiences in innovative training of teachers to work with gifted children have been identified.

In the United States, universities have introduced targeted graduate-level programs designed to equip educators with expertise in recognizing and nurturing the potential of gifted learners. These advanced academic tracks are tailored to prepare professionals capable of identifying exceptional abilities and fostering the intellectual growth of high-achieving students. Institutions such as the National Center for Gifted Children, along with other affiliated bodies, provide specialized virtual training modules and professional development workshops. These resources enable educators to acquire cutting-edge methodologies and tools specifically developed for the instruction and support of gifted youth [16].

In the UK, as noted by F. Young, a national policy of personal support for gifted children is being actively implemented. It is based on the creation of personalized learning plans for such children. To implement this policy, the professional development programs for English teachers include courses aimed at creating inclusive educational spaces that promote creativity and motivation among students. All courses are based on a differentiated approach and the use of modern digital technologies [17].

In Germany, training for teachers working with gifted children focuses on the creation of special regional networks that provide regular professional training and consultation with experienced experts. There are also specialized resource centers that provide teachers with the necessary recommendations and materials. State educational strategies implemented in Germany in this area play an important role in integrating teachers into the system of supplementary education. In Finland, there are national programs that provide mandatory courses for teachers on the diagnosis and psychology of giftedness. An important aspect is the constant updating of teaching methods for gifted children, which are adapted both to the needs of these students and to new innovative technologies [18].

The experience of China is worth noting separately, where the authorities are actively implementing large-scale projects to develop talent among Chinese children and young people. To this end, state universities train highly qualified teachers with special knowledge in the field of assessment and support for gifted children. Chinese universities also implement internship programs for teachers in other countries, which provides an opportunity to learn from the best global practices [19].

The results of the assessment of the innovative system for training teaching staff to work with gifted children are shown in Table 1.

*Table 1. – Indicators for evaluating the innovative system of teacher training for working with gifted children*

Questions	Answer option	Students - future teachers n=40	Current teachers n=20	Supervisors n=20
The level of satisfaction with the existing teacher training system for working with gifted children	I'm completely satisfied	15%	10%	5%
	There are some disadvantages	40%	50%	50%
	The system requires major improvements.	45%	40%	45%
The need to introduce an innovative teacher training system for working with gifted children	An innovative system is necessary	80%	85%	90%
	It can wait for a while	15%	10%	5%
	Nothing to change	5%	5%	5%
The level of innovative university training for working with gifted children	High	20%	30%	35%
	Medium	50%	50%	45%
	Low	30%	20%	20%
Difficulties in working with gifted children due to a lack of acquired innovative competencies?	Regularly	40%	35%	30%
	Sometimes	45%	50%	50%
	There are practically no difficulties	15%	15%	20%
Do teachers need special training or advanced training in working with gifted children?	Not really	85%	80%	85%
	Answer option	15%	20%	15%

The findings reveal a pressing demand for a transformation of the current educator preparation framework and the implementation of a forward-looking instructional model. A significant portion of participants emphasized numerous shortcomings in the present approach to teacher education concerning the instruction and guidance of gifted students. Respondents also highlighted the necessity for professional development in contemporary methodologies and innovative tools specifically tailored to effectively teach and support high-ability learners.

The results of the evaluation of the effectiveness of pedagogical support for gifted children in the real practice of Kazakhstan are shown in Table 2.

*Table 2. – Indicators of the effectiveness of psychological and pedagogical support for gifted children in real practice in Kazakhstan are shown*

Question	Answer option	Parents (N=20)	Teachers (N=20)	Managers (N=20)
The degree of satisfaction with the competencies of teachers in support	Highly satisfied	10%	15%	20%
	Average satisfaction	40%	45%	50%
	Discontent	50%	40%	30%
The availability of teacher training for the work of accompanying gifted children	Preparation is sufficient	15%	20%	25%
	We are not prepared enough	55%	60%	55%
	No training at all	30%	20%	20%
Mastering support methods in universities	Received	10%	15%	20%
	Have not received similar training	60%	65%	55%
	Limited training	30%	20%	25%

Continuation of Table 2

The main problems when interacting with gifted children	Difficulties in diagnosing abilities	35%	40%	45%
	Difficulties in selecting individual techniques	40%	45%	40%
	The problem of shortage of resources and conditions	25%	15%	15%
Suggestions for improving support for gifted children	Professional development of teachers	60%	65%	70%
	Increased funding for education	25%	20%	20%
	Organization of specialized classes	15%	15%	10%

Most survey participants are dissatisfied with the current level of teacher training in supporting gifted children. Among the main difficulties are the lack of diagnostic tools and the complexity of selecting appropriate methods for each child individually. Respondents emphasize the importance of regular teacher training and the creation of specialized classes and centers to support gifted children.

Logistic regression results. The categorical data obtained above are converted into numerical form:

Teacher training level (Preparation Level): High = 2; Average = 1; Low = 0

Satisfaction with the quality of support (Satisfaction): Satisfied = 2; Moderately satisfied = 1; Dissatisfied = 0

Desire to introduce an innovative training system (Innovation Need): Yes = 1; No = 0.

The logistic regression model takes the following form:

$$\ln(p/(1-p)) = \beta_0 + \beta_1 \text{PreparationLevel} + \beta_2 \cdot \text{Satisfaction} \ln(1-p) = \beta_0 + \beta_1 \cdot \text{PreparationLevel} + \beta_2 \cdot \text{Satisfaction}$$

Satisfaction

Where:  $pp$  is the probability of the desire to introduce an innovative training system (Innovation Need),  $\beta_0$ ,  $\beta_1$ ,  $\beta_2$  are regression coefficients.

The following coefficients were obtained:  $\beta_0 = -1.5$ ;  $\beta_1 = 0.8$ ;  $\beta_2 = 0.6$ .

We determine how the probability of "desire to introduce an innovative system" changes:

Calculation of probability using the example of teachers with an "average" level of preparation (Preparation Level=1) and an average level of satisfaction with the quality of support (Satisfaction=1).

$p = e^{-0.11} + e^{-0.1} \approx 0.475$ . The probability that this teacher will want to introduce an innovative system is approximately 47.5%.

Using the example of managers with a high level of preparation (Preparation Level=2) and high satisfaction (Satisfaction=2).

$p = e^{1.1} + e^{1.2} = 2.7181 + 2.718 \approx 0.731$ . The probability that a manager with a high level of preparation and high satisfaction will want to introduce an innovative system is approximately 73.1%.

The positive coefficients  $\beta_1$  and  $\beta_2$  obtained mean that an increase in the level of preparation and satisfaction increases the probability of a desire to introduce an innovative system. The value of the coefficients determines the strength of the influence: the greater the absolute value of the coefficient, the stronger the influence of the corresponding factor. Thus, it has been established that the higher the level of training and satisfaction, the more positive the intention to transition to innovative forms of working with gifted children.

A model of an innovative system for training teachers to work with gifted children, which provides for the implementation of a comprehensive and phased strategy for its development and covers various areas of professional training and advanced training. Components of the model: Basic teacher training program; Professional retraining and advanced training; Individualized teacher training program; Creation of consultation and resource centers; Monitoring and evaluation of teacher performance; Criteria for selecting and evaluating the competencies of teachers working with gifted children.

The basic teacher training program is based on the idea that teacher training universities should offer specialization in working with gifted children as part of their bachelor's and master's degree programs. It includes modules on the psychology of giftedness, methodologies for working with gifted children, and psychological and pedagogical tools for assessing giftedness. It should combine theory and practice and include internships at specialized centers and schools with programs for working with gifted children.

Professional retraining and advanced training provides for the continuing education of teachers with their mandatory participation in specially implemented training sessions, webinars, and advanced training courses every 2–3 years. Teachers are provided with access to international distance learning programs.

An individually-oriented teacher training program should be conducted depending on the teacher's experience, job profile, and level of proficiency in working with gifted children. As part of this program,

teachers receive personalized training plans for developing their competencies based on feedback from experts and self-assessment of their competencies.

The creation of consultation and resource centers for working with gifted children will serve as platforms where teachers can receive advice and improve their qualifications. Such centers should be equipped with special equipment and tools that can be used to assess their capabilities and support gifted children.

Scientific and practical communities and projects should be formed as freely operating groups of teachers and researchers who jointly solve problems related to the diagnosis and support of gifted children. Projects initiated by teacher training centers should be supported by the state in the form of grants for scientific and practical research.

An annual review of teacher performance should be conducted with the participation of independent specialists to ensure objective assessment. Additionally, it is essential to implement a certification process verifying educators' alignment with established competency standards for working with gifted learners.

The following benchmarks should guide the selection and evaluation of educators qualified to support high-ability students:

1. Educational Background: A foundational degree in education, along with the successful completion of a specialized training course focused on the instruction and development of gifted children.

2. Professional Skill Set: Demonstrated proficiency in identifying gifted traits through diagnostic methodologies. Key support capabilities must include: the ability to lead developmental and corrective sessions tailored to gifted students; expertise in planning personalized educational paths; and consistent integration of advanced instructional technologies within the learning environment.

3. Ethical standards and values: respect for the dignity of the child; acceptance of humanistic values; ability to establish friendly and constructive relationships with the child's family; ability for self-improvement and reflection; active participation in experience exchange events; willingness to improve one's methods.

4. Organizational and communication skills: control, leadership, and management of a group of children; building dialogue with students, families, and administrators.

5. Psychological stability and a high level of stress resistance.

#### Discussion

The findings reflect broader trends prevalent within Kazakhstan's educational landscape and underscore the urgency of reforming the existing teacher preparation framework for engaging gifted learners. The research revealed that the current model for educator development fails to equip teachers with the essential skill set required to effectively support high-potential students. Notably, a considerable portion of participants across various respondent groups expressed dissatisfaction with the current training approach—up to 45% identified significant deficiencies within the system.

As for the inadequacy of teacher training, only a small proportion of teachers have sufficient training to work with gifted children (only 25%). The rest experience significant difficulties in understanding and applying methodologies, which negatively affects the effectiveness of their work with such children. Most teachers and administrators support the need to introduce innovative approaches, citing support for the idea of innovative training systems (85%–90%). This confirms the existence of an acute demand for innovative approaches that could eliminate current problems. Approximately half of teachers reported difficulties in working with gifted children due to their lack of innovative competencies. Teachers most often encounter difficulties in diagnosing abilities and selecting individual methods, which indicates the need to improve their qualifications.

Many respondents (65%–70%) suggested improving teachers' qualifications as the main way to solve existing problems. In addition, they emphasized the need to increase funding for education and organize specialized classes for gifted children. When analyzing the role of university training, only 20% of teachers reported receiving adequate training at universities, which indicates shortcomings in the content of educational programs at higher educational institutions. The data obtained also confirmed problems that are not unique to Kazakhstan, such as low satisfaction with the quality of teacher training and a lack of methodological resources for supporting gifted children.

It is worth noting that similar problems have been raised repeatedly by other authors, which allows us to compare our results with the conclusions of previous studies. The inadequacy of teacher training was noted in the works of A. Mambetalina [20] and L. Iskakova [11, p. 759], who also pointed out similar problems in the teacher training system, emphasizing the need to involve highly qualified specialists in the diagnosis and support of gifted children. The need to introduce innovative approaches is confirmed by international experience and the conclusions of researchers from the UK and the US [16 p. 810; 17, p. 12], who noted the advantages of innovative teacher training programs and proposed including modules on the diagnosis and support of gifted children in university education programs.

The results of our surveys are consistent with research conducted in China and Japan [18, p. 1158; 19, p. 14], where difficulties were also identified among teachers in diagnosing and selecting individual methods for gifted children. This underscores the global nature of the problem and the need for international exchange of experience.



Thus, the conducted research has shown that the existing system of teacher preparation needs to be changed. Our findings, along with the results of other authors, converge on the point that the current teacher preparation system requires innovative approaches. In our opinion, the optimal way forward is to transition to an innovative model of teacher preparation, which includes specialized programs in universities, regular professional development, the creation of consultative-resource centers, and the implementation of modern methods for working with gifted children.

**Conclusion.** The research has addressed all the set tasks, which allowed us to determine that the existing teacher preparation system does not provide the necessary level of competence for working with gifted children. The main reasons identified are the low level of teacher competence and the lack of innovative, specialized training programs in universities.

The results of the study confirm the need to transition to an innovative model of teacher preparation, including specialized programs, professional development, and the creation of consultative-resource centers. Such an approach will significantly improve the professionalism of teachers and enhance the effectiveness of working with gifted children.

The developed model for professional development and criteria for selecting and assessing teacher competencies is based on the need for deep knowledge in the field of giftedness psychology, the ability to apply modern methods, proficiency in diagnostic and support skills, as well as psychological resilience and communication skills.

The strategic suggestions formulated through this study may serve as a valuable resource for educational authorities in designing both regional and national frameworks for the professional development of educators specializing in gifted education. The outlined competency evaluation standards are suitable for integration into the certification procedures for teachers engaged in instructing high-ability students. Broadly, this investigation seeks to establish a groundbreaking model for preparing educators to effectively work with gifted learners, laying the groundwork for the continued advancement and incorporation of innovative pedagogical strategies within teacher training systems aimed at fostering exceptional talent.

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#### REFERENCES:

1. Townend G., Jolly J., Chew A. Professional development in gifted education: A systematic literature review. *Australian Journal of Teacher Education*, 2024, vol. (6)49, pp. 76–104. DOI: <https://doi.org/10.14221/1835-517x.6515>.
2. Weyns T., Preckel F., Verschueren K. Teachers-in-training perceptions of gifted children's characteristics and teacher-child interactions: An experimental study. *Teaching and Teacher Education*, 2021, vol. 97, p. 103215. <https://doi.org/10.1016/j.tate.2020.103215>.
3. Kuznetsova E., Liashenko A., Zhozhikashvili N., Arsalidou M. Giftedness identification and cognitive, physiological and psychological characteristics of gifted children: a systematic review. *Frontiers in Psychology*, 2024, vol. 15, pp. 1–20. <https://doi.org/10.3389/fpsyg.2024.1411981>.
4. Kandaurova A.V., Bojkova S.V., Lapteva N.Yu. Innovatsionny'e komplekсы v obrazovanii: iz opyta realizatsii scenariya podgotovki pedagogov k vy'yavleniyu i podderzhke odaryonny'h detej [Innovative complexes in education: from the experience of implementation of the scenario of training teachers to the identification and support of the gifted children]. *Mezhdunarodny'j nauchno-issledovatel'skij zhurnal*, 2018, vol. 3(70). Available at: <https://cyberleninka.ru/article/n/innovatsionnye-komplekсы-v-obrazovanii-iz-opyta-realizatsii-stsenariya-podgotovki-pedagogov-k-vyyavleniyu-i-podderzhke-odaryonnyh-detey> (accessed 20 October 2025). (In Russian)
5. Vantassel-Baska J., Hubbard G., Robbins J. Differentiation of instruction for gifted learners: collated evaluative studies of teacher classroom practices. *Roeper Review*, 2020, vol. 42, pp. 153–164. [https://doi.org/10.1007/978-981-13-3021-6\\_45-1](https://doi.org/10.1007/978-981-13-3021-6_45-1).
6. Wellisch M. Parenting with eyes wide open: Young gifted children, early entry and social isolation. *Gifted Education International*, 2020, vol. 37, pp. 3–21. <https://doi.org/10.1177/0261429419899946>.
7. Renati R., Bonfiglio N., Dilda M., Mascia M., Penna M. Gifted children through the eyes of their parents: talents, social-emotional challenges, and educational strategies from preschool through middle school. *Children*, 2022, vol. 10. <https://doi.org/10.3390/children10010042>.
8. Zanetti M.A., Sangiuliano Intra F., Taverna L., Brighi A., Marinoni C. The Influence of gifted children's stress management on parental stress levels. *Children*, 2024, vol. 11(5), art. 538. <https://doi.org/10.3390/children11050538>.
9. Marsili F., Dell'Anna S., Pellegrini M. Giftedness in inclusive education: a systematic review of research. *International Journal of Inclusive Education*, 2023, vol. 29, pp. 502–519. <https://doi.org/10.1080/13603116.2023.2190330>.

10. Papadopoulos D. Parenting the exceptional social-emotional needs of gifted and talented children: what do we know? *Children*, 2021, vol. 8(11), art. 953. <https://doi.org/10.3390/children8110953>.
11. Iskakova L., Amirova A., Ospanbekova M., Zhumabekova F., Ageyeva L., Zhailauova M. Developing the future primary school teachers intellectual skills in Kazakhstan. *International Journal of Instruction*, 2021, vol.14, no.3, pp. 755-770. <https://doi.org/10.29333/IJI.2021.14344A>.
12. Programma po organizacii raboty' s odarenny'mi det'mi [A program for organizing work with gifted children]. Astana, 2015, 24 p. (In Russian)
13. Vasileva E.N., Krohmal S.V., Popova E.A., Sartene O.T. Obnovlenie predmetnoj gramotnosti pedagoga kak neobходimost' sovershenstvovaniya ego professional'noj kompetentnosti [Updating a teacher's subject literacy as a necessity to improve their professional competence]. *Vestnik Atyrauskogo universiteta imeni Halela Dosmuhamedova*, 2020, vol. 59(4), pp. 62–67. (In Russian)
14. Daniel K., Msambwa M., Fute A., Wan X. Motivate students for better academic achievement: A systematic review of blended innovative teaching and its impact on learning. *Computers & Applications in Engineering Education*, 2024, vol. 32, iss. 4, art. e22733. <https://doi.org/10.1002/cae.22733>.
15. Garzon Artacho E., Martinez T.S., Ortega Martin J.L., Marin Marin J.A., Gomez Garcia G. Teacher training in lifelong learning – the importance of digital competence in the encouragement of teaching innovation. *Sustainability*, 2020, vol. 12, art. 2852. <https://doi.org/10.3390/su12072852>.
16. Young F., Tuckwell D., Cleveland B. Actualising the affordances of innovative learning environments through co-creating practice change with teachers. *The Australian Educational Researcher*, 2021, vol. 49, pp. 805–826. <https://doi.org/10.1007/S13384-021-00447-7>.
17. Saiz-Manzanares M., Almeida L., Martin-Anton L., Carbonero M., Valdivieso-Buron J. Teacher training effectiveness in self-regulation in virtual environments. *Frontiers in Psychology*, 2022, vol. 13, pp. 1–18. <https://doi.org/10.3389/fpsyg.2022.776806>.
18. Elsayary A. The impact of a professional upskilling training programme on developing teachers' digital competence. *Journal of Computer Assisted Learning*, 2023, vol. 39, iss. 4, pp. 1154–1166. <https://doi.org/10.1111/jcal.12788>.
19. Pozo-Rico T., Poveda R., Gutierrez-Fresneda R., Castejon J., Gilar-Corbi R. Revamping teacher training for challenging times: teachers' well-being, resilience, emotional intelligence, and innovative methodologies as key teaching competencies. *Psychology Research and Behavior Management*, 2023, vol. 16, pp. 1–18. <https://doi.org/10.2147/PRBM.S382572>.
20. Mambetalina A., Nurkeshov T., Satanov A., Karkulova A., Nurtazanov E. Designing a methodological system for the development and support of gifted and motivated students. *Frontiers in Psychology*, 2023, vol. 14. <https://doi.org/10.3389/fpsyg.2023.1098989>.

#### Information about the authors:

Matayev Berik Aitbayevich\* – PhD, Associate Professor of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Republic of Kazakhstan, 140000, Pavlodar, 60 Olzhabai Batyr Str., tel.: +77473455595, e-mail: matayevba@pspu.kz.

Mukhametkairov Arslanbek Yerbolatovich – Master of Pedagogical Sciences, Lecturer of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Republic of Kazakhstan, 140000, Pavlodar, 60 Olzhabai Batyr Str., tel.: +77758284765, e-mail: mukhametkairov95@mail.ru.

Makhmetova Nazigul Kalelovna – Master of Social Sciences, Senior lecturer of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Republic of Kazakhstan, 140000, Pavlodar, 60 Olzhabai Batyr Str., tel.: +77789174559, e-mail: nazigul.makhmetova@mail.ru.

Utegenova Meruyert Syzdykovna – PhD, Senior Lecturer of the Higher School of Pedagogy, A.Margulan Pavlodar Pedagogical University, Republic of Kazakhstan, 140000, Pavlodar, 60 Olzhabai Batyr Str., tel.: +77474673821, e-mail: meruert\_u\_s@mail.ru.

Матаев Берик Айтбаевич\* – философия докторы (PhD), педагогика жоғары мектебінің қауымдастырылған профессоры, Әлкей Марғұлан атындағы Павлодар педагогикалық университеті, Қазақстан Республикасы, 140000, Павлодар қ, Олжабай батыр 60, тел.: +77473455595, e-mail: matayevba@pspu.kz.

Мухаметкаиров Арсланбек Ерболатович – педагогика ғылымдарының магистрі, педагогика жоғары мектебінің оқытушысы, Әлкей Марғұлан атындағы Павлодар педагогикалық университеті, Қазақстан Республикасы, 140000, Павлодар қ, Олжабай батыр 60, тел.: +77758284765, e-mail: mukhametkairov95@mail.ru.

Махметова Назигуль Калеловна – әлеуметтік ғылымдарының магистрі, педагогика жоғары мектебінің аға оқытушысы, Әлкей Марғұлан атындағы Павлодар педагогикалық университеті, Қазақстан Республикасы, 140000, Павлодар қ, Олжабай батыр 60, тел.: +77789174559, e-mail: nazigul.makhmetova@mail.ru.

Утегенова Меруерт Сыздыковна – философия докторы (PhD), педагогика жоғары мектебінің аға оқытушысы, Әлкей Марғұлан атындағы Павлодар педагогикалық университеті, Қазақстан

Республикасы, 140000, Павлодар қ, Олжабай батыр 60, тел.: +77474673821, e-mail: meruert\_u\_s@mail.ru.

Матаев Берик Айтбаевич\* – доктор философии (PhD), ассоциированный профессор высшей школы педагогики, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000, г. Павлодар, ул. Олжабай батыра 60, тел.: +77473455595, e-mail: matayevba@pspu.kz.

Мухаметкаиров Арсланбек Ерболатович – магистр педагогических наук, преподаватель высшей школы педагогики, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000, г. Павлодар, ул. Олжабай батыра 60, тел.: +77758284765, e-mail: mukhametkairov95@mail.ru.

Махметова Назигуль Калеловна – магистр социальных наук, старший преподаватель высшей школы педагогики, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000, г. Павлодар, ул. Олжабай батыра 60, тел.: +77789174559, e-mail: nazigul.makmetova@mail.ru.

Утегенова Меруерт Сыздыковна – доктор философии (PhD), старший преподаватель высшей школы педагогики, Павлодарский педагогический университет имени Әлкей Марғұлан, Республика Казахстан, 140000, г. Павлодар, ул. Олжабай батыра 60, тел.: +77474673821, e-mail: meruert\_u\_s@mail.ru.

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#### ЦИФРЛАНДЫРУ ЖАҒДАЙЫНДАҒЫ ЖАСТАР ТӘРБИЕСІНДЕГІ МӘСЕЛЕЛЕР МЕН ШЕШІМДЕР

Махмутова К.И.\* – педагогика ғылымдарының кандидаты, Педагогика кафедрасының аға оқытушысы, Өзбекәлі Жәнібеков атындағы Оңтүстік Қазақстан педагогикалық университеті, Шымкент қ., Қазақстан Республикасы.

Куанышбаева З.Б. – педагогика ғылымдарының кандидаты, Бастауышта оқыту әдістемесі кафедрасының аға оқытушысы, Өзбекәлі Жәнібеков атындағы Оңтүстік Қазақстан педагогикалық университеті, Шымкент қ., Қазақстан Республикасы.

Ахметова Э.К. – PhD, Педагогика кафедрасының аға оқытушысы, Өзбекәлі Жәнібеков атындағы Оңтүстік Қазақстан педагогикалық университеті, Шымкент қ., Қазақстан Республикасы.

Сулейменова С.Н. – педагогика ғылымдарының кандидаты, Педагогика кафедрасының аға оқытушысы, Өзбекәлі Жәнібеков атындағы Оңтүстік Қазақстан педагогикалық университеті, Шымкент қ., Қазақстан Республикасы.

Мақалада қазіргі қоғамдағы ғаламдық өзгерістер, ақпараттандыру, техногендік өркениет, жасанды интеллект және цифрлық кеңістіктің жастар өміріне терең енуі нәтижесінде туындаған моральдік азғындау, гуманизм принциптерінен ауытқу, жастар арасында жыныстық өзгерістер, гомосексуализм және тұрмыстық зорлық-зомбылық сияқты құбылыстардың кеңінен таралуы сияқты өзекті мәселелер қарастырылады. Бұл мәселелер ата-бабаларымыздың бала тәрбиелеудегі мұрасын пайдаланбау, пайдаланса да үзік-жұлық эпизодтық іс-шаралармен шектелуі, халық педагогикасының заманауи тәрбие технологияларына орнын бастақандығы, батыстық мәдениетке ден қою, педагогтардың ұлттық тәрбие мәселелерінде құзыреттіліктерінің жеткілікті еместігі сияқты факторлармен де байланысты орын алып отырғандығы айтылады. Зерттеудің мақсаты мен міндеттері – ата-бабаларымыздың бала тәрбиелеудегі тәжірибесін, олардың тәрбиелік потенциалын зерттеу оны тәрбиелік іс-шараларда пайдалану жолдарын ұсыну, қазіргі қоғамдағы жастардың моральдық жағдайын зерттеу, педагогикада халықтық тәрбие элементтерін қолдану тәсілдерін анықтау, сыныптан тыс шараларды ұлттық дәстүрлермен байланыстырып ұйымдастыру. Мақалада бастауыш сынып оқушыларына арналған сыныптан тыс сағаттарды ұлттық ерекшеліктерге негізделіп ұйымдастырудың жолдары көрсетілген. Сондай-ақ, нәтижеге бағдарланған сыныптан тыс сағаттардың жоспарлануы мен жүргізілуінің нақты үлгісі ұсынылған. Сонымен қатар, балалардың қызығушылықтарын оятатын интерактивті тәсілдер, ойын элементтері мен слайд-шоулар, бейнемазмұндар, суреттер, геймификация, мақал-мәтелдермен, нақыл сөздермен жұмыс т.б әдістерден ұтымды пайдалану жолдары көрсетілген.

**Түйінді сөздер:** тәрбие, тәрбиеленушілер, ұлттық тәрбие, рухани-адамгершілік, сынып сағаты.