

MODEL FOR TRAINING APPLIED BACHELORS IN PRIMARY EDUCATION COLLEGE PROGRAMS

A. Muratkyzy^{1,*} , T. Slambekova¹ , Hasan Arslan² 

¹L.N. Gumilyov Eurasian National University, Republic of Kazakhstan, Astana

²Çanakkale Onsekiz Mart University, Republic of Turkey, Canakkale

*e-mail: Akhmetova_05@mail.ru, tolkyn_1969@mail.ru, arslan.phd@gmail.com

Abstract. The article addresses the problem of improving the training of applied bachelors enrolled in the educational program “Pedagogy and Methods of Primary Education” in the college setting. The relevance of the study is determined by the need to strengthen the practice-oriented character of teacher education, develop students’ professional readiness, and identify training models that provide a closer connection between theoretical instruction and future professional activity. The aim of the study was to design and test a model for training applied bachelors in primary education in the college setting.

The study was organized as a quasi-experimental investigation and conducted at the Pedagogical College of Astana International University during the first semester of the 2025–2026 academic year. The participants were 122 third-year students enrolled in the educational program “Pedagogy and Methods of Primary Education”. The experimental group included 65 students, while the control group consisted of 57 students. The main methods used in the study were analysis of scholarly literature, pedagogical modeling, questionnaire survey, testing, descriptive statistics, the Mann-Whitney U test, the Wilcoxon test, and Pearson’s chi-square test.

The formative stage was based on the author’s training model implemented within the elective component of the program through the use of microteaching. The effectiveness of the model was assessed through motivational, cognitive, practical, and reflective components of professional readiness.

The results showed a more pronounced positive dynamic in the experimental group compared to the control group. The most noticeable changes were identified in the cognitive and practical components, as well as in the distribution of students across levels of professional readiness. The study concludes that the proposed model is productive and can be used to improve the preparation of future primary school teachers in the college setting.

Keywords: applied bachelor, college, teacher education, primary education, professional training, microteaching, training model.

Introduction

The modernization of teacher education in Kazakhstan has increased the demand for such training models that ensure not only the assimilation of theoretical knowledge, but also the formation of a future teacher’s sustainable readiness for professional action in a real educational environment. This request is especially noticeable in applied bachelor’s degree programs, where the learning outcome is linked to the practical applicability of competencies, the flexibility of the educational route, and a closer link between the college and the graduate’s future professional activities. Kazakh studies emphasize that the teacher training system is developing in the context of the simultaneous action of international guidelines, national reforms and the internal need to update the content of education [1]. At the same time, a broader review of the transformation of higher education and science in Kazakhstan shows that modernization in recent years has been accompanied by increased requirements for the quality of programs, digital infrastructure, and the practical effectiveness of personnel training [2].

In the international literature, one of the most stable trends is associated with the transition from the predominantly disciplinary logic of teacher training to practice-based teacher education, where professionally significant actions, modeling pedagogical situations and mastering the so-called core practices occupy a central place. G. Falloon’s research shows that modern teacher training can no longer be limited to general digital literacy and requires a more complex professional framework of digital competence [3]. A systematic review by K. Matsumoto-Royo and M.S. Ramírez-Montoya, in turn, demonstrates that practice-oriented training is becoming one of the key ways to combine theory, assessment and professional action in teacher education programs [4]. A similar position is taken by the work of K. Kärkkäinen, P. Jääskelä and P. Tynjälä, which shows that pedagogical training should

be consistent not only with the academic logic of the course, but also with the requirements of the social and professional context [5].

The second important area is related to the digital transformation of future teacher training. Research by M. Lindfors, F. Pettersson and A.D. Olofsson shows that professional digital competence is not formed automatically, but depends on the institutional conditions, the role of the teacher and the nature of the training organization [6]. Similar conclusions are presented in the work of F.M. Røkenes and co-authors, which emphasizes the importance of digital competence of teachers of pedagogical programs as intermediaries in the professional development of students [7]. A more recent review by S.L. Norhagen, R.J. Krumsvik and F.M. Røkenes confirm that digital competence in teacher education should be considered as a systematic education covering instrumental, didactic, critical and professionally oriented levels [8]. Finally, a study by L. Momdjian, M. Manegre, and M. Gutiérrez-Colón shows that the most productive training models are those in which direct training in digital tools is combined with integrated practice and modeling of professional actions [9].

The third line of research focuses on active and productive training formats. A systematic review by B.P. Uyen, D.H. Tong and L.K. Ngan shows that project-oriented learning in teacher education promotes the development of independence, professional interaction and the ability to apply knowledge in contextual tasks [10]. In the review by M. Galdames-Calderón, A.S. Pedersen and D. Rodriguez-Gomez found that challenge-based learning enhances the transition from reproductive forms of learning to models focused on solving complex professional tasks [11]. This is especially important for teacher education, since the future teacher must master not only the content of the training, but also the way of professional thinking, in which the solution of the problem, the choice of method, assessment and reflection form a single structure of action.

In the Kazakh context, the problem acquires additional specifics. The work of A. Berikkhanova and co-authors shows that the training of future teachers in the country is increasingly in need of integrating research and practical mechanisms to bring pedagogical science and real educational practice closer [12]. At the same time, article A. Zhumasheva et al., devoted to the design of applied bachelor's degree programs in the Republic of Kazakhstan, emphasizes the importance of competence logic, focus on professional results and taking into account the specifics of the applied level of training [13]. However, in this work, the issue is mainly addressed at the level of general principles of designing an educational program, without special analysis of the pedagogical applied bachelor's degree in college.

Russian authors also pay attention to individual components of modern teacher education. The work of G.S. Usenova, Sh.M. Maigeldieva and R.K. Diuanova shows that the professional training of future teachers in the context of digitalization requires updating the content, strengthening practical tasks and including digital educational resources in the logic of training [14]. Analyzing the formation of digital competence of future primary school teachers, Zhankushkov and co-authors conclude that electronic resources and digital tools should be considered not as an external complement, but as part of a teacher's professional training [15]. In a more recent publication by S. Trapitsyn and A. Tursynbaeva, this line is already being developed through the prism of artificial intelligence: the authors justify the need to revise the structure of information competence of future teachers in the context of AI integration [16]. Nevertheless, the listed studies, as a rule, analyze either the digital component or the general issues of modernization of teacher education, without offering a holistic model of preparation of an applied bachelor of primary education in a college setting.

Thus, an analysis of the literature shows that three productive research lines have already been clearly identified in the scientific field: practice-oriented training of future teachers, digital and research transformation of teacher education, as well as updating educational programs in the logic of a competence approach [2–15]. However, an integrative model that would combine methodological, practical, digital and reflexive components into a single training system remains insufficiently developed for the college-level applied bachelor's degree in the Pedagogy and Methods of Primary Education program. This is the *research gap* that this article aims to fill. Its *purpose* is to develop and substantiate a model for the preparation of applied bachelors of primary education in college settings

and to test its productivity in the real educational process. To achieve this goal, the following *tasks* were set: to analyze theoretical approaches to the training of future teachers; to identify the structural components of the model; to introduce it into the educational process of the college; to compare the dynamics of professional readiness of students in experimental and control groups.

Methods and materials

The study was organized as a quasi-experimental one and aimed at verifying the effectiveness of the model of training applied bachelors in the educational program “Pedagogy and methods of primary education” in college conditions. The choice of this design is due to the fact that in the real educational process, students study in already formed academic groups, so the intervention was carried out in natural conditions without individual randomization.

The basis of the study was the Pedagogical College of Astana International University. The study was conducted in the first semester of the 2025–2026 academic year, from September 3 to December 24, 2025. It was attended by 122 3rd year students studying in the specialty 01140100 “Pedagogy and methods of primary education” with the qualification 5AB01140101 “Applied Bachelor of Pedagogy and methods of Primary Education”. The age of the participants was 19–20 years. In the sample structure, 69% were girls and 31% were boys.

Four ready-made academic groups were included in the study. After random distribution at the group level, two of them were assigned to the experimental sample, and two to the control sample. The experimental group consisted of 65 students, the control group – 57. At the entrance stage, the groups were considered comparable because they studied according to the same educational program, were in the same organizational and pedagogical conditions and mastered the same basic educational content.

The formative impact was implemented within the framework of the elective component of the program and lasted for one semester with a load of 2 hours per week. Its substantive basis is the author’s model of applied bachelor’s degree training, focused on the development of motivational, cognitive, practical and reflexive components of professional readiness. The key tool for implementing the model was micro-teaching, which allowed students to design and present lesson fragments, develop methodological solutions, use digital resources, and analyze their own professional actions. In the control group, the training was carried out within the framework of the traditional organization of the educational process without a specially organized support model. The content of the formative influence in the experimental group was organized in stages; its structure is presented in Table 1.

Table 1 – Structure of the formative intervention in the experimental group

Stage / Weeks	Content of work	Form of organization	Developed components
Weeks 1–2	Introduction to the content of the training model, setting professional tasks, activating ideas about the work of a primary school teacher, baseline assessment	Introductory sessions, discussion, questionnaire survey, testing	motivational, cognitive
Weeks 3–5	Mastering the logic of lesson design: formulating objectives, selecting methods, organizing learning tasks, choosing assessment tools	Practical classes, analysis of pedagogical situations, work with educational cases	cognitive, practical
Weeks 6–8	Development and presentation of lesson fragments in the microteaching format, analysis of typical methodological mistakes, receiving feedback	Microteaching, group discussion, instructor feedback	practical, reflective

Stage / Weeks	Content of work	Form of organization	Developed components
Weeks 9–11	Use of digital resources and modern pedagogical approaches in designing and conducting lesson fragments	Practicum, lesson modelling, work with digital tools	cognitive, practical
Weeks 12–14	Repeated microteaching taking comments into account, improvement of methodological solutions, development of self-analysis skills	Microteaching, self-assessment, peer discussion	practical, reflective, motivational
Week 15	Final summarizing of results, reflection on professional achievements, post-test assessment	Final session, questionnaire survey, testing, discussion	motivational, cognitive, practical, reflective

The presented structure ensured a consistent transition from mastering the methodological foundations to performing professionally oriented actions, their analysis and final assessment of the dynamics of students' professional readiness.

A questionnaire and a test were used to collect the data. The questionnaire included 20 statements grouped by motivational and reflexive components of professional readiness. The responses were recorded on a five-point Likert scale, where a higher value corresponded to a greater severity of the assessed trait. The test consisted of 20 tasks aimed at assessing the cognitive and practical components of training; the maximum total score on the test was 40. Based on combining the results of the questionnaire and the test, an integral professional readiness index was formed, which was used for inter-group and intra-group comparison. The level interpretation of the results was carried out in three grades: low, medium and high levels. The boundaries of the levels were determined based on the total score of the integral index of professional readiness. A low level was recorded with results below 50% of the maximum possible value, an average level in the range from 50% to 74%, and a high level with scores of 75% or higher. This approach allowed us to provide a single principle of interpretation of the results for all stages of the study. The questionnaire made it possible to identify the students' attitude to the future profession, the level of professional motivation, willingness to use modern pedagogical approaches and the ability to reflect. The test was aimed at assessing cognitive and partially practical readiness, including understanding the structure of the lesson, teaching methods, features of primary education and the use of modern educational technologies. The assessment was conducted by teachers. The substantive validity of the questionnaire and the test was ensured by their correlation with the purpose of the study, the structure of professional readiness and the content of the educational program "Pedagogy and methods of primary education". The diagnostic materials were previously reviewed by teachers of pedagogical disciplines of the college, which made it possible to clarify the formulations of the tasks and confirm their compliance with the assessed components. The tools have been peer-reviewed for their content relevance.

The data was processed using descriptive and comparative statistical methods. At the first stage, the average values, percentages and distribution of students by levels of professional readiness were determined. The Mann–Whitney criterion was used to compare the results of the experimental and control groups, and the Wilcoxon criterion was used to assess the dynamics of indicators within the groups at the ascertaining and control stages. Differences in the distribution of students at low, middle, and high levels were analyzed using Pearson's χ^2 criterion. The interpretation of the results was carried out considering the statistically identified differences and their pedagogical significance for the training of future primary school teachers. The study was conducted as part of the normal college educational process. The results were used in a generalized form, without identifying individual participants, in compliance with the principles of pedagogical ethics and confidentiality.

Results and discussion

At the first stage, the initial indicators of the experimental and control groups were compared according to the integrated professional readiness index, formed on the basis of the results of the questionnaire and the test. As the input diagnostic data showed, there were no statistically significant differences between the groups at the ascertaining stage, which makes it possible to consider them as comparable for subsequent analysis of the results of the formative impact. To assess the overall dynamics of students' professional readiness, a comparison of integral indicators in the experimental and control groups was carried out, the results of which are presented in Table 2.

Table 2 – Dynamics of the integral indicator of professional readiness in the experimental and control groups

Group	Before the experiment, M ± SD	After the experiment, M ± SD	Wilcoxon Z	p
Experimental (n = 65)	55.8 ± 8.9	66.9 ± 8.1	-6.34	<0.001
Control (n = 57)	56.5 ± 9.1	59.8 ± 8.7	-2.08	0.038

The intergroup comparison at the entrance stage did not reveal statistically significant differences (Mann–Whitney U = 1809.0; p = 0.712). After completion of the formative stage, the differences between the experimental and control groups became statistically significant (U = 1206.5; p < 0.001). This suggests a more pronounced positive trend in the experimental group compared to the control group. To visually represent the dynamics of the integral indicator of professional readiness, the results of the experimental and control groups are shown in Figure 1.

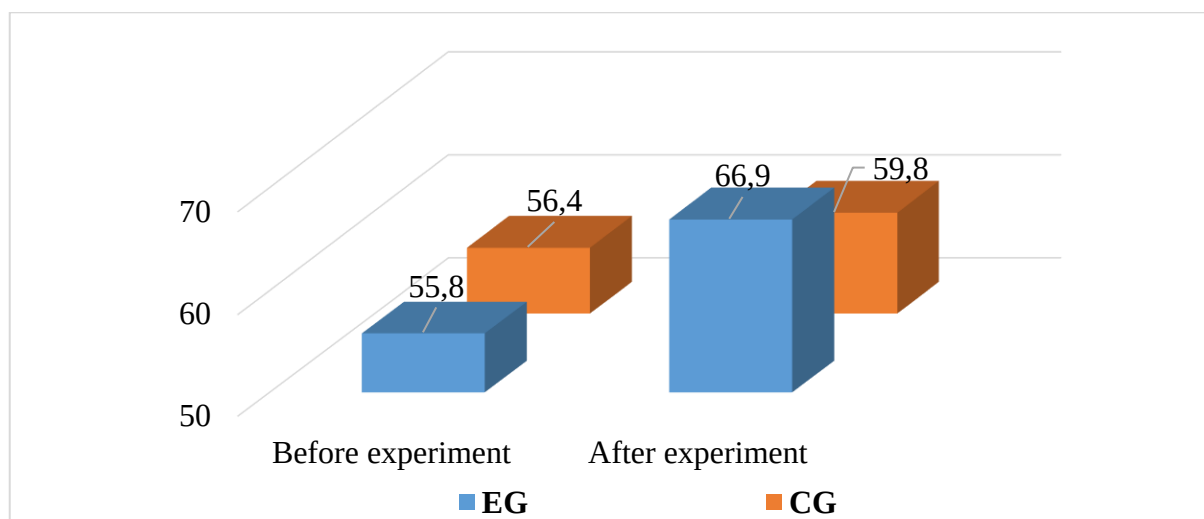


Figure 1 – Dynamics of the integral indicator of professional readiness of students in the experimental and control groups

The data obtained show that in both groups there was an increase in the total indicator of professional readiness, but the nature of this dynamic was different. In the control group, the growth was moderate and probably reflected the natural progress of students within the framework of mastering the educational program. In the experimental group, the increase was more noticeable, which indicates the productivity of the implemented training model. To clarify the structure of the identified changes, an analysis was carried out on individual components of professional readiness: motivational, cognitive, practical and reflexive.

Table 3 – Dynamics of indicators by components of professional readiness, $M \pm SD$

Component	Experimental group: before	Experimental group: after	p	Control group: before	Control group: after	p	Mann-Whitney U (after)	p
Motivational	13.8 $\pm$ 3.1	16.7 $\pm$ 2.9	<0.001	14.0 $\pm$ 3.0	14.8 $\pm$ 3.1	0.073	1432.0	0.018
Cognitive	14.2 $\pm$ 3.4	17.1 $\pm$ 3.0	< 0.001	14.4 $\pm$ 3.5	15.3 $\pm$ 3.2	0.035	1315.5	0.006
Practical	13.1 $\pm$ 3.2	17.0 $\pm$ 3.1	< 0.001	13.3 $\pm$ 3.1	14.6 $\pm$ 3.0	0.023	1128.0	< 0.001
Reflective	14.7 $\pm$ 2.8	16.1 $\pm$ 2.7	< 0.001	14.8 $\pm$ 2.7	15.1 $\pm$ 2.8	0.174	1521.0	0.039

As can be seen from Table 3, the greatest dynamics in the experimental group was observed in terms of practical and cognitive components. It is these changes that are most expected, taking into account the structure of the formative impact, in which micro-teaching, designing lesson fragments, working out methodological solutions and using digital resources in professionally approximate situations played a key role.

There was also a noticeable increase in the motivation component. This may be due to the fact that participation in simulated pedagogical situations and more active involvement in professional action contributed to the strengthening of students' internal involvement in the future profession. The reflexive component demonstrated a positive, albeit less pronounced dynamics, which can be explained by the greater inertia of this aspect of professional development.

In the control group, the changes were less pronounced. Statistically significant shifts were recorded only in the cognitive and practical components, and the magnitude of these changes remained moderate. There were no statistically significant dynamics in the motivational and reflexive components. This suggests that in the conditions of the traditional organization of training, the development of individual elements of professional readiness occurs, but does not acquire a systemic character.

The next stage of the analysis was related to the distribution of students by levels of professional readiness – low, medium and high (see Table 4).

Table 4 – Distribution of students by levels of professional readiness, number of students (%)

Level	Experimental group before (n = 65)	Experimental group after (n = 65)	Control group before (n = 57)	Control group after (n = 57)
Low	22 (33.8%)	9 (13.8%)	18 (31.6%)	15 (26.3%)
Medium	34 (52.3%)	36 (55.4%)	31 (54.4%)	34 (59.6%)
High	9 (13.9%)	20 (30.8%)	8 (14.0%)	8 (14.1%)

At the entrance stage, there were no differences in the distribution of students by levels between the experimental and control groups ($\chi^2 = 0.31$; $p = 0.858$). After the completion of the formative stage, the differences became statistically significant ($\chi^2 = 7.48$; $p = 0.024$). This is primarily due to a decrease in the proportion of low-level students and an increase in the proportion of students with a high level of professional readiness in the experimental group.

It is especially significant that in the experimental group, the number of high-level students more than doubled, from 9 to 20 people. At the same time, the number of low-level students decreased from 22 to 9. In the control group, the distribution structure changed slightly: there was a slight decrease in the proportion of low-level students and a corresponding increase in the

proportion of middle-level students, but the number of high-level students actually remained the same. The change in the distribution of students by levels of professional readiness in the experimental and control groups is shown in Figure 2.

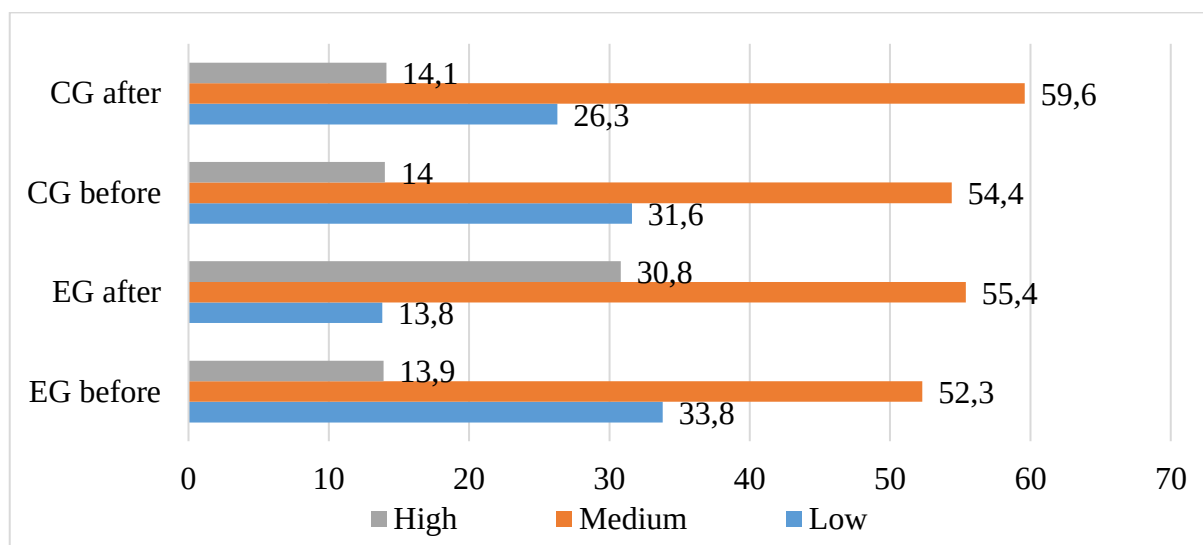


Figure 2 – Changes in the distribution of students by levels of professional readiness in the experimental and control groups, %

It is especially important that the changes affected not only the average values, but also the level structure of professional readiness. A decrease in the proportion of low-level students and a simultaneous increase in the number of high-level students in the experimental group indicate the practical effectiveness of the model. In the control group, the changes were mainly compensatory in nature and reflected to a great extent the transition of students from low to intermediate levels without a significant expansion of the high-level group. Thus, the introduction of the model of training applied bachelors in the educational program “Pedagogy and methods of primary education” in college conditions was accompanied by a more pronounced positive trend compared with the traditional organization of education. This manifested itself in a statistically significant increase in the integral indicator of professional readiness, more noticeable changes in cognitive and practical components, as well as in the redistribution of students by levels of professional readiness in favor of a high level. The combination of these results allows us to consider the proposed model as pedagogically productive.

Limitations of the study

When interpreting the results obtained, it is necessary to take into account a number of limitations. Firstly, the study was conducted on the basis of one college, which narrows the possibilities of direct transfer of conclusions to all organizations of post-secondary teacher education. Secondly, the sample included only students of the educational program “Pedagogy and methods of primary education,” therefore, the results primarily relate to this training profile and require additional verification based on the material of other pedagogical areas. Thirdly, the formative stage was limited to one semester, as a result of which the recorded changes mainly reflect the short-term dynamics of professional readiness and do not allow us to fully assess the long-term sustainability of the identified effects. Fourth, the research tools included questionnaires and testing, which made it possible to compare the results quantitatively, but did not equally cover all manifestations of students’ professional behavior in real teaching practice. In this regard, it is advisable to direct further research to expand the sample, include several colleges, increase the duration of the formative impact, as well as supplement the diagnostic complex with observation, expert assessment and analysis of the results of pedagogical practice.

Conclusion

The conducted research has shown that the preparation of applied bachelors in the educational program “Pedagogy and methods of primary education” in college conditions requires a holistic pedagogical model that combines the theoretical, methodological, practical and reflective components of students’ professional development. The developed model was focused on strengthening the practice-oriented nature of training, activating methodological design, using micro-education and the inclusion of modern digital resources in the structure of professional training. The results of a quasi-experimental study confirmed the productivity of the proposed model. In the experimental group, there was a more pronounced positive dynamics of the integral indicator of professional readiness compared to the control group. The most noticeable changes were identified in the cognitive and practical components, which indicates the positive impact of the model on the quality of methodological training and the willingness of students to perform professionally significant actions. Along with this, positive changes in the motivational and reflexive components have been identified, which makes it possible to consider the implemented model not only as a means of mastering professional knowledge and skills, but also as a factor in forming a conscious attitude towards future teaching activities.

A significant result of the study was also a change in the level structure of students' professional readiness: in the experimental group, the proportion of low-level students decreased and the number of high-level students increased. This allows us to conclude that the proposed model has not only theoretical validity, but also practical effectiveness in the conditions of the real educational process of the college. Thus, the model of training applied bachelors in the educational program “Pedagogy and methods of primary education” can be considered as an effective means of improving the professional training of future primary school teachers. The results obtained can be used in updating the content of elective disciplines, organizing practice-oriented forms of work, developing methodological support and designing training programs for applied bachelors of pedagogical profile in the college education system.

Author Contributions:

Muratkzy A. – organised and conducted the study, collected, systematised, and processed the empirical data, and contributed to the analysis of the results and the writing and formatting of the manuscript.

Slambekova T.S. – provided overall scientific supervision, contributed to the development of the study concept and methodology, interpreted the results, and performed the scientific editing of the manuscript.

Khasan A. – provided methodological consultation, contributed to the interpretation of the study results, and participated in editing and substantively revising the manuscript.

LITERATURE:

1 Sharplin E., Ibrasheva A., Shamatov D., Rakisheva A. Анализ педагогического образования Казахстана в контексте современной международной практики // Journal of Educational Sciences. – 2020. – Т. 64. – № 3. – С. 12–27. DOI: <https://doi.org/10.26577/JES.2020.v64.i3.02>

2 Narbaev T., Amirbekova D., Bakdaulet A. A Decade of Transformation in Higher Education and Science in Kazakhstan: A Literature and Scientometric Review of National Projects and Research Trends // Publications. – 2025. – Vol. 13. – № 3. – Article 35. DOI: <https://doi.org/10.3390/publications13030035>

3 Falloon G. From digital literacy to digital competence: the teacher digital competency (TDC) framework // Educational Technology Research and Development. – 2020. – Vol. 68. – № 5. – P. 2449–2472. DOI: <https://doi.org/10.1007/s11423-020-09767-4>

4 Matsumoto-Royo K., Ramírez-Montoya M.S. Core practices in practice-based teacher education: A systematic literature review of its teaching and assessment process // Studies in Educational Evaluation. – 2021. – Vol. 70. – Article 101047. DOI: <https://doi.org/10.1016/j.stueduc.2021.101047>

5 Kärkkäinen K., Jääskelä P., Tynjälä P. How does university teachers’ pedagogical training meet topical challenges raised by educational research? A case study from Finland // Teaching and Teacher Education. – 2023. – Vol. 128. – Article 104088. DOI: <https://doi.org/10.1016/j.tate.2023.104088>

6 Lindfors M., Pettersson F., Olofsson A.D. Conditions for professional digital competence: the teacher educators’ view // Education Inquiry. – 2021. – Vol. 12. – № 4. – P. 390–409. DOI: <https://doi.org/10.1080/20004508.2021.1890936>

7 Røkenes F.M., Grütters R., Skaalvik C., Lie T.G., Østerlie O., Järnerot A. Teacher Educators’ Professional Digital Competence in Primary and Lower Secondary School Teacher Education // Nordic Journal of Digital Literacy. – 2022. – Vol. 17. – № 1. – P. 46–60. DOI: <https://doi.org/10.18261/njdl.17.1.4>

8 Norhagen S.L., Krumsvik R.J., Røkenes F.M. Developing professional digital competence in Norwegian teacher education: a scoping review // *Frontiers in Education*. – 2024. – Vol. 9. – Article 1363529. DOI: <https://doi.org/10.3389/educ.2024.1363529>

9 Momdjian L., Manegre M., Gutiérrez-Colón M.A. A study of preservice teachers' digital competence development: Exploring the role of direct instruction, integrated practice, and modeling // *Evaluation and Program Planning*. – 2025. – Vol. 109. – Article 102538. DOI: <https://doi.org/10.1016/j.evalprogplan.2025.102538>

10 Uyen B.P., Tong D.H., Ngan L.K. Online project-based learning for teacher education during the COVID-19 pandemic: A systematic review // *Contemporary Educational Technology*. – 2023. – Vol. 15. – № 3. – Article ep433. DOI: <https://doi.org/10.30935/cedtech/13238>

11 Galdames-Calderón M., Pedersen A.S., Rodriguez-Gomez D. Systematic Review: Revisiting Challenge-Based Learning Teaching Practices in Higher Education // *Education Sciences*. – 2024. – Vol. 14. – № 9. – Article 1008. DOI: <https://doi.org/10.3390/educsci14091008>

12 Berikkhanova A., Sapargaliyeva B., Ibraimova Z., Sarsenbayeva L., Assilbayeva A., Baidildinova D., Wilson E. Conceptualising the Integration of Action Research into the Practice of Teacher Education Universities in Kazakhstan // *Education Sciences*. – 2023. – Vol. 13. – № 10. – Article 1034. DOI: <https://doi.org/10.3390/educsci13101034>

13 Zhumasheva A., Demessinova G., Zhetpisbay A., Kenzhetayeva G., Anafinova M. On the issue of designing educational programmes of applied Bachelor's degree in the Republic of Kazakhstan // *Scientific Herald of Uzhhorod University. Series "Physics"*. – 2024. – № 56. – P. 471–480. DOI: <https://doi.org/10.54919/physics/56.2024.47dbt1>

14 Усенова Г.С., Майгельдиева Ш.М., Диуанова Р.К. Профессиональная подготовка будущих педагогов в условиях цифровизации образования // *Вестник КазНПУ имени Абая. Серия «Педагогические науки»*. – 2024. – Т. 82. – № 2. – С. 193–204. DOI: <https://doi.org/10.51889/2959-5762.2024.82.2.017>

15 Жанкушков Б., Онланбеккызы Г., Сержанкызы Ж. Электронные ресурсы как средство формирования цифровой компетентности будущих учителей начальной школы // *Вестник КазНПУ имени Абая. Серия «Педагогические науки»*. – 2024. – Т. 83. – № 3. – С. 230–236. DOI: <https://doi.org/10.51889/2959-5762.2024.83.3.021>

16 Trapitsyn S., Tursynbaeva A. Formation of Information Competence in Future Teachers based on the Integration of Artificial Intelligence Technologies in Education // *Pedagogy and Psychology*. – 2025. – Vol. 64. – № 3. – P. 102–111. DOI: <https://doi.org/10.51889/2960-1649.2025.64.3.010>

REFERENCE:

1 Sharplin E., Ibrasheva A., Shamatov D., Rakisheva A. (2020). *aloz pedagogicheskogo obrazovania Kazahstana v kontekste sovremennoi mejdunarodnoi praktiki* [Analysis of teacher education in Kazakhstan in the context of modern international practice]. *Journal of Educational Sciences*, vol. 64, no. 3, pp. 12–27. DOI: <https://doi.org/10.26577/JES.2020.v64.i3.02> (in Russian)

2 Narbaev T., Amirbekova D., Bakdaulet A. (2025). A Decade of Transformation in Higher Education and Science in Kazakhstan: A Literature and Scientometric Review of National Projects and Research Trends. *Publications*, vol. 13, no. 3, article 35. DOI: <https://doi.org/10.3390/publications13030035>

3 Falloon G. (2020). From digital literacy to digital competence: The teacher digital competency (TDC) framework. *Educational Technology Research and Development*, vol. 68, no. 5, pp. 2449–2472. DOI: <https://doi.org/10.1007/s11423-020-09767-4>

4 Matsumoto-Royo K., Ramírez-Montoya M.S. (2021). Core practices in practice-based teacher education: A systematic literature review of its teaching and assessment process. *Studies in Educational Evaluation*, vol. 70, article 101047. DOI: <https://doi.org/10.1016/j.stueduc.2021.101047>

5 Kärkkäinen K., Jääskelä P., Tynjälä P. (2023). How does university teachers' pedagogical training meet topical challenges raised by educational research? A case study from Finland. *Teaching and Teacher Education*, vol. 128, article 104088. DOI: <https://doi.org/10.1016/j.tate.2023.104088>

6 Lindfors M., Pettersson F., Olofsson A.D. (2021). Conditions for professional digital competence: The teacher educators' view. *Education Inquiry*, vol. 12, no. 4, pp. 390–409. DOI: <https://doi.org/10.1080/20004508.2021.1890936>

7 Røkenes F.M., Grütters R., Skaalvik C., Lie T.G., Østerlie O., Järnerot A. (2022). Teacher Educators' Professional Digital Competence in Primary and Lower Secondary School Teacher Education. *Nordic Journal of Digital Literacy*, vol. 17, no. 1, pp. 46–60. DOI: <https://doi.org/10.18261/njdl.17.1.4>

8 Norhagen S.L., Krumsvik R.J., Røkenes F.M. (2024). Developing professional digital competence in Norwegian teacher education: A scoping review. *Frontiers in Education*, vol. 9, article 1363529. DOI: <https://doi.org/10.3389/educ.2024.1363529>

9 Momdjian L., Manegre M., Gutiérrez-Colón M. (2025). A study of preservice teachers' digital competence development: Exploring the role of direct instruction, integrated practice, and modeling. *Evaluation and Program Planning*, vol. 109, article 102538. DOI: <https://doi.org/10.1016/j.evalprogplan.2025.102538>

10 Uyen B.P., Tong D.H., Ngan L.K. (2023). Online project-based learning for teacher education during the COVID-19 pandemic: A systematic review. *Contemporary Educational Technology*, vol. 15, no. 3, article ep433. DOI: <https://doi.org/10.30935/cedtech/13238>

11 Galdames-Calderón M., Pedersen A.S., Rodriguez-Gomez D. (2024). Systematic Review: Revisiting Challenge-Based Learning Teaching Practices in Higher Education. Education Sciences, vol. 14, no. 9, article 1008. DOI: <https://doi.org/10.3390/educsci14091008>

12 Berikhanova A., Sapargaliyeva B., Ibraimova Z., Sarsenbayeva L., Assilbayeva A., Baidildinova D., Wilson E. (2023). Conceptualising the Integration of Action Research into the Practice of Teacher Education Universities in Kazakhstan. Education Sciences, vol. 13, no. 10, article 1034. DOI: <https://doi.org/10.3390/educsci13101034>

13 Zhumasheva A., Demessinova G., Zhetpisbay A., Kenzhetayeva G., Anafinova M. (2024). On the issue of designing educational programmes of applied Bachelor's degree in the Republic of Kazakhstan. Scientific Herald of Uzhhorod University. Series "Physics", no. 56, pp. 471–480. DOI: <https://doi.org/10.54919/physics/56.2024.47dbt1>

14 Usenova G.S., Maigeldieva Sh.M., Diuanova R.K. (2024). Profesionalnaia podgotovka budushih pedagogov v usloviakh sifrovizatsii obrazovaniya [Professional training of future teachers in the context of digitalization of education]. Vestnik KazNPU imeni Abaya. Seriya "Pedagogicheskie nauki", vol. 82, no. 2, pp. 193–204. DOI: <https://doi.org/10.51889/2959-5762.2024.82.2.017> (in Russian)

15 Zhankushkov B., Onlanbekkyzy G., Serzhankyzy Zh. (2024). Elektronnye resursy kak sredstvo formirovaniya sifrovoy kompetentnosti budushih uchitelei nachalnoi shkoly [Electronic resources as a means of developing digital competence of future primary school teachers]. Vestnik KazNPU imeni Abaya. Seriya "Pedagogicheskie nauki", vol. 83, no. 3, pp. 230–236. DOI: <https://doi.org/10.51889/2959-5762.2024.83.3.021> (in Russian)

16 Trapitsyn S., Tursynbaeva A. (2025). Formation of Information Competence in Future Teachers based on the Integration of Artificial Intelligence Technologies in Education. Pedagogy and Psychology, vol. 64, no. 3, pp. 102–111. DOI: <https://doi.org/10.51889/2960-1649.2025.64.3.010>

КОЛЛЕДЖДЕ БАСТАУЫШ БІЛІМ БЕРУ БАҒДАРЛАМАСЫ БОЙЫНША ҚОЛДАНБАЛЫ БАКАЛАВРЛАРДЫ ДАЯРЛАУ МОДЕЛІ

А. Мұратқызы^{1,}, Т.С. Сламбекова¹, Hasan Arslan²*

¹*Л.Н. Гумилев атындағы Еуразия ұлттық университеті,
Қазақстан Республикасы, Астана қ.*

²*Чанаккале Онсекиз Март университеті, Түркия Республикасы, Чанаккале қ.*

**e-mail: Akhmetova_05@mail.ru, tolkyn_1969@mail.ru, arslan.phd@gmail.com*

Аңдатпа. Мақалада колледж жағдайында «Бастауыш оқыту педагогикасы мен әдістемесі» білім беру бағдарламасы бойынша қолданбалы бакалаврларды даярлауды жетілдіру мәселесі қарастырылады. Зерттеудің өзектілігі педагогикалық білім берудің практикалық-бағдарлы сипатын күшейту, студенттердің кәсіби дайындығын дамыту және теориялық оқытуды болашақ кәсіби қызметпен неғұрлым тығыз байланыстыратын даярлау модельдерін іздестіру қажеттілігімен айқындалады. Зерттеудің мақсаты колледж жағдайында бастауыш білім беру бойынша қолданбалы бакалаврларды даярлау моделін әзірлеу және оның тиімділігін тексеру болды.

Зерттеу квазиэксперименттік түрде ұйымдастырылып, 2025–2026 оқу жылының бірінші семестрінде Астана халықаралық университетінің Педагогикалық колледжі базасында жүргізілді. Зерттеуге «Бастауыш оқыту педагогикасы мен әдістемесі» білім беру бағдарламасы бойынша оқитын 3-курс студенттері, барлығы 122 студент қатысты. Эксперименттік топты 65 студент, бақылау тобын 57 студент құрады. Негізгі әдістер ретінде ғылыми әдебиеттерді талдау, педагогикалық модельдеу, сауалнама жүргізу, тестілеу, сипаттамалық статистика әдістері, Манн-Уитни критерийі, Уилкоксон критерийі және Пирсонның χ^2 критерийі қолданылды.

Қалыптастырушы кезеңнің мазмұны микрособақ өткізу әдісін қолдана отырып, бағдарламаның элективті компоненті аясында жүзеге асырылған авторлық даярлау моделіне негізделді. Тиімділікті бағалау кәсіби дайындықтың мотивациялық, когнитивтік, практикалық және рефлексивтік компоненттері бойынша жүргізілді.

Зерттеу нәтижелері эксперименттік топта бақылау тобымен салыстырғанда айқынырақ оң динамика тіркелгенін көрсетті. Ең елеулі өзгерістер когнитивтік және практикалық компоненттер бойынша, сондай-ақ студенттердің кәсіби дайындық деңгейлері бойынша бөлінуінде анықталды. Ұсынылған модельдің нәтижелілігі және оны колледж жағдайында болашақ бастауыш сынып мұғалімдерін даярлауды жетілдіру үшін пайдалану мүмкіндігі туралы қорытынды жасалды.

Кілт сөздер: *қолданбалы бакалавр, колледж, педагогикалық білім беру, бастауыш білім беру, кәсіби даярлық, микрособақ өткізу, даярлау моделі.*

МОДЕЛЬ ПОДГОТОВКИ ПРИКЛАДНЫХ БАКАЛАВРОВ ПО ПРОГРАММЕ НАЧАЛЬНОГО ОБРАЗОВАНИЯ В КОЛЛЕДЖЕ

Мураткызы А.^{1,*}, Сламбекова Т.С.¹, Hasan Arslan²

¹Евразийский национальный университет имени Л.Н. Гумилева,
Республика Казахстан, г. Астана

²Университет Чанаккале Онсекиз Март, Республика Турция, г. Чанаккале

*e-mail: Akhmetova_05@mail.ru, tolkyn_1969@mail.ru, arslan.phd@gmail.com

Аннотация. В статье рассматривается проблема совершенствования подготовки прикладных бакалавров по образовательной программе «Педагогика и методика начального обучения» в условиях колледжа. Актуальность исследования обусловлена необходимостью усиления практико-ориентированного характера педагогического образования, развития профессиональной готовности студентов и поиска таких моделей подготовки, которые обеспечивают более тесную связь между теоретическим обучением и будущей профессиональной деятельностью. Цель исследования заключалась в разработке и проверке модели подготовки прикладных бакалавров начального образования в условиях колледжа.

Исследование было организовано как квазиэкспериментальное и проводилось на базе Педагогического колледжа Международного университета Астана в первом семестре 2025–2026 учебного года. В исследовании приняли участие 122 студента 3 курса, обучающиеся по образовательной программе «Педагогика и методика начального обучения». Экспериментальную группу составили 65 студентов, контрольную – 57. В качестве основных методов использовались анализ научной литературы, педагогическое моделирование, анкетирование, тестирование, методы описательной статистики, критерий Манна-Уитни, критерий Уилкоксона и критерий χ^2 Пирсона.

Содержание формирующего этапа основывалось на авторской модели подготовки, реализованной в рамках элективного компонента программы с применением микропреподавания. Оценка эффективности проводилась по мотивационному, когнитивному, практическому и рефлексивному компонентам профессиональной готовности.

Результаты исследования показали, что в экспериментальной группе была зафиксирована более выраженная положительная динамика по сравнению с контрольной. Наиболее заметные изменения выявлены по когнитивному и практическому компонентам, а также в распределении студентов по уровням профессиональной готовности. Сделан вывод о продуктивности предложенной модели и возможности ее использования для совершенствования подготовки будущих учителей начальных классов в колледже.

Ключевые слова: прикладной бакалавр, колледж, педагогическое образование, начальное образование, профессиональная подготовка, микропреподавание, модель подготовки.

Information about authors:

Muratkyzy Arman – Doctoral Student, L.N. Gumilyov Eurasian National University (Kazakhstan, Astana, e-mail: Akhmetova_05@mail.ru, ORCID: <https://orcid.org/0000-0002-5057-8869>).

Slambekova Tolkyn – Professor, Candidate of Pedagogical Sciences, L.N. Gumilyov Eurasian National University (Kazakhstan, Astana, e-mail: tolkyn_1969@mail.ru, ORCID: <https://orcid.org/0000-0003-0897-9850>).

Hasan Arslan – PhD, Professor, Canakkale Onsekiz Mart University (Turkey, Canakkale, e-mail: arslan.phd@gmail.com, ORCID: <https://orcid.org/0000-0002-8011-3069>).

Авторлар туралы мәлімет:

Мұраткызы Арман – докторант, Л.Н. Гумилев атындағы Еуразия ұлттық университеті (Қазақстан, Астана қ., e-mail: Akhmetova_05@mail.ru, ORCID: <https://orcid.org/0000-0002-5057-8869>).

Сламбекова Толкын Сламқұлқызы – профессор, педагогика ғылымдарының кандидаты, Л.Н. Гумилев атындағы Еуразия ұлттық университеті (Қазақстан, Астана қ., e-mail: tolkyn_1969@mail.ru, ORCID: <https://orcid.org/0000-0003-0897-9850>).

Hasan Arslan – PhD, профессор, Чанаккале Онсекиз Март университеті (Түркия, Чанаккале қ., e-mail: arslan.phd@gmail.com, ORCID: <https://orcid.org/0000-0002-8011-3069>).

Сведения об авторах:

Мұраткызы Арман* – докторант, Евразийский национальный университет имени Л.Н. Гумилева (Казахстан, г. Астана, e-mail: Akhmetova_05@mail.ru, ORCID: <https://orcid.org/0000-0002-5057-8869>).

Сламбекова Толкын Сламқұловна – профессор, кандидат педагогических наук, Евразийский национальный университет имени Л.Н. Гумилева (Казахстан, г. Астана, e-mail: tolkyn_1969@mail.ru, ORCID: <https://orcid.org/0000-0003-0897-9850>).

Hasan Arslan – PhD, профессор, Университет Чанаккале Онсекиз Март (Турция, г. Чанаккале, e-mail: arslan.phd@gmail.com, ORCID: <https://orcid.org/0000-0002-8011-3069>).