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<https://doi.org/10.51889/2960-1649.2026.68.3.012>ATYMBAYEVA GULZHANAR¹, KADIRSIZOVA SHYNAR^{2*}, SHESTITKO IRINA³¹*Alikhan Bokeikhan University (Semey, Kazakhstan)*²*Semey Medical University (Semey, Kazakhstan)*³*Belarusian State Pedagogical University (Minsk, Belarus)*

*Address of correspondence: Kadirszova Shynar, Abai Kunanbayev Street103, Semey Medical University, Semey, 071400, Republic of Kazakhstan, <https://orcid.org/0000-0002-3991-7962>,
E-mail address: shynarr1982@mail.ru /Tel.: +77751775448

Exploring the Formation of Global Competences in Pre-service Primary School Teachers

Abstract

Introduction. This paper explores the issues of the formation of global competences in primary school pre-service teachers. Developing primary school pre-service teachers' global competences is significant because they play a crucial role in laying the foundation for educating future specialists who contribute to the country's development. Thus, it is essential to form and develop pre-service teachers' global competences during their training at universities to equip them for future opportunities. *Methods and methodology.* Both theoretical and empirical methods were employed in this research. An adapted global competence scale survey was used to collect the data from pre-service primary school teachers. *Results.* The research revealed that pre-service primary school teachers are competent in theoretical knowledge but demonstrate limited ability to apply it in practice. *Scientific novelty.* Although many studies have examined global competence, its importance and formation cases have not yet been investigated on a scientific basis - *practical significance.* The present research concluded that universities' educational programs for pre-service teachers should include content aimed at forming and developing their global competences.

Keywords: global competence, primary school, pre-service teachers, formation, development.

Introduction. Globalization and ongoing societal changes require revising educational programs to prepare teachers who can work effectively in modern schools. In response, universities' educational programs must be updated to focus on developing pre-service teachers' global competences. Modern teachers should not be limited to imparting knowledge; they should also strengthen students' ability to overcome social, economic, and technological difficulties.

One key issue in university education programs for primary school teachers is developing pre-service teachers' global competences. Global competences are often linked to global education, which is becoming increasingly important in contemporary education. Global education is understood as a combination

of theoretical knowledge that explains and informs the essence and effects, and practical application that provides the development of global competences. Global competences combine knowledge and abilities that enable successful interaction in different environments. Developing pre-service teachers' global competences enhances their understanding of diverse international processes, thereby contributing to the cultivation of critical thinking and tolerance. Therefore, university teacher training programs should include pedagogical approaches that develop the global competences of pre-service primary school teachers.

Developing global competencies among professionals is essential, as it enhances their competitiveness in the international labor market. Developing these competences is significant for

teachers, as it creates opportunities to prepare a young generation for active participation in the global world. It is important to introduce primary school students to the features of other nationalities and teach them to connect with people from other countries. For instance, primary school teachers play an important role in primary school children's understanding of global processes, respect for cultural diversity, and awareness of their responsibilities as citizens of Kazakhstan and members of the global community. Thus, theoretical understanding and empirical research into the formation of teachers' global competences, as well as the conditions and ways of their development, are particularly significant.

In addition, scientific research shows that secondary schools and higher education frequently address global competence, whereas primary school education and primary school teachers' training remain insufficiently studied. The lack of a clear methodological approach, assessment criteria, and conditions to support teachers' professional development to improve the quality of modern primary education demands thorough scientific exploration. Studying this topic makes it possible to define future primary school teachers' global competence formation level and identify the pedagogical conditions that support professional development. This research aims to identify future primary school teachers' global competence formation level and provide recommendations to support its development.

Understanding global education is essential for fostering the development of global competence. The concept "global competence" was introduced in International Education in 1988 (Leal et al., 2022). Global education is a necessary approach that enhances global relations and intercultural competence; it strengthens skills, knowledge, and attitudes, which are needed for dealing with different perspectives. Researchers highlight the importance of global education for intercultural communication. El-Kafafi (2025) noted that global education plays a tremendous role in building resilience, understanding, and respect for intercultural differences. Reimers (2020)

underscored the significance of global education in solving various global problems related to climate change, geopolitical problems, and many others. Furthermore, global education was identified as crucial for addressing these complex issues, which require both global knowledge and competencies.

Global education opens opportunities to form and develop global competences (Majewska, 2023). Global competences include knowledge and skills needed to comprehend, develop, and contribute to international communities. They form the basis for lifelong learning necessary in responding to global alterations. Global competences encompass the knowledge and skills needed to understand, engage with, and contribute to international communities. They form the foundation for lifelong learning, which is essential in responding to ongoing global changes.

Different definitions of the term "global competences" are given in the scientific literature. Hunter et al. (2006) considered global competence as a practical tool, emphasizing that it is a set of knowledge and abilities to differentiate cultural differences when interacting with people from other nationalities. This explanation strengthens the role of cultural understanding in global competence and offers precise recommendations for teaching methods. According to Li (2013), global competence is the capacity to comprehend global events and cultural norms outside of particular subjects or specialties, allowing for productive contact, communication, and group work in another cultural environment. Global competences are described as a body of awareness of regions, cultures, and global questions, and they are also abilities to be engaged with in a global environment (Rizvi & Lingard, 2009). The concept of global competences includes the combination of local and global knowledge, comprehension, and the capacity (Parmigiani et al., 2022).

The formation of global competences in teachers is crucial in modern education. It is determined by an awareness of the challenges of the times and the selection of competencies in an educational environment related to life

in a global community (Balitskaya, 2022). This selection was influenced by several interconnected and interdependent factors, including:

- the need to focus on the future of the entire global community;
- the specific nature of socioeconomic development of modern society;
- the increase of general skills which are related to personal qualities significant in any profession;
- modification of all life spheres;
- necessity of change of content of education and seeking a balance between subject-based and meta-subject-based education;
- the search for new approaches to the socialization of schoolchildren.

Educational authorities suggest that school curricula should contain content aimed at the formation and development of global competences. In this regard, experts in the educational sphere constantly urge students to enhance global competences in the interconnected world (Rizvi & Lingard, 2009). Ying et al. (2025) advise that the curriculum includes global competencies, which include knowledge development for global involvement and a global civic mindset. These materials help gain knowledge and skills needed for effective participation in the global world. These skills provide opportunities to successfully interact in the international community. The importance of global competences was discussed in the global scholarly circulation. For example, Köş and Celik (2023) noted that educational programs should align with global realities. Karanikola et al. (2022) observed that global competence encompasses a wide range of concepts and values that are necessary to collaborate, communicate, and work toward the welfare of both local and global competences.

Global competences of teachers are developed through different approaches. Wu (2023) explored how inquiry-based learning fosters teachers' global competences; the study demonstrates that teachers could improve their abilities needed to critically analyze local and global educational issues and power discourses.

Crawford et al.'s (2020) research revealed how an Instructional Design course could

contribute to increasing students' global competences; the study argues that in prioritizing global competence, it is essential to accelerate students' progress toward teaching global competence. Zhang et al. (2024) compared how a special program contributed to the development of in-service and pre-service teachers' global competences; their research found that the program impacted the development of global competences differently. The program positively influenced in-service teachers' ICT competences, while professional guide and robust knowledge were effective in strengthening their global competences.

The review of scientific literature made it possible to discover that, despite extensive research on global competences of teachers, the training of pre-service teachers has not been sufficiently investigated. Pre-service teachers lack the professional orientation needed to navigate the global changes sweeping Kazakhstan and other countries. For instance, in the design of training programs for future primary school teachers, insufficient consideration is given to globalization and its impact on education, and the development of teachers' global competencies is largely overlooked. This condition necessitates a realistic analysis of the objective state of affairs and a fresh look and assessment of the training requirements for primary school teachers called upon to work in the 21st century. Thus, investigating the level of pre-service teachers' global competences and providing recommendations for their development would help to fill this research gap.

Materials and Methods. Research Design. The study employed a cross-sectional survey design aimed at determining the level of formation of global competence among pre-service teachers. To collect the empirical evidence, the study adapted the global competence scale developed by Liu et al. (2020) to the context of teacher education in Kazakhstan.

Instruments. The instrument used for measuring pre-service teachers' global competence was a survey comprising 25 closed-ended questions and one open-ended question. Five of the closed-ended items collected demographic data, while the remaining 20 statements were

devoted to the assessment of global competence. Respondents indicated their level of agreement with each statement on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The statements covered four components of global competence: global knowledge, global skills, global settings and values, and global activeness and readiness for action. The overall level of global competence was determined on the basis of total scores, which were classified into three levels: high, middle, and low. The open-ended question invited respondents to describe how they understand the role of global knowledge, skills, and values in their future professional career.

Participants. The respondents were students enrolled in various pedagogical majors at both bachelor's and master's levels. In total, 131 students from four universities took part in the research: Alikhan Bokeikhan University, L. N. Gumilyov Eurasian National University, Shakarim University, and Abai Kazakh National Pedagogical University. The distribution of participants across the universities is presented in Table 1.

Procedure. The survey was disseminated through a Google Form. Data collection lasted two weeks, a period determined by the

students' availability and the time required to obtain signed consent forms. Respondents were informed about the aim of the research, and participation was voluntary (Dörnyei, 2007).

Data Analysis. The collected data were processed using quantitative and qualitative methods. The internal consistency of the instrument was assessed using Cronbach's alpha coefficient, with $\alpha \geq .70$ adopted as the threshold for sufficient reliability; the obtained value met this criterion, confirming that the twenty statements reliably measured the construct of global competence.

Descriptive statistics - minimum, maximum, mean, and standard deviation - were computed for each statement and for each of the four components of global competence. Inferential testing was not performed, as the aim of the study was descriptive rather than comparative.

Responses to the open-ended question were examined through thematic analysis. The answers were read repeatedly, coded inductively, and grouped into categories on the basis of recurring semantic units; the resulting codes were then consolidated into broader themes, which are presented in Table 4 together with illustrative responses. The qualitative findings were used to contextualize and clarify the quantitative results.

Table 1

Information about students' universities

Universities	Number of students
Alikhan Bokeikhan University	38
L.N. Gumilyov Eurasian National University	37
Shakarim University	21
Kazakh National Pedagogical University named after Abai	35

Respondents were students in pedagogical majors such as pedagogy, mathematics, English, geography, Kazakh language, biology,

and IT teaching. Table 2 demonstrates the data on respondents' majors.

Table 2

Information about respondents' specialties

Majors	Number
Pedagogy	25
Mathematics	16

English	25
Geography	17
Kazakh language	15
Biology	15
IT	18

The data collection process lasted two weeks due to students' availability and the time required to sign the consent form. The respondents were informed about the aim of the research, and their participation was voluntary (Dörnyei, 2007). The majority of respondents were female (n=103), while the remaining respondents were male (n=28). This is explained by the fact that relatively few male students prefer pedagogical specialties. Respondents' ages ranged between 18 and 35 years. The presence of age 35

indicates the sample included master's students as well. 111 bachelor's students and 20 master's students participated in our survey.

Data Analysis. The collected data were processed through quantitative methods. To assess the reliability of the survey, Cronbach's alpha was calculated. A value of $\alpha \geq 0,70$ was considered a sufficient level of reliability, confirming that all statements measured global competences. For open-ended questions, a thematic analysis was conducted.

Results. The research revealed the following findings. The data are given in Table 3.

Table 3

Descriptive Statistics of the survey results

Statements	Min	Max	Mean	Standard Deviation
I Global knowledge				
I have a basic understanding of global problems (climate change, migration, inequality)	18	35	26,2	7,09
I understand how global processes influence a system of education	19	35	26,2	5,46
I am aware of the cultural, social, and educational features of different countries	17	38	26,2	9,28
I understand interactivity between local and global events	17	35	26,2	6,68
I understand the meaning of global competences in teachers' professional activity	19	35	26,2	5,98
II Global skills				
I can analyse the information of different cultural and international positions	21	33	26,2	5,27
I am able to critically analyse global events and activities.	23	28	26,2	1,94
I can effectively interact with representatives of other cultures	21	31	26,2	4,07
I am ready to use an international experience in my future pedagogical practice	18	38	26,2	6,76
I can work in a multinational and multicultural environment	23	28	26,2	1,94
III Global settings and values				
I respect cultural diversity	15	35	26,2	8,52
I am open to dialogue with people of other outlooks and cultures	18	31	26,2	4,62

I think it is important to form global competences of schoolchildren	10	39	26,2	10,67
I understand my responsibility as a future teacher in the global society	19	35	26,2	5,98
I strive to develop tolerance and mutual understanding in the educational environment.	17	35	26,2	6,68
IV Global activeness and readiness for actions				
I am ready to include global themes in the educational process	21	33	26,2	5,27
I am interested in participating in international programmes	15	33	26,2	7,30
I strive for consistent self-development in the sphere of global education	17	35	26,2	6,68
I am ready to use digital technologies for international interactivity	21	33	26,2	5,27
I think that I am ready for work in the conditions of a globalized world	18	33	26,2	5,46

The first block of the survey statements revealed that respondents' global knowledge mean is average ($M=26.2$). Respondents are familiar with different features of other countries, such as culture, social life, and education. However, their knowledge and skills should be enhanced. The second block findings indicate that respondents demonstrate moderate spread, which means that there are differences in the ability to integrate and analyze international and cultural data. The low variability means that respondents have common confidence in international and polycultural work. The third block results indicate that respondents are at an average level of value-oriented

competence, which means there is a need for further development of an understanding of the importance of global competences.

The fourth block findings demonstrate that respondents are at an average level of work in the globalized world. The data emphasize the need for practice-oriented work to increase respondents' professional skills in the international context. Moreover, the survey included one open-ended question. The question "How do you understand the role of global knowledge, skills, and values in your future career?" revealed the following answers. According to the answers, a thematic analysis was conducted, and Table 4 demonstrates these findings.

Table 4

A thematic analysis of the answers

Themes	Quotes
Global knowledge	Inclusion of global themes into educational disciplines will make teaching more effective; Comprehension of interconnections between local and global processes is needed for a future teacher; Studies on international educational experience contributes increase in the quality of teaching; Education should be focused on the international environment
Intercultural competence	International educational experience contributes to the improvement of education quality. Global context makes it possible to understand modern problems better. Respect for representatives of different cultures increases the quality of education. The ability to work in a multicultural environment is an important professional skill. Tolerance-based teaching should be the main priority in modern education. Simple human relations are the key to a successful career.

Digital technologies	Digital technologies expand international interethnic possibilities. Teaching online makes it easier to build global educational connections. Virtual academic mobility can be an alternative to traditional mobility as well. Use of international digital resources increases the enthusiasm of students. Digital literacy is an obligatory skill for teachers.
Language Proficiency	Knowledge of foreign languages is important for professional success; English is a necessary tool for both academic and professional needs. Foreign languages contribute to success in international relations. Knowledge of foreign languages will contribute to learning specific disciplines from different points of view. Proficiency in foreign languages will enhance international connections with experts.
Professional Development	Global competence opens opportunities for professional competence development. Global competence enhances students' critical and creative thinking. Global competence contributes to diverse learning styles. Global competence helps to connect with international experts who can guide students when they become specialists. Global competence prepares students for global jobs.

Table 4 summarizes five key themes from respondents about global competence in education. Overall, it shows that effective teaching and professional growth increasingly depend on integrating global knowledge, intercultural competence, digital technologies, language proficiency, and continuous professional development. Respondents emphasize that understanding global and local interconnections, working respectfully in multicultural settings, and using digital tools expand educational opportunities and improve quality. Foreign language skills, especially English, are seen as essential for international communication and academic success. Together, these themes suggest that modern education should prepare teachers and students to operate confidently in a globalized, interconnected, and technology-driven environment.

Ethical Consideration. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki and the Law of the Republic of Kazakhstan “On Personal Data and Their Protection” (No. 94-V of 21 May 2013, as amended). The research was limited to a non-interventional online questionnaire survey of adult university students; it involved no medical, clinical, or experimental procedures, no deception, and no collection of sensitive personal data. Under the institutional regulations in force, studies of this type do not require review by a formal ethics committee.

Participation was entirely voluntary. Before completing the questionnaire, respondents were informed of the aims of the study, the procedure for working with the instrument, the approximate time required, and the intended use of the data for research purposes only; each participant signed a consent form prior to inclusion. Respondents were informed that they could decline to participate or withdraw at any stage without giving reasons, and that this would have no effect on their academic assessment or their relationship with the teaching staff. No incentives were offered for participation.

The questionnaires contained no names, student identification numbers, or contact details. Only aggregated demographic characteristics were recorded (university, major, degree level, gender, and age), which do not permit the identification of individual respondents. All data were stored on a password-protected device accessible only to the research team and are reported exclusively in aggregated form. Excerpts from the open-ended responses are presented without any details that would allow individual participants to be identified.

Discussion. The data revealed from the survey indicate that the level of formation of global competences of pre-service teachers of primary schools is not uniform, and these results are consistent with trends inherent in the modern educational space. The first block of statements revealed that our respondents' global

knowledge level is average; they are aware of the cultural, social, and educational peculiarities of other countries. However, the findings indicate that they have overall theoretical knowledge, but they lack its application. According to OECD (2018), students should not only gain theoretical knowledge, but they should also be able to apply this knowledge in practice.

The findings of the second block of statements demonstrated that there are some differences in the responses given by our respondents in terms of their abilities in integrating and discussing international and cultural data. We conclude that the mean spread of the responses indicates that respondents' cognitive skills are not enhanced uniformly. Moreover, the revealed low variability shows that students have a positive attitude, and they believe that they can work in an international and multicultural community. Deardorff (2006) considered this issue and emphasizes that the foundation of cognitive skills is values and attitudes, and our results are consistent with his proposed intercultural competence model.

The findings revealed from the third block of our survey indicate that respondents' competences related to values are at an average level. These results indicate that future primary school teachers comprehend the importance of global competences; however, this comprehension needs more clarification and study. According to UNESCO (2017), in *A Guide for Ensuring Inclusion and Equity in Education Concepts*, global educational values are the basis of global competences; thus, an understanding of the following values, such as responsibility, tolerance, and global interdependence, should be formed systematically.

The findings of the fourth block demonstrate that respondents' readiness for the global world is formed at an average level as well. These data indicate that universities' educational teaching programs lack practice-oriented objectives that are focused on the development of future primary school teachers' abilities to work in the international context. Darling-Hammond (2015), in his research, emphasized that to develop global competences, it is necessary to incorporate teaching models that combine

theory and practice into the educational process.

The open-ended question results demonstrate that participants' responses were concentrated around five topics, such as global knowledge, intercultural competence, digital technologies, language proficiency, and professional development. The revealed responses mean that the participants have knowledge, and they understand the necessity of global competences, but they lack the skills to apply this knowledge in practice. In our view, it is necessary to incorporate teaching models aimed at the formation of global competences of primary school teachers into university educational programs.

The findings of our research justify that it is important to develop global competences of future primary school teachers, and they should be developed via systematic, practice-oriented, and innovative methods. Moreover, the revealed data indicates the necessity of forming primary school teachers' global competences purposefully and structurally. The models aimed at students' global competences formation should be integrated into all educational programs of future teachers. We believe that linking educational disciplines' content with global content, using different teaching methods based on intercultural interaction, and introducing international academic practices such as virtual mobility, joint projects, and online interactions with foreign specialists can be beneficial. These methods improve future primary school teachers' critical thinking abilities regarding global issues and their ability to interact effectively in an international and multicultural society.

Conclusion. The formation of global competences of pre-service teachers is an important pedagogical issue. Exploring the level of formation of pre-service teachers helps reveal data on the readiness and the conditions for effective participation in the globalized world, as they play a great role in laying the foundation for future specialists capable of working in the future job market. The research conducted justified the necessity of the study in this field and identified that primary school pre-service teachers' level of global competences

is at an average level. The participants of the research survey understand the need for global competences; they have theoretical knowledge; however, they lack the skills to apply that knowledge in practice. Thus, universities' educational training programs should include modules focused on developing students' global competences.

References

- Balitskaya, T. I. (2022). *Formirovaniye globalnykh kompetentsiy v nachalnoy shkole* [Formation of global competences in primary school]. Nportal.ru. <https://nsportal.ru/nachalnaya-shkola/materialy-mo/2022/12/04/formirovanie-globalnykh-kompetentsiy-v-nachalnoy-shkole> [in Russian].
- Crawford, E. O., Higgins, H. J., & Hilburn, J. (2020). Using a global competence model in an instructional design course before social studies methods: A developmental approach to global teacher education. *The Journal of Social Studies Research*, 44(4), 367–381. <https://doi.org/10.1016/j.jssr.2020.04.002>
- Darling-Hammond, L. (2015). *The flat world and education: How America's commitment to equity will determine our future*. Teachers College Press.
- Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education*, 10(3), 241–266. <https://doi.org/10.1177/1028315306287002>
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford University Press.
- El-Kafafi, S. (2025). Global education and cultural exchange: Building global citizenship and addressing global challenges. In *Global education and cultural exchange* (pp. 1–24). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-8834-1.ch001>
- Hunter, B., White, G. P., & Godbey, G. C. (2006). What does it mean to be globally competent? *Journal of Studies in International Education*, 10(3), 267–285. <https://doi.org/10.1177/1028315306286930>
- Karanikola, Z., Katsioulis, G., & Palaiologou, N. (2022). Teachers' global perceptions and views, practices, and needs in multicultural settings. *Education Sciences*, 12(4), Article 280. <https://doi.org/10.3390/educsci12040280>
- Köş, İ. E., & Celik, H. (2023). Global competence scale: An adaptation to measure pre-service English teachers' global competences. *International Journal of Assessment Tools in Education*, 10(4), 813–838. <https://doi.org/10.21449/ijate.1260245>
- Leal, M. S., Gómez, M. L. O., & Toma, R. B. (2022). Conceptual construction of global competence in education. *Teoría de la Educación*, 34(1), 83–103. <https://doi.org/10.14201/teri.27289>
- Li, Y. (2013). Cultivating student global competence: A pilot experimental study. *Decision Sciences Journal of Innovative Education*, 11(1), 125–143. <https://doi.org/10.1111/j.1540-4609.2012.00371.x>
- Liu, Y., Yin, Y., & Wu, R. (2020). Measuring graduate students' global competence: Instrument development and an empirical study with a Chinese sample. *Studies in Educational Evaluation*, 67, Article 100915. <https://doi.org/10.1016/j.stueduc.2020.100915>
- Majewska, I. A. (2023). Teaching global competence: Challenges and opportunities. *College Teaching*, 71(2), 112–124. <https://doi.org/10.1080/87567555.2022.2027858>
- OECD. (2018). *Preparing our youth for an inclusive and sustainable world: The OECD PISA global competence framework*. OECD Publishing. <https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/global-competence/Handbook-PISA-2018-Global-Competence.pdf>
- Parmigiani, D., Jones, S. L., Kunnari, I., & Nicchia, E. (2022). Global competence and teacher education programs: A European perspective. *Cogent Education*, 9(1), Article 2022996. <https://doi.org/10.1080/2331186X.2021.2022996>
- Reimers, F. M. (2020). A cultural perspective and global education. In *Educating students to improve the world* (pp. 31–52). Springer. https://doi.org/10.1007/978-981-15-3887-2_3
- Rizvi, F., & Lingard, B. (2009). *Globalizing education policy*. Routledge. <https://doi.org/10.4324/9780203867396>
- UNESCO. (2017). *A guide for ensuring inclusion and equity in education*. UNESCO Publishing. <https://www.unesco.org/en/articles/guide-ensuring-inclusion-and-equity-education-0>
- Wu, X. (2023). Fostering Chinese preservice teachers' global competence through inquiry learning in globalised educational contexts. *Teaching and Teacher Education*, 122, Article 103961. <https://doi.org/10.1016/j.tate.2022.103961>
- Ying, J., Poole, A., Lourenço, M., Parmigiani, D., & Timková, R. (2025). Teacher education for global competence in the 'post-global' era: A cross-European perspective. *Compare: A Journal of Comparative and International Education*, 55(4), 698–717. <https://doi.org/10.1080/03057925.2025.2452483>

Zhang, Y., Zhou, S., Wu, X., & Cheung, A. C. (2024). The effect of teacher training programs on pre-service and in-service teachers' global competence: A meta-analysis. *Educational Research Review*, 45, Article 100627. <https://doi.org/10.1016/j.edurev.2024.100627>

Information about authors:

Atymbayeva Gulzhanar, PhD student, Alikhan Bokeikhan University, ORCID ID: 0009-<https://orcid.org/0008-5302-9858>, email: atymbayeva@gmail.com

Kadirsizova Shynar, PhD, assistant professor, Semey Medical University, ORCID ID: <https://orcid.org/0000-0002-3991-7962>, e-mail: shynarr1982@mail.ru

Shestitko Irina, PhD, associate professor, Belorussian State Pedagogical University, ORCID ID: <https://orcid.org/0009-0005-8792-0444>, e-mail: irina.shestitko14@gmail.com