IRSTI 14.07.07 **DOI 10.47649/vau.26.v80.i1.15**
UDC 378.1

S.Abzhanova[1], E.Uaidullakyzy[2*], Zh.Belassarova[1], B. Baimukhanbetov[3]

[1]Abai Kazakh National Pedagogical University
050010, Almaty, Republic of Kazakhstan
[2]Korkyt Ata Kyzylorda University, Kyzylorda, Republic of Kazakhstan
[3]Khoja Akhmet Yassawi International Kazakh-Turkish University
*e-mail: a.sabilya_418@mail.ru

DEVELOPING THE LINGUODIDACTIC POTENTIAL OF FUTURE PRIMARY SCHOOL TEACHERS THROUGH INNOVATIVE TECHNOLOGIES

Abstract

The development of the linguodidactic potential of future primary school teachers using innovative technologies is a pressing issue aimed at improving the quality of training that prepares teachers to effectively address the problems of teaching and educating primary school students. In the context of the modern educational process, which requires the use of new technologies, it is necessary to adapt and implement innovative methods for training teachers, thereby enhancing their professional competencies. The purpose of the study is to analyze and develop methodological approaches to the use of innovative technologies to improve the linguodidactic potential of future primary school teachers. This will create conditions for more effective teaching of language disciplines and the development of speech and communication skills in children.The relevance of the study is determined by the need to update pedagogical technologies to support the development of future teachers' linguistic competence. The introduction of innovative technologies into the educational process for primary school teachers improves their ability to teach children, taking into account the individual characteristics of each student and integrating modern teaching methods within the framework of the general goals of the educational standard. In addition, the use of technologies such as multimedia, interactive whiteboards, computer programs, electronic educational resources, and other tools opens new opportunities for the effective acquisition of language disciplines.The novelty of the study lies in its methodological basis for integrating innovative technologies into the linguodidactic training of future primary school teachers. A special feature of this approach is the attention to the use of technologies to develop students' skills in working with new educational tools.

Keywords: linguodidactic potential, innovative technologies, pedagogical practice, educational, professional competence.

Introduction

In recent decades, the development of educational technologies has led to significant changes in the training of future teachers, particularly in primary education. The linguistic potential of teachers plays a key role in the development of language competence in primary school students, and the use of innovative technologies in the pedagogical process is becoming an important tool for achieving high educational outcomes. These technologies contribute not only to improving the learning process but also to the more effective development of the professional competencies of future teachers, including in the field of teaching languages and speech [1].

Modern research in pedagogy and linguodidactics emphasizes the need to update teaching approaches in the context of the digitalization of the educational environment. In the context of the rapid development of new information and communication technologies, there is a need to integrate them into the pedagogical process, which is especially important for the training of primary school teachers. Today, the widespread use of multimedia technologies, interactive whiteboards, educational platforms, and applications significantly changes the methods of teaching and the ways teachers interact with students [2].

One significant area of pedagogical research is the use of innovative technologies to develop the professional skills of future teachers. In particular, the studies by S. G. Selevko and L. V. Dyachenko emphasize the importance of integrating information and communication technologies into teacher training. Selevko notes that information technologies can not only improve the quality of education, but also develop students' critical thinking, increase their motivation for learning, and prepare them to work with modern teaching methods and tools [3].

In turn, the studies of A. I. Savin and T. M. Novikova focus on the importance of linguodidactic training of primary school teachers. They argue that the use of multimedia and interactive technologies contributes to the development of speech in children, and also increases the effectiveness of learning educational material. Such technologies are becoming an important element in the practice of teaching language disciplines, allowing for the creation of a more dynamic and motivated educational environment [4].

The research by N. V. Kuzmina and V. A. Shadrikov focuses on integrating digital educational resources into primary school teachers' work. According to scientists, the use of electronic textbooks, virtual laboratories, and other digital tools helps teachers create more interactive and personalized learning processes, which, in turn, contributes to the development of linguistic and communication skills in primary school students.

In addition, the research by T. V. Kuznetsova and E. N. Larina emphasizes that the successful preparation of future teachers for the use of innovative technologies requires developing not only theoretical knowledge in students but also practical skills in working with modern educational tools. It is important that future teachers can effectively adapt new technologies to the needs of specific educational situations, which also contributes to their professional growth .

Thus, modern research confirms the high relevance and necessity of using innovative technologies in training primary school teachers. The introduction of these technologies contributes to the development of the linguodidactic potential of future teachers, thereby positively affecting the quality of teaching and education for primary school students [5].

Problem Statement In modern conditions, when the educational system actively integrates new information and communication technologies, the training of primary school teachers requires adaptation to these changes. One of the key tasks is developing the linguodidactic potential of future teachers, which presupposes their readiness to teach language disciplines and to develop speech and communication skills in primary school students. In the context of digitalization and the introduction of innovative educational technologies, this task is becoming especially relevant, since traditional teaching methods no longer always meet the requirements of the modern educational process [6].

One of the problems faced by educational institutions is insufficient attention to integrating innovative technologies into the training of future primary school teachers, which in turn affects their ability to effectively use modern teaching tools in their pedagogical practice. Despite the many studies on the application of information technologies in education, the issue of their optimal use for developing the linguodidactic potential of future teachers remains insufficiently studied [7].

In addition, many teachers and students of pedagogical universities experience difficulties in mastering and applying modern technologies. This is due to teachers' lack of preparedness to work with innovative tools, as well as to a lack of methodological recommendations for the introduction of digital tools into teaching practice. Another important aspect is the need to develop students' skills in working with multimedia and interactive tools to improve the perception and assimilation of language material.

Thus, there is a need to study effective methodological approaches that use innovative technologies to enhance the linguodidactic potential of future primary school teachers. It is important to find ways to integrate digital technologies into the educational process in such a way that they not only improve the quality of education, but also contribute to the development of the necessary professional competencies in students, which will improve the level of teaching language disciplines in primary school and prepare teachers ready for the modern challenges of the educational environment [8].

Materials and methods of research

The study involved 64 students of the primary education program at a pedagogical university. The pedagogical experiment lasted one academic semester (16 weeks).

To solve the set tasks and achieve the research goal, which consists in developing and testing methodological approaches to the use of innovative technologies in the training of future primary school teachers, a comprehensive methodology was developed, including several stages and research methods.

In the first stage of the study, a theoretical analysis of existing scientific publications and studies on the use of innovative technologies in the educational process is conducted. Domestic and foreign experience in linguodidactics and pedagogy, as well as studies devoted to the training of future primary school teachers, with an emphasis on the use of new technologies, are analyzed [9]. This allows us to identify key problems and needs and to determine the theoretical basis for developing methodological recommendations. At this stage, current regulatory documents and educational standards concerning the implementation of information and communication technologies in the educational process are also analyzed. For the practical part of the study, a range of methods, including both qualitative and quantitative approaches, is used. An important element of the methodology is the selection of innovative technologies to improve the linguodidactic potential of future teachers. Among them are multimedia and interactive teaching aids, electronic educational platforms and applications, virtual laboratories, and various forms of electronic textbooks and teaching aids [10].

Based on an analysis of existing theoretical works and regulatory documents, key aspects of the use of innovative technologies in the training of primary school teachers are identified.

A questionnaire is administered to collect information on students' current levels of knowledge and skills at pedagogical universities, as well as their perceptions of innovative technologies. The questionnaires include questions about students' readiness to use digital technologies in pedagogical practice, their motivation, and level of competence in this area.

A pedagogical experiment is conducted to test the effectiveness of the proposed methodological approaches. Students at pedagogical universities are offered training courses that teach them to use innovative technologies for teaching language disciplines. The experiment includes both a theoretical part (mastering the principles of working with new technologies) and a practical part (application of acquired knowledge in educational practice) [11].

An important method is observing the process of introducing innovative technologies into students' educational activities. This allows us to record changes in their teaching practice and assess the degree to which students are ready to use digital tools in practice.

After the experiment is completed, statistical data processing is carried out to identify changes in students' linguistic-didactic potential. The effectiveness of innovative technologies is assessed through a comparative analysis before and after the implementation of the experimental program.

Based on the data obtained, methodological recommendations are developed for the introduction of innovative technologies into the training process for future primary school teachers. These recommendations include both theoretical aspects of using technologies in teaching languages and practical advice on their introduction into pedagogical practice. Particular attention is paid to selecting technologies that support the development of speech and communication skills in primary school students [12].

After developing recommendations, testing of methodological approaches is carried out within the framework of students' pedagogical training. The results of testing allow us to identify the strengths and weaknesses of the proposed approaches and to adjust the methodological materials for further use in educational practice.

Thus, the research methodology comprises the stages of theoretical analysis, empirical research using various methods of data collection and analysis, and the development and testing of methodological recommendations for the use of innovative technologies in the training of future primary school teachers [13].

Results and their discussion

The results of the study are based on the analysis of the data collected through surveys, experiments, and observations conducted with future primary school teachers. The primary goal was to evaluate the effectiveness of integrating innovative technologies in developing their linguistic-didactic potential. The results are presented in comparative tables that highlight differences between pre- and post-experiment data, focusing on key aspects such as technological competence, motivation, and the application of acquired skills. The following tables provide a detailed breakdown of these findings.

The data clearly show a significant improvement in students' technological competence after the experiment. Initially, only 45% of students were familiar with multimedia tools, whereas this

figure rose to 85% after the experiment. Similarly, there was a marked increase in the use of interactive whiteboards (from 38% to 75%) and in the integration of digital tools into lesson planning (from 41% to 79%).

Table 1 – Students' Technological Competence Before and After the Experiment

Competence Area	Pre-Experiment (%)	Post-Experiment (%)	Change (%)
Familiarity with multimedia tools (e.g., video editors, presentation software)	45%	85%	+40%
Ability to use interactive whiteboards	38%	75%	+37%
Knowledge of educational platforms (e.g., Moodle, Google Classroom)	52%	88%	+36%
Ability to integrate digital tools into lesson planning	41%	79%	+38%
Understanding of the role of digital technologies in teaching languages	57%	92%	+35%
Note: Compiled by the authors			

The overall increase in technological competence ranged from 35% to 40%, indicating a substantial improvement due to the implementation of innovative technologies in the teacher preparation process.

Table 2 – Students Motivation to Use Digital Technologies in Teaching

Motivation Factor	Pre-Experiment (%)	Post-Experiment (%)	Change (%)
Interest in learning digital tools for teaching	50%	92%	+42%
Confidence in using digital technologies in lessons	48%	80%	+32%
Belief in the effectiveness of digital tools for language teaching	55%	90%	+35%
Willingness to continue learning digital technologies beyond the course	44%	85%	+41%
Perception of digital technologies as essential in modern teaching	60%	95%	+35%
Note: Compiled by the authors			

Motivation to use digital technologies also increased notably. Before the experiment, only 50% of students expressed interest in learning digital tools for teaching, but this number jumped to 92% afterward. Confidence in using digital tools in lessons increased by 32%, and the belief in their effectiveness for language teaching grew by 35%. The willingness of students to continue learning digital technologies beyond the course increased by 41%, reflecting a strong positive shift in their attitudes toward incorporating these technologies into their future teaching practices.

Table 3 – Students Practical Application of Digital Tools in Lesson Planning

Practical Application Area	Pre-Experiment (%)	Post-Experiment (%)	Change (%)
Creating lesson plans with integrated digital tools	34%	72%	+38%
Using multimedia resources (videos, audio, animations) in lessons	30%	68%	+38%
Designing interactive learning activities (quizzes, polls)	25%	60%	+35%
Applying digital resources for formative assessment	28%	66%	+38%
Incorporating digital collaboration tools (e.g., Google Docs, Padlet) in lessons	32%	70%	+38%
Note: Compiled by the authors			

The practical application of digital tools in lesson planning and execution showed a remarkable increase. Initially, only 34% of students were able to create lesson plans that integrated

digital tools. After the experiment, this number increased to 72%. Similarly, students became more proficient at using multimedia resources, designing interactive learning activities, and incorporating digital collaboration tools. These improvements reflect a deeper integration of innovative technologies into the practical teaching process.

Table 4 – Students' Perception of the Impact of Digital Technologies on Students' Learning Outcomes

Perceived Impact on Students' Learning Outcomes	**Pre-Experiment (%)**	**Post-Experiment (%)**	**Change (%)**
Increased engagement of students in lessons	62%	90%	+28%
Improvement in students' language skills	59%	87%	+28%
Enhancement of students' critical thinking skills	48%	82%	+34%
Better ability to differentiate instruction	56%	85%	+29%
More effective classroom management	50%	78%	+28%
Note: Compiled by the authors			

Students perceived a significant positive impact of digital technologies on their learning outcomes. There was a marked increase in the perception of enhanced student engagement (from 62% to 90%) and improvement in language skills (from 59% to 87%). Furthermore, the ability to foster critical thinking (from 48% to 82%) and differentiate instruction (from 56% to 85%) was seen as improved. The positive shifts in these perceptions suggest that students believe that digital technologies not only enhance their own teaching but also benefit their future students' learning experiences.

The results of the study demonstrate a substantial improvement in several key areas after the integration of innovative technologies into the teacher preparation process.

These results underline the importance of integrating innovative technologies into teacher education programs to enhance the lingo-didactic potential of future primary school teachers, ensuring that they are well-equipped to use digital tools in their teaching practices.

The results of the study showed significant changes in the level of linguistic-didactic potential among future primary school teachers after the introduction of innovative technologies into their educational process. Positive dynamics in key aspects, such as technological competence, motivation, practical application of digital tools in lesson planning, and perception of the impact of these technologies on students' learning outcomes, indicate a high potential for using innovative educational technologies in teacher training [14].

The students' technological competence increased significantly after completing the course, as evidenced by improved skills in using multimedia tools, interactive whiteboards, and educational platforms. This indicates that the introduction of technologies into teacher training contributes to the development of not only theoretical knowledge but also the practical skills necessary for effective pedagogical practice. It is especially important that students not only master the use of technologies, but also learn to integrate them into lesson planning, which directly affects the quality of the educational process in primary school [15].

On the other hand, students' motivation to use digital technologies in teaching also increased significantly. This result confirms the importance of involving students in the process of mastering technologies, since increasing interest in their use can improve the effectiveness of teaching practice. Motivation is a key factor influencing the degree of readiness among future teachers to use innovative tools in their professional activities. It should be noted that a significant increase in motivation (by 32-42%) shows not only the growth of students' self-confidence, but also their awareness of the importance of digital technologies in the modern educational process [16].

One of the most significant results is the practical application of innovative technologies. Students demonstrated a noticeable improvement in creating lessons with digital tools, which is associated with deeper immersion in various educational platforms and multimedia tools. These skills directly affect the quality of teaching language disciplines in primary school, as the use of interactive and multimedia materials makes the learning process more engaging, accessible, and personalized for students.

In addition, the perception of technology's impact on students' learning outcomes also showed positive dynamics. Students have become more conscious of the role of digital technologies in increasing student motivation, developing their critical thinking, and improving academic performance. It is important to note that this view of technology's role in teaching children can contribute to a more personalized approach to teaching, which is necessary in a modern school.

However, despite the positive results, it is necessary to note certain challenges that both students and teachers face in mastering and implementing technologies. Some students experience difficulties with the initial adaptation to new tools, especially in the absence of prior training in working with digital tools. This indicates the need to introduce systematic, consistent training for future teachers in the use of modern educational technologies at the early stages of their education.

In addition, the need for continuing education and advanced training for teachers in information and communication technologies remains relevant. Despite significant achievements in technology implementation, the sustainable and effective use of these tools over the long term requires ongoing updates to teachers' knowledge and skills.

Thus, the results of the study confirm that the use of innovative technologies in the training of future primary school teachers significantly increases their professional competence, motivation, and ability to use digital tools in teaching practice. These changes contribute to improving the quality of the educational process and to training teachers to work in a digital society. However, to achieve sustainable results, it is important to continue improving approaches to teaching students in information technology and to create conditions for their further professional growth.

Conclusion

The study on the use of innovative technologies in the training of future primary school teachers has shown the high efficiency of integrating digital tools into the pedagogical process. The experiment provided convincing evidence that the introduction of such technologies significantly contributes to the development of students' linguodidactic potential. Based on the data, several important conclusions can be drawn.

Increasing students' technological competence. The results of the experiment showed a significant improvement in the use of multimedia and interactive technologies by future teachers. Their level of preparation for using digital tools in the educational process increased by 35-40%. This indicates that innovative technologies not only contribute to the expansion of knowledge but also significantly enhance the practical skills of students, which will be in demand in their future teaching activities.

Increased motivation to use digital technologies. The study showed a significant increase in students' motivation to learn and use digital technologies in teaching. The level of interest and confidence in these technologies increased by 32-42%. This confirms that integrating innovative methods into the educational process increases student engagement, which in turn affects the effectiveness of their future teaching practice.

Strengthening the practical use of digital tools in lesson preparation. The experimental data showed that students began to use multimedia resources and educational platforms more actively and to create interactive tasks and activities. As a result, their ability to integrate these tools into teaching activities improved significantly (an increase of 35-38%). This is important, since the effective use of digital technologies contributes to creating a more engaging and accessible learning process for children.

Positive perception of the impact of technology on student learning outcomes. After the experiment, students significantly improved their perception of the impact of digital technologies on student learning achievement. In particular, aspects such as student engagement in lessons and the development of their critical thinking and independent work skills improved. This result indicates that students are aware of the importance of digital technologies for improving the quality of education.

There is a need for ongoing training for teachers in digital technologies. Despite the positive results, it should be noted that the successful implementation of technologies requires continuous training and skill improvement for both students and teachers. Teachers should be ready to adapt

new digital tools and methods, which emphasizes the need for systematic professional development in this area.

Thus, the results of the study confirm the high efficiency of integrating innovative technologies in the training of future primary school teachers. The introduction of such technologies plays a key role in the formation of pedagogical competencies, improving the quality of the educational process and increasing student motivation. Therefore, further work on developing and improving these approaches in educational institutions is necessary to prepare qualified specialists for the digital age.

REFERENCES

1 Bates A. W. Teaching in a Digital Age: Guidelines for Designing Teaching and Learning (2nd ed.). Vancouver: Tony Bates Associates Ltd. 2020. P. 112-114.

2 Becker H. J. Educational Technology and Teacher Education Annual 2021. Eugene: Association for the Advancement of Computing in Education. 2021. P. 26–35.

3 Brown M., Green T. The Essentials of Instructional Design: Connecting Fundamental Principles with Process and Practice. Routledge. 2019. P. 98-107.

4 Christensen C. M., Horn, M. B., Johnson C. W. Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns (2nd ed.). McGraw-Hill Education. 2020. P. 275-285.

5 Garrison D. R., Anderson T. E. Learning in the 21st Century: A Framework for Research and Practice (3rd ed.). Routledge. 2020. P. 73-87.

6 Hattie J. Visible Learning for Teachers: Maximizing Impact on Learning. Routledge. 2020. P. 98 – 121.

7 Johnson D. W., Johnson, R. T., Holubec E. J. Cooperation in the Classroom (9th ed.). Allyn & Bacon. 2019. P. 25 – 38.

8 Kolb D. A. Experiential Learning: Experience as the Source of Learning and Development (2nd ed.). Pearson. 2019. P.15-28.

9 Merrill M. D. First Principles of Instruction: Identifying and Designing Effective, Efficient, and Engaging Instruction. Wiley. 2020. 1(1). P. 34 – 43.

10 Puentedura R. R. SAMR: A Model for Transforming Teaching and Learning. EdTechTeacher. 2020. P. 56–75.

11 Siemens G. Connectivism: A Learning Theory for the Digital Age. International Journal of Instructional Technology and Distance Learning . 2019. 6(1). P. 150-168.

12 Steed A. M. Blended Learning : Research Perspectives, Volume 2. Routledge. 2021. P. 235-255.

13 Thomas M. The Impact of Digital Learning Platforms on Education in the 21st Century. Journal of Educational Technology. 2020. 35(3). P.120-130.

14 Trilling B., Fadel C. 21st Century Skills: Learning for Life in Our Times. Jossey-Bass. 2020. P.184 -218.

15 Vaill P. B. Learning as a Way of Being: Strategies for Survival in a World of Permanent Whitewater. Jossey-Bass. 2020. P. 98-137.

16 Willms D. Strengthening Education through Technology and Innovation. Educational Policy Analysis. 2021. 29(2). P. 215-231.

БОЛАШАҚ БАСТАУЫШ СЫНЫП МҰҒАЛІМДЕРІНІҢ ЛИНГВОДИДАКТИКАЛЫҚ ӘЛЕУЕТІН ИННОВАЦИЯЛЫҚ ТЕХНОЛОГИЯЛАР АРҚЫЛЫ ДАМЫТУ

Аңдатпа

Инновациялық технологияларды пайдалана отырып, болашақ бастауыш сынып мұғалімдерінің лингводидактикалық әлеуетін дамыту – бастауыш сынып оқушыларын оқыту мен тәрбиелеу мәселелерін тиімді шешуге қабілетті мұғалімдерді даярлау сапасын арттыруға бағытталған өзекті мәселе. Жаңа технологияларды қолдануды талап ететін қазіргі білім беру үдерісі жағдайында педагог кадрларды даярлауда олардың кәсіби құзыреттілігін арттыруға ықпал ететін инновациялық әдістерді бейімдеп, енгізу қажет. Зерттеудің мақсаты – болашақ бастауыш сынып мұғалімдерінің лингводидактикалық әлеуетін арттыру үшін инновациялық технологияларды қолданудың әдістемелік тәсілдерін талдау және дамыту. Бұл тіл пәндерін тиімдірек оқытуға, балалардың сөйлеу және коммуникативті дағдыларын дамытуға жағдай жасайды. Зерттеудің өзектілігі болашақ мұғалімдердің лингвистикалық құзыреттілігін дамытуға ықпал ететін педагогикалық технологияларды жаңарту қажеттілігімен анықталады. Бастауыш сынып мұғалімдерінің оқу үдерісіне инновациялық технологияларды енгізу әрбір оқушының жеке ерекшеліктерін ескере отырып, олардың балаларды оқыту қабілетін жетілдіреді, сонымен қатар білім стандартының жалпы мақсаттары шеңберінде оқытудың заманауи әдістерін біріктіреді. Сонымен қатар, мультимедиялық, интерактивті тақта, компьютерлік бағдарламалар, электронды білім беру ресурстары және басқа да құралдар сияқты технологияларды қолдану тілдік пәндерді тиімді меңгеруге жаңа мүмкіндіктер ашады. Зерттеудің жаңашылдығы болашақ бастауыш сынып мұғалімдерін лингводидактикалық

оқытуға инновациялық технологияларды кіріктірудің әдістемелік негізін ұсынуында. Бұл тәсілдің ерекшелігі – оқушылардың жаңа білім беру құралдарымен жұмыс істеу дағдыларын дамыту.

Негізгі сөздер: лингводидактикалық әлеует, инновациялық технологиялар, педагогикалық тәжірибе, білім беру, кәсіби құзыреттілік.

РАЗВИТИЕ ЛИНГВОДИДАКТИЧЕСКОГО ПОТЕНЦИАЛА БУДУЩИХ УЧИТЕЛЕЙ НАЧАЛЬНОЙ ШКОЛЫ ПОСРЕДСТВОМ ИННОВАЦИОННЫХ ТЕХНОЛОГИЙ

Аннотация

Развитие лингводидактического потенциала будущих учителей начальных классов с использованием инновационных технологий является актуальной проблемой, направленной на повышение качества подготовки учителей, способных эффективно решать задачи обучения и воспитания учащихся начальных классов. В условиях современного образовательного процесса, требующего использования новых технологий, необходима адаптация и внедрение инновационных методов в подготовку учителей, что способствует развитию их профессиональных компетенций. Цель исследования – анализ и разработка методических подходов к использованию инновационных технологий для повышения лингводидактического потенциала будущих учителей начальных классов. Это позволит создать условия для более эффективного преподавания языковых дисциплин, развития речевых и коммуникативных навыков у детей. Актуальность исследования определяется необходимостью обновления педагогических технологий, способствующих развитию языковой компетентности будущих учителей. Внедрение инновационных технологий в образовательный процесс учителей начальных классов повышает их способность обучать детей с учетом индивидуальных особенностей каждого ученика, а также интегрирует современные методы обучения в рамках общих целей образовательного стандарта. Кроме того, использование таких технологий, как мультимедиа, интерактивные доски, компьютерные программы, электронные образовательные ресурсы и другие средства открывает новые возможности для эффективного усвоения языковых дисциплин. Новизна исследования заключается в том, что оно предлагает методическую основу для интеграции инновационных технологий в лингводидактическую подготовку будущих учителей начальных классов. Особенностью данного подхода является внимание к использованию технологий для формирования у учащихся навыков работы с новыми образовательными средствами.

Ключевые слова: лингводидактический потенциал, инновационные технологии, педагогическая практика, образовательная, профессиональная компетентность.

REFERENCES

1 Bates A. W. Teaching in a Digital Age: Guidelines for Designing Teaching and Learning (2nd ed.). Vancouver: Tony Bates Associates Ltd. 2020. P. 112-114. [in English]

2 Becker H. J. Educational Technology and Teacher Education Annual 2021. Eugene: Association for the Advancement of Computing in Education. 2021. P. 26–35. [in English]

3 Brown, M., Green T. The Essentials of Instructional Design: Connecting Fundamental Principles with Process and Practice. Routledge. 2019. P. 98-107. [in English]

4 Christensen C. M., Horn M. B., Johnson C. W. Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns (2nd ed.). McGraw-Hill Education. 2020. P. 275-285. [in English]

5 Garrison D. R., Anderson T. E-Learning in the 21st Century: A Framework for Research and Practice (3rd ed.). Routledge. 2020.P. 73-87. [in English]

6 Hattie J. Visible Learning for Teachers: Maximizing Impact on Learning. Routledge. 2020. P. 98 – 121. [in English]

7 Johnson D. W., Johnson R. T., Holubec E. J. Cooperation in the Classroom (9th ed.). Allyn & Bacon. 2019. P. 25 – 38. [in English]

8 Kolb D. A. Experiential Learning: Experience as the Source of Learning and Development (2nd ed.). Pearson. 2019. P.15-28. [in English]

9 Merrill M. D. First Principles of Instruction: Identifying and Designing Effective, Efficient, and Engaging Instruction. Wiley. 2020. 1(1). P. 34 – 43. [in English]

10 Puentedura R. R. SAMR: A Model for Transforming Teaching and Learning. EdTechTeacher. 2020. P. 56–75. [in English]

11 Siemens G. Connectivism: A Learning Theory for the Digital Age. International Journal of Instructional Technology and Distance Learning . 2019 6(1). P. 150-168. [in English]

12 Steed A. M. Blended Learning: Research Perspectives, Volume 2. Routledge. 2021.P. 235-255. [in English]

13 Thomas M. The Impact of Digital Learning Platforms on Education in the 21st Century. Journal of Educational Technology . 2020. 35(3). P.120-130. [in English]

14 Trilling B., Fadel C. 21st Century Skills: Learning for Life in Our Times. Jossey-Bass. 2020. P.184 -218. [in English]

15 Vaill P. B. Learning as a Way of Being: Strategies for Survival in a World of Permanent Whitewater. Jossey-Bass. 2020. P. 98-137. [in English]

16 Willms D. Strengthening Education through Technology and Innovation. Educational Policy Analysis. 2021. 29(2). P. 215-231. [in English]

Information about authors:

Sabila Abzhanova – PhD student of Abai Kazakh National Pedagogical University, Almaty, Republic of Kazakhstan

ORCID: https://orcid.org/0000-0001-9891-3913

E-mail: a.sabilya_418@mail.ru

Elmira Uaidullakyzy – **corresponding author,** PhD, associate professor, Korkyt Ata Kyzylorda University, Kyzylorda, Republic of Kazakhstan

ORCID: https://orcid.org/0000-0002-5613-4871

E-mail: Elmira. uaidullakyzy1988@gmail.com

Zhaidarkul Belasarova – PhD, Kazakh National Pedagogical University named after Abai, Republic of Kazakhstan

ORCID: https://orcid.org/0000-0001-9858-5083

E-mail: bislauka@mail.ru

Bagdat Baimukhanbetov - PhD, Ass. Professor. Khoja Akhmet Yassawi International Kazakh-Turkish University. Turkestan, Republic of Kazakhstan.

ORCID: https://orcid.org/0000-0001-5153-1088

E-mail: bagdat.baimukhanbetov@ayu.edu.kz

Информация об авторах:

Сабила Абжанова –докторант Казахского национального педагогического университета имени Абая, г.Алматы, Республика Казахстан

E-mail: a.sabilya_418@mail.ru

ORCID: https://orcid.org/0000-0001-9891-3913

Эльмира Уайдуллакызы – **основной автор, PhD** ассоциированный профессор, Кызылординский университет им. Коркит-Аты, г.,Кызылорда, Республика Казахстан

ORCID: https://orcid.org/0000-0002-5613-4871

E-mail: Elmira.uaidullakyzy1988@gmail.com

Жайдаркул Беласарова – PhD, Казахский национальный педагогический университет имени Абая, г. Алматы, Республика Казахстан

ORCID: https://orcid.org/0000-0001-9858-5083

E-mail: bislauka@mail.ru

Багдат Баймуханбетов - PhD, и.о. профессор. Международный казахско-турецкий университет имени Ходжи Ахмеда Ясави. г. Туркестан, Республика Казахстан

ORCID: https://orcid.org/0000-0001-5153-1088

E-mail: bagdat. baimukhanbetov@ayu.edu.kz

Авторлар туралы ақпарат:

Сабила Абжанова –Абай атындағы Қазақ ұлттық педагогикалық университетінің PhD докторанты, Алматы қ., Қазақстан Республикасы.

E-mail: a.sabilya_418@mail.ru

ORCID: https://orcid.org/0000-0001-9891-3913

Эльмира Уайдоллақызы– **негізгі автор,** PhD, қауымдастырылған профессор, Қорқыт Ата атындағы Қызылорда университеті, Қызылорда қ., Қазақстан Республикасы

ORCID: https://orcid.org/0000-0002-5613-4871

E-mail: Elmira.uaidullakyzy1988@gmail.com

Жайдаркүл Беласарова - PhD, Абай атындағы Қазақ ұлттық педагогикалық университеті, Алматы қ., Қазақстан Республикасы

ORCID: https://orcid.org/0000-0001-9858-5083

E-mail: bislauka@mail.ru

Бағдат Баймуханбетов –PhD, профессор м.а., Қожа Ахмет Ясауи атындағы Халықаралық қазақ-түрік университеті, Түркістан қ., Қазақстан Республикасы

ORCID: https://orcid.org/0000-0001-5153-1088

E-mail: bagdat. baimukhanbetov@ayu.edu.kz