

ABSTRACT
of the dissertation of PhD doctoral student
of the educational program
8D01301 – “Pedagogy and Methods of Primary Education”
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on the topic:
“Preparing Future Primary School Teachers to Use Interactive Learning
Tools”

Research topic: Preparing Future Primary School Teachers to Use Interactive Learning Tools

Research objective: to determine the theoretical and methodological foundations for preparing future primary school teachers to use interactive teaching tools, to develop a methodology and verify its effectiveness through a pedagogical experiment, as well as to provide scientific and methodological recommendations.

Research objectives

1. To determine the theoretical and methodological foundations for preparing future primary school teachers to use interactive teaching tools.
2. To identify the specific features of preparing future primary school teachers to use interactive teaching tools.
3. To determine the pedagogical conditions for preparing future primary school teachers to use interactive teaching tools.
4. To develop a structural and content-based model for preparing future primary school teachers to use interactive teaching tools.
5. To develop a methodology for preparing future primary school teachers to use interactive teaching tools, to verify its effectiveness through experimental work, and to provide scientific and methodological recommendations.

Research methods: *theoretical methods* – analysis, generalization, systematization, comparison, specification, and design of results based on the study of psychological-pedagogical and scientific-theoretical literature, the experience of higher education institutions, and normative and educational-methodological documentation; *empirical methods* – questionnaires, observation, and pedagogical experiment (ascertaining, formative, and control stages); *mathematical-statistical methods* – processing of the obtained data, analysis of experimental results and their graphical presentation, and expert evaluation.

Main provisions submitted for defense

1. The preparation of future primary school teachers to use interactive teaching tools is a purposeful pedagogical process aimed at developing professional competence and involving the mastery of a set of knowledge, skills, and abilities necessary for the effective use of interactive teaching tools. This process is considered in the unity of systemic, activity-based, competence-based, learner-centered, informational, and communicative approaches, which requires the identification of its theoretical and methodological foundations.
2. The preparation of future primary school teachers to use interactive teaching tools, as an important component of their professional training, is carried

out taking into account the following features: 1) mastery of the theoretical foundations of using interactive teaching tools; 2) acquisition of the methodology for using interactive teaching tools; 3) development of skills for the effective organization of the educational process through the use of interactive teaching tools; 4) development of the ability to plan, implement, and evaluate interactive interaction in pedagogical activity.

3. The effectiveness of preparing future primary school teachers to use interactive teaching tools is ensured through the comprehensive implementation of special pedagogical conditions. These include organizational-pedagogical, didactic, psychological-pedagogical, and material-technological conditions.

4. The structural and content-based model of preparing future primary school teachers to use interactive teaching tools includes the interrelationship of motivational, cognitive, and operational-reflective components; the identification of their criteria and indicators makes it possible to determine the levels of preparedness.

5. The preparation of future primary school teachers to use interactive teaching tools is carried out through the introduction of a specially developed methodology into the educational process of a higher education institution. The effectiveness of this methodology is verified in the course of experimental work, based on the results of which scientific and methodological recommendations are developed.

Description of the main research results:

– the essence of the concept of “interactive learning tools” was clarified, and an author’s definition was proposed;

– the essence and specific features of the professional preparation of future primary school teachers in the context of educational digitalization were scientifically substantiated;

– a structural-content model for preparing future primary school teachers to use interactive learning tools was developed and introduced into the educational process, together with the educational-methodological package for the elective course “Using Interactive Learning Tools in Primary Classes,” a textbook, a computer program, and methodological guidelines for using interactive learning tools in primary classes;

– the effectiveness of the structural-content model and the educational-methodological package for preparing future primary school teachers to use interactive learning tools was experimentally verified, and scientific-methodological recommendations were developed.

Justification of the novelty and significance of the obtained results:

– *the first result is novel.* The theoretical and methodological foundations for preparing future primary school teachers to use interactive teaching tools have been determined.

– *the second result is novel.* The specific features of preparing future primary school teachers to use interactive teaching tools have been identified.

– *third new result is novel.* The pedagogical conditions for preparing future primary school teachers to use interactive teaching tools have been determined.

– *the fourth result is novel.* A structural and content-based model for preparing future primary school teachers to use interactive teaching tools has been developed.

– *the fifth result is new.* A methodology for preparing future primary school teachers to use interactive teaching tools has been developed, its effectiveness has been verified through experimental work, and scientific and methodological recommendations have been provided.

Practical significance of the research:

– the textbook “Using Interactive Learning Tools in Primary Classes” was prepared and introduced into practice; it was recommended by the Academic Council of Zhetysu University named after I. Zhansugurov (Minutes No. 4 dated November 29, 2024), ISBN 978-601-216-982-9;

– the computer program “Using Interactive Learning Tools in Primary Classes” was developed. – Taldykorgan: Zhetysu University named after I. Zhansugurov, 2024. – 142 pages;

– methodological guidelines on using interactive learning tools in primary classes were developed. – Taldykorgan, 2024. – 29 pages;

– copyright certificates confirming the inclusion of information in the State Register of Rights to Copyright-Protected Objects were obtained:

1. Copyright certificate: “Using Interactive Learning Tools in Primary Classes.” National. No. 52558, dated December 11, 2024;

2. Copyright certificate: computer program “Using Interactive Learning Tools in Primary Classes.” National. No. 65715, dated December 23, 2025;

the educational-methodological package for the elective course “Using Interactive Learning Tools in Primary Classes” was developed, introduced into the educational program 6B01301 – “Pedagogy and Methods of Primary Education” in the 2023–2024 academic year, and piloted in the educational process. The research results can be used in the educational process of higher and secondary professional education institutions that train pedagogical specialists, as well as in the system of professional development and retraining of primary school teachers.

Compliance of the research with the priority directions of scientific development and state programs:

The reforms being implemented in the Republic of Kazakhstan, aimed at modernizing the education system, its digitalization, and improving the quality of teaching staff, place new demands on the content of future teacher preparation. The dissertation topic fully corresponds to the priority areas defined in the Laws of the Republic of Kazakhstan “On Education” and “On the Status of a Teacher,” in the Professional Standard for Teachers of Educational Organizations, as well as in the Concept for the Development of Higher Education and Science in the Republic of Kazakhstan for 2023–2029. These state documents explicitly identify the tasks of digitalizing the educational process, introducing innovative teaching methods and tools, and improving teachers’ professional competence. In addition, the statements of the Head of State, K. Tokayev, on improving the quality of education and enhancing teacher education programs in accordance with modern requirements further emphasize the relevance of the research topic. Therefore, the issue of

preparing future primary school teachers to use interactive learning tools is an important scientific and practical problem that fully corresponds to the directions of scientific development, state educational policy, and the strategic objectives of teacher training.

Description of the doctoral candidate's contribution to each publication:

Based on the results of the research, 17 scientific works were published.

1) Article indexed in Scopus: Fostering Pre-Service Primary Teachers' Capacity to Employ an Interactive Learning Tool. *Qubahan Academic Journal*, 5(1) (Mar. 2025), 662–673. DOI: <https://doi.org/10.48161/qaj.v5n1a1530>. Doctoral candidate's contribution: 75% (co-authors: Gulnar Zholtaeva – 10%, Gulnar Tazhinova – 5%, Gulnara Syrlybayeva – 5%, Raushan Assylova – 5%).

2) Four articles in journals recommended by the Committee for Quality Assurance in the Field of Science and Higher Education of the Republic of Kazakhstan:

1. Using Interactive Learning Tools in Kazakh Language Lessons in Primary School. *Bulletin of Yasawi University. Pedagogy Series*, No. 1 (131), 2024, pp. 449–463. Doctoral candidate's contribution: 90% (co-authors: Assylova R.O. – 5%, Abdullina G.T. – 5%).

2 Engaging Primary School Teachers in the Use of Interactive Learning Tools. *Bulletin of Ablai Khan KazUIR&WL (Kazakh University of International Relations and World Languages)*, Series “Pedagogical Sciences”, No. 2 (73), 2024, pp. 177–190. Doctoral candidate's contribution: 85% (co-authors: Tazhinova G.A. – 5%, Assylova R.O. – 5%, Kabdrakhmanova G.S. – 5%).

3. Prerequisites for Preparing Future Primary School Teachers to Use Interactive Learning Tools. *Bulletin of L.N. Gumilyov Eurasian National University. Series: Pedagogy. Psychology. Sociology*, 147, No. 2 (2024), pp. 200–218. Doctoral candidate's contribution: 85% (co-authors: Zholtaeva G.N. – 10%, Tazhinova G.A. – 5%).

4. Developing Digital Competences of Future Primary Education Teachers through Interactive Learning Tools. *Izvestiya. Series: Pedagogical Sciences*, 2025, Vol. 78, No. 3, pp. 346–374. Doctoral candidate's contribution: 80% (co-authors: Zholtaeva G.N. – 10%, Abdullina G.T. – 5%, Assylova R.O. – 5%).

3) Teaching aid and computer program:

1. Using Interactive Learning Tools in Primary Classes. Taldykorgan, 2024. 142 p. Doctoral candidate's contribution to the teaching aid: 80% (co-author: Zholtaeva G.N. – 20%).

2. Computer program: Using Interactive Learning Tools in Primary Classes. Taldykorgan: Zhetysu University named after I. Zhansugurov, 2025. Doctoral candidate's contribution to the computer program: 80% (co-author: Zholtaeva G.N. – 20%).

3. Methodological Guidelines for the Use of Interactive Learning Tools in Primary Classes. – Taldykorgan, 2024. – 29 pages.

4) Author's certificates:

1. Using Interactive Learning Tools in Primary Classes. Republic of Kazakhstan. No. 52558, 11.12.2024. Doctoral candidate's contribution: 80% (co-author: Zholtaeva G.N. – 20%).

2. Computer program: Author's certificate. Using Interactive Learning Tools in Primary Classes. Republic of Kazakhstan. No. 65715, 23.12.2025. Doctoral candidate's contribution: 80% (co-author: Zholtaeva G.N. – 20%).

5) Ten articles published in international and domestic venues:

1. Media Education in the Modern School through Interactive Tools. Scientific and Practical Journal "Global Science and Innovation: Central Asia", Proceedings of the XVIII International Scientific and Practical Conference, Astana, 10–15 April 2023, pp. 12–15. Doctoral candidate's contribution: 95% (co-author: Tazhinova G.N. – 5%).

2. Types and Content of Interactive and Didactic Tools Used in Primary Schools. "Problems and Prospects for the Development of Modern Science in the Countries of Eurasia": Proceedings of the IX International Scientific and Practical Online Conference, Pereiaslav-Khmelnytskyi, Kyiv Region, Ukraine, 31 October 2023. Doctoral candidate's contribution: 95% (co-author: A. Tazhinova – 5%).

3. Interactive Platforms and Their Potential in Organising Learning. Proceedings of the III International Scientific and Practical Conference "Innovative Technologies, Issues of Distance Learning and Prospects for the Development of Modern Education", Shymkent, 15–16 February 2024, pp. 89–93. Doctoral candidate's contribution: 90% (co-author: Zholtaeva G.N. – 10%).

4. The Issue of Preparing Future Primary School Teachers to Use Interactive Learning Tools. Proceedings of the International Scientific and Practical Conference "Current Trends and Strategies for the Development of Modern Pedagogical Education", M. Kozybayev North Kazakhstan University, Petropavl, 2024, pp. 161–165. Doctoral candidate's contribution: 90% (co-author: Zholtaeva G.N. – 10%).

5. Types and Content of Interactive and Didactic Tools Used in Primary School. Proceedings of the III International Scientific and Practical Conference "Contemporary Issues of Education, Science and Technology", "INN & SCIENCE ASIA" Scientific and Educational Center, Oskemen, 2024, pp. 9–15. Doctoral candidate's contribution: 100%.

6. Pedagogical Conditions for Using Interactive Teaching Methods to Develop Speech Skills of Primary School Students. Proceedings of the International Scientific and Practical Conference "Integrating Skills in the Process of Developing Preschool Children's Speech in a Digital Society: Problems, Solutions and Prospects", Astana: "BiKA" Publishing House, 2025, pp. 425–429. Doctoral candidate's contribution: 95% (co-author: Syrlybayeva G.T. – 5%).

7. Opportunities for Using Interactive Learning Tools in Higher Education Institutions. Bulletin of Zhetysu University named after I. Zhansugurov, 2022, No. 4 (105), pp. 11–15. Doctoral candidate's contribution: 90% (co-author: Zholtaeva G.N. – 10%).

8. Methodological Features of Using Interactive Tools in the Educational Process. "Current Issues of Science and Education": Proceedings of the

International Forum dedicated to the 300th anniversary of the Russian Academy of Sciences. Volume, Part 2. Yekaterinburg, 2023, pp. 406–412. Doctoral candidate's contribution: 95% (co-author: Tazhinova G.A. – 5%).

9. Methodological Aspects of Using Interactive Learning Tools in Primary Classes. Norwegian Journal of Development of the International Science, Vol. 148, 2025, pp. 74–79. Doctoral candidate's contribution: 90% (co-author: Zholtaeva G.N. – 10%).

10. The Role of Interactive Tools in Improving the Effectiveness of Education in the Teaching Process. Integration of the Scientific Community to the Global Challenges of Our Time: Materials of the X International Scientific-Practical Conference. Marseille (France), February 5–7, 2025, pp. 218–225. Doctoral candidate's contribution: 90% (co-author: Zholtaeva G.N. – 10%).