ABSTRACT

This is the abstract of the dissertation on the topic «Formation of a digital pedagogical university based on the integration of informatization technologies of educational activities» for the degree of Doctor of Philosophy (PhD) in the specialty 6D011100-Informatics

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Research topic: Formation of a digital pedagogical university based on the integration of informatization technologies of educational activities.

The purpose of the study: Theoretical justification and implementation of the formation of a digital pedagogical university based on the integration of informatization technologies of educational activities.

Research objectives:

– to determine the scientific and theoretical foundations of the formation of a digital pedagogical university based on the integration of informatization technologies of educational activities;

– creation of a model for the formation of a digital pedagogical university based on the integration of informatization technology of types of educational activities;

– selection of effective modern technologies for integrating components of the digital educational environment in the framework of the formation of a digital pedagogical university;

– experimental substantiation of the effectiveness of the model for the formation of a digital pedagogical university based on the integration of informatization technologies for the types of educational activities.

Research methods:

– theoretical methods (analysis of psychological– pedagogical and educational literature, dissertations, monographs, regulatory documents, analysis, synthesis and systematization of materials on the research problem);

– empirical methods (observation, conversation, sociological survey using questionnaires and online questionnaires, testing, conducting a ascertaining and formative experiment);

– methods of quantitative analysis of the obtained data in an experimental study, the use of mathematical methods of data processing.

The main provisions (proven scientific hypotheses and other conclusions that are new knowledge) submitted for defense:

1. The integration of informatization tools used in various fields of activity of a pedagogical university into a digital educational environment makes it possible to increase students' motivation for learning, to involve additional methods and means in training, to involve teachers and university staff in professional activities using modern information and telecommunication technologies.

2. The structural and content model of the formation of a digital pedagogical university based on the integration of technologies for informatization of educational activities, consisting of functional-target, theoretical-methodological, content-

activity, analytical and effective parts, allows providing the system of teacher training with high-quality information resources and technologies in demand.

3. The application of the technology of the fourth industrial revolution, selected on the basis of didactic principles integrated into the components of the digital educational environment within the framework of the formation of a digital pedagogical university contributes to achieving the results set out in the above structural and content model: increasing the digital competence of all participants in the environment, personalized and result-oriented education, updating the content, methods and organizational forms of training and pedagogical activity.

The main results of the study:

– the concept of "digital pedagogical university" has been clarified, the advantages and directions for the development of its formation have been shown, the scientific and theoretical foundations for the formation of a digital educational environment based on the integration of information technologies for the development of a digital pedagogical university have been determined;

– a structural and content model of the formation of a digital pedagogical university based on the integration of informatization technologies of educational activities has been developed;

– technologies of the fourth industrial revolution have been selected for integration into the components of the digital educational environment within the framework of the formation of a digital pedagogical university.

Novelty and importance of the results obtained:

The first result is new, because the integration of informatization technologies of educational activities of the Pedagogical University into a single digital educational environment further the formation of a digital Pedagogical University contributes to the activation of professional training of future teachers, increasing the motivation of students to learn, the use of additional methods and tools in the learning process, the involvement of teachers and university employees in the implementation of professional activities using the technologies of the Fourth Industrial Revolution and modern telecommunications technologies, it creates conditions for increasing the availability and transparency of educational resources, which leads to an increase in the quality of training of future teachers, their readiness to carry out pedagogical activities using the needs and systematized tools of digitalization of Education.

The second result is new, because the proposed model of the formation of a digital Pedagogical University based on the integration of informatization technologies of educational activities makes it possible to combine various means of informatization and provide the system of training future teachers with the necessary high-quality modern information resources and technologies.

The third result is new, since the technologies of the fourth industrial revolution have been selected for integration into the components of the digital educational environment within the framework of the formation of a digital pedagogical university. Information resources developed on their basis in the course of research are an integral part of the digital educational environment and contribute to improving the quality of pedagogical university activities.

Compliance with the directions of science development or state programs:

"Just state. United Nation. Blessed society" address of the head of state Kassym-Jomart Tokayev to the people of Kazakhstan (September 1, 2022); Concept for the development of Information and communication technologies and the digital sphere (No. 961, December 30, 2021); The concept of education development of the Republic of Kazakhstan for 2022-2026 (No. 941, November 24, 2022); The Strategic Development Plan of the Republic of Kazakhstan until 2025 (No. 521, February 26, 2021).

The contribution of the doctoral student to the preparation of each publication (the contribution of the author of the dissertation is shown as a percentage of the total volume of the publication):

1. The influence of interdisciplinary integration of information technologies on the effectiveness of IT training of future teachers //Journal of Theoretical and Applied Information Technology. -2022. -Vol.100, Iss.5. -P. 1265-1274. (Co-authored by: Balykbayev T., Bidaibekov E., Grinshkun V., 60%);
2. Об интеграции технологии информатизации при формировании цифрового университета //Abai Kaznpu Bulletin, Series «Physical and Mathematical Sciences». –Almaty. -2018. –№2 (62). – P. 35-40. (100%);
3. Қашықтықтан оқыту жағдайында педагогикалық дизайн негізінде оқу курстарын құрудың маңыздылығы // Abai Kaznpu Bulletin, Series «Physical and Mathematical Sciences». – Almaty. -2020. –№3 (71). –P.188-192. (Co-authored by: Isabaeva D.N., 50%);
4. Педагогикалық жоғары оқу орнының цифрлық білім беру ортасын қалыптастыру моделі // Abai Kaznpu Bulletin, Series «Physical and Mathematical Sciences». -Almaty. -2022. -№4(80). –P.192-200. (Co-authored by: Bıdaıbekov E.Y., Grınshkýn V.V., 50%);
5. Ақпараттандыру технологияларын интеграциялау арқылы болашақ педагогтарды даярлаудың тиімділігін эксперименттік негіздеу // Abai Kaznpu Bulletin, Series «Physical and Mathematical Sciences». -Almaty. -2022. -№4(80). P.209-216. (100%);
6. Об одном примере использования технологии блокчейн // Materials of the VIII International Scientific and Methodological Conference «Mathematical modeling and information technologies in education and science». –Almaty. -2018.– 3.263-266. (Co-authored by: Bıdaıbekov E.Y. Ýrazymbetov M.S., 60%);
7. Білім берудің цифрлық трансформациясы және жаңа технологиялар // Audanbek Kobesov is the creator of the image of al-Farabi as a philosopher-thinker, mathematician, naturalist, teacher and modern education and upbringing: Materials International online-Conference dedicated to the 90th anniversary of A.Kobesov –Almaty. -2022. –P.380-384. (100%);
8. Білім алушылардың цифрлық құзырлылығын қалыптастыруда цифрлық портфолионың ролі //Materials of the X international scientific and Practical Conference «Information and education: boundaries of communication». – №10 (18). – Gorno-Altaısk, 2018. –P. 23-28. (100%);
9. Использование технологии блокчейн в организационной

деятельности университета // Materials of the International Scientific Conference «Informatization of continuing Education – 2018». –Moskva. -2018. –P.645-649. (Co-authored by: Grınshkýn V.V., Bıdaıbekov E.Y., 60%);

10. Интеграция технологии «Индустрия 4.0» в образовательную деятельность университета как фактор формирования цифрового университета // Informatization of education: Theory and practice: collection of materials of International scientific.- practical conf. of the memory of akad. REA M. P. Lapchik. –Omsk. -2022. –P.14-20. (Co-authored by: Balykbaev T.O., 60%);

11. Оқыту үдерісінде «Индустрия 4.0» технологияларын қолдану әдістемесі. –Almaty: Abai University, 2022. -95 p. (Co-authored by: Bıdaıbekov E.Y., Grınshkun V.V., 70%).