

## ANNOTATION

**to the dissertation work, presented for degree of Doctor of Philosophy (PhD) in the specialty 6D010300 - Pedagogy and Psychology, of Mizambaeva Ferizat Kanatbekovna on the topic: «Formation of professional competence of future geography teachers: essence, problems and prospects»**

**The relevance of research.** In the Republic of Kazakhstan, a new education system is being formed, which is focused on modern trends in the world educational space. This process entails significant changes in pedagogical science and the content of the educational process. These conditions oblige the modern teacher to be competent in a wide range of modern innovative approaches to the design of new generation teaching materials.

In the Address of leader of the nation N.A. Nazarbayev to the people of Kazakhstan «Nurly Zhol - the way to the future» emphasizes that «a developed country of the XXI century is active, educated and healthy people», linking the future of our country with new opportunities for unlocking the potential of the people of Kazakhstan. This, in turn, is aimed at the formation of professional competence of specialists based on the idea of the nation to implement five institutional reforms, the published national plan and joining the 30 leading developed countries in the program «100 real steps», training qualified personnel in ten leading colleges and universities and compliance with international practice.

Analysis of foreign literature on the issue under study showed that the issues of professional competence of teachers as a whole are widely considered, without dividing into separate subjects in the works of such scientists as J. Brianas, M. Haberman, F. Parson, V.A. Slastenin, P. Rasmussen, L.F. Spirin, J. Spring, J. Steiner-Hamsi et al.

In the State Program for the Development of Education of the Republic of Kazakhstan for 2011-2020, among the basic requirements for both the teacher and the student, the development of communicative and professional competence is included.

The problems of developing the professional competence of future specialists in various fields of science are disclosed in the works of leading Russian and Kazakh scientists such as S.Ya. Batyshev, E.V. Bondarevskaya, N. D. Khmel, Sh. Abdraman, B.A. Abdykarimov, G.K. Akhmetova, N. Zavalko, G.M. Kertaeva, B.T. Kenzhebekov, S.Z. Kokanbaev, N.A. Minzhanov, J. Zh. Nauryzbay, K. Kudaibergenova, R.M. Koyanbaev, K. Boleev, R.K. Duisenbinova, K. Zh. Kozhakhmetova, S. Kaliev, A. Tabyldiev, S.A. Uzakbaeva, Sh.M. Mukhtarova, K.A. Sarbasov and others, who note the need to consider the professional competence of future teachers as one of the main units of updating the content of education.

The issues of psychological constructs of the quality of vocational education, including the characteristics of education in universities, have received scientific substantiation in the works of Russian and domestic scientists such as V.S. Bezrukova, V.I. Zagvyazinsky, E.F. Zeera, M.V. Kalashnikova, P.I. Pidkasiy, A.A. Reana, K.V. Adolf, V.N. Vvedensky, A.A. Vorotnikova, I.A. Winter, I.F. Isaeva, I.A. Kolesnikova, N.V. Kuzmina, A.K. Markova, L.M. Mitina, N.N. Natsarenus,

N.A. Popovanova, A.P. Tryapitsyna, V.V. Egorova, V.S. Portnova, E.G. Ogoltsova, K.M. Arynkazina, S.T. Kargin, J.A. Karaeva, Zh.Y. Namazbaeva, L.A. Shkutina, Zh. Asanova, L.A. Boletova, K. Zharykbaev, R. Aitzhanova, S.K. Abildina, L.S. Syrymbetova, etc.

Changing the quality of education, taking into account the new challenges of society, should be based on the formation of a new image of a teacher who understands the essence and content of new changes in educational programs.

The modern education system of the Republic of Kazakhstan is focused on entering the global educational space, which leads to a comprehensive consideration of the issue of compliance of the professional training of future teachers and the level of educational services received with international standards and norms. Currently, a very important aspect of the entire educational system is the training of highly qualified specialists who can compete in the international labor market. The search for new effective approaches to training future specialists are among the priority tasks. The new emphasis in the assessment of learning outcomes indicates that a graduate of a higher educational institution should not only have the necessary amount of knowledge, but also develop in further practice the competencies acquired within the walls of the university. What determines the transition to a competence-based approach in modern education.

Higher education plays an important role in providing professional training of competent and competitive specialists for all sectors of the republic's economy in integration with science and industry.

In the plan of strategic development of the Republic of Kazakhstan until 2025 year, the Law of the Republic of Kazakhstan «On the status of a teacher» dated December 27, 2019 No. 293 - VI notes the need to improve the efficiency of training future teachers.

However, in the psychological and pedagogical literature, the issues of professional competence of the future teacher of geography have not been fully studied: there is no clear definition of the professional competence of future teachers of geography; the structure of the process of forming the professional competence of future teachers of geography has not been sufficiently disclosed. Therefore, there is a need for the creation and application in practice of comprehensive measures aimed at solving the objectively existing **contradictions** between the problem of forming the professional competence of the future teacher of geography and the lack of study of theoretical ideas about the content and characteristics of the professional qualities of the future teacher of geography.

This contradiction gives rise to a **research problem**: the definition of modern effective ways of forming the professional competence of a future geography teacher based on a higher educational institution.

Taking into account the level of study of the problems, the **research topic** was determined – «**Formation of professional competence of future teachers of geography: essence, problems and prospects**».

**The purpose of the study** is to theoretically and methodologically substantiate a set of measures to form the professional competence of a future teacher of geography.

**The object of the research** is the process of professional training in a higher educational institution.

**The subject of the research** is the formation of professional competence of future teachers of geography in a higher educational institution.

**Research hypothesis.** If the process of educational work includes the main components of professional competence (epistemological, axiological, praxeological and professional-personal), psychological, pedagogical, organizational and didactic conditions are maintained, then the effectiveness of the process of forming the professional competence of a future teacher of geography will increase. Since the model of the educational process is theoretically substantiated and experimentally verified, as a condition for the formation of the professional competence of the future teacher of geography.

Based on the goal set, the hypothesis put forward, in accordance with the object and subject of the study, the following **tasks** were determined:

- 1) to characterize the essence, structure and specifics of the professional competence of a student-geographer;
- 2) to determine the modern effective ways of forming the professional competence of the future teacher of geography;
- 3) to prepare and test experimentally an adapted model of the training program for future teachers of geography in order to form their professional competence.

**The leading idea of the research:** Modernization of the content and methods of higher education in accordance with the requirements of world innovations.

**Theoretical foundations of the research:** competence-based approach (A.K. Markova, A.A. Verbitsky, B.T. Kenzhebekov, G.Zh. Menlibekova, etc.); systems approach. (V.V. Kraevsky, N.V. Kuzmina and others); personal (V.V. Serikov, V.A. Slastenin, I.S. Yakimanskaya and others); culturological (L.A. Fedoseeva, B.S. Gershunsky, I.F. Isaev and others); synergetic (P.K. Anokhin, Z.Zh. Zhanabaev and others); reflexive (V.V. Davydov, A.N. Leontiev, B.D. Elkonin, etc.).

**Methodological foundations of the research:** The essence of professional competence is based on the philosophical, logical principles of interconnection and continuity of phenomena and is determined by pedagogical and psychological works, concepts, scientific works on the formation of professional pedagogical qualities, competencies, professional competence of teachers, psychological, pedagogical, methodological, technological foundations of training future teachers.

**Sources of research:** scientific works of philosophers, psychologists, teachers and specialists in pedagogy and psychology, geography for research, the Law of the Republic of Kazakhstan "On Education"; Law of the Republic of Kazakhstan "On the status of a teacher"; State standards of compulsory education and higher education of the Republic of Kazakhstan; Normative documents of the Ministry of Education and Science of the Republic of Kazakhstan related to education; State program for the development of education in the Republic of Kazakhstan for 2020-2025, scientific and pedagogical periodicals and pedagogical experience of the author.

**Research methods:**

The study used the following system of methods:

Theoretical: analysis of philosophical, sociological, psychological, pedagogical and methodological literature; historical, conceptual analysis of earlier dissertation research; modeling; synthesis of empirical material; generalization of the pedagogical experience of professional teachers.

Empirical: observational - direct, indirect and included observation; diagnostic - questioning, interviewing, test tasks; experimental - ascertaining and formative experiments, (micro) teaching; statistical - methods of measuring and mathematical processing of experimental data obtained during the study, their systematic and qualitative analysis, graphic interpretation; descriptive - description and verbal recording of the research material and the results obtained.

**The practical significance of the study.** The theoretical principles and conclusions drawn from the study allowed the creation of practical teaching materials to update the teaching content.

Modernization and improvement of the professional competence of future teachers of geography by using the program of the elective course «Technologies for building digital maps».

**The main provisions for the defense:**

1. The professional competence of the future teacher of geography includes four components: epistemological, axiological, praxeological, professional and personal.
2. The content of the elective course "Technologies for building digital maps" and the proposed teaching methods are the basis for the formation of students' knowledge and information skills.
3. The structural model of the process of forming the professional competence of future teachers of geography was tested based on conceptual foundations, principles, functions, and dialogical teaching technologies.

**Scientific novelty and theoretical significance of the work:**

1. the essence, structure and specificity of the professional competence of the student-geographer are revealed;
2. a complex of effective conditions for the formation of professional competence of future teachers of geography has been determined;
3. developed and tested an adapted model of the training program for students as a system for the formation of professional competence of a future teacher of geography.

**Base of research:** Zhetysu University named after Ilyas Zhansugurov, University named after Shakarim of Semey, secondary schools of the Almaty region of the Republic of Kazakhstan.

**Research stages:** Experimental and experimental work on the formation of the professional competence of future teachers of geography was carried out in three stages in accordance with the tasks.

**At the first stage (2017–2018),** the problem, goals and objectives of the study were identified, and the scientific apparatus of the study was developed. Analysis of domestic and foreign fundamental research has revealed the theoretical and methodological foundations of the problem. Materials on the topic were sorted and collected. Scientific articles have been prepared and published. Experimental sites have

been identified, an experimental work plan has been developed, and a curriculum for elective courses has been developed.

**At the second stage (2018–2019),** the systematization of theoretical materials was continued, during the experiment to identify the initial levels of knowledge of future teachers, they were checked using tests, questionnaires, the results were summarized and a formative experiment was carried out.

**At the third stage (2019–2020),** the selected methods, the developed elective course for students were tested and put into practice. The results of the experimental work are analyzed, processed, systematized by structure. Recommendations were developed, the thesis was prepared in accordance with the requirements.

#### **Approbation of practical research results:**

The main provisions and results of the study were heard and discussed at scientific and methodological seminars in the direction of educational programs «Pedagogy and Psychology», «Geography» of Zhetysu University named after Ilyas Zhansugurov, also during a scientific internship at the Faculty of Philosophy of Vilnius University (Vilnius, Lithuania).

In addition, the results of research work were presented at the Republican Scientific and Practical Symposium «Innovative technologies for the development of national spiritual values» (Taldykorgan, 2018), at the seminar «How to Get Published in Scientific Journals» (Bursa, Turkey, 2019), at the «Innovative Teaching» workshop (Vilnius, Lithuania, 2019), at the International Online Conference «Competence-Based Approach in Education: Trends and Problems» (Cheboksary, Russia).

The content of the results of the thesis was published in 11 scientific publications. Of these, 2 - in journals included in the bibliographic and abstract database Scopus, 3 - in printed publications recommended by the Committee for Control in Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan, 1 - in a foreign peer-reviewed journal, 5 - in International Materials and republican scientific and practical conferences:

1. Conditions for the Formation of Professional Competence of an Intending Geography Teacher // Revista ESPACIOS. ISSN 0798 1015, Volume 40, Issue 20, (2019) 10-19 p.
2. The effectiveness of interactive teaching methods in the professional training of pre-service geography teachers // Cypriot Journal of Educational Sciences ISSN: 1305-905X, Volume 16, Issue 4, (2021) 1976-1996 p.
3. Профессиональное саморазвитие как условие развития личности будущего учителя географии // Международный научно-популярный журнал «НАУКА И ЖИЗНЬ КАЗАХСТАНА», №1 (54), Астана, 2018. – С. 50-52.
4. Педагогические условия формирования компетенций учителя географии в процессе обучения // Международный научно-популярный журнал «НАУКА И ЖИЗНЬ КАЗАХСТАНА», №10/2, Алматы, 2019. – С. 195-201.
5. Значение педагогической практики в становлении будущих учителей географии // Вестник ЗКГУ, № 4 (76), Уральск, 2019. – С. 149-153.

6. Mastering professional competences of students-geographers // International scientific journal «SCIENCE AND WORLD», № 7 (59), Volgograd, 2018. – 91-94 p.
7. Формирование методологической компетентности будущего учителя географии средствами модульного обучения // Материалы международной научно-практической конференции «Ұлы дала Астанасы», посвященная 25-летию Астаны, г. Семей, 2018. – С. 109-112.
8. Духовно-нравственное воспитание учащихся на уроках географии // Материалы республиканского научно-практического симпозиума «Ұлттық рухани құндылықтарды дамыту мақсатындағы инновациялық технологиялар», Талдықорган, 2018. – С. 51-54.
9. The value of teaching practice in the development of professional competencies of future teachers (on the example of a geography teacher) // Материалы Международной научно-практической конференции «Молодежь – движущая сила образования, науки и общества», г. Талдықорган, 2019. – С. 10-14.
10. Творческий подход в профессиональном развитии педагога // Сборник статей XIV Международной научно-практической конференции «Актуальные вопросы современной науки и образования», г. Пенза, 2021. – С. 181-184.
11. Psychological aspect of teacher professional competence formation // Материалы Международной онлайн-конференции «Компетентностный подход в образовании: тенденции и проблемы», г. Нижний-Новгород, 2021. – С. 89-92.

**The volume and structure of the thesis:** The content of the thesis consists of an introduction, two chapters, a conclusion, a list of sources used, annexes.

The **introduction** contains the relevance of the research, the subject, the goal, the forecast, the tasks, the guiding ideas, the theoretical and methodological foundations, sources, methods, the main stages and foundations of the research, the principles to be defended, the scientific novelty, the theoretical and practical significance, the reliability of the results.

**The first chapter, «Theoretical Foundations of the Formation of Professional Competence of Future Geography Teachers»,** describes the characteristics of the initial concepts of the study, the essence and structure of the professional competence of future teachers; analyzed the pedagogical conditions for the formation of professional competence of future teachers of geography; developed and characterized a structurally meaningful model of the formation of professional competence of future teachers of geography.

**The second chapter «Experimental - experimental study of the formation of professional competence of future teachers of geography»** includes the results of a defining experiment on the formation of professional competence of future teachers of geography, the content and methods of forming the professional competence of future teachers of geography, as well as analysis and interpretation of the results of the formative experiment of the studied issue.

**In conclusion**, based on the results of the study, conclusions were drawn and scientific recommendations were given.

The content of the elective course «Technologies for constructing digital maps», acts of introducing the research results into the educational process of Zhetysu University named after Ilyas Zhansugurov and Shakarim University of Semey are **attached** to the dissertation work.