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Formation of Professional Competency of Future Primary School Teachers at University in the Context of Teaching Research Activities to Primary Schoolchildren

The given paper analyzes the basic concepts of professional competency and approaches to the formation of professional competency of future primary school teachers at university in the context of teaching research activities to primary schoolchildren. The importance is argued and the conditions for the formation of professional competency of future primary school teachers at university are determined. The concept and stages of the formation of professional competency for the effective development of professional qualities of future primary school teachers have been determined. Pedagogical conditions for the formation of professional competency of a future primary school teacher in the process of student-centered education at university have been developed and tested in practice: the use of the possibilities of student-centered education in the formation of professional competency of the future teacher; the formation of motives for the professional activity of the future primary school teacher by creating a motivating environment; creation of a developing, personality-oriented educational environment; ensuring self-education of students in the process of mastering professional activity. The results of psychological and pedagogical research that confirm the effectiveness of the formation of professional competency of future primary school teachers at university are presented.

Keywords: competencies, professional competencies, formation, future teachers, primary school, university, effective development, pedagogical research.

Introduction

The urgency of the research is substantiated by the problem of training primary school teachers in the context of innovative transformations in the republic, which in their turn dictate new approaches to the professional training of future primary school teachers.

Professional training is a system of professional education aimed at accelerating the acquisition of the skills necessary for performing a certain job. General professional training of a future teacher, which is traditionally understood as mastering rules, norms and methods of the professional activity, is legitimately considered as a process of accumulation and enrichment of the experience of integral professional activity by a student.

Rodríguez, Pérez & Núñez believe that "... the significance of the problems related to teacher training has never been questioned, but in modern conditions they have acquired particular urgency due to the fact that the education system is undergoing fundamental transformations caused by:

- first, the modernization of the education system, caused by the need to form a new system of values with a focus on a freely self-realized individual, capable of a flexible change of life ways and forms on the basis of positive communication and the principle of social responsibility;
- second, the change in the traditional paradigm of education, in which the assimilation of ready-made knowledge becomes clearly insufficient, when the student turns from a passive object into an active subject of the educational process when the role and function of the teacher changes;
- third, joining a single world educational space;
- fourth, the informatization of the entire education system" [1].

The problem of professional competency as a priority characteristic of a specialist has been in the focus of attention of pedagogical science in recent decades. This phenomenon is studied in works of Mandzhieva [2], B. Kaskatayeva [3], Kuter [4], Zh. Bissenbayeva, M. Aurenova, Zh. Aubakirova, E. Uaidullakzy [5], Qualters [6], A.M. Suguralieva [7], Yeoman & Zamorski [8] and others. Their research resulted in a reorientation of specialist training in the system of higher professional education in accordance with its development trends.

Analysis of the studies devoted to the teacher professional competency demonstrates that they are aimed at developing the foundations for the formation of his pedagogical orientation (Halász G, Michel [9], Therese N. Hopfenbeck [10], Drach, Slobodianiuk [11], etc.); as well as development of professional and personal qualities (Ianni, Samuels, Eakin, Perorazio, Ellingrod [12], Leonard, Basuki Wibawa [13], Gómez-Rodríguez [13], [14–16], etc.).

The multifaceted nature of our research of the problem of forming the professional competency of the future primary school teacher has determined the need to use various approaches to studying the essence of this phenomenon: systemic (synthesizing various knowledge about an object into a single whole) and competency-based (orientation of professional training towards the formation of the main components of professional competency, reflecting the specifics of the activity of the primary school teacher).

The aim of this article is to identify and experimentally test the effectiveness of pedagogical conditions that contribute to the formation of professional competency of a future primary school teacher at university.

Main part

In the course of the research, we have determined the essence, content and specificity of the activity of the primary school teacher. On this basis the following structural components of the professional competency of the future primary school teacher have been identified (Figure 1).

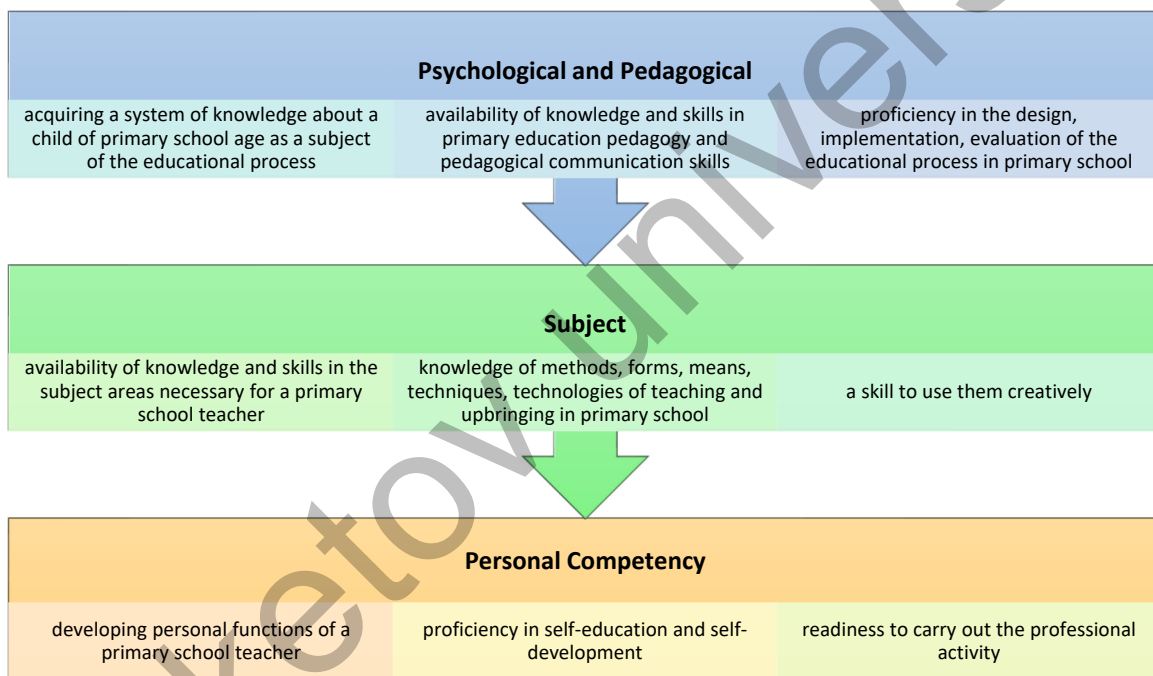


Figure 1. Structural components of the professional competency of the future primary school teacher

We have identified the criteria that have the same name with the components of professional competency (psychological and pedagogical, subject, methodological, personal), indicators and levels of formation of the professional competency of a future primary school teacher: high, medium and low.

The high level is characterized by sufficient knowledge of the foundations of the primary education pedagogy, the age-related psychophysiological characteristics of a primary schoolchild, the patterns of development and formation of his personality, knowledge of the subject foundations and the ability to operate with them; the ability to solve professional problems in various ways; vast possession of various methods and techniques of diagnostics of a primary schoolchild; the ability to carry out empirical and theoretical research, the ability to process and analyze the results obtained, the presence of one's own position in the study of the problem; the ability to design the author's elements of the technology of professional activity, to apply the optimal forms and methods of the upbringing and educational process in primary school; the presence of a high level of motivation and a deep conscious interest in pedagogical activity, possession of the skills of self-education and self-development, psychological readiness to carry out professional and pedagogical activities.

The middle level is characterized by partial knowledge of the foundations of the primary education pedagogy, the age-related psychophysiological characteristics of a primary schoolchild, the patterns of development and formation of his personality, knowledge of the basics of mathematics, natural science and the modern Russian language, not always skillful use of them; partial knowledge of methods and techniques for diagnosing the personality of a primary school child; striving for self-improvement and self-development; partial possession of self-education skills.

The low level of formation of professional competency is characterized by insufficient knowledge of the basics of primary education pedagogy; age-related psychophysiological characteristics of a primary schoolchild, patterns of development and formation of his personality, knowledge of the basics of mathematics, natural science and the modern Russian language, inability to operate with them; poor knowledge of the methods and techniques of diagnostics of a primary schoolchild (having difficulty in analyzing the data obtained); not possessing pedagogical skills, the intuitive nature of solving professional problems (without relying on existing unsystematic knowledge, he often makes mistakes); the presence of inadequate self-esteem and mental readiness for the implementation of professional and pedagogical activities.

The pedagogical conditions for the successful formation of professional competency of a future primary school teacher are (Figure 2):

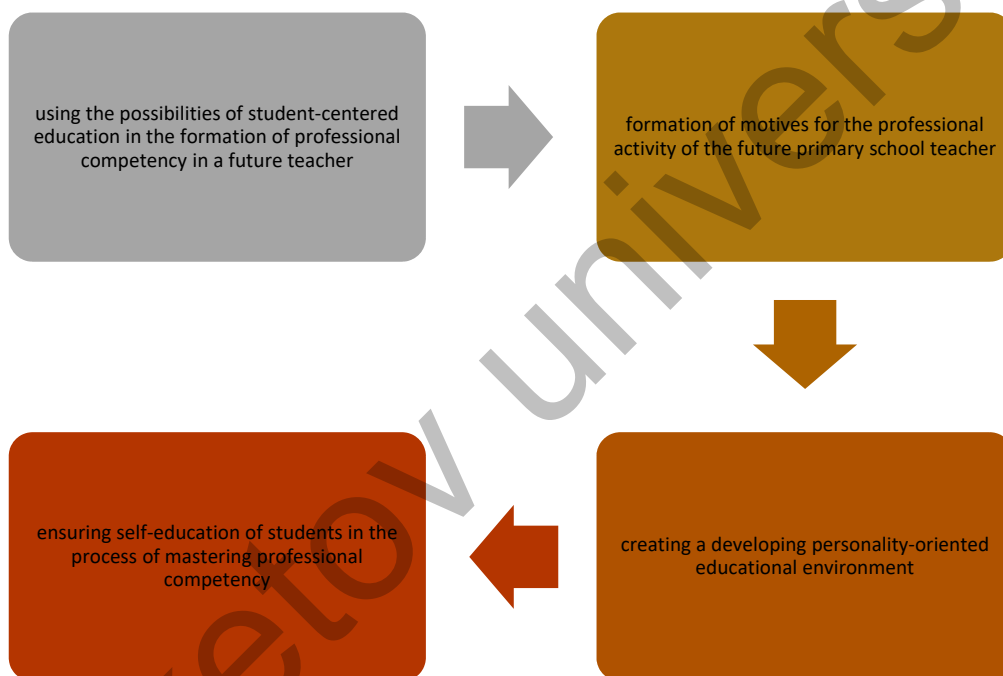


Figure 2. Pedagogical conditions for the successful formation of professional competency

The pedagogical conditions for the formation of professional competency of the future primary school teacher that we highlighted were implemented in conducting a formative experiment throughout all the indicated stages.

Research methods

To solve the set tasks a set of research methods was used: analysis, observation, conversation, questioning, testing, creating pedagogical situations; educational and cognitive tasks; analysis of products of activity; personality self-assessment method, expert assessment method, diagnostics of the level of empathy formation.

Results and discussion

As a result of the ascertaining experiment, it was found that a significant number of students have a low level of professional competency formation: 43.2%; 39.4% demonstrated the average level; 16.7% of students showed the high level. The results obtained indicate the insufficient formation of professional competency of the future primary school teacher at university.

The results of the initial ascertaining experiment, which involved 1-4 year students (128 people in total), showed that 64.6% of the respondents entered the specialty "Pedagogy and Methods of Primary Education" guided by the desire to obtain a diploma of higher education. In addition to this motive, the students named a number of other motives: the desire to become a cultured person (28.4%); striving to realize their abilities and achieve a position in society (12.3%); desire to live and work among educated friends (9.4%), etc. The only motive concerning professional activity, that is, interest in raising children, was named by 39.4% of students.

The results of the distribution of students according to the levels of formation of professional and pedagogical motivation turned out to be as follows: 19.65% of students have a high level of formation of professional and pedagogical motivation, 34.8% of students – an average, 48.75% – a low level.

These results indicate the need for a purposeful formation of motives for professional activity of a future primary school teacher in the process of developing his professional competency, as well as the need to create certain conditions for this.

The ascertaining experiment, conducted in order to clarify the attitude of students to self-education and self-development, possession of self-education skills, as well as to determine the factors that impede self-development in the process of vocational training, included a questionnaire survey of 1-4-year students of the specialty "Pedagogy and Methods of Primary Education". The results of the experiment have shown that the majority of students (76%) adequately consider self-development (in the form of professional self-education), but they have little command of the skills of self-educational activity: they cannot work with reference literature, systematize and generalize information, highlight the main thing and others; almost half of the students (43.21%) have a low level of self-education skills.

On the basis of the data obtained, the experimental work was built on the formation of students' skills of self-educational activity aimed at increasing the level of professional competency.

Work was organized with 1-2 year students to teach them the ability to work with special, scientific and methodological literature (to find the necessary information; to take notes, to highlight main ideas; to link this material with already known; to systematize what has been read in tables, graphs, diagrams); the ability to plan educational activities (to see the prospect of their educational activities; to draw up a plan of educational work for the near future, to follow it clearly; to analyze what has not been done and why; to adjust the plan).

Work was also organized with 3-4 year students. It was focused on mastering the skills of self-educational activity in the preparation of speeches and reports (to highlight the essence of the issue under consideration; to combine data from several sources; to draw conclusions); when writing essays, articles (to navigate the flow of information; to find the necessary literary sources; to fold information; to draw logical conclusions).

After the experiment, an assessment of the level of self-education skills of 1-4-year students was carried out, which showed that the number of students with a low level of self-education skills formation decreased by half, and those with a high level increased by almost 10%, with an average level by 12%.

To determine the influence of the formation of self-education skills on the level of professional competency of the future primary school teacher we calculated the Pearson correlation coefficient, the value of which is 0.76, which proves the close dependence of these indicators.

At the final stage of the experimental work, we used the same diagnostic tools as in the ascertaining experiment.

The results of the final ascertaining experiment are presented in Table 1.

Table 1

The results of the final ascertaining experiment

Formation levels	Before the experiment		After the experiment	
	Absolute	%	Absolute	%
High	21	16,7	36	28,3
Medium	52	39,4	70	52,2
Low	57	43,2	24	19,7

Analysis of the results has shown that the number of students with a high level of professional competency formation increased by 12.8%, the number of students with a low level decreased by 26.8%, the number of students with an average level of professional competency formation increased by 15%.

The result reliability of the experimental work was verified using the statistical criterion χ^2 , the value of which turned out to be 43.49, which is more than its critical value both with a probability of 95% and with a probability of 99%. This proves the reliability of the experiment results.

Therefore, the significant positive dynamics of the levels of formation of professional competency of the future primary school teacher indicates the effectiveness of the experimental work and confirms the hypothesis put forward.

Conclusion

The research presents the results of the effectiveness of pedagogical conditions contributing to the formation of professional competency of a future primary school teacher at university.

In the course of the analysis of psychological and pedagogical literature, theoretical and practical approaches to solving the problem of the formation of professional competency were revealed: use of various means (information, game and developmental technologies); realization of the potential of industrial (pedagogical) practice; application of a competency-based approach to professional training and others.

The criteria, indicators and levels of formation of professional competency of the future primary school teacher (high, medium, low) have been determined.

The essential characteristics and possibilities of personality-oriented education have been determined, ensuring the effectiveness of the formation of professional competency of the future primary school teacher: presentation of the elements of the education content in the form of multi-level personality-oriented tasks; assimilation of the education content in the context of dialogue as a special didactic and communicative environment; imitation of social-role and space-time conditions.

Pedagogical conditions for the formation of professional competency of the future primary school teacher in the process of student-centered education at university have been developed and tested in practice: the use of the possibilities of student-centered education in the formation of the professional competency of the future teacher; the formation of motives for the professional activity of the future primary school teacher by creating a motivating environment; creation of a developing, personality-oriented educational environment; ensuring self-education of students in the process of mastering professional activity.

The conducted experimental work has proved that the developed pedagogical conditions for the formation of professional competency of the future primary school teacher in the process of personality-oriented education at university are effective and provide stable positive motivation of professional competency, deep personal assimilation of knowledge, skills and readiness for their practical application.

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К. Ыбыраимжанов, Г. Есполова

Жоғары оқу орындарында болашақ бастауыш мектеп педагогтарының кәсіби құзыреттіліктерін кіші мектеп оқушыларын зерттеушілік іс-әрекетке үйрету контекстінде қалыптастыру

Мақалада кіші мектеп оқушыларының зерттеу әрекетін оқыту контекстінде жоғары оқу орындарындағы болашақ бастауыш мектеп педагогтарының кәсіби құзыреттілігін қалыптастыру тәсілдері мен кәсіби құзыреттіліктің негізгі ұғымдары жайында талдау жасалынған. ЖОО-дағы болашақ бастауыш мектеп педагогтарының кәсіби құзыреттілігін қалыптастырудың маңыздылығы мен шарттары дәлелденді. Болашақ бастауыш мектеп мұғалімдерінің кәсіби қасиеттерін тиімді дамыту үшін кәсіби құзыреттілікті қалыптастыру тұжырымдамасы мен кезеңдері анықталды. ЖОО тұлғалық-бағдарлы білім беру үрдісінде болашақ бастауыш мектеп мұғалімдерінің кәсіби құзыреттілігін қалыптастырудың педагогикалық шарттары әзірленді және іс-тәжірибе барысында тексерілді: болашақ мұғалімдердің кәсіби құзыреттілігін қалыптастыруда тұлғалық-бағытталған білім беру мүмкіндіктерін пайдалану; мотивациялық орта құру арқылы болашақ бастауыш сынып мұғалімдерінің кәсіби іс-әрекет мотивтерін қалыптастыру; дамытушы тұлғалық-бағытталған білім беру ортасын құру; кәсіби қызметті игеру үрдісінде студенттердің өздігінен білім алуын қамтамасыз ету. Жоғары оқу орындарының болашақ бастауыш мектеп педагогтарының кәсіби құзыреттілігін қалыптастырудың тиімділігін растайтын психологиялық-педагогикалық зерттеу нәтижелері келтірілген.

Кілт сөздер: құзыреттілік, кәсіби құзыреттілік, қалыптастыру, болашақ педагог, бастауыш мектеп, жоғары мектеп, тиімді дамыту, педагогикалық зерттеу.

К. Ыбыраимжанов, Г. Есполова

Формирование профессиональной компетенции будущих педагогов начальной школы в вузе в контексте обучения младших школьников исследовательской деятельности

В статье проанализированы основные понятия профессиональной компетенции и подходы к формированию профессиональной компетенции будущих педагогов начальной школы в вузе в контексте обучения младших школьников исследовательской деятельности. Аргументирована значимость и определены условия формирования профессиональной компетенции будущих педагогов начальной школы в вузе. Определены понятие и этапы формирования профессиональной компетенции для эффективного развития профессиональных качеств будущих педагогов начальной школы. Разработаны и проверены на практике педагогические условия формирования профессиональной компетенции будущего педагога начальной школы в процессе личностно-ориентированного образования в вузе: использование возможностей личностно-ориентированного образования в формировании профессиональной компетентности будущего учителя; формирование мотивов профессиональной деятельности будущего учителя начальной школы посредством создания мотивирующей среды; создание развивающей личностно-ориентированной образовательной среды; обеспечение самообразования студентов в процессе овладения профессиональной деятельностью. Приведены результаты психолого-педагогического исследования, подтверждающие эффективность формирования профессиональной компетенции будущих педагогов начальной школы в вузе.

Ключевые слова: компетенции, профессиональные компетенции, формирование, будущие педагоги, начальная школа, высшая школа, эффективное развитие, педагогическое исследование.

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