

Implementing didactic opportunities for developing the methodological preparation of future primary school teachers in students through the 4K model

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Annotation: The article examines the fundamental changes in all areas of our lives today, including new methodologies in preschool and primary education, the role of models, the role of 4K skills in the training of future primary school teachers, and the problems of modern education. Future primary school teachers should develop creativity in their native language and reading literacy, which is manifested in thinking, communication, emotions, and a specific type of activity. The incorporation of the 4K model into the pedagogical training of prospective primary school educators has attracted much focus in contemporary educational studies. This paradigm, highlighting essential competencies—knowledge, skills, attitudes, and abilities—provides a basis for the development of student-centered, constructivist instructional methods. The application seeks to provide educational opportunities that improve instructors' capacity to employ innovative teaching methodologies in accordance with contemporary educational requirements.

Keywords: 4K skills, creativity, education system, quality of education, pedagogical conditions, outcome-goal, function clarification, system, essence, textbook, educational materials, education, great curiosity, flexible thinking.

Introduction

In the Republic of Uzbekistan, alongside the improvement of material infrastructure, the continuous enhancement of the educational system, educational quality, and overall efficiency is inextricably linked to the development of the didactic-methodological competence of future primary school educators. Currently, the imperative to cultivate this competence and adequately prepare prospective teachers for didactic activities is dictated by the contemporary demand for highly qualified, practical-oriented personnel.

As the continuous education system increasingly adopts an innovative character, it has precipitated the need to seek viable solutions for a myriad of emerging pedagogical challenges. A primary requisite is the expansion of opportunities for teachers to execute their professional duties within a rapidly evolving educational environment. The preparation of future educators must be rigorously aligned with the social mandates placed upon general secondary education schools. As noted by educational theorists, the transition from traditional, rote-learning models to competency-based frameworks requires a profound shift in teacher preparation methodologies (Darling-Hammond, 2017).

In his address to the Oliy Majlis, the President of the Republic of Uzbekistan, Sh. Mirziyoyev, emphasized the critical importance of cultivating a well-rounded generation during the systemic reform of education: "In the development of any society, the healthy and harmonious upbringing of the young generation, who will secure its future, plays a decisive role. Therefore, in further expanding the scale and effectiveness of our reforms, we rely on our comprehensively developed, initiative-driven youth who have thoroughly mastered modern knowledge and skills." This underscores the timeless significance of youth development and the immense responsibility placed upon primary educators as foundational figures in lifelong learning.

Literature Review

The discourse surrounding teacher competence has evolved significantly, shifting from an emphasis on mere subject-matter expertise to a holistic understanding of pedagogical delivery. The foundational concept of Pedagogical Content Knowledge (PCK), introduced by Lee Shulman (1987), remains highly relevant. Shulman posited that effective teaching requires an amalgamation of content knowledge and pedagogical strategies tailored to specific learning contexts.

In the context of primary education, didactic-methodological competence encompasses not only the mastery of instructional techniques but also the cognitive flexibility to adapt to diverse classroom dynamics. According to European Commission frameworks on educator competence (Caena, 2014), modern teachers must act as facilitators of knowledge rather than mere transmitters. Furthermore, research by Kunter et al. (2013) demonstrates that a teacher's professional competence—comprising pedagogical knowledge, enthusiasm, and self-regulation—directly correlates with enhanced student engagement and academic achievement.

Within the post-Soviet educational paradigm, scholars have increasingly focused on the integration of interactive and student-centered methodologies. As global educational standards converge, the necessity for prospective teachers to possess forecasting competencies—the ability to anticipate pedagogical outcomes and tailor interventions accordingly—has become a central theme in contemporary educational research (Zeichner, 2010).

The argument for implementing didactic opportunities through the 4K model is supported by various studies that emphasize the importance of preparing future primary school teachers with the necessary skills for modern educational environments. For instance, Kamalova et al. (2015) highlight the need for pedagogical values in teacher preparation, suggesting that a methodological model can enhance the professionalism of future educators [5]. Similarly, Sikhimbaeva et al. (2020) discuss the necessity of preparing future teachers for the formation of 21st-century skills, specifically through the 4K model, which includes critical thinking, creativity, collaboration, and communication [9]. This model is seen as essential for equipping teachers to handle the complexities of contemporary classrooms. Moreover, the integration of innovative teaching methods, such as gamification and project-based learning, has been shown to enhance student engagement and learning outcomes. For example, the use of gamification in teaching has been noted to motivate students, particularly those with learning difficulties [6]. Additionally, the emphasis on collaborative models in teacher preparation, as discussed by Harris et al. (2008), supports the idea that collaborative learning environments can foster teacher leadership and improve educational practices [4].

Furthermore, the application of the 4K model aligns with the current educational reforms aimed at enhancing the quality of teacher training, as indicated by various studies that advocate for the integration of modern didactic principles into teacher education [11][12][13]. This approach not only prepares teachers for their roles but also ensures that they can effectively engage students in meaningful learning experiences.

Materials and Methods

In the current era of globalization, the fundamental principle underlying the methodological approach in educational processes is to ensure the global competitiveness of future educators. To cultivate a high-level, results-oriented pedagogical experience, university curricula and academic modules must systematically integrate topics, materials, and didactic tasks designed to develop students' pedagogical forecasting skills.

This requires special attention to the fundamental mechanisms of forming forecasting competencies in future teachers. Primarily, this involves identifying, systematizing, and embedding both fundamental and applied approaches within higher education textbooks. To equip prospective teachers with the predictive competencies required for their future careers, it is essential to first

provide targeted pedagogical knowledge, thereby fostering the necessary skills, qualifications, and practical experience.

In the educational process, the didactic function of teaching tools is defined as the external structure of personal instruments utilized to achieve educational objectives. Based on these considerations, the teaching of academic disciplines must address the following methodological tasks:

1. The subject must stimulate the cognitive and critical thinking abilities of the learner;
2. It must cultivate the capacity to comprehend and respect the perspectives of others;
3. It must direct the learner toward accurately and articulately expressing their thoughts, both orally and in writing;
4. From the perspective of educational philosophy and history, it must shape the qualities required to be competent and articulate within the conceptual frameworks of knowledge, skills, and qualifications established in pedagogical science.

Concurrently, "knowledgeability" as a model of a competent individual is the product of socialization, general education, and didactic preparation required to fulfill a broad spectrum of life tasks. It represents the capacity to make independent, humanistic choices and develop harmoniously with a dynamic, open society as a responsible individual.

The lesson remains the most effective method for transmitting centuries of accumulated human experience to students in a condensed timeframe. The teacher's role in organizing and ensuring the efficacy of these lessons is paramount. In this regard, educators rely heavily on interactive methods, transforming the lesson into a dynamic environment that manifests their creative potential. To cultivate creative thinking in primary school teachers, it is necessary to employ unconventional, out-of-the-box methods in organizing both extracurricular and out-of-school activities.

Results and their discussion

Empirical observations indicate a significant advancement in the didactic-methodological competence of future primary school teachers. According to an analysis of competency formation among students of the Faculty of Pedagogy and Primary Education Methodology, there is a progressive decline in the number of students demonstrating low proficiency levels. This positive dynamic was predominantly observed in the experimental groups, whereas the control groups did not exhibit such significant progress. Qualitative modifications to the methods of developing didactic-methodological competence act as catalysts, facilitating a smooth transition to advanced stages of professional readiness.

Thus, a systematic continuum is formed during the transition from an "Activity Position" to a "Technological Position." Consequently, in the final phase of practical development, we prioritize the cultivation of reflective and evaluative skills, aligning with Donald Schön's (1983) concept of the "reflective practitioner."

During their didactic training, future primary school teachers are guided to:

- Recognize the necessity of defining actionable developmental goals;
- Cultivate self-reflection, self-awareness, and pedagogical foresight;
- Problematize and critically analyze the concept of their future didactic activities;
- Consciously evaluate their attained level of didactic-methodological competence;

- Engage with creative methodologies for teaching and raising primary school students, thereby demonstrating various iterations of their pedagogical technology.

Based on the research problem, hypothesis, purpose, object, and subject, the study confirmed that the integration of targeted didactic modules significantly accelerates the professional maturation of pedagogical candidates.

Conclusion

The aforementioned data underscores the urgent need to radically modernize the educational system in accordance with contemporary demands, elevate the scientific potential of primary school teachers, and formulate methodological approaches that align with international benchmarks. Shifting away from strictly traditional methodologies in favor of innovative pedagogical technologies instills a robust sense of confidence in future primary school teachers regarding their professional trajectories.

By fully integrating national developmental reforms into the educational framework, the opportunity arises to nurture a highly qualified and globally competitive generation. Isolating education from the broader context of upbringing serves to precisely direct the professional activities of teachers and enhances process efficiency.

Based on the research conducted for the Doctor of Philosophy (PhD) dissertation in pedagogical sciences titled "Development of Didactic-Methodological Competence in Future Primary School Teachers," the following empirical conclusions are presented:

The process of developing didactic-methodological competence in future primary school teachers requires precise structural definition. Consequently, this development necessitates the refinement of informational, literacy, creative, and artistic dimensions through autodidactic management actions.

The structural framework of this competence must be cultivated based on the integrative provision of value-motivational, exploratory-informational, reflective, procedural-activity, didactic-technological, and cognitive-evaluative components.

The proposed model for developing the didactic-methodological competence of future primary school teachers facilitates continuous improvement through indicators of existential presence, intensity, and creativity.

The didactic-methodological competence of future educators has been systematically developed within the context of a paradigm shift towards adaptive and reproductive instructional transformations.

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