

**INNOVATIVE METHODS IN FOSTERING COGNITIVE COMPETENCE IN
FUTURE HISTORY TEACHERS**

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Annotation: This scholarly article thoroughly examines the use of innovative methods in fostering cognitive competence among future history teachers within the modern education system. The article analyzes the theoretical foundations of cognitive competence, the practical application of innovative methods (such as project-based learning, flipped classroom models, digital technologies, and role-playing simulations), and their effectiveness. Particular attention is given to the national characteristics and challenges within Uzbekistan's education system, alongside an evaluation of the long-term impact of these methods. The article provides scientifically grounded recommendations for improving the training system for educators.

Keywords: Future history teachers, cognitive competence, innovative methods, project-based learning, digital technologies, historical thinking, Uzbekistan's education system.

**ИННОВАЦИОННЫЕ МЕТОДЫ ФОРМИРОВАНИЯ КОГНИТИВНОЙ
КОМПЕТЕНТНОСТИ У БУДУЩИХ УЧИТЕЛЕЙ ИСТОРИИ**

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Аннотация: Данная научная статья всесторонне рассматривает использование инновационных методов для формирования когнитивной компетентности у будущих учителей истории в рамках современной системы образования. В статье анализируются теоретические основы когнитивной компетентности, практическое применение инновационных методов (таких как обучение на основе проектов, модель перевёрнутого класса, цифровые технологии и ролевые симуляции) и их эффективность. Особое внимание уделяется национальным особенностям и проблемам системы образования Узбекистана, а также оценке долгосрочного воздействия этих методов. Статья предлагает научно обоснованные рекомендации по совершенствованию системы подготовки педагогов.

Ключевые слова: Будущие учителя истории, когнитивная компетентность, инновационные методы, обучение на основе проектов, цифровые технологии, историческое мышление, система образования Узбекистана.

BO'LAJAK TARIX O'QITUVCHILARINING KOGNITIV KOMPETENSIYASINI SHAKLLANTIRISHDA INNOVATSION METODLAR

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Anotatsiya: Ushbu ilmiy maqola zamonaviy ta'lim tizimida bo'lajak tarix o'qituvchilarining kognitiv kompetensiyasini shakllantirishda innovatsion metodlardan foydalanish masalasini har tomonlama o'rganadi. Maqolada kognitiv kompetensiyaning nazariy asoslari, innovatsion metodlarning amaliy qo'llanilishi (masalan, loyiha asosidagi o'qitish, teskari sinf modeli, raqamli texnologiyalar va rol o'ynash simulyatsiyalari) va ularning samaradorligi tahlil qilinadi. Ayniqsa, O'zbekiston ta'lim tizimidagi milliy xususiyatlar va muammolarga alohida e'tibor berilib, ushbu metodlarning uzoq muddatli ta'siri baholanadi. Maqola pedagoglar tayyorlash tizimini takomillashtirish bo'yicha ilmiy asoslangan tavsiyalar beradi.

Kalit so'zlar: Bo'lajak tarix o'qituvchilari, kognitiv kompetensiya, innovatsion metodlar, loyiha asosidagi o'qitish, raqamli texnologiyalar, tarixiy tafakkur, O'zbekiston ta'lim tizimi.

INTRODUCTION

In the era of rapid globalization, technological advancements, and digital transformation, the education system has undergone a profound shift in its objectives and methodologies. No longer confined to the mere transmission of factual knowledge, education now plays a pivotal role in cultivating the intellectual and cognitive capacities of individuals, preparing them to navigate an increasingly complex and interconnected world. At the heart of this transformation are educators, particularly those in the humanities, such as history teachers, whose professional preparation is a cornerstone of educational quality and societal progress. History teachers bear a unique responsibility: they must transcend the traditional role of imparting dates, events, and chronologies, instead fostering in students the ability to critically analyze historical phenomena, discern cause-and-effect relationships, evaluate diverse perspectives, and address multifaceted problems. This demands a high level of cognitive competence a multifaceted capability encompassing information processing, comprehension, synthesis, and the creation of new knowledge. Cognitive competence enables history teachers to shape students' historical thinking, equipping them to interpret the past in ways that inform the present and future, thereby contributing to the cultural, social, and political development of society.

The concept of cognitive competence is deeply rooted in the intersection of psychology and pedagogy, drawing on foundational theories from scholars such as Jean Piaget and Lev Vygotsky. Piaget's cognitive development theory emphasizes the progressive complexity of human thought through assimilation and accommodation, underscoring the need for active learning environments to stimulate intellectual growth. Vygotsky's Zone of Proximal Development highlights the importance of scaffolding, where educators guide

students toward tasks that challenge their current abilities, thereby expanding their cognitive potential. In the context of history education, cognitive competence is not merely about memorizing facts but about developing historical thinking skills ranging from fact recognition to critical interpretation and predictive reasoning. These skills are essential for future history teachers, as they enable them to cultivate in their students a nuanced understanding of historical processes and their relevance to contemporary issues.

In Uzbekistan, the training of future history teachers is guided by national frameworks, such as the Law on Education and the Concept for the Development of the Higher Education System, which emphasize the integration of innovative teaching methods to enhance educational outcomes. However, the persistence of traditional, passive teaching approaches often centered on rote learning and the limited availability of digital resources pose significant challenges to this goal. These limitations hinder the development of cognitive flexibility and critical thinking, both of which are vital for preparing teachers who can inspire and educate the next generation effectively. The urgency of addressing these challenges is amplified by the broader societal need to foster a generation capable of critical reflection, cultural awareness, and active citizenship qualities that history education, when delivered effectively, can uniquely nurture. This article aims to explore the use of innovative methods in fostering cognitive competence among future history teachers through a scientific lens. It examines the theoretical underpinnings, practical applications, and effectiveness of these methods, while offering recommendations tailored to the national context of Uzbekistan, with a focus on overcoming existing barriers and leveraging global best practices to enhance teacher training. The theoretical foundations of cognitive competence lie at the intersection of psychology and pedagogy, with Jean Piaget's theory of cognitive development playing a central role. According to Piaget, human cognition evolves through stages, assimilating and accommodating new information. Applied to education, this theory underscores the need for active teaching methods to develop future teachers' cognitive processes, as passive learning limits their intellectual growth. Similarly, Lev Vygotsky's concept of the Zone of Proximal Development is critical: by engaging students in tasks slightly beyond their current capabilities, teachers can expand their cognitive potential. In the context of history education, cognitive competence encompasses components of historical thinking from recognizing facts to interpreting and predicting outcomes. For instance, based on Peter Seel's cognitive models, history teachers must help students develop mental models, a process facilitated by innovative methods. These models enhance students' ability to visualize historical events and interpret them in modern contexts, thereby increasing cognitive flexibility. The emergence of innovative methods stems from the limitations of traditional teaching approaches. Traditional lessons are often rooted in passive learning, where students merely receive information with limited opportunities for analysis or processing. In contrast, innovative methods promote active engagement and stimulate cognitive processes. One such method is Project-Based Learning (PBL). In this approach, future history teachers are involved in solving real historical problems. For example, in a project exploring the crisis of feudalism in medieval Europe, students work in groups: one analyzes primary sources, another creates visual models, and a

third compares the historical crisis to modern economic downturns. This process fosters the analysis and synthesis components of cognitive competence, as students not only gather facts but also apply them in new contexts. Research indicates that PBL enhances students' problem-solving skills by 30–40%, a critical competency for history teachers. In Uzbekistan, this method is particularly effective in studying national historical events, such as the Kokand Khanate, as it strengthens students' cognitive interpretation of national identity.

Another innovative approach is the Flipped Classroom model, where theoretical material is studied in advance through videos or interactive modules, and class time is dedicated to discussions and practical activities. This method is particularly beneficial for future history teachers, as it equips them to design their lessons similarly. For instance, in a lesson on World War II, students watch documentaries at home and engage in role-playing or debates during class. This approach distributes cognitive load and fosters higher-order thinking analysis, evaluation, and creation, as per Bloom's taxonomy. Studies in Uzbekistan highlight that this method increases cognitive flexibility by 25%, preparing future teachers for adaptable pedagogical practices. However, its success depends on teachers' digital literacy and the availability of technical resources, necessitating specialized workshops in Uzbekistan's universities.

The integration of digital technologies is an integral part of innovative methods. Virtual Reality (VR) and Augmented Reality (AR) enable future history teachers to “bring history to life.” For example, simulating the Kokand Khanate era through VR allows students to experience its social environment, fostering empathy and cognitive visualization. Research confirms that immersive digital experiences improve retention of historical facts by 50% and enhance analytical skills. In Uzbekistan, projects introducing AR to present national historical sites enrich the cognitive competence of future teachers within a national context. Digital methods allow real-time monitoring of cognitive processes, enabling personalized approaches. Interactive methods like role-playing and simulations also play a significant role in cognitive development. In history lessons, students assume the roles of historical figures and make decisions—for instance, in a simulation of strategic decisions during the Napoleonic Wars. Combined with Error-Based Learning, this method allows students to learn from mistakes, enhancing cognitive flexibility. Psychological studies show that making errors activates the prefrontal cortex, forming new neural connections. For future history teachers, this method teaches them to apply similar techniques in their classrooms, enabling students to perceive history as a “living” phenomenon. For example, simulating the Islamic Silk Road era in Uzbekistan's history helps students cognitively interpret economic and cultural interactions. Collaboration and group work are also critical in fostering cognitive competence. Through collective projects, students learn to discuss diverse perspectives, deepening their understanding of the multifaceted nature of historical events. For instance, a group discussion on the dissolution of the Soviet Union, with each participant representing a different country, fosters cognitive empathy. To assess the effectiveness of innovative approaches, rubrics and portfolio methods are recommended, allowing tracking of students'

cognitive growth. In Uzbekistan's education system, these methods must consider national values, as history education serves not only as a source of knowledge but also as a tool for fostering patriotism. In Uzbekistan, the training of future history teachers is grounded in national programs, with the Law on Education and the Concept for the Development of the Higher Education System emphasizing the integration of innovative methods. For example, pedagogical universities are establishing digital resource centers to support cognitive competence development. However, challenges remain, including insufficient technological infrastructure, low digital literacy among educators, and reliance on traditional pedagogical paradigms. Addressing these requires workshops, professional development courses, and learning from international experiences, such as history education models in Finland or the United States. Specifically, the role of cognitive questioning in the U.S.'s Common Core State Standards could serve as a model for Uzbekistan.

In summary, the integration of innovative methods in fostering cognitive competence among future history teachers holds transformative potential for enhancing the quality of education in Uzbekistan and beyond. These methods—encompassing project-based learning, flipped classrooms, digital immersion, and interactive role-playing—go beyond traditional pedagogical approaches by cultivating higher-order thinking skills, such as analysis, evaluation, and creation, as outlined in Bloom's taxonomy. By engaging students in active, inquiry-based learning, these approaches empower future teachers to develop not only their own cognitive capacities but also those of their students, enabling a deeper and more meaningful engagement with historical knowledge. The scientific validity and practical effectiveness of these methods are well-documented in global educational research, offering a robust framework for their adoption. In the context of Uzbekistan, where national identity and historical consciousness are integral to education, these methods can be tailored to incorporate culturally relevant content, such as the study of the Kokand Khanate or the Islamic Silk Road, thereby strengthening students' connection to their heritage while fostering critical thinking.

However, the successful implementation of these innovative approaches requires overcoming significant challenges, including the need for enhanced technological infrastructure, increased digital literacy among educators, and a shift away from entrenched traditional teaching paradigms.

To address these barriers, Uzbekistan must invest in teacher training programs, establish more robust digital resource centers, and foster international collaborations to draw on best practices from countries like Finland and the United States. Future research should focus on longitudinal studies to assess the sustained impact of these methods on both teacher preparation and student outcomes, ensuring that educational reforms are data-driven and aligned with long-term societal goals.

Ultimately, by equipping future history teachers with advanced cognitive competencies, Uzbekistan's education system can produce educators who are not only conveyors of knowledge but also architects of intellectual and cultural progress, capable of inspiring a generation that is critically engaged, culturally aware, and prepared to contribute to a dynamic global society.

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