

INTERACTIVE TASKS BASED ON ARTIFICIAL INTELLIGENCE AS A MEANS OF ACTIVATING EDUCATIONAL ACTIVITIES IN LESSONS ON THE HISTORY OF KAZAKHSTAN

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Abstract. This article explores the potential of using interactive tasks created using artificial intelligence methods in teaching the history of Kazakhstan to students in grades 6 and 7 of comprehensive schools. Particular attention is paid to analyzing the pedagogical potential of AI technologies for activating student learning, enhancing their cognitive motivation, developing an interest in historical events, and developing historical thinking skills. Various forms of interactive tasks are considered, including those based on quiz generators, maps, and historical diagrams, which allow students to independently explore historical material and receive instant feedback. The paper explores the importance of digital educational tools in the context of modernizing modern school education. It demonstrates that the use of artificial intelligence helps diversify history teaching methods and make the learning process more visual, dynamic, and focused on student participation. Based on the results of a pedagogical experiment, it is demonstrated that integrating AI tools into the educational process promotes increased learning activity, engagement, and learning, as well as stimulates critical thinking and the ability to analyze historical sources. The authors conclude that the introduction of interactive tasks based on artificial intelligence into the practice of teaching history in Kazakhstan opens up new opportunities for improving the quality of historical education and developing a more meaningful understanding of historical processes in schoolchildren.

Key words: artificial intelligence, interactive tasks, history of Kazakhstan, educational activities, digital educational technologies, grades 6–7.

Introduction

Today, the education system is demonstrating progress in the context of the digitalization society, necessitating the search for new pedagogical tools, technologies, and teaching methods aimed at improving the quality and academic performance of students. The expansion of the digital educational environment, the integration of the interactive teaching methods, and the development of artificial intelligence are having a significant impact on the content and organization of the educational process as a whole. During this period, teachers are faced with the task of not only imparting knowledge but also developing students' skills and abilities to independently process acquired information, critically evaluate it, analyze it, and subsequently apply it in the classroom and everyday life.

This question is particularly relevant in the teaching of the history of Kazakhstan. Historical thinking and patriotism play a significant role in shaping students' views. Advocating for their civic position, understanding historical processes, and preserving cultural heritage. However, traditional teaching methods based on illustrations are not always able to fully engage students and engage them in the study of historical events. As a result, we believe that students' cognitive interest is declining, which may impact the overall learning experience.

Artificial intelligence methods are gradually becoming an important tool in digital learning, enabling the creation of new formats for educational materials and assignments. AI methods can be used to create interactive quizzes, maps, diagrams, mind maps and tests. Furthermore, it is possible to create professional presentations and other educational content that can be adapted to students' varying levels of preparation.

We believe that the use of interactive assignments created using AI in Kazakhstan history lessons for grades 6 and 7 offers significant pedagogical potential. These methods promote student

cognitive activity, foster interest in historical events, and develop skills in historical thinking and critical analysis. Furthermore, the use of AI methods in Kazakhstan history lessons makes the learning process engaging, dynamic, and suitable for all levels of students. Another advantage of integrating AI into the educational process is that generation makes the teacher's work easier to some extent (in terms of generation speed, receiving feedback, checking results, and processing large volumes of data).

Materials and methods of research

The study is based on a combination of theoretical and practice-oriented methods. Methods for analyzing and summarizing scientific and pedagogical literature on interactive learning, digitalization of education, and the use of artificial intelligence technologies in the educational environment were used. This allowed us to determine the theoretical foundations for using AI tools in history teaching.

The methodological basis of the study is based on the principles of activity-based, constructivist, and competency-based approaches to education, which focus on student active participation in the learning process and the development of their research and analytical skills. Within these approaches, interactive learning methods are particularly important, ensuring students' active involvement in the educational process.

In pedagogical science, interactive assignments are considered a form of learning activity that involves students' active interaction with the educational material, the teacher, and the digital educational environment. Their primary function is to transition from reproductive forms of learning to activity-based and problem-oriented ones, where students not only perceive information but actively process, analyze, and apply it [1]. M.V. Reimer and A.V. Yakutina emphasize that interactive learning is characterized by collaborative activities in which each participant makes a personal contribution to researching a topic, sharing experiences and acquired knowledge, which fosters the development of creative thinking and the ability to independently analyze events [1].

M.P. Kiseleva defines interactivity as the degree of interaction between the objects of the educational process (the student and the task), when the achievement of the learning goal occurs through information exchange with immediate feedback—visual, audio, or text [2]. This format of interaction helps overcome the passivity of traditional teaching methods and make the educational process more dynamic and effective.

A significant expansion of the capabilities of interactive tasks is associated with the introduction of artificial intelligence technologies. The use of AI in educational practice enables the generation of educational content of varying levels of complexity, including personalized questions, descriptions of historical events, and alternative scenarios for the development of historical processes. Furthermore, AI tools make it possible to simulate dialogues and historical situations, for example, through role-playing games with historical figures, and to adapt assignments based on students' level of preparation, their pace of work, and their individual educational characteristics. A significant advantage is the ability to receive prompt feedback and adjust learning outcomes in real time [3; 4].

Platov A.V. and Gavrilina Yu.I. view the development of artificial intelligence in education as a consistent shift in several pedagogical models: from learning management, characteristic of the behavioral paradigm, to a partnership between the learner and the digital system, and then to a model in which the student is an active subject and leader of the educational process, which corresponds to the ideas of constructivism and connectivism [3]. In the context of history education, this allows for the creation of tasks aimed not only at reproducing factual material, but also at analyzing, interpreting, and evaluating historical events, as well as developing students' historical thinking [5].

Research shows that the use of digital educational platforms promotes the development of key components of critical thinking, including information analysis, evaluation, argumentation, decision planning, and self-regulation of cognitive activity [5]. In turn, Akylbekova B.T. and Muldagalieva M.S. note that artificial intelligence is a complex system capable of perceiving, analyzing, and adapting to information, making it an effective tool for modeling cognitive processes in learning

[6]. Arkhiereev N.V. considers AI as computer program possessing a set of cognitive functions of the human's brain and capable of performing various types of intellectual activity [7]. Morhat P.M. emphasizes the need for a clear regulatory definition of AI for its safe and effective use in the educational environment [8].

Of particular importance in this study was the pedagogical modeling method, which allowed us to develop and systematize examples of interactive assignments on the history of Kazakhstan for students in grades 6 and 7 [9].

Results and its discussion

During the study, various types of interactive tasks based on artificial intelligence were developed and tested, oriented toward the content of the history of Kazakhstan course in grades 6–7. Their use allowed expanding traditional forms of learning activities and activating students' cognitive activity.

Among the most effective types of interactive tasks are:

Historical dialogue.

This type of task involves modeling dialogues between students and historical figures (for example, Ablai Khan, Kenesary Khan, Abulkhair). Using artificial intelligence tools, students can ask questions as a researcher or participant in historical events, and the system generates responses taking into account the historical context. Such tasks contribute to the development of argumentation skills, historical analysis, and understanding of the motivations of historical figures.

Intellectual quizzes and tests.

The use of AI allows automatically generating questions of various levels of complexity and adapting them depending on students' answers. This ensures personalization of learning and prompt feedback, increasing the effectiveness of material assimilation.

Historical quests.

This format involves completing sequential problem-based tasks related to the analysis of historical sources and making alternative decisions. For example, students are offered to consider a hypothetical scenario for the development of events related to Kenesary Khan's uprising and discuss the possible consequences of different decisions. This approach stimulates the development of critical thinking and historical imagination.

Reconstruction of historical events.

Within this type of task, students model the development of historical processes using artificial intelligence capabilities to analyze alternative scenarios. For example, students can reconstruct the features of Ablai Khan's internal and external policies and evaluate their impact on the development of the Kazakh Khanate.

Work with historical concepts.

Tasks of this type are aimed at explaining, comparing, and applying historical terms. The use of AI prompts helps students more deeply comprehend the content of concepts and their interconnections in the historical context.

Practical testing of these types of tasks showed that their use contributes to the active inclusion of students in the learning process, increasing interest in studying the history of Kazakhstan, and developing critical thinking skills. In addition, interactive tasks stimulate students' independent research activities and form skills in working with digital educational tools. As Mikhailova N.A. notes, artificial intelligence is gradually becoming one of the key factors in modernizing the educational environment, opening new opportunities for teaching humanities disciplines [6].

As an example of the practical implementation of interactive tasks, one can consider a task aimed at analyzing the chronological sequence of events in the history of the Kazakh Khanate in the 18th–19th centuries.

Task: «Analysis and Expansion of the Chronological Timeline of Events in the Kazakh Khanate in the 18th–19th Centuries Using ChatGPT» (7th grade).

Students are offered to analyze a ready-made chronological timeline, including key events of the period: the acceptance of citizenship of the Junior Zhuz under the leadership of Abulkhair Khan

in 1731, the administrative reforms of M.M. Speransky in 1822–1824, Kenesary Khan's uprising in 1837–1847, as well as the processes of the final inclusion of Kazakh territories into the Russian Empire.

Using the capabilities of the ChatGPT system, students are tasked with supplementing the timeline with new events, for example, Syrym Datov's uprising (1783–1797), indicating their causes, course, and consequences. In addition, students analyze the impact of these processes on the development of Kazakh society and the formation of regional political relations.

Completing the task allows developing skills in chronological thinking, analysis of cause-and-effect relationships, and working with digital sources of information. Practice has shown that the use of such tasks contributes to a deeper understanding of historical processes and increases students' interest in studying the history of Kazakhstan.

Another example of an interactive task is group work on classifying elements of Ablai Khan's internal and external policies.

Task: «Internal and External Policies of Ablai Khan» (7th grade).

Within the task, students are offered to distribute a series of historical statements into two categories: internal and external policies. The first group includes measures for uniting the three zhuzes, reforming the governance system, and developing internal trade. The second includes diplomatic relations with the Russian Empire and the Qing Dynasty, military actions against the Dzungars, and establishing ties with neighboring states.

The task is performed on the interactive platform Wordwall, which allows students to work with cards in a group sorting format. During the discussion, students argue their choices and explain the significance of the policies pursued by Ablai Khan for strengthening the Kazakh Khanate.

Such tasks contribute to the development of skills in analyzing historical facts, forming argumentation, and collective discussion of historical processes.



Figure 1. Analysis and Expansion of the Chronological Timeline of Events in the Kazakh Khanate in the 18th–19th Centuries Using ChatGPT

As another example of applying interactive tasks based on artificial intelligence, one can consider the use of multimedia materials created with AI tools.

Task: «Analysis of a Video Podcast on the Formation of the Kazakh Khanate» (6th grade, topic: «Formation of the Kazakh Khanate»).

Within this task, students are offered to analyze video material created by the teacher based on a historical article using the NotebookLM platform. This tool allows automatically generating audio or video podcasts based on textual sources, in which structured information on the given topic is presented.

After viewing the video podcast, students formulate their own questions on the content of the material. The questions may be aimed at identifying the causes of the formation of the Kazakh Khanate, the role of Zhanibek Khan and Kerei Khan in forming the new state union, as well as the significance of this historical event for the further development of Kazakh statehood. Then, students independently formulate answers to the posed questions and discuss them in class.

The final stage of the task is a collective discussion, during which students exchange formulated questions, analyze answers, and draw conclusions about the significance of the formation of the Kazakh Khanate in the history of Kazakhstan.

Conclusion

The application of modern AI tools contributes to the renewal of the traditional lesson format, expands opportunities for organizing learning activities, and ensures more active student engagement in the process of mastering historical material.

In our opinion, the use of interactive tasks based on artificial intelligence technologies makes the educational process more dynamic, visual, and student-centered. We consider that such tasks stimulate student's cognitive activity, increase their interest in historical events, and contribute to the development of sustained learning motivation. Moreover, the use of AI allows for a variety of classroom activities, including historical dialogues, intellectual quizzes, quests, reconstructions of historical events, timeline analysis, and work with multimedia materials.

We have come to the conclusion that the development of key cognitive skills in students is of particular importance. These include the ability to analyze historical sources, establish cause-and-relationships, formulate well-reasoned conclusions, and interpret historical facts. As a result, students act not only as recipients of information but also as active participants in the educational process, independently exploring historical phenomena. The practical development and testing of various types of tasks have shown that the integration of AI into the teaching of Kazakhstan's history can be effectively used as a tool for developing students' critical thinking, research skills, and digital literacy. We also believe that a crucial condition for the successful application of AI technologies is their pedagogically sound use, in which artificial intelligence serves not as a substitute for the teacher, but as an auxiliary tool that expands educational opportunities.

We believe, that the further development of this area should be associated with a more in-depth study of the pedagogical conditions for the effective integration of artificial intelligence technologies into the educational process, as well as with the development of practice-oriented methodological recommendations for history teachers.

Thus, we have come to the conclusion that the introduction tasks based on AI into the teaching of the history of Kazakhstan opens up new opportunities for improving the quality of historical education and fostering a deeper and more meaningful understanding of historical processes among school students.

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ҚАЗАҚСТАН ТАРИХЫ САБАҚТАРЫНДА ОҚУ ІС-ӘРЕКЕТТЕРІН БЕЛСЕНДІРУ ҚҰРАЛЫ РЕТІНДЕ ЖАСАНДЫ ИНТЕЛЛЕКТКЕ НЕГІЗДЕЛГЕН ИНТЕРАКТИВТІ ТАПСЫРМАЛАР

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Аңдатпа. Бұл мақалада жалпы білім беретін мектептің 6 және 7 сынып оқушыларына Қазақстан тарихын

оқытуда жасанды интеллект әдістерін қолдана отырып жасалған интерактивті тапсырмаларды пайдалану мүмкіндігі қарастырылады. Оқушылардың оқуын белсендіру, олардың когнитивтік мотивациясын арттыру, тарихи оқиғаларға қызығушылықты дамыту және тарихи ойлау дағдыларын дамыту үшін жасанды интеллект технологияларының педагогикалық әлеуетін талдауға ерекше назар аударылады. Интерактивті тапсырмалардың әртүрлі формалары, соның ішінде оқушыларға тарихи материалды өз бетінше зерттеуге және лезде кері байланыс алуға мүмкіндік беретін викторина генераторларына, тест сұрақтарына, тарихи квестке негізделген тапсырмалар қарастырылады. Мақалада қазіргі мектеп білімін жаңғырту тұрғысынан цифрлық білім беру құралдарының маңыздылығы зерттеледі. Онда жасанды интеллектті пайдалану тарихты оқыту әдістерін әртараптандыруға және оқу процесін көрнекі, динамикалық және оқушылардың қатысуына бағытталған етуге көмектесетіні көрсетілген. Педагогикалық эксперимент нәтижелеріне сүйене отырып, жасанды интеллект құралдарын білім беру процесіне енгізу оқу белсенділігін, қызығушылықты және оқуды арттыратыны, сондай-ақ сыни ойлауды және тарихи дереккөздерді талдау мүмкіндігін ынталандыратыны көрсетілген. Авторлар Қазақстан тарихын оқыту тәжірибесіне жасанды интеллектке негізделген интерактивті тапсырмаларды енгізу білім беру сапасын жақсарту және мектеп оқушыларында тарихи процестерді мағыналы түсінуді дамыту үшін жаңа мүмкіндіктер ашады деген қорытындыға келді.

Түйін сөздер: жасанды интеллект, интерактивті тапсырмалар, Қазақстан тарихы, білім беру іс-шаралары, цифрлық білім беру технологиялары, 6–7 сыныптар.

ИНТЕРАКТИВНЫЕ ЗАДАНИЯ НА ОСНОВЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА КАК СРЕДСТВО АКТИВИЗАЦИИ УЧЕБНОЙ ДЕЯТЕЛЬНОСТИ НА УРКОКАХ ИСТОРИИ КАЗАХСТАНА

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Аннотация. В статье исследуются возможности применения интерактивных заданий, созданных с помощью методов искусственного интеллекта, в процессе преподавания истории Казахстана в 6-7 классах общеобразовательной школы. Отдельное внимание уделяется анализу потенциала технологий искусственного интеллекта для активизации учебной деятельности учащихся, повышения их познавательной мотивации, развития интереса к историческим событиям и формирования навыков исторического мышления. Рассматриваются различные формы интерактивных заданий, включая задания на основе генераторов викторин, тестов, исторических квестов, которые позволяют учащимся самостоятельно исследовать исторический материал и получать мгновенную обратную связь. В работе раскрывается значение цифровых образовательных инструментов в условиях модернизации современного школьного образования. Показано, что применение искусственного интеллекта помогает разнообразить методы преподавания истории и сделать учебный процесс более наглядным, динамичным и ориентированным на активное участие учащихся. На основе результатов педагогического эксперимента показано, что интеграция ИИ-инструментов в учебный процесс способствует росту учебной активности, вовлеченности и качества усвоения материала, а также стимулирует критическое мышление и умение анализировать исторические источники. Авторы приходят к выводу о том, что внедрение интерактивных заданий на основе искусственного интеллекта в практику преподавания истории Казахстана открывает новые возможности для повышения качества исторического образования и формирования у школьников более осмысленного понимания исторических процессов.

Ключевые слова: искусственный интеллект, интерактивные задания, история Казахстана, учебная деятельность, цифровые образовательные технологии, 6-7 классы.